**Biometrics the Future of Payment Authentication**

Today buyers have to deal with PIN codes and passwords, and despite all warnings, are often guilty of using same passwords for multiple accounts, making them actually less secure. Yet, all this may be a thing of the past very soon as the expansion of mobile payments at a global level has increased the need for more secure alternate authentication system: mobile biometrics based in the cloud.

The market for biometrics payment is set to grow with MasterCard and Visa as key players. Mobile wallet vendors like Google and Apple and mobile device companies such as Samsung are also making solutions. [1]

**What is a Biometric Payment Card and How does it Work?**

Biometric cards in the future will be small with the fingerprint sensor located on the front side of the card. Currently, biometric payment cards are in trial across some banks in Europe. [2] The main benefit of using a biometric card is security; instead of entering a PIN code during purchase, you touch the fingerprint reader and upon matching with the stored fingerprint, the payment gets approved. Since the fingerprint data is always stored in the card, it cannot be stolen or intercepted.

There is no contactless [transaction](http://www.cardzgroup.com/ContactSmartCard.html) limit in biometric cards. This makes the transaction convenient and fast. Once biometrics payment cards are launched, customers could begin using them by recording their biometric data to a sensor device in the bank. This data will only be [stored on the card](https://www.printplast.com/hotel-key-cards/) without any central database. Even if the card is lost, the user’s identity cannot be stolen and the card cannot be used by any other entity for fraudulent activity.

**Benefits of Biometric Authentication for Payments**

With biometric technology gaining popularity in the payment cards industry, let’s find out how consumers will benefit.

* widely considered as highly secure as compared to prevailing PIN codes. The algorithms used for it are known to be the most accurate [5] in terms of authentication.
* can be easily allow payment cards to be set up from the bank or from home using a biometric scanning device.
* much simpler to use as compared to cards requiring PIN codes, where a user usually forgets PINs due to multiple cardsIt
* a seamless and almost instant process of payment authorization, in contrary to PIN codes which can take a while.
* ensures privacy by keeping the user’s credentials in the card and ensure they can never leave the card.
* can boost retail store contactless purchases of higher value and increase profitability of brick and mortar stores.
* uses very little power and does not require a battery for it to work.
* compatibility with already existing point of sale terminals

**What Does the Future Hold?**

The future of the payment card industry belongs to biometric cards. Visa is rolling out payment cards with the help of Bank of Cyprus and Mountain America Credit Union. [3] These cards will include on-card biometric sensor for contactless payment, and be used for testing fingerprints recognition to authenticate a cardholder’s identity during the transaction.

This pilot program, named the Visa Ready for Biometrics[4] , is being carried out to meet the growing demand of biometric technology for transactions. Similar to fingerprints, facial recognition systems are also being tested where a user’s credit card details will be linked with their facial profile and transactions will be authenticated by simply presenting your face.

As we look into the future, biometric technology is improving and developing constantly in terms of speed and accuracy. It is helping break down potential barriers for users and develop a sense of security around this method of payment authentication.

1. <https://www.financedigest.com/the-future-of-biometrics-in-payments.html>
2. <https://www.justaskgemalto.com/en/biometric-payment-card-work/>
3. <https://www.biometricupdate.com/201912/biometrics-and-the-future-of-payment-transactions>
4. <https://www.itbusiness.ca/news/visa-ready-for-biometrics-begins-testing-fingerprint-sensor-based-payment-cards/98326>
5. <https://www.gemalto.com/govt/inspired/biometrics>