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The State of EMV
TRANSCRIPT

Nicole Machado, Director of Card Services
Greg Kuyava, Senior Product Manager, Card Services

Greg: Thank you for participating in today's call — The State of EMV. Today's speakers, you'll have myself Greg Kuyava, I'm the senior project manager of card services in marketing as well as our trade show associations, and then also joining me today is going to be Nicole Machado who is our director of card services.

For the call today, all participants will receive a copy of today's presentation, and that will be emailed to you after the call. We will ask you that if you want to ask any questions, we have two ways for you to be able to do that. Number one is at the end of the presentation, you can ask a question via the phone line. Jamie will come back on and give instructions on how to queue up and get in line to ask that question and we'll give those instructions once we're done presenting. The other way is if you use the chat button, and you can send that chat either to the MarTech at Harland Clarke or all panelists in the Send To option. If you can send it to all panelists that would be fantastic. We do request that you do not use the Q&A if that is currently showing up.

Today's call and how we're going to handle it is we're going to do a real high level overview of EMV, what's it about, what it looks like, what it is throughout the market both internationally and domestically. We're going to look at some of the key dates and deadlines and things that have passed and are coming up, then we're going to get into the heart of what really was a catalyst behind this webinar today and that is the results of a survey that we sent out earlier this year.

Once we handle the results of the survey, we're going to go into best practices for implementing an EMV program, and then we're going to tie it all together in a nice neat little box with a ribbon on it and tell you what Harland Clarke card services can do in order to be able to help you with implementing that program

With that being said, I'm now going to turn it over to Nicole Machado who will walk us through and EMV overview.

Nicole: Great, thanks Greg. I appreciate it. Let's just start off with what is EMV. EMV is a global specification standard that governs transactions between a chip card and merchant terminals, and the acronym comes from the initials of Europe, MasterCard and Visa, which were the payment networks that originally developed the specifications back in 1994.

EMV technology is mostly sited for reducing fraud and increasing security but there are other benefits to EMV such as guaranteed interoperability between countries. So when you're travelling— which we're hearing mostly here in the United States— if we try to travel abroad with our magnetic stripe cards, sometimes we're not able to use them where we want to. And there is the potential to really boost card and payment innovation; a gateway into the emerging technology such as mobile payments and such.

The US is one of the last major markets to adopt EMV, and there are some significant reasons for that. When markets outside the US were developing their payment infrastructure, the chip technology mostly at that time in the form of a smart card was available. Those markets really incorporated the chip technology into their

infrastructure and chip technology would work with either the smart cards of the past or EMV, the infrastructure itself would fit both. Here in the US the payment infrastructure has been well developed and the magnetic stripe technology has served the industry well and has been reliable. And it's been inexpensive to run. As global markets adopted EMV, card fraud really has begun to migrate to the weakest point in the payments chain which really now is here in the US.

The card associations took notice, and when I say card associations— MasterCard, American Express, Discover— all decided that they no longer want to hold the risks for magnetic stripe card transactions where there's a safe and less risky transaction available in EMV. Since the card associations in the south can't mandate a change across the east coast systems, they decided to put a series of liability shifts in place. The liability shift really means that the entity such as a merchant or an issuer that is not supporting the EMV transaction will be liable for fraud if on that transaction it occurs, and that's really what we're talking about when saying liability shift.

There are a couple of key dates when we're talking about liability shifts and each association, be it MasterCard, Visa, American Express or Discover, has laid their own road maps of when they're going to make changes and when they're going to put these shifts into place, but these dates are fairly global.

In 2013 merchant acquirers really needed to step in and be able to support EMV transactions so that they could own the rails.

In 2015, and this is a date where a lot of financial institutions and the industry is looking towards, is when the major associations announced the liability shift at the POS merchant terminals except for an automated fuel dispenser. This is really the dates that's on everyone's mind.

In 2016, MasterCard has announced that they're going to do a liability shift at the ATM. It's unclear at this stage if the other associations are following, but definitely MasterCard has said in 2016 that's going to happen.

In 2017, most of the major associations also have announced that the liability shift at the automated fuel dispenser will happen.

The reason why this has been delayed a bit is because if you think about when we go to the gas station, we use the automated fuel dispensers, all of those terminals are going to need to get reworked because if you think about an EMV card, they're inserting the card into a reader and leaving it there for the plates to make contact in the terminal itself. If we left our card in one of those terminals at the automated fuel dispenser, it would get cobbled up right away so it's going to take a little more work to get those on line.

With EMV on the horizon, we here at Harland Clarke were very curious as to where our current clients were in the past in the process, so we developed an EMV survey last spring in order to get a temperature check on where folks were. We just redeployed the survey to a broader audience within the last few weeks and will continue to do that every few months in order to benchmark the results and determine where folks are in the process. With that said, we thought it would be interesting to share the results of the original survey.

Greg: Thanks Nicole. I'll take over from here. Just to give you the size and the scope of the financial institutions we surveyed, as Nicole had stated, that these were current clients of ours. We have assets ranging anywhere from $50 million all the way up to over $1 billion dollars, and then the card volumes which we also thought was

important to share with you, annual volumes ranging anywhere from someone on the 25,000 annual volume range all the way up to more than 100,000 cards. Results here include a wide range of financial institutions, a wide range of markets that are being served, and I feel that there's really something relevant as far as information for everyone that's participating today.

With that being said, we're looking forward to this most recent deployment coming back to us and being able to benchmark what this survey said and then moving forward and continuing to have these updates available to you and anyone in the market that's available and looking to Harland Clarke for product knowledge and information.

Let's get into the actual survey itself, some of the questions and what they've told us and what your peers are looking like. One of the questions was, and the very first question, 'Has your financial institution started researching EMV?' What we're looking at here is that 26% of the individuals that answered said no they are not, where over 74% said that they are ready.

Over 25% of your peers or the financial institutions in the market right now have not started researching EMV that have admittedly come to the table and said 'you know what, we heard about it, but we haven't done anything, we haven't made phone calls, we haven't looked on the web, we haven't done anything.'

The other 74% that said that they have started, what we're learning is there are various levels in which we have started and with the levels of research that they have conducted.

Harland Clarke card services gets called on a weekly basis on just that very question, 'Where do we start? What's going on? Who do we need to contact?' Certainly of those 74%, those that have started, many of them are still going to be in the infancy of that whole process, and what I would highly recommend is that every week there are numerous articles being added to the internet and information that's available. The different card associations are excellent sources for research and information. Regardless of where you are on your project plan, what's going to be real important, with the 2015 deadline coming, is education and understanding where you are and where you need to be. And then where you are compared to your readiness of your peers will be key.

Those that have started, we ask them 'Who have you engaged in your whole process and research?' A couple of the numbers that jump out immediately and the highest ones here are certainly that they're using multiple resources; everything from the EFT processor in card association all the way down to their card manufacturer. Those that tend to be discussing things with their card manufacturer would probably be a little bit further along in the whole process, but there are multiple resources that are being engaged, and I think this is a key theme that you'll hear us talk about throughout is that the whole process around EMV and implementing the program is really going to be a team effort.

35% right now start with a card association, and in my humble opinion, I would think that that is the most important place for you to start.

You need to reach out to Visa or MasterCard or whatever card association that you're using and go through and start getting engaged in the conversation. They'll be able to work you through a questionnaire that will help you determine not only what type of risk and fraud deterrence you can put in place, but the type of chips and the program in the platform that will work best for you. It really will be a team effort. You really do not need

to just concentrate on the card associations, but start including your EFT processor in your card personalization. What you want to really do at the beginning is you want to make sure that everyone is on the same page, and that you get the programming correct and that all, whether it be a platform and a certain type of chip or whatever type of parameter to your program that your EFT processor, your card association, your card issuers or even your card manufacturer are all in synch.

Then we asked the question 'How knowledgeable do you feel you are in about implementing an EMV program?' If you look at the two responses on the left hand side of this circle, you have 17% that say 'I don't know where to start' and another 30% that say 'I'm somewhat unknowledgeable.' Those together add up to 47% that really don't quite know either where to start or maybe just haven't done enough research so far in trying to get this program up and going. Hopefully today's presentation will give you some additional direction on where you need to be starting and who you need to be talking to.

I think what's also important here is that you need to consider your time and staying ahead of the curve. Knowing where to start and starting that process of implementation and talking to the right teammates, players, your card association, your EFT processor is real important. And just because you understand what your needs are. And just because you understand you know what platforms and what chips or cards. You need all those things. And that doesn't really mean you have to implement the program, but you'll be able to do a lot of your homework and get a lot of the busy work done on the front end, and then at some point when you are ready to implement the program at a timing of your choosing, you would have done all of your work ahead of time. You'll be much quicker to the actual market itself. We still have a lot of your peers out there that are sitting right at that 47% to 50% saying 'Not quite sure what we need to be doing or where we need to be going.'

Now we look at the time frame for implementation. What really stands out here is that 43% of the peers of the financial institutions surveyed are sitting at 18 months or greater as far as implementation. This actually doesn't surprise us, because we do get a lot of feedback from financial institutions on a weekly basis that they're taking a wait-and-see approach. They want to see whether the market really adopts it. They want to see whether their peers in their market start handing out EMV cards, and what method or in what type of issuing distribution method they use. Do they do it all at once? Do they do it one off? A lot of people are taking a wait-and-see approach.

And there are other things that are happening in the market that are making people take a wait-and-see approach whether it be going what's going on with Durbin and how that relates to networks on debit cards and such. At the end of the day, your timeframe will be determined by how you feel about the liability shift and what it means to your financial institution, and at the end of the day, that's going to determine the urgency of when you need to implement this program.

Understanding the liability shift and what that means to your financial institution will determine whether if 18 months or not is appropriate or you need to be into that 12 to18 month type of timeframe.

Nicole: I will continue on with some of these results. The next question we asked is 'How to and whom are you going to roll out your program to? How is that rollout going to look?'

There really are a number of different rollout approaches to EMV whether it's doing it in a very small calculated roll out such as if your financial institution has a lot of international travelers. Or perhaps you have a very high end set of customers or members that you are needing to be sure that when they travel abroad, there's not going to be any problems.

There are rollouts that you can do just to portions of your card portfolio. Of course the way the US has done it, at least for the last few years, is a lot of the large financial institutions have really rolled out EMV on request. So if you're a cardholder, and you knew you were going to be traveling, and you called one of the larger financial institutions, they would issue you an EMV card.

Some folks are looking at doing the rollout as they reissue cards. As you can see here on the side, the majority are not looking to do a big mass reissue of cards. Most people are stepping into the EMV rollout and likely there are some cost considerations as to why that is happening. Also, as Greg alluded to, there is still some uncertainty in the marketplace that folks are uncomfortable necessarily going all in at the moment, but want to definitely get going in that direction.

Next, we asked 'What is your main reason for migrating to EMV?' As you can really see here, it's largely financial. 71% of the respondents really recognized the financial risk being that they answered that the liability shift was going to be a big concern of theirs, as was having the card be a fraud deterrent. The message about EMV and it being a safer card in the marketplace, one that reduces fraud, really has been heard, and we can see that here on this slide.

Then we started to ask 'What type of EMV program are you considering?' There are a couple of different ways you can go. Something really worth noting is that all EMV cards that will be issued here in the United States will still have a magnetic stripe. The reason for that is that there needs to be some type of backup method for authenticating transactions if something went down. When we talk about EMV only, what we are saying there is that we'll have the contact chip, and it will also have a magnetic stripe. That will probably be your least expensive way to roll with EMV.

The next option is called dual interface and that is having the contact chip as well as an RFID contactless antenna. This would be a more expensive card both from a plastics perspective and from a personalization perspective. However this really sets up the gateway to the more emerging markets such as mobile, and as we can see here, this is still something that people are really grappling with. Folks are still determining which way they want to go. There's not a clear direction.

Lastly, this was an open ended question that we had at the end of the survey and when we looked at the responses, it really fell into these top four buckets, and as you can see there, number one and number two—cost of implementation and cost of reissuing and card production being huge concerns.

In general, I think for most financial institutions and for most people in the market, cost is a huge concern because it's not just the cards, it's not just the plastic for the personalization process— we're looking at ATM infrastructure, needing to determine the processors and networks that you have as your partners today. Are they going to be the right ones going forward? There are a lot of things to consider and that is really on the top of everyone's mind.

The third one there, people are still unsure if EMV is going to take hold here in the US, and they are nervous about that acceptance and that is a big concern.

The last big over arching theme was people just did not know where to start. It's such a daunting process, and they were very concerned of how to even get started. We have basically seen in the last slide and what Greg was saying, all of those things point to these big concerns and challenges with the implementation.

Greg: Excellent and thank you, Nicole. Now we have taken a look at the results of the survey itself, and we can see where your peers fall into their readiness and of course you can obviously place yourself within and find yourself within the results knowing where you're currently sitting. I think the next natural question comes to 'What do we need to do? Where do we start as far as it comes to implementation?' We are going to take a couple slides and go over exactly what that looks like.

First thing I think that's the most important is that you understand your cardholder needs. Nicole had mentioned this earlier at the top of the presentation. Do you have a lot of travelers at this point and that seems to be driving a lot of the usage and the requests from the financial institutions that we are talking about? People that are going overseas wanting to use the cards anywhere outside the US and being able to have access to their funds when traveling with only a magnetic stripe or needing to be able to travel with an EMV card? How does that relate domestically? As Nicole had mentioned just a couple of slides back, EMV cards will continue to be able to be used with a magnetic stripe. What it comes down to is understanding your cardholder's needs, where their demands are, and then how that lines up with the fraud and security and the risks that you are willing to take on or put yourself in with the liability shifts.

Lastly I think we also need to engage your card partners. Make sure that you're talking to your card associations, your processers, getting your network and the card producers, both your card issuers and your manufacturers on board and understanding the related interdependencies. Different chips, different platforms in which those chips are able to run off of, whether it be on native or Java or Multos or different platforms that they can run off of; whether you need to do just EMV or contactless only; or whether you want to do a contact and RFID type of chip which would be considered a dual interface. And then outlining those program parameters; working with your card association in particular and understanding what your needs are and what the parameters are of the program that you need that best suits your financial institution. Once all those are in place you'll be able to begin identifying what your conversion and programming costs are to move from a magnetic stripe only card portfolio to an EMV card portfolio.

Last but not least, we need to make sure that we are doing something along the lines of education for both your employees who will be fielding a lot of questions around EMV— 'How can I use it? Where can I use it? What's the purpose of it?'— for your cardholders not quite sure why their card looks different.

The bottom line is I think that you need to communicate that out, and I think electronic communications are a great way to do it to slowly introduce it, helping to understand exactly what EMC stands for, what markets it's being able to be used in, what the United States is transitioning to and what your deployment plan is and what they can expect in the next couple months or years, whatever the case might be. It really comes down to understanding what your cardholder needs are, looking at what that means to your institution's fraud risk and cost trends that determine your urgency of implementing this. Making sure you put that team together that includes your card associations and your EFT processors. And then it's never too early to start educating your

employees and your cardholders about what your plan is because even though they may not be hearing it from you, they are probably hearing it when they are out and about doing financial transactions.

Nicole: There are a number of decisions that really need to be made initially that are going to impact the cost of your implementation. There are two big ones up front; one, as we had mentioned, was the card type— deciding whether or not you are going to do just a chip only card or are you going to do the dual interface with the EMV contact chip and the contactless RFID. Making that determination will start driving what size chips should be placed on the card and how you are going to set your program up, so that becomes an important decision of front. Then you need to determine the method of cardholder verification, and EMV offers flexibility here. You can choose several and put them in priority based on what type of transaction was presented. It's very important. Obviously the cardholder verification is a means of authenticating a cardholder so you could do off-line PIN which is very big in Europe because most of their infrastructure is not online, and so a lot of automated ticket dispensers at the rail stations, etcetera, would be off-line, so that inserting your card and then putting in a PIN number and authenticating that way.

Then there are online PINs. Their signature verification which we do mostly here in the US today. There is the option to choose no CVM, so for transactions that are less than $25 you're not going to do them any type of cardholder verification. It's really important to get with your card associations to understand the implications and what is right for your organization.

If we go to the next slide, 'how can Harland Clarke help?' Currently, Harland Clarke and our partners are fully capable of supporting EMV card manufacturing and personalization. What we would really suggest, and Greg has alluded to this in number of times throughout this presentation, is that it is very important to reach out to your card associations be a MasterCard, Visa, American Express or Discover. All of those entities have tools that will help guide you on how to set up your security profile, determine your cardholder verification methods, set up your program outline and really work with them to open up a project so that you have an outline for how you want your program to work. That way, the rest of the players, the card manufacturers, the card personalization vendors and processors know how they need to be supporting you, know what kind of pricing structure needs to put into place. Again as Greg had stated, the EMV implementation requires a team and that team includes the card association, the processors, networks, card manufacturing, partners, personalization vendors and of course the financial institutions. It's really necessary that all these groups work together in order to ensure a smooth migration into the EMV ecosystem.

Greg: Thank you Nicole. I would also just add to that as far as what Harland Clarke can do to help. We get requests again for things like 'Can you provide me pricing on what my cards are going to cost?' and things like that, and until you actually are able to go through the full process of working with your team and what parameters your EMV program is going to look like and all the things Nicole had mentioned— the size of the chips, if you wanted a certain color be it gold or silver, there's a certain programming platform that you need whether Java or Multos or a native type of platform. Until you are set and you have determined what those parameters are, all pricing details that we can provide up to this point will be more ballpark. We can give you a certain size chip and what that's going to look like, but in order to get down to your actual cost, I can't say it enough, until you go through that process then we would be able to give you more exact pricing, which will then also help you understand what you're programming charges are going to be to issue the cards to your personalization provider and things like that.

That concludes the presentation part of our webcast today. We would like to open it up for questions and before we do that, I would just like to remind everyone that you will be receiving a copy of this PowerPoint after today's call.