

## EMV<sub>2</sub>: Extracting Maximum Value

Implementing EMV is a very heavy investment for card issuers, acquirers, and often also for processors and retailers. It will be competing with other projects for the same funds, and so EMV project managers must be aware of the ways in which they can maximise the return on this investment. We can call this EMV<sub>2</sub>: Extracting Maximum Value from EMV!

### Fraud, credit and customer management

Too often, the case for EMV is made purely on fraud savings, and in particular on counterfeit fraud. Certainly, this is an important area; chip cards are hundreds or thousands of times more difficult to counterfeit than magnetic stripe cards. In a country like Taiwan, where counterfeit fraud is around ten times as prevalent as in most other countries, there are large savings to be made here.

Adding PIN cardholder verification attacks a further area of fraud: lost and stolen cards. As with counterfeit fraud, though, the move to chip cards does not remove the fraud threat: it simply means that the card itself is no longer the weakest link in the chain. The systems behind the card must also be examined closely, and it is likely that further upgrades will be needed in order to strengthen other areas.

EMV transactions yield much more data than magstripe: if this data is used intelligently, then both acquirers and issuers have more opportunities to spot abnormal transaction patterns, and thereby limit their risk. Acquirers should be able to spot patterns of merchant fraud, and issuers may better understand their customers' behaviour.

This information can be used to manage credit risks as well as fraud: card characteristics can be changed dynamically in response to signals which might indicate a change in a person's spending habits, or in response to a lifestyle event (such as parenthood or promotion). Active risk management can be used to encourage card spending by the creditworthy as well as to reduce spending by those who may have difficulty paying. As yet, few banks anywhere in the world have developed systems sufficiently refined to make use of such data (see Figure 1).

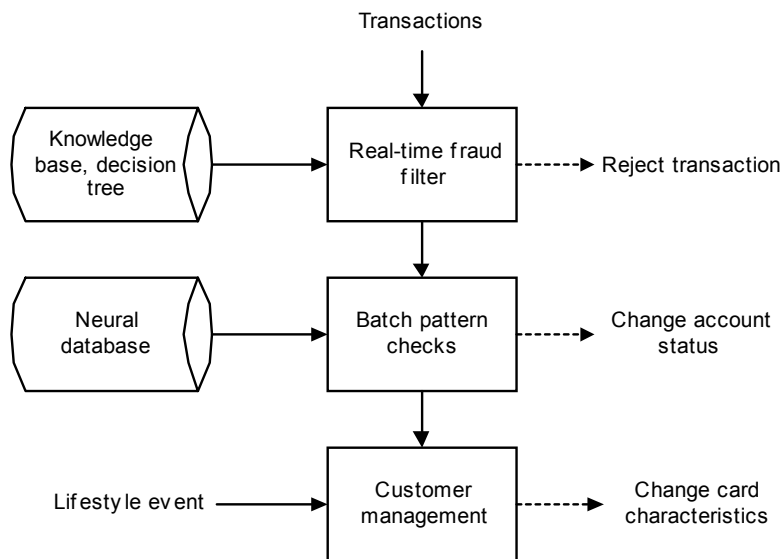


Figure 1: Transaction, customer and card risk management

It is only by using such a system, however, that card issuers can approach the goal of the "segment of one" which they claim they are aiming for. There is evidence that customers do

understand when they are genuinely being treated as individuals, and that they respond positively to such personal treatment, which helps to counteract the impersonal feel of many modern banking practices. Customers may actively seek cards which offer a more personal service, and be prepared to pay more for them than for a generic card.

### Further card applications

If a multi-application card is used, then issuers can consider which applications will yield the maximum value.

The range of possible applications can be viewed as a sequence in which banks stray further and further from their core competence. Some banks will prefer to stick very close to their core competences, others may be prepared to set up new divisions or joint ventures which allow them to operate in these areas without undermining their unique status.

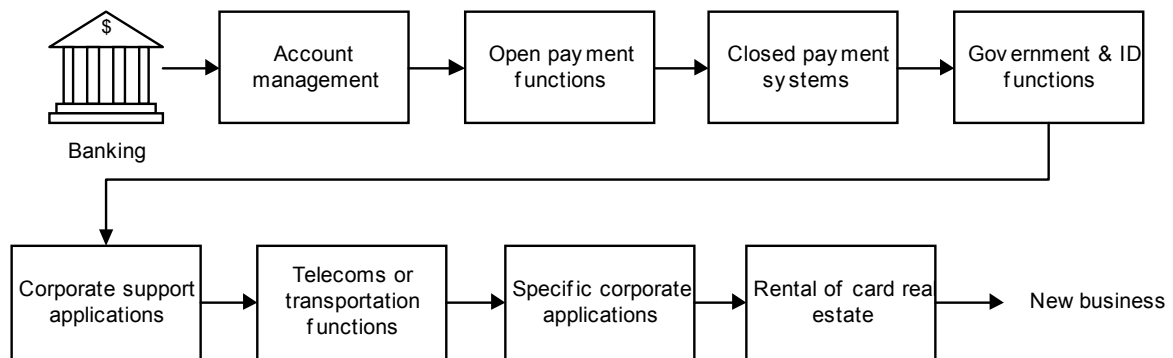


Figure 2: Issuer added-value applications

Closely linked to the credit and debit card function is that of **account management**. The card can hold additional data about the holder: linked accounts, status, lifestyle status etc. The customer may be encouraged to maintain some of this data. Such functions allow more customer self-service as well as helping in the individual customer management already described. This group would include bank loyalty functions.

Chip cards are ideal for supporting other **open payment functions** such as electronic purses and Internet payments. Taiwanese banks are already well aware of the opportunities in this area.

The technology also supports **closed payment systems** such as vending, transportation or telephony, where a store of value or account is linked to the provision of a single service from one or a specific group of suppliers.

Many **Governments** have sought the support of banks in issuing identification cards, or cards for accessing Government accounts. In some countries, such as the United States or United Kingdom, this would be regarded as being a long way from the role of banks, but in others, including Germany, many banks already have strong links with national and regional Government and they are regarded as natural partners.

Support for **generic corporate applications**, such as retail loyalty, building or computer system access control, or purchase authorisations, can be offered to business customers, particularly on corporate or purchasing cards.

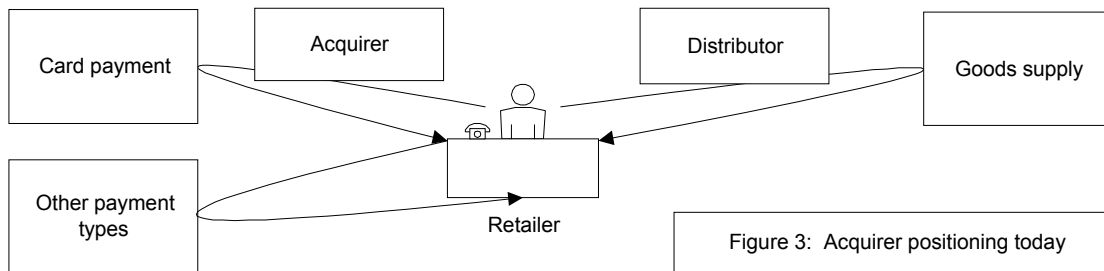
Some more specific functions, such as **telephony or transportation**, may be regarded as sufficiently generic to be offered to all customers, whereas others would be offered as part of a partnership between the bank and the service provider. Such cards would probably be co-branded.

Many card companies emphasise the value of the card “**real estate**” – both the marketing value of the physical card and the ability of the chip to store other applications. Certainly, most banks issuing multi-application cards will have to install complex application management systems which can be extended to **manage applications** from other sources. The commercial relationships and liabilities involved are usually more complex than the technicalities of these arrangements.

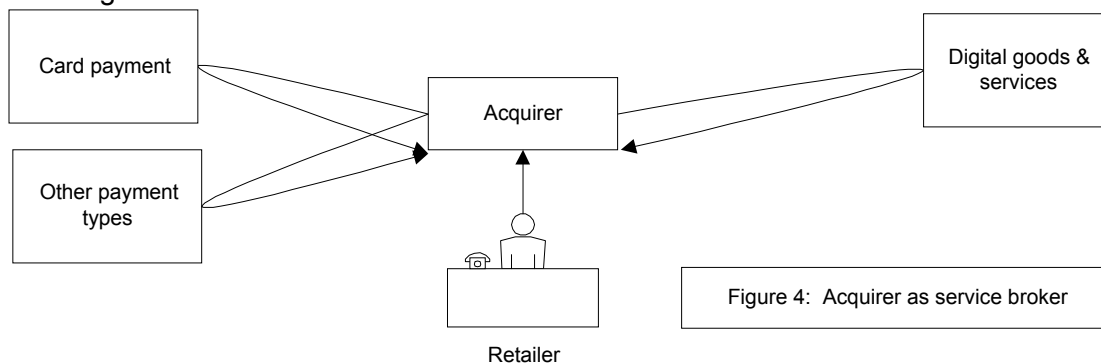
### Acquirer opportunities

Whereas the benefits for issuers are clear, the business case for acquirers migrating to EMV is often much more difficult to make. High costs for purchasing and upgrading terminals are not automatically offset by any extra income or lower costs. Where issuers have extra processing in authorisation and card management systems, acquirers must upgrade their networks to handle the extra message data, and install terminal management systems capable of managing the more complex terminals and cryptographic keys required by EMV.

Making use of these upgrades requires acquirers, or acquirer processors, to reposition themselves in the retailer’s value chain. Today, the acquirer acts as a distribution channel for card payment services (see Figure 3). It is not involved in other forms of payment or services.



Acquirers could, however, use their terminals and networks to handle other payment instruments and to manage the retailer's acceptance of cash, cheques and travellers cheques, foreign exchange and Government vouchers. This becomes a turnkey payment handling service for the retailer.



Several acquirers have already started to act as a service broker (see Figure 4), initially for pre-payment services such as mobile phone top-ups and Internet time. They can then move into lotteries, utilities payment and information services. Loading transport cards is another attractive area, but is likely to require contactless card readers. A further stage is for the acquirer to become an information intermediary between branches and Head Office, or for common business services such as credit checking or ordering.

### Processor opportunities

In many countries, including Taiwan, issuers and acquirers subcontract many of their technical functions to a non-bank processor, which provides a service on behalf of many

banks. Such processors may have to carry a large part of the EMV investment, and it is also important for them to be able to profit from that investment; this may reduce the cost of services to their bank customers.

Even where banks carry out these technical functions in-house, there is a world-wide trend towards making such operations into stand-alone divisions, able to source and deliver services outside the bank.

Processors can offer either card management or terminal management to the many other sectors for which these are completely new functions, including telcos, transportation, central and local government, and retailers. This is potentially a very exciting business and could certainly keep most processors busy for many years.

### **Retailer opportunities**

Often retailers will also have to make significant investments in EMV also: many own their own payment terminals, or have integrated payment into their point of sale and retail management systems. They must upgrade these terminals, networks and management systems to include real-time management of terminals, applications and keys. This gives them a very flexible and powerful system capable of delivering a wide range of services using the card. We have already discussed some of these services under acquiring, but within most retail sectors there are opportunities for specialised services using customer data held on a card.

For example, clothing shops can keep a record of a person's size, preferred materials and any modifications they have needed in the past. Pharmacies can keep records of prescriptions and other medicines, to check compatibility. Foodstores can make a person aware when their favourite foods are in stock or on offer.

The retailer opportunities fall into four categories:

- They may **offer more services** (generic or sector-specific), thereby increasing footfall or increasing the contribution per customer visit;
- They may **increase the added-value** within the service they are currently supplying (e.g. through personalised services or loyalty);
- They may **decrease costs** by encouraging customer interaction, self-service and out-of-hours operation;
- Or they may just **collect more data** and thereby target their marketing and product selection more accurately.

### **Common goals and potential conflicts**

Common to all these positions is the players' desire to maximise the value they add and to be as close as possible to the end customer. Everyone wants to avoid being the supplier of a commodity product. Banks in particular are seeking to defend their position in the overall card industry, and to maintain their unique status as guardians of the customer's financial interests, but at the same time they want to justify their investment by providing additional services.

Often partnerships will be the key to providing an integrated service, but banks have not traditionally been good at setting up and maintaining customer-facing partnerships. The rapid speed of change in card technology also works against the stability which is important to most banks' strategies.

It is certain that the advent of multi-application smart cards offers many commercial opportunities to add value. The question is: which organisations will prove most nimble and able to profit from these opportunities?