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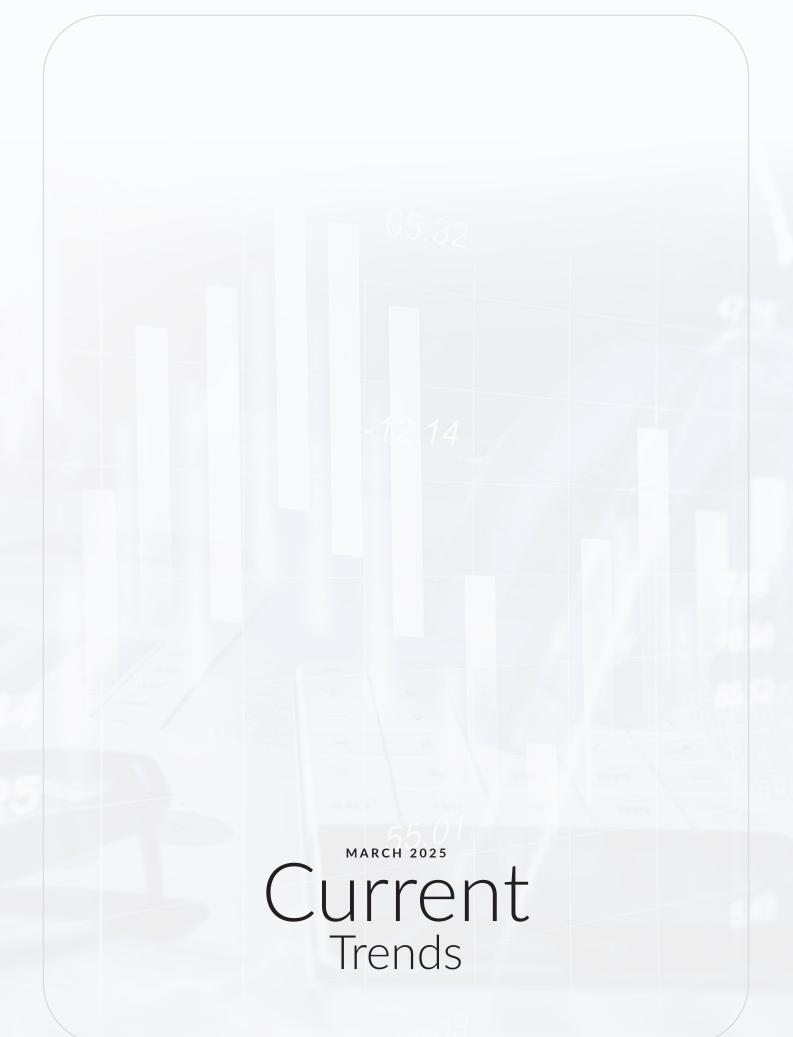
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MARCH 2025

Face-swiping Payment

Current Trend

Current
Trends

Background

Biometric payments provide higher security than those protected by passwords or personal identification numbers (PINs) and can typically facilitate quick and convenient transactions. The evolution of biometric payments showcases a shift toward more secure and user-friendly transaction methods, revolutionizing the way payments are authenticated and processed. Biometric payments involve verifying and identifying customers based on their physical features — usually by scanning their face, hand, fingerprint, iris, or voice. The feature can replace or coexist with traditional payment verification features. For instance, it can work alongside two-factor authentication (2FA) or PIN entry for additional security verification. Biometric payments offer several advantages, such as greater security, faster and more convenient payments, and a reduced need for customers to carry cards and cash.

Concept and Definition

A facial payment system leverages an individual's unique facial features as a secure and highly reliable form of biometric authentication. Face payment, an innovative payment method utilizing facial recognition technology, has become increasingly popular in recent years. This technology allows users to make payments by simply scanning their faces, offering a convenient and, in some cases, more secure alternative to traditional payment methods. However, like any technological advancement, face payment also comes with its own set of advantages and disadvantages.

Importance

Biometric verification is highly secure. Because users must verify themselves with their unique physical features, attackers cannot steal information in the same way they might steal a payment card, PIN, or cash. Imitation and impersonation are a limited concern with biometrics. Liveness detection, which ensures that a real person is being verified, makes it difficult to trick the system. For example, liveness detection can ensure that someone has scanned their real face rather than a photograph. The global face-swiping payment market is projected to depict significant expansion over the forthcoming years owing to increasing advancements in payment technologies. These payments involve the unique facial features of an individual as a reliable and secure form of biometric authentication. The technology eliminates the need for PINs, cash, or physical cards and is anticipated to provide an enhanced user experience and security. The surge of this technology is tied intricately to the growing consumer appetite for painless, quick, and seamless purchasing experiences. Face-swiping payments embody the evolution of technology, meeting an era's needs that thrives on efficiency and security.

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| Benefits

- **Enhanced Security**

Facial recognition provides a high level of security by accurately verifying identities. Unlike passwords or PINs, which can be forgotten or stolen, facial features are unique and difficult to replicate, making unauthorized access more challenging. Facial recognition is also widely used to access passkeys for passwordless and anti-phishing authentication. Using biometrics like facial recognition also minimizes shoulder surfing attacks that have become common in recent years.

- **Convenience**

Despite being secure, the most common reason consumers love facial recognition is its convenience. Facial recognition simplifies access and authentication processes. Users can quickly unlock devices, authorize payments, or gain entry to secure areas without needing to remember passwords or carry physical keys. If someone is accustomed to using facial recognition to access their device or user account, switching back to passwords or PINs can feel outdated and inconvenient.

- **Speed**

Facial recognition processes are fast, reducing wait times for tasks like logging into devices, checking in at airports, or completing transactions. When well-integrated into a system, facial recognition feels effortless since the user has to do nothing when being authenticated. More people find facial recognition even more convenient than fingerprint scanning since it requires no action on the user's part.

- **Contactless Operations Enhance Hygiene**

Facial recognition enables contactless interactions, making processes more hygienic and convenient. For instance, when accessing a secure building, users can do so without touching physical surfaces. This reduces the risk of spreading germs and viruses, contributing to a healthier environment. Having such authentication technology can be crucial to dealing with diseases like COVID-19 that mainly spread through contact.

- **Fraud Prevention**

Facial recognition enhances fraud prevention by utilizing unique facial features for identity verification. Since everyone has distinct facial characteristics, it is challenging for someone to impersonate another person successfully, even if they are twins. This technology safeguards against unauthorized transactions and access, as only the verified individual can complete actions. Since facial recognition does not rely on passwords, it also mitigates phishing risks, as attackers cannot steal or exploit non-existent credentials.

| Challenges

- **Privacy Concerns:** The collection and usage of biometric data need severe regulatory frameworks to assure consumer trust.

- **Cost Implications:** Initiating and maintaining face-swiping systems demands initial investment and ongoing operational adjustments.

- **Technological Dependence:** With tech errors or malfunctions, businesses might face temporary operational hurdles.

- **Environmental and Contextual Factors:** Some facial recognition systems can struggle in varying environmental conditions, such as poor lighting or obstructed views. Changes in appearance (e.g., facial hair, glasses) or background noise can also impact the technology's performance and accuracy.

- **Public Acceptance:** Public acceptance of facial recognition technology can be mixed. While some users appreciate the convenience, others may have concerns about privacy and surveillance. Building trust through transparent practices and addressing these concerns is important for wider adoption.

| Practices and Examples

- In August 2024, Federal Bank launched a new payment method 'SmilePay', which deploys facial recognition technology for conducting transactions.

- In January 2025, J.P. Morgan Payments (JPM) launched two new proprietary biometric payment terminals, Pinpad and Paypad, for restaurant, retail, and entertainment applications. The Pinpad is a small terminal that provides contactless, swipe, chip, QR code, or biometrics using facial and palm recognition with a built-in infrared camera. The Paypad is an 8-inch scanner and display that deploys biometric facial recognition and infrared palm vein technology to facilitate touchless transactions.

- In May 2022, Mastercard launched a new program for retailers to provide biometric payment methods such as fingerprint scanning and facial recognition. Instead of swiping a card, the technology would allow users to authenticate their payment by showing their palm or face.

- In January 2023, QNB Group, a commercial banking company introduced the latest biometric payment acceptance solution enabling merchants to accept biometric payments in Qatar. As a result of this launch, QNB Group offered help to merchants with outlets in Qatar by providing their customers the security and convenience of facial biometric payments.

- In April 2022, PopID, a consumer authentication service, partnered with Visa Inc., a financial services corporation. This partnership was aimed at launching facial verification payment acceptance across the Middle East.

- In 2021 Moscow Subway started to use Face Pay to provide passengers with facial payment. It is the first time a public transportation system uses pay by face.

- In China, Tencent, which runs the WeChat app with 600 million users, unveiled its new facial payment machine called "Frog Pro" in August, while a growing number of start-ups are trying to tap into the burgeoning industry.

- In China, Alipay technology uses a liveness algorithm, a 3D camera, and an analysis of over 600 facial features to determine a match.

- Dubai's Road and Transport Authority (RTA) recently unveiled several new projects including a smart gate for paying public transport fares through facial recognition. The smart gate would remove the need for users to pay fares using tickets, or credit cards and could be applied to several types of public transport such as Dubai Metro, Dubai Tram, buses, taxis, and marine transport.

- Network International and Carrefour, which is owned and operated by Majid Al Futtaim in the UAE, have announced the activation of the Face Pay payment solution by verifying payments from consumer authentication service provider PopID.

- Mastercard, Empik and PayEye are launching an in-store biometric payment pilot leveraging iris and facial biometrics. Thanks to the cooperation with PayEye fintech, and technology partner Planet Pay, customers will be able to test paying for purchases with their glance in five Empik stores across Poland. This is the first Biometric Checkout Program pilot in Europe.

March 2025

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