

The First Commercial Launches of Biometric EMV Payment Cards

After the great success of contactless (dual-interface) debit and credit cards over the last decade, and especially during the Covid epidemic, new developments have focussed on increasing the security of contactless payments at POS. The most successful of these has been the incorporation of cardholder fingerprint authentication within the card itself.

This development addresses some important current requirements – Strong Customer Authentication (SCA), no changes required to the POS terminal infrastructure or to customer behaviour, addressing cardholder concerns about privacy and security as the maximum transaction limits are raised, protection against lost/stolen cards, and PIN/touch-free transactions. As the technology has developed (improved fingerprint capture, and the inclusion of all related processing in the card's main chip) costs have fallen. The main outstanding question is still “How much will it cost the cardholder?” We now have some answers.

The main EMV card schemes – Visa and Mastercard – have updated their specifications, including their type approval specifications, and have already certified a number of EMV biometric card products. They have also actively participated in pilot trials. At the end of 2021 there were 20 pilot trials active around the world. After a pause while the lessons of earlier pilot trials have been digested, a number of commercial launches* have been made.

The first of these launches was carried out in France by **BNP Paribas**, following initial trials in 2019. The bank is the largest in the Eurozone and operates in 72 countries. It owns banks in Belgium and Italy. The launch of the biometric card consisted of an offer to all **BNP Paribas Visa Premier** cardholders in France, who currently pay an annual fee of **€134**. The additional annual fee for the biometric authentication feature is **€24**.

The BNP Paribas biometric card is supplied by Gemalto/Thales, the largest EMV card supplier in the world. The chip supplier is Infineon, which supplies chips for over 50% of the 12 billion EMV cards in the world. The fingerprint sensor is supplied by Finger Print Cards – the market leader.

** The word “launch” is often used for a small scale trial, or for a product definition. These may or may not lead to a commercial product that cardholders can apply for.*

The next bank issuer to launch was in the **Credit Agricole** group - the second largest bank in France. In a similar manner to BNP Paribas, the cards are **Gold Mastercard** and **World Elite Mastercard** cards – both are premium cards with annual fees. The card supplier is IDEMIA, a French company.

These French banks with their French card suppliers show that France is clearly in the lead with implementation of biometric payment cards.

In the UK, **RBS/NatWest** bank seems the most likely first commercial issuer, again with **Gold Mastercard** and **World Elite Mastercard** cards.

The two common features of these launches are the target cardholders, who currently pay an annual fee for their cards, and the offer of an optional additional functionality, for an additional fee.

Other issuers of fee-paying cards are likely to follow, to attract new high-spending cardholders, & to prevent existing valuable cardholders from migrating to rival issuers.

The future size and shape of the biometric EMV card market will depend on the uptake and success of these first biometric card launches.

When biometric cards become widely distributed, banks will need to look at other areas of their operations. ATMs and branch terminals are clear targets to upgrade, in order to take advantages of the card's customer authentication ability. This would address the requirements of Know-Your-Customer (KYC) and Anti-Money-Laundering (AML).

The recently announced development which allows the fingerprint sensor to be put **under** the PVC layer of the biometric card looks very promising.

The next mass market for biometric card technology could be local or national ID cards, or access control cards. No need for large centralised Big Brother databases storing customer's biometric data.

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PS This is a follow-on update of a Smartex article from September 2021 entitled "Two European Fingerprint Smart Card Teams prepare for Battle"