The worst of both worlds – the problems with the EMV shift in the US

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On 1 Oct 2015 we saw the anticipated and arguably long overdue EMV liability shift in the US. Some 10 years after Western Europe, and 20 years after the technology was developed, EMV cards (ie, payment cards with a chip to encrypt the information held on cards) were finally to become the norm for US consumers.

The liability shift meant that if merchants suffered card fraud and they did not have EMV-enabled card readers then they would be liable for the costs of that fraud. It was hoped that this would encourage merchants to make the necessary investment in the machinery needed to accept EMV cards.

Prior to the liability shift, the majority of payment cards in the US used the magstrip to store the card information. Magstrip technology has its roots in the Second World War. This venerable, obsolete technology is easy to hack and easy to clone. It is very much an analogue technology in a digital world. And yet it took the US a surprisingly long time to ditch the magstrip and adopt the chip.

EMVCo figures from the first quarter of 2014 showed that while 96.33% of all

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card transactions in Europe Zone 1 (all of Europe save countries in the former Yugoslavia and former Soviet Union) were made using encrypted cards – in the US, this figure was a minuscule .03%.1

What, then, was the tipping point that led to the US adopting EMV? In 2014, there was a significant number of high-profile breaches in leading US retailers. Household names such as Target, Michael’s and Home Depot all suffered damaging data breaches, with millions of card holders finding their personal details compromised. Out of the 1,500 reported breaches in 2014, 1,164 were in North America, almost 78% of the total number.2 North America truly was the epicentre of the card fraud storm.

It was estimated, prior to the liability shift, that the total costs of making the US EMV compliant would be $8.65bn, a considerable sum of money.3 The 2014 breaches clearly convinced US card issuers that this was, finally, a sum worth paying. And so in October 2015 the long-awaited liability shift happened. What has happened since? Has there been a drop in fraud? Has it been a success?

Card-present fraud

MasterCard has recently reported a strong uptake in EMV chip-enabled cards, stating that as of June 2016, nine in 10 of its cards in circulation in the US have EMV chips.4 It also announced that one in three US merchants now have EMV terminals.

In terms of fraud, MasterCard has released data that show a 54% decrease in counterfeit fraud costs between April 2015 and April 2016.5 This is good news from MasterCard and is surely indicative that the roll-out has been a success. But not entirely.

Only one third of merchants have EMV terminals and the 54% decrease in counterfeit card fraud is only for merchants who have EMV-enabled payment devices in-store. For larger merchants who have yet to adopt this technology, there has been a rise of 77% in counterfeit card fraud.

What, then, could be causing this? Where there is a window of opportunity fraudsters will take it. And in this situation the opportunity exists to continue to carry out counterfeit card fraud. While MasterCard might be proud of the one in three merchants who have adopted EMV payment technology, the fact remains that two in three do not. This means that the majority of US merchants are still open to the same old frauds as before.

Chip and PIN

In Europe, chip-encrypted payment cards are given a further layer of security by cardholders having to enter their PIN on the payment device at the point of sale. In the US, though, this is still far from the norm. For the most part, the authentication of the card holder is still being done via the signature.

While the addition of the EMV chip in cards might help prevent the cloning of card, by not using the PIN it is doing nothing to stop stolen card fraud. A signature is easy to forge and, as US shoppers will testify, isn’t always checked as rigorously as it could be (if at all). So this takes away much of the power of the technology.

Provided that the PIN is kept secure and not shared with anyone, it is a very secure and simple method of in-store authentication. Without this critical part of the EMV equation, payment cards are still far less secure than they could or should be.

There is also a significant amount of anecdotal evidence that where EMV payment devices are installed they are still not being used. This could be down to a lack of training for staff and a lack of education for consumers, but it is symptomatic of the fact that the launch of EMV in the US has been, at best, half-hearted.

It is to be expected that the PIN part of the Chip and PIN process will come into play in the US but this will require more education both for retail workers and consumers.

CNP fraud

In the run-up to the EMV liability shift in the US, fraud experts expected a rise in card-not-present (CNP) fraud. Drawing on the example of the UK – where in the 10 years between 2004 (when EMV was first introduced in the UK) and 2014, CNP fraud increased by 120% – something similar was predicted for the US.6

While figures for the past 12 months are as yet unavailable, there is some evidence to suggest that the predictions are sadly coming true. Figures from the end of Q2 2015 to Q1 2016 (which takes in six months of post-EMV activity) suggest that there has been a 137% rise in CNP fraud in the US.7 To understand what this figure really means, compare it to the UK where, between 2014 and 2015, there was a 20% rise in CNP fraud.8 Of course, EMV protocols are well established in the UK.

This triple digit rise in fraud seems to suggest that, as predicted, fraudsters in the US are now turning to online fraud in large numbers as the counterfeit card
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