**Biometrics the Future of Payment Authentication**

**Introduction**

In today’s times, 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. The expansion of mobile payments at a global level has increased the need for more secure alternate authentication system, which is mobile biometrics based on cloud.

Most users are already familiar with using their fingerprint scan to unlock their smartphones. According to a recent [study](https://usa.visa.com/dam/VCOM/global/visa-everywhere/documents/visa-biometrics-payments-study.pdf), about 70% of Americans find it easier to use biometrics instead of PINs or passwords and about 46% consider it as a more secure alternative. The same study showed that only one-third of respondents used unique password or PIN for their multiple accounts. This highlights the need for better and more secure new verification methods.

However, respondents were not very welcoming towards other biometric identification ways such as voice, eye or face scans. This was mainly due to unfamiliarity, but will be swiftly adopted when the technology is actually applied. 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.

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

The future biometric cards will be small and secure with the fingerprint sensor located on the front side of the card. Currently biometric payment cards are in trial across some banks in Europe. 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 limit in biometric cards. This makes the transaction convenient and fast. Once the biometrics payment cards are launched, customers can begin using them by recording their biometric data to a sensor device in the bank. This data will only be stored on the card without any central database.

**Benefits of Biometric Authentication for Payments**

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

**Highly Secure**

The currently used four-digit PIN codes are not considered very secure, however, biometric technology is widely considered as highly secure. The algorithms used for it are known to be 99.99 percent accurate in terms of authentication.

**Easy Setup**

Payment cards enabled with biometric technology can be easily set up from the bank or from home using a biometric scanning device.

**Simple to Use**

The biometric payment card is much simpler to use as compared to cards requiring PIN codes, where a user usually forgets PINs due to multiple cards. In a biometric card, the user touches the fingerprint sensor at the payment terminal and the payment gets authorized if the biometric match is successful.

**Pay Anywhere**

With time, more retailers are moving to contactless payment methods and with biometrics cards it will become easier to pay anywhere, anytime.

**Time-Saving**

Biometric payment card is a seamless and almost instant process of payment authorization, in contrary to PIN codes which can take a while.

**Unique and Private**

A user’s authentication through the biometric process is completely secure as it is nearly impossible to replicate a person’s unique fingerprint. It also ensures privacy by keeping the user’s credentials in the card and ensure they can never leave the card.

**Convenient Transactions**

With secure and convenient transactions all over the world, the adoption of biometric cards can boost retail store contactless purchases of higher value and increase profitability of bring and mortar stores.

**Environment Friendly**

The biometric technology uses very little power and does not require a battery for it to work. The card is small, thin and bendable like traditional cards.

**Backward Compatibility**

One of the advantages of adopting biometric cards is their compatibility with already existing point of sale terminals. There is no upgradation of software or hardware required by merchants to accept biometric payment cards.

**What Does the Future Hold?**

It goes without a doubt that 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. These cards will include on-card biometric sensor for contactless payment. The card will be used for testing fingerprints recognition to authenticate a cardholder’s identity during the transaction. This pilot program, named the Visa Ready for Biometrics, 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.

**Conclusion**

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.