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S. Nixon:

Could we all sit down and start the session please? Good morning. Welcome to this panel session on the cashless society. We are to discuss the role that electronic payment systems can play in Russia's development and in economies more generally. We have an expert panel covering everybody from government and banking systems to payment systems and consultancies. I am going to start by asking Stefan Dab, who is a senior partner with The Boston Consulting Group, to set out some thoughts on the advantages for business of electronic payment systems and what the business case might be for accelerating cashless economies. Stefan?

S. Dab:

Thank you, Simon. Thank you everyone. Welcome. There are obviously many benefits to a cashless society. There are benefits for the consumer, there are benefits for merchants, there are benefits for the state. Today the perspective I want to talk about is the benefit of accelerating the migration to electronic payments for the banking sector. So I want to use a business perspective to think about what the business potential is for financial service firms and most notably for banks, who are the traditional owners of electronic payments.

Let me start with a few numbers. I will not give you too many, just a few to keep in mind. If we look globally at the value of payments for business, it is a USD 500 billion market. If we look at emerging economies in Asia or emerging economies in Europe or Latin America, these make up 40%. So that is a USD 200 billion market, a very big market. And if we look at how we expect this market to develop over the next 10 or 15 years, by 2022 the USD 200 billion market in emerging economies will reach USD 600 billion. It will grow by about 12% per year. If we look at the rest of the market, which is the 300 billion in mature markets, this will reach 500 and something billion. So by 2022, the payments market in emerging economies will be bigger than the payments market in

mature countries. That gives you a sense of how much potential there is in that market.

Now if we look at the banking sector, and what the value of payments is for the banking industry, I think it is important to keep in mind where this money comes from. It basically comes from two sources. One source is obviously the fee that a bank or a payment provider can charge to its customer: the card fees, notably the transaction fees. The other source is the interest, because when people transact with electronic payments, they have money on an account and the money that is on the account is creating an interest margin. In rapidly developing economies, around 40 to 60% of the revenue of payments is actually not the revenue linked to the transaction, but the value of the money that the customer leaves on the bank account. So it is very important to remember that when we think about payments, we need to look at their business value outside the direct fees.

Then there is a second source of benefits for banks which accelerate the migration from cash to non-cash transactions, beyond this direct profitability from fees and accounts. This second element is the deepening of the customer relationship. Once somebody has a transaction account with a bank, that customer will become very loyal and much more profitable. All the numbers that the BCG has on the matter tend to prove that the profitability of a client who is a heavy transactor with a given bank is 2.5 times higher than the value of someone who does not transact: someone who takes the cash at the first of the month to a salary card, versus someone who uses the account to make payments. So the stakes for the banking sector are very significant, because there is obviously growth and profitability potential, and there is relationship potential, but there is also a threat in the sense that if the banking sector is not able to convert a client to use cash, to use payment instruments managed by the bank, this customer will go to an alternative payments provider. They will go to the PayPals of the world, to Alipay, to Yandex Money – I know Yandex Money is owned by a bank today in Russia, but it is still an alternative payments provider. They will use QIWI Wallets,

etc. So it is very important to keep in mind that there is a huge potential but there is also a huge threat, and that is why I think banks needs to think about that. That is my introduction. I suggest that we open the debate and later on I can talk about what industry and what banks need to do to capture that potential.

S. Nixon:

Thank you very much, Stefan, for setting out the business opportunity and for setting out some of the topics for us to debate.

M. Luet:

Simon, could I add something to the introduction? The only thing I would say, Stefan, is that the main beneficiary of the improvement in cashless penetration is actually governments. It is not banks. And I think herein lies part of the issue. You talked about the business model for banks adapting to better penetration, and actually that is a difficult thing to do, for some banks at least. But I think the main beneficiary is governments, as cashless is the best way to put flows of business into the economy that would not otherwise be recognized, and it leads to higher taxation and better taxation revenues for governments. It also leads to inflows of deposits into the known system and eventually it percolates down to the customer himself, but I think the governments, for tax purposes and fiscal balance as well as efficiency, are the main beneficiaries of that debate. I just wanted to add that as a perspective.

S. Nixon:

Thank you very much, Marc. You pre-empted me because I was actually going to turn to Alexey Moiseev next. I am sure you would agree with what Marc just said. Perhaps you would like to talk about it from the Russian government's point of view. How do you see electronic payment systems playing a role in the economy?

A. Moiseev:

I agree with Marc, but I also agree with Stefan. It is a strange situation. It is typical for the government that it listens to various positions, and then it has to come up with a certain compromise. Of course, from the point of view of internal government interests, having no cash in society would be the best solution, because if there is no cash then people pay taxes, and there is no money laundering because laundering starts when cash becomes stolen cash. All money laundering is really about making dirty cash bankable. There is no crime on the streets, nobody steals anybody's wallet, and so on. Plus, of course, it is much cheaper when one does not have to print notes. Simply crediting somebody else's account is a little cheaper than having notes spread around the country and so on. That, of course, is an expense of the central bank, but if we are speaking of the general government, that is the case. From the point of view of government interests, having no cash is best.

However, I also have to agree with Stefan that it is important to see what the costs are for the people and what levels of infrastructure allow what limitations on the circulation of cash. If you have a country with one ATM machine and no POS terminals, then you cannot even start talking about limiting the amount of cash in circulation. Interestingly, and I am sure my colleague from Sberbank will talk about this later and will have better information about it, in Russia we have the biggest penetration of ATM machines in the world, but a relatively low penetration of POS terminals compared to countries of a similar level of economic development. This obviously suggests that even though the vast majority of Russian employers pay using bank debit card products, people receive money on their cards, then go downstairs, use their card to take cash out of the ATM machine and use cash to make payments. That is not really a cashless society. We can pretend that people receive salaries on their cards, but it just means that people just have one more step to take. Instead of going to the corporate cash

office and getting cash in an envelope, people go and do it using ATM machines, so it keeps money in the banking system for perhaps one more hour or one more day, or something like that.

Of course, there are a number of reasons for this. One, of course, is cost. It is a problem that if someone in Russia comes to buy a car, for example, and wants to use a card, then the car dealer will try to find various ways to make it more expensive for the person to use a card as opposed to paying in cash. That is related, of course, to the commission charged to the vendor when clients use cards. There are also costs to the vendor when they order banking services to process cash. Again, I am sure Sberbank will comment in more detail, but in my understanding, it is often cheaper for vendors to use cash than to use cards. Clearly, vendors then try to pass this cost on to the consumer. So even though, as I said, we are very consistent in our efforts to squeeze cash out as much as possible, we also need to understand that we need to be very careful in order not to make those requirements cumbersome for the people.

At this stage we have decided to move in another direction, which is to provide better accessibility to non-cash products. For example, on May 5, 2014, the President signed a law which, among other things, demands that all shops and service companies have POS terminals if they are not micro companies, which means that their turnover is no smaller than RUB 60 million per year. If it is anything more than a kiosk, it has to have a POS terminal, and there is a very significant fine if they do not comply. Of course, we need to be very careful not to put an additional burden on business, so we try to make it as easy as possible. People do not have to use those big POS terminals; they can use cheap systems which are linked to mobile phones or something similar, which will make costs to shops and service companies minimal. This is our first step, and when we see how it works and how it develops, of course we can start limiting the usage of cash.

Currently, there are very strict limits on cash transactions between companies, but there is no limit on cash transactions between individuals, or between individuals and companies, so unlike in some other countries, and particularly European countries, one can pay for anything in a shop in cash. People can buy a very expensive car by bringing a suitcase of money. We want to limit this eventually, but as I said, we want to be very careful to make sure that people are not squeezed on the margins with additional costs. Let me use the example of cars. Essentially, we tax expensive cars based upon their sale price. Clearly, if somebody pays cash for this sale price then there can be two contracts, one contract for USD 100 for the car, and then another one that states something else. You know how it happens. Obviously this means we cannot tax it, so obviously we want the least cash possible. But as I said, we want to be very careful and we want to first provide sufficient infrastructure that is cheap for people to use, to make sure that it is convenient for people to use non-cash instruments.

S. Nixon:

Thank you very much. I think before we come to the subject of infrastructure, it might be interesting to come to Sberbank, to Victor Orlovsky. Could you talk about your perspective on moving to electronic payments and comment on what the Minister just said?

V. Orlovsky:

Thank you, Simon. I can only support what was said by the previous speakers. Alexey has referred to Sberbank a few times, so I will support a few ideas which were mentioned with numbers, if I may. First of all, I strongly believe that the biggest competitor for Sberbank, and the biggest competitor for the entire banking system in Russia, is cash. You can measure it in different ways, but with any measurement you take, nearly 80% of the payments done in Russia are

cash-based, especially in consumer to business and consumer to consumer transactions. Meanwhile, a 1% conversion from cash to electronic payments would give the entire banking system a revenue equivalent to USD 1 billion, which is a great, great start. Obviously, by converting cash to e-channels, to electronic money, we may make the entire banking system a lot richer than it is now.

Let us see what means are available to do that. First, the penetration of bank cards. We consider our population unbanked, which is not quite true. There have been 200 million cards issued so far, meaning that on average the adult working population has three cards per person. So we may say that from the card issuance perspective, we are well covered. There are 3.3 million points of sale in Russia that accept cash, or nearly that amount, and yet only 600,000 points of sale accept bank cards. So in terms of data, Alexey is right. The infrastructure for accepting cards is not as high-level as what you would find in Europe or the US. However, the infrastructure itself is very solid. If you look at big supermarkets and large retail chains, you will see that almost every merchant is being equipped for card acceptance, and this is with a really modern device that accepts both the magnetic stripe and the chip. Yet, there are all sorts of e-channels available, exactly as Stefan said. There is Yandex Money, QIWI Wallet and many others, which may be smaller but are still rather big, and they keep growing. So I would not say that the infrastructure is not there. Alexey is right: there are more than 200,000 ATMs in Russia. Sberbank is the largest ATM network in the world nowadays, having more than 80,000 ATM bases, and I must say that this is a very profitable business for us. This is a very profitable business for everyone. Every ATM brings in money by definition. What are the habits of people? If you look at the cards issued, at what we are doing, and at what our customers are doing, there are more than 60 million active cards issued by Sberbank.

The majority of the transactions happening in the Sberbank network are averaging at two transactions a month. Guess what they are: cash withdrawals.

People come and withdraw cash so that they are at the absolute minimum on their card. They just take it all, twice a month, because they usually get their salaries twice a month. Why do people not pay with a card? Why do they still pay with cash? Starting in the year 2000, banks put a lot of effort into converting cash or cash withdrawals into e-payments. But people do use cards outside of Russia and they do not do so in Russia. Do they feel insecure? I do not think so. As I said, almost all terminals, maybe not 100% but close to it, are equipped with chip and pin technology. It is a very secure instrument, so people should not be afraid of using cards. I think that the reason people still do not do so is a matter of habits. That is the tricky thing. We were not on the mobile top-up market at all a few years ago, and now we cover 30% of the mobile top-up market. What we discovered was that despite the fact that there is a huge advertisement on the ATM, reading "Top up your mobile now for free, with no commission", what people do is withdraw money from the ATM, go to the nearest cash terminal and pay 3-5% commission. That is their habit. They do not listen. They do not care. They want to do it the way they did it before. I think that this is the biggest issue that we have to struggle with: to convert these habits into something different, into a different customer experience.

We believe that there are a couple of things that will help us do this. First, the payment method has to be simple. We now have what we call a direct debit or autopay option, by which you can pay all your utility bills or top up your mobile while applying whatever limits you want, and applying all kinds of triggers to the payment, but with one click. You click and then all your utility bills are paid automatically. We receive the utility bill from the service provider and we pay it all, informing the customer individually about every transaction that happens, or asking his permission to pay. Simplicity is the key. The second thing is being social. Around 2.5 years ago, we started what we call P2P payments, a person to person payment method and technology. This means you pay from mobile to mobile without knowing the card number, and there are more than 48 million

customers now in Sberbank who have the opportunity to pay like this. The average transaction floor in person to person payments is nearly RUB 7 billion per month and it is growing by about 50% per year. So people like to pay this way: it is simple, it is very convenient and it is social. For example, if a few guys go to a restaurant, one of them pays with a card, and the others can reimburse their share of the payment by P2P. It is very convenient. You can pay almost everything that way consumer to consumer, and we want to convert it to consumer to business payments.

The next thing is that obviously it has to be mobile. We believe that if you put it all into the mobile device then it will make a difference for people, because they carry their phones everywhere. If you enable them to pay through their mobile phones on public transport, for example on the Moscow underground or the St. Petersburg underground, then people will start paying with their mobiles. What they need for that is infrastructure, both on the underground side and on the banking side. There are many phones that are equipped with NFC. By the end of 2017, there will be almost two billion phones available with NFC functionality. That is a way for people not only to pay, but also to accept payments.

We started an initiative called Mobile POS. We want to issue nearly one million new mobile POS terminals within the next few years, so we are now running a pilot. We want to make it absolutely convenient for small and medium enterprises. The cost of this POS has to be a maximum of USD 30, compared to the USD 250 that it costs now. This POS has to be bought off the shelf in the shop, and then you can register online and become a merchant accepting cards online through your mobile. I think that would also make a difference.

From the perspective of how expensive it is, the average margin paid by the merchant is between 0.6% and 3% for every transaction. The average cash expense is about 1%. It is still cheaper, but I do not think that all expenses are really being counted and measured. I think that if you compare it apples to apples, then the average transaction cost by card and by cash would be the

same. What the government can do, obviously, is help us educate people. It is very important that people get the right message from the government that this is convenient, firstly, and secondly, absolutely private, and that people should not be afraid of paying with a card instead of cash. We truly support the initiative of the tax ministry that converts the fiscal devices and fiscal memory to the cloud, and that would enable the mobile phone to eventually become a cash desk for every merchant. This will dramatically reduce the cost of the point of sale for the merchant and make it a lot more convenient for the merchant to accept cards. We think that this is a great initiative that has been taken by the tax ministry and we want it to happen sooner rather than later. That is basically the answer. Thank you, Simon.

S. Nixon:

Thank you very much, Victor. You raised a lot of very interesting and important points there which I would like to follow up. I think you make a good case that infrastructure is not necessarily the biggest limiting factor here, while on the other hand, we have had Stefan make the point that for the banking system, there is a big threat potentially from alternative providers of infrastructure. And Alexey has talked about the fact that there are some infrastructure issues in Russia. So I thought that before we move on to addressing some of the other points, I might bring in Dmitry Strashnov from Russian Post who has some thoughts on the infrastructure challenge in Russia particularly.

D. Strashnov:

OK, Simon, thanks a lot. You might ask what on earth Russian Post is doing here. In fact, Russian Post is one of the biggest cash channels in the country. Through the channel, we pull in roughly RUB 3.5 trillion a year to the regions of Russia. But I will say, when we are talking about the cashless society, I think this is not only a question of electronic payment systems, but of those customers who

already have accounts. We have to look at the entire market, or potential market, and I think the World Bank data says that only 50% of the population has accounts in Russia. Are we talking about a cashless society for 50% of the population? No. If you really want to talk about a cashless society, let us talk about a society that consists of 100% of the population. I think the penetration of accounts is a key element, rather than the penetration of credit cards. In Moscow, we have 5.75 credit cards per person. In the country, the figure is 1.5. You can divide this as 1.5 credit cards per citizen, but that is not really the true story, with 50% having no accounts. Fifty percent of the population is using cash. If we want to build a cashless society, we have to take care of that. How can we do that? First of all, I think there are three elements that will really boost this journey. The first is having enough accounts. If you look at the penetration in the world, in Europe, France has 97%, Germany 98%, and Finland 99.7% penetration of accounts. China is lower, at 64%. We are very close to Brazil, below them, and Brazil is also not a cashless society yet. I think we have to really strive to get each and every citizen capable of getting banking services, capable of having a bank account. I think that this is a real task for the banking community and probably not only banking, because we need to get to those people who have yet to receive banking services. As you probably know, almost all of the classic banks think the cities with a population below 20,000 are not so attractive for them to open an office. Probably my colleague from Sberbank will correct me, but I think most of the banks have certain kinds of limitations. They go for certain cities with certain populations, and smaller ones are out of their scope. One third of the population is living in cities the banks are not planning to go into. There is an enormous amount of cash that is lying in pockets, or under pillows, and this cash is withdrawn from the economy.

In moving society to a cashless economy, we need to get this cash working. How? Well, there are plenty of solutions. One of the solutions used throughout the world is the postal administration. They have banking licences. They can provide basic banking services, such as opening accounts, issuing debit cards, maybe selling some state-owned bonds, or whatever, for the entire population, because there is a post office present in each and every village, even in a village with a population of five or six or ten people. It is the easiest way to get penetration of accounts to a high level.

What is important? Penetration of accounts, not only penetration of credit cards. I think acquiring infrastructure is extremely important. Victor mentioned that. It is not about ATMs. If we want to achieve a cashless society, we need to kill ATMs. Why do we need ATMs for a cashless society? To withdraw cash? To use cash again? It is a matter of mobile terminals, and the ability to use credit cards at each and every selling point.

And of course, thirdly, we need to have enough money in the accounts. Those are three key elements for moving towards a cashless society from our point of view. Thank you.

S. Nixon:

Thanks very much, Dmitry. I now want to bring in Christian Kothe from SWIFT, an organization that has come out of part of the e-payment world and has some insights into how to manage these systems. Christian, over to you.

C. Kothe:

Thanks a lot. SWIFT is coming from the business to business world and there are perhaps a few takeaways that can be reapplied to the retail world, namely how you can create value by building economies of scale. I think that the whole cashless society discussion is a discussion around building economies of scale and making the same processes reusable for different market participants. That is primarily talking to the service providers.

On the discussion that we just heard on retail payments: when is an electronic payment competitive to cash? First, you need to achieve finality in the same way,

so that you have paid when you have completed the electronic payment. Secondly, I support Victor's point: there is a high need for education. To refer to a study Deutsche Bundesbank did in Germany with regards to how cash is developing and how the use of cash is developing, the conclusion of the study, which was an empirical study, was that a cashless society is fiction. It is fiction because a lot of people do not know that they can use their cards to basically replace cash. In Germany we have wide use of debit cards, and of those people who have a debit card in Germany, only 21% were aware of the fact that they could use their credit card or their debit card for a cash wallet in the same context of payment. Accordingly, I think there is a huge effort that needs to be made in education, to get cash into electronic form. Then you can reap all the benefits that you see in the business to business world as well, which are the economies of scale, the standardization, the risk reduction and the automation that come along with it. The success of SWIFT as one service provider in that context is linked to the fact that all those three criteria work positively for the financial industry. They should be working for the retail world as well.

S. Dab:

I would like to make a quick comment, because I think it is very interesting what was said, especially what was said by Victor. I think it is very true that the biggest competitor is cash, and the biggest issue is inertia of consumer habits in the way they pay. If there is one rule in payment, it is that people have enormous inertia in the way that they pay. If they are used to paying in cash, they pay in cash, and people will even pay at a restaurant with one card, and at another with another one, simply for the reason that they have done so before. Clearly, after infrastructure, the question is very much about the activation and usage of payment instruments. With the work that we have done across the world, our observation is that it is not only about education. In fact, it is primarily not about education. It is about creating the right incentives. It has to go far beyond

education. It is about creating a very clear value proposition and giving very clear incentives for having the customer do something differently. The way to do that is by taking a customer perspective and really understanding at a deep level what the unmet needs are, what the issues are that people are facing with the way they do payments, and how to provide a clear solution to them.

I will give you one or two examples. If you look at Brazil, for example, Brazil is an emerging country which is quite advanced if you look at electronic payments, card penetration, card usage and points of sale. They are a little bit of an anomaly among the emerging countries. Why? I think the banking sector have done something quite successful, which is to understand that the issue for people around cash in Brazil was security and inflation, and they have done a very good job of coming up with a card value proposition that allowed people to avoid the loss of value linked to inflation, because they understood it was an issue. In a high-inflation society, day after day, cash loses value, and there were some security concerns. They really understood that that was an issue for people when they used cash. And although they had to deal with all the behaviour and the habits, they understood that that was the way to address payments, so they positioned electronic payments and they positioned cash as a solution to an extremely practical problem.

If you look at India, for another example, India has been able to accelerate the growth of e-commerce payments and electronic payments. They also looked at the consumer and they tried to understand why people are very reluctant to pay with electronic payments on the Internet, and there was also a security issue there. People are very concerned about the security of e-commerce transactions, and what they did was to mandate 3D Secure. They mandated some security protocols, and that boosted the usage of the Internet. If you look at Europe, it is exactly the opposite. If you ask a consumer in Europe, in most countries, why they do not use Internet payments, it is because of 3D Secure, because it is very cumbersome to authenticate and validate transactions.

The point that I am trying to make is that it is very important to start from a deep understanding of what drives the customer and to provide specific solutions. When you do that, it is not about education, because education is a bit too generic. You need to be much more segmented and understand that you have urban people, you have rural people, you have young people and you have old people, and we need to be much smarter in how we segment value propositions and how we position them. I think that players like Sberbank and Yandex Money are extremely well equipped to develop a solution, with the support of the central banks, because I think part of the value proposition is also to make the true cost of payment visible.

S. Nixon:

Thank you very much, Stefan. I just want to explain that Dmitry Strashnov unfortunately has had to leave the panel without even waiting to hear whether the Ministry of Finance is going to give him a banking license. Maybe he already knew the answer. Anyway, he has been replaced by the Chief Financial Officer of Russian Post for the rest of the discussion. To pick up on some of the points that Stefan was making, we should bring Marc Luet into the discussion. Marc is from Citigroup, based in Central and Eastern Europe. He will give some responses to the points you have heard on the panel so far.

M. Luet:

There was a lot said, so if we bring it together, our belief is that there is a high correlation between what we call the digital money readiness in a country and the actual penetration of a cashless society. There are several elements to it and we talked about some of them. To sum up, there is the institutional environment that is essential. There it is the rule of law, market efficiencies, and regulatory frameworks that are important. There is the enabling infrastructure, which is the second piece. We talked about scale in infrastructure, and I think that is a key

point. There is solution provisioning, and I think that is where government can play a role. That means e-government, transit and tool solutions and so on and so forth, that are very adapted to the customer. And then there is the propensity to adopt, which I think Stefan was tapping into, and this could mean pricing, it could mean education, it could mean trial programmes and the identification of unmet needs. There have been places where countries have been very successful, moving the needle very quickly. You mentioned a few, and the UAE is another example where they have had very targeted policies by sector. Transit was one where they took a lot of effort to move the needle.

I would like to come back to the point of how the transformation happens and the financial inclusion issue that Dmitry raised earlier. Yes, we broadly believe that cashless is the way for financial inclusion and a 10% increase in financial inclusion around the world is the equivalent of bringing a quarter of a billion people into the banking system, so it is huge. I think that is where it gets difficult, because the business model under which many of the banks and the actors in the sector have built their know-how is not necessarily very adapted to this new reality. When you are a financial institution and you make USD 100 per customer and you do that with ten million customers, you need to move to a business model where you are going to make USD 2 a year on a customer, but you need to do that on 300, 400, or 500 million customers. That is where the scale issue comes in. Banks are, I think, well-equipped in general, but there is a business model issue. The entire industry has to transform its business model to push the cashless element. I think digital technology, which Victor alluded to, is the breakthrough, because that is the point in technology where we can provide the right and relevant offers to the customers, very customized, at a relatively low cost. And through the ubiquity of mobile phones, we can actually push that to populations that would not have had access before. It is the first time, I think, in the past few years, where we are reaching that point where we can actually break through that business model issue through the use of digital tools. And that is probably where we are going to see the tipping point and a sharp change in most of the developing economies.

The only point I want to end up with is that in the US, where there is no lack of effort and education of customers on cashless and so on and so forth, 40% of transactions are still done in cash. So we have our work cut out for us. It is a long haul journey. That is my view.

C. Kothe:

Can I add one point? To get to the economies of scale and generate cost reductions, standards is a key driver. If you do not have a standardized way for people to understand how they can effect a payment, then the dissemination of these payment methods will go very slowly. So if there are 10 or 15 different methods to effect a payment because there are all kinds of different systems, that is going to block adoption big time.

If we look at it the other way around, the smaller the communities, the higher the rate of technology adoption. Sweden is one example where cash makes up roughly 3% of the payments today. There you see that adoption goes faster because it is highly standardized. Smartphones are everywhere, and there is a generation growing to the point where they basically expect instant happiness. You push the button, you get the information. You push the button, you effect the payment and the counterparty has the money on its account. This will lead to a discussion around real time low-value payments like we have in the large-value, high-value world already, and that is a trend emerging right now in different countries. There are roughly 20 real-time low-value payment systems live in the world with limited adoption, I think only in Mexico and in one additional country, in the UK, actually. I think that will significantly drive the closing of the gap between cash and electronic payments, which is the final point. Do I have the money on my account, yes or no? That is one point.

The other point is regarding incentives. When you go to a restaurant, have you ever been asked to pay with a credit card instead of cash, and would you get an incentive to pay with a credit card or with a card? No. So there is no discount. There are thousands of discount cards, but there is no discount applied in case you do work with an electronic payment. I think the story is a little bit reversed as to what cashless is all about.

S. Nixon:

Victor wanted to come back in. Do you want to respond to some of the things that Christian was saying?

V. Orlovsky:

If I may. I want to resume what Stefan, Christian and Marc were saying. I do believe that education itself does not really help. If you start printing books, how good is that, really? Fake cards or whatever, using e-methods, these do not help. I do mean deep incentives, obviously. Is there any tipping point idea, one idea, that can change the world? I do not think so. There is no one idea that can be such a tipping point. It is a steady, slow effort, a lot of effort put into complex things, so it has to be taken from all sides. We have to take small steps towards an electronic society, a cashless society. Obviously, there are three parties involved. The first is the consumer, the second is the merchant, and then the banks.

I have to admit that so far, the most popular e-banking, e-payment system is bank cards. Bank cards themselves are a legacy. I do believe that there will be no cards in the future. They will be replaced by something, by a watch or a mobile, Google Glass or anything, but there will be something else besides the card. The card itself will disappear since the function of it is only payment and all our devices tend towards some universal mode. Some of us are still wearing a watch that only shows the time, but others wear a watch that shows the time as

well as our weight, pulse, health, or whatever. It will be converted. There will be no one device that is for payment only.

But what I have to admit is that the current payment system is bank-centric, so the beneficiary of the system is the banks. They get the most out of the card environment. I think that the disruption is happening in that side of the business model, so the beneficiary has to be the merchant and the consumer. That is what is happening in the non-banking world. That is how technology companies are trying to disrupt banking, and I think that at the end of the day, they will largely succeed, and the banking-centric environment for payments will be transferred to the consumer and the merchants. Again, what can we all do about that? Definitely not offer another way of paying. If you say that the card is a different way of paying in a restaurant, that you can pay with cash or with a card, it would not really stimulate a person to pay with a card, if it is just one of the methods. It has to be a lot simpler, it has to be a lot faster and cheaper. It has to a be much more secured. In the end, it has to be a lot more fun. I think that that is what the Y-generation is all about. If you do not create it, if you do not gamify it, if you do not make it fun, people will not pay. There are many ways of gamifying the payment and we can use some and we can see how successful they are on a small scale, so that they will be successful on a large scale too. Can we do it in an administrative way? Obviously we cannot do so in many countries. In Russia, we cannot say that starting tomorrow we will only accept cards or we will only accept cash. I do not think that will help, because if it is not consumer-centric, consumers and merchants will always find a way to accept other means rather than electronic payments. They would find a way, so we have to really move slowly, steadily, but surely. Thank you.

S. Nixon:

Thank you, Victor. I am now going to bring Alexey Moiseev back into the discussion.

A. Moiseev:

Yes, thanks, Simon. Victor has said a lot of what I was going to say. I would like to reflect on what Christian, and before him Marc and Dmitry, said, which is that it is a question of the chicken and the egg. What do you do first? Dmitry says that first you need to achieve financial inclusion and then you get cards. But Marc says, no, you need cards, and this way you can achieve financial inclusion. Of course it is the classic question of the chicken and the egg: what is first, what is next. What Christian has mentioned and Victor has then developed further is absolutely right. Things have to be more convenient than cash. There is nothing more convenient than cash, unless you're carrying suitcases, of course, if you do it in everyday life, except for maybe very niche things like core brand cards with frequent flyer miles or something like this, which are really a very niche thing. There is no reason for people to use cards. Banks' online services are getting better. They have obviously gotten much better. But they are still a little more like a toy for computer geeks. Essentially, people will use them if your grandmother can use them. If it is easy for your grandmother, then it is consumer-centric. That is exactly what it is.

Victor has said that it is in the banks' interest to develop a cashless society. I would add what I have already said, which is that it is also in the government's interest. But at the same time, the government has to protect the interests of the people. Therefore, there should be a combination of things. Again, the perfect example is the United States, where everyone is very financially literate, but still people use greenbacks as their preferred method of payment in 40% of cases, according to Marc. So there should be some push from the government as well. I feel that very carefully, here and there, little by little, we should put out blocks that push people and merchants into using electronic money. If we do not do so, then it will happen very, very slowly. We have to ensure that people are not

overcharged and that it is convenient for people, but we have to slowly move in this direction.

S. Nixon:

Can I just ask a follow-up question? Does it make any difference, from the point of view of the government's interests, who owns the payment system, who operates it both in terms of whether it is banks or non-banks, and whether it is domestic operators or national operators?

D. Moiseev:

Well, the answer to this question has already been given by the lawmakers. It is quite obvious to me what you are getting at, so I can quote to you what is written in the law. But without doing that, I think it is of secondary importance whether it is a bank or a non-bank. Of course, typically, a payment engine would get a banking license. I think that is typical. But it does not have to be this way. I guess it is preferred. The question is, what is the difference between domestic and nondomestic? Our clear preference is for it to be domestic, because this is critical financial infrastructure, and clearly we have to make sure that the transactions that are using that infrastructure are uninterrupted no matter what happens. There are certain requirements. There are three processing centres, two of which can be near to each other, but the third has to be something like a thousand miles away from the first two. So there are a lot of technological requirements. In Russia's case, speaking of payment cards, we have 200 million cards issued on Russian territory. We have to make sure that people are sufficiently protected no matter what happens, to continue being able to make their transactions without any interruptions. And the only way that we as the Russian government can make sure of this is to make sure that the physical infrastructure, the physical transactions, are being conducted domestically.

S. Nixon:

Thank you very much. Yes, Victor, you wanted to come back in?

V. Orlovsky:

I just wanted to give you one example. There are a couple which I wanted to mention, but one is very important. The consumers are a lot more loyal to cash than to banks. We discovered that one of the reasons why they are much more loyal to cash is simply because nobody is pushing them to spend. The bank gives you an opportunity to spend and is trying to prompt you to spend more and more. We found a very interesting example in the US. There are a couple of disruptive banks there that are giving the opposite message to the customer. They push you to save. They tell you not to spend. They say they are better than cash, because cash saves you nothing. It is all up to your willpower to spend or not to spend, and they are your partner in letting you spend less. They will stop you spending when they see that you are spending too much. These models are quite successful. So I think that this is one of the ideas behind what we can do to make cards and e-payments much more interesting for the end user, and to make the user and the end customer much more loyal to e-payments and to banks, rather than to cash.

S. Nixon:

I just have a question for you. You mentioned the difficulty of trying to change consumer behaviour, but in some parts of the world, and certainly in Greece, where I was last week, one of the big issues is that it is a cash economy. It has a very large informal or black economy, and people do not want to use electronic payments because they do not want to be traced. There are issues of trust and privacy around that. Is that an issue? How does one respond to those kinds of consumer behaviour issues and building electronic payments?

V. Orlovsky:

Obviously privacy is an issue, and I think that the reason that in Europe and the US 40% of the transactions are still happening in cash is because of privacy. There are many things that you want to pay for which you do not want anybody else to know about. I think that that goes away, by the way, with the younger generation. If you look at the mindsets and the ways the younger Y-population thinks, or the way the digital age population thinks, they do see it completely differently. Everything they do is open. If you look at Facebook or Twitter, or anything else, you see that they show themselves completely differently. They do not care much about privacy, and I think that the privacy issue, the idea that I have to really take care so that others do not know about what I am doing, will disappear slowly. One thing we have now, as an example, is that when you are doing a transaction, when you pay in the shop, we have an app you can use to publish your purchase. You can take a picture and send it to Facebook. The younger generation does it a lot more frequently. They publish everything they spend. They want the world to know what they spend. I think that is one of the things that would help us in talking about privacy issues, and obviously the government can help here by making it much more constrained in the black and grey economy than it is now.

S. Nixon:

Yes, the young will learn one day.

V. Orlovsky:

As they become older, I guess.

S. Nixon:

Marc, do you want to come back on this issue on trust and privacy?

M. Luet:

I agree in the long run that, Victor, you may be right. We see how far this privacy issue goes, because we are seeing a lot of applications emerge now that are not about the right to privacy, the right to be forgotten and so on and so forth. I do not know where we will end up on this. But one striking fact is that, if you look at cash usage in the US, which is at the top of the league in terms of the group of markets that are ready for cashless, cash usage goes across the age bands. It is less related to age and more related to income. It is the income bracket you are in that determines whether you are going to use more cash or not. If you have a lower income, you are more prone to use cash, and having a higher income means you are less prone to use cash, which may be linked to other education factors and dimensions. So the jury is still out on privacy, and age studies on cash usage show that even in developed markets, it is not that clear that it is a story of the younger generation versus the older generation.

S. Nixon:

Marc, is there not an issue that some of the potential competing payment systems that might come out of the non-bank world could address some of these trust and privacy issues better? Is that a potential competitive issue for the banking system?

M. Luet:

There will be increased competition. Ninety percent of the digital financial applications that are being produced or created come from non-banks. They do not come from banks, and that is a staggering number in a sense. Although banks are probably best placed to give it scale. The issue of trust, the issue of where you deposit your information and how weak the protection is, is moving. It is not necessarily located with banks. A lot of the major events that have happened are actually located at merchants or other places. It is not a financial

services industry or a bank industry issue, this issue of privacy and potential hacking and usurping identities and all the rest of it. So it is the entire system we should look at. Others are probably better placed to comment on that, but it is not solely a bank issue. I think it is along the value chain and the payment system. So it will impact non-banks in some of the same ways it now impacts banks.

S. Dab:

I just wanted to make one comment. I think that trust in the banking system is very country specific. There are countries where the trust is very high, and some countries where it is very low. Regarding the competition between bank and nonbank, in my view it will depend very much on what the regulator wants and the rules that the regulator puts in place in terms of anti money laundering measures, and in terms of knowing your customer. If you project a few years out, it is not at all clear whether the pure non-banking player will win, because there are countries that require physical identification for opening an account. If you are an e-money company and you need physical identification for some transactions, having a network is a huge asset, and I think the jury is very much out in terms of the banking sector and the non-banking sector. I was chatting with Victor before we started, and that is why I thought that the acquisition of Yandex Money by Sberbank is extremely interesting, because you have the assets of a physical network in which you can do things that you cannot do online, and at the same time you have this technology platform.

I just wanted to come back to something that Alexey mentioned, which is the cost. I think it is very clear that if you want to move to a cashless society, it has to be cheap for the merchant and for the consumer. That is very obvious, and I think that one of the things that we observe in emerging markets is that the fees in emerging markets are still quite high, so electronic payment is still quite expensive. I think that some of the countries in emerging markets will also have to think about the pricing of their services and elasticity. If you take a market like

France, then it is a market where the fees are very low. The fees are very low, but usage is very high, and if you look at what the revenue is per capita, it is quite high although the fees are quite low, because usage has been promoted. I think that banks and regulators will really have to think in quite a smart way about what the right level of fees is, what the right level of interchange for these services is, and about how to make the cost of cash more transparent, which is very important because one of the big issues is that the merchant does not see the cost of cash, but does see the cost of electronic payments. I think that on that topic, the regulator has to be really thoughtful about how to provide the right incentives on the cost of cash and the cost of non-cash. I think that banks need to be very thoughtful about the full benefits of doing electronic payments. When you look at the full benefits, the interest margin, the fees, the value of the customer relationship, you will see that you may want to lower the price of services to clients. I think it is a key topic for the regulator and for the bank.

S. Nixon:

Victor, do you want to respond to that? We are running out of time now, so if anybody has any final, very brief comments, just let me know and we will wrap up. Alexey?

A. Moiseev:

Thank you very much. It is true, of course, what Victor has mentioned, that taking away a physical printout at a POS terminal would be one thing, of course, and there are a lot of similar things which we can do on the government side to make these costs lower. My question is that we also have to make sure that there is no illegal behaviour when costs are much higher than the actual costs and those economic profits are extracted out of transactions, which is much easier to do as opposed to when there is cash. When there is cash, it is obvious, and people never bear the cost of having cash. Cash is expensive to keep, it is expensive to

transport, expensive to count, and even the current technological levels of counterfeiting are becoming very, very expensive to produce in relative terms, but I think that Stefan made the right point. People do not really understand. People have cash in their pocket, and for them it is free and for them it is safe. What is more important is that when they lose cash out of their pocket they blame themselves. When something similar happens, because they keep the pin code in their wallet alongside their card or something like that, it is their fault, but they still blame the bank or the payment system. I think it is very important that people are educated, and not just about how to be careful with their cards. It is almost like with airplanes in a sense. Everybody knows that 10 or 20 times more people get injured or die in car accidents, yet when there is an airplane crash, everybody talks about it, it is in all the newspapers. It is almost the same. How many people get robbed and lose their cash? I do not know how many tens or hundreds of times more than people who lose their money through credit card fraud. Yet when there is credit card fraud, it is always in the newspapers and everybody is concerned about it. There is this information asymmetry. But it is not that we should blame the press for it, it is just that banks and payment systems have to work very hard to make the cards even more secure. Again, Victor mentioned the switch from stripes into chips, and there is a new technology now coming along, and so on and so on. I think that the key thing is not only cost, but also the safety of those transactions for the people.

S. Nixon:

Thank you very much. I am very glad that you are not going to blame the press. That ends on a good note. I think that is all we have time for in this session. Thank you very much indeed to the panel. Thank you very much. Goodbye.