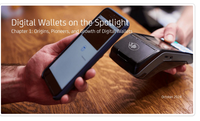

INTRODUCTION

Digital Wallets at a glance

WHAT IS A DIGITAL WALLET?

A **digital wallet** is an application that stores **an any connected device, on smartphone** or other mobile device. Digital wallets allow users to **store payment cards** (both type of the physical cards and digital versions of cards issued by banks) and cash (**prepaid and Pre-Paid Loaded top-Ups**), without the need to carry cash around.

More widely, they can also be used to store **digital copy of physical documents**, e.g.ID, membership or loyalty cards, event tickets, and other digital assets such as cryptocurrency wallets. Some Examples: Gift cards, passports, health certificates.

INTRODUCTION

Digital Wallets on the Spotlight

WHY EVERYONE TALKING ABOUT DIGITAL WALLETS?

DIGITALIZATION AND DIGITAL WALLETS

Digitalization is the process of using digital technologies to change business models and provide new revenue and value-producing opportunities. Digitalization is the process of using digital technologies to change business models and provide new revenue and value-producing opportunities. Digital wallets are a key component of digitalization, as they provide a convenient and secure way for consumers to store and manage their digital assets, such as payment cards, loyalty cards, and identity documents. By digitalizing these assets, digital wallets can help businesses to streamline their operations and improve the customer experience, leading to increased efficiency and revenue.

WHAT CAN YOU EXPECT FROM THIS SECTION?

- Executive summary
- Origins of Digital Wallets
- Pioneers
- Adoption and Growth
- Market Competition

WHAT ARE THE KEY TOPICS?

- Executive summary
- Origins of Digital Wallets
- Pioneers
- Adoption and Growth
- Market Competition

WHAT'S NEXT?

- Chapter 4: Adoption and Growth
- Chapter 5: Market Competition

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EXECUTIVE SUMMARY

Digital Wallets on the Spotlight

KEY TAKEAWAYS:

Chapter 3: Origins, Pioneers, and Growth of Digital Wallets

- **Digital wallets** which expanded to the late 1990s, boosted by the spread of Internet and mobile phones, initially focused on storing payment card information and enabling peer-to-peer payments.
- Beyond basics, **all the major players** in payment adoption channels were **represented by consumers' mobile phones**, which underscores the significant shift toward mobile-centric payment solutions.
- Early Adopters **were attracted by Digital's security measures**, leading, and have contributed to the growth of digital wallets.
- The **Pandemic is being recognized by Digital Wallets as a catalyst** for their growth, marking the pandemic as a pivotal moment in the history of digital wallets.
- **Google Pay and Apple Pay lead in adoption by smartphone OS**, but mobile wallets, customized and enhanced participation and Digital Wallet expansion, driving growth across various platforms.
- **The pandemic** has accelerated an trend in digital commerce and digital wallets, with significant increases in usage and adoption. This trend is expected to continue, with projections for exponential growth in the coming years.
- The **Pandemic is being recognized by Digital Wallets as a catalyst** for their growth, marking the pandemic as a pivotal moment in the history of digital wallets. The pandemic has accelerated the trend in digital commerce and digital wallets, with significant increases in usage and adoption. This trend is expected to continue, with projections for exponential growth in the coming years. Key factors driving this growth include the rise of contactless payments, the increasing popularity of mobile wallets, the expansion of e-commerce, and the growing acceptance of digital wallets by merchants and consumers worldwide. The pandemic has also prompted governments and financial institutions to accelerate the adoption of digital payments and to promote the use of digital wallets. The future of digital wallets is expected to be shaped by the continued growth of e-commerce, the increasing adoption of contactless payments, and the development of new technologies and business models that leverage the power of digital wallets to provide a seamless and convenient experience for consumers and businesses alike.

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INTRODUCTION & HISTORY

Digital Wallets Introduction by PayPal

- Digital wallets originated in the **late 1990s and early 2000s**, with companies like PayPal and Google Wallet (formerly Google Checkout) **launched in 1998, one one of the first**, providing platforms for users to store payment card information and make online purchases more convenient and secure. These early digital wallets laid the groundwork for the digital payment ecosystem.
- In the 1990s, mobile technology further advanced digital wallets, with companies like Nokia and Ericsson introducing mobile payment solutions. The widespread adoption of smartphones in the 2000s further accelerated the growth of digital wallets, with companies like Apple Pay and Google Pay leveraging the ubiquitous nature of smartphones to provide a seamless and convenient mobile payment experience.
- Today, services like Alipay in China and Paytm in India have further expanded the reach of digital wallets, with over **70 Plus already many countries** worldwide adopting digital wallets. This has contributed to the **rapid growth of e-commerce** and the shift toward cashless payments.

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EARLY

PayPal (1998)

EARLY INNOVATOR IN DIGITAL PAYMENTS

- PayPal was one of the **earliest and most significant contributors** to the rise of digital payments.
- Launched in 1998, PayPal **initially focused on peer-to-peer payments** but its innovations in security and convenience laid the groundwork for **seamless transactions between buyers and sellers**. PayPal grew from a possibility and a dream into a global phenomenon.

Their key development was related to **security and trust**.

PayPal's success was largely due to its **ability to gain user trust through its security measures**, such as **encrypted transactions and buyer protection policies**. This set a foundation for consumer confidence in digital wallets.

EARLY

Google Wallet (2011)/Google Pay (2018)

CONTACTLESS PAYMENTS

- Google Wallet, launched in 2011, was **one of the first digital wallets to use Near-Field Communication (NFC) for contactless payments**, allowing users to store credit card information and pay by tapping their smartphones at compatible terminals. This innovation was a significant step in **contactless convenience and merchant support**.
- In 2018, Google rebranded and enhanced Google Wallet into Google Pay, which **integrated with Google's ecosystem and expanded its capabilities to include peer-to-peer payments and gift cards, making it more versatile**. Google Pay's integration with various services and its support for a wide range of payment methods **made it a popular mobile payments** increased.

Their key development was **Near-Field Communication (NFC) technology**.

Google Wallet's introduction of NFC-based payments **marked a turning point in contactless payments**, influencing future players like Apple and Samsung.

EARLY

Apple Pay (2014)

REVOLUTIONIZING MOBILE PAYMENTS

- Apple's entry into the digital wallet space with Apple Pay in 2014 was a game-changer. Apple Pay **integrated NFC technology with the iPhone's Touch ID fingerprint sensor, leveraging biometric authentication to enhance security** on a major selling point, as users were not required to share credit card information with merchants.
- Apple Pay's **seamless integration with iPhones and Apple Watches** boosted adoption, especially in regions where digital e-wallet was dominant. The ease of use and security features of Apple Pay helped it stand out from other mobile payment systems.

Their key development was **biometric authentication**.

Apple Pay's use of **biometric authentication significantly enhanced security and ease-of-use** in digital wallets, helping to address one of the major challenges of mobile payments.

EARLY

M-Pesa (2007)

LEADING FINANCIAL INCLUSION IN AFRICA

- Launched by Vodafone and Safaricom in Kenya, M-Pesa was **developed to provide mobile banking services to underserved populations**. With M-Pesa, users can deposit, withdraw, send money, and pay bills using their mobile phones. By 2023, M-Pesa had become a **vital tool for financial inclusion**, especially in rural areas where traditional banking services were limited.
- M-Pesa's mobile-power immediacy successfully expanding to other African countries and Asia and Eastern Europe, it demonstrated the **scalability and adaptability of digital wallets**. The success of M-Pesa also sets previously excluded from formal banking systems.

Their key development was related to **financial inclusion**.

M-Pesa's success in Africa showed that digital wallets could bring **outside developed markets**, particularly in regions with **high mobile phone penetration but low banking infrastructure**.

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EARLY

Alipay and WeChat Pay (2004 & 2013)

SUPER APPS OF CHINA

- In China, Alipay (founded in China in 2004 and WeChat Pay (launched by Tencent in 2013) are at the **forefront of digital wallet adoption**. These platforms offer a wide range of services beyond payments, including social media, e-commerce, and more. Their ubiquitous nature **makes them integral parts of daily life in China and a model for other countries** seeking **convenience, and make payments seamlessly**.
- Alipay and WeChat Pay's success in China has set a benchmark for other digital wallets worldwide. The integration of various services into a single app has helped **popularize the concept of SuPer apps**, which digital wallets aim to emulate.

Their key development was **super app model**.

By **combining digital wallets with other services**, these platforms **kept users engaged** for longer periods, transitioning the approach to mobile payment systems.

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CHALLENGES

Early challenges in digital wallets adoption

When digital wallets first emerged, they **faced significant hurdles** that hindered adoption.

Security concerns

Early digital wallets faced skepticism regarding their security. Users were hesitant to store sensitive financial information on digital platforms due to concerns about potential data breaches and cyberattacks. Ensuring robust security measures and enhancing user trust was a significant challenge for these early adopters.

Fragmentation and interoperability

Fragmentation arose as different companies began developing their own digital wallets, each with unique features and standards. This lack of interoperability meant that users could only use their digital wallets with compatible merchants and systems, limiting the convenience and adoption of these early digital wallets.

Consumer Education and Trust

Many users were unfamiliar with digital wallets and their benefits. Educating consumers about the convenience and security of digital wallets was crucial for overcoming initial hesitation and building trust in these new technologies.

Interoperability

Early digital wallets faced challenges with interoperability across devices and platforms. This lack of interoperability limited the convenience and adoption of these early digital wallets, as users could only use their digital wallets with compatible devices and platforms.

They **faced several major challenges** when first emerging, including security concerns, fragmentation and interoperability issues, and the need for consumer education and trust. Overcoming these challenges was crucial for digital wallets to gain widespread adoption and become a mainstream payment method.

By the mid-2010s, digital wallets gained global acceptance, driven by increased mobile-first adoption and organized government policies. **They leveraged keypad payments to include features for carrying tickets, loyalty cards, and more.**

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ADOPTION AND GROWTH

Innovative features and COVID-19: the accelerators

Over time, **improvements in security features and user experiences** addressed many of these initial concerns.

- Innovations such as **biometric authentication** (fingerprint or facial recognition) introduced by Apple Pay and Google Pay greatly enhanced security and user convenience.
- As these platforms became more secure and user-friendly, **the general public grew more comfortable** with storing financial data on their mobile devices.

The COVID-19 pandemic significantly accelerated digital wallet adoption, making contactless payments essential to reduce physical contact.

> COVID-19 has accelerated the shift toward digital payments in the U.S. Google Wallet, an innovative platform that simplifies payments and boosts security, has seen a substantial increase in users and transactions.
>
> — Sundar Pichai, CEO of Alphabet Inc.

They contributed significantly to the rapid growth and adoption of digital wallets.

ADOPTION AND GROWTH

Innovative features and COVID-19: the accelerators

As digital wallets mature, they become essential for **financial inclusion, particularly in emerging markets**.

> In China, "contactless" has become a new normal, with over 70% of transactions in the nationwide, reaching over 90 trillion yuan by 2021, underscoring the significant impact of digital wallets on cashless payments.
>
> — Zhang Yaqin, Chairman of Baidu

> In India, "digital wallets have played a pivotal role in the rapid growth and adoption of digital payments, with platforms like Alipay and WeChat Pay leading the way in providing a seamless and convenient experience for consumers and businesses.
>
> — Ravi Shankar Prasad, Minister of Electronics and Information Technology

They contributed significantly to the rapid growth and adoption of digital wallets.

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MARKET COMPETITION

The global market share

- The latest data collected COVID pandemic that **3.4 billion consumers use digital or mobile wallets globally**, and this number is projected to reach **5.2 billion by 2025**.
- In the United States, **Apple Pay and Google Pay are the most established wallets**, where around 12% of the devices in the US are equipped with Apple Pay, and Google Pay has the largest business share in the US, with over 50 million merchants accepting Google Pay.
- In China, the market is **dominated by Alipay and WeChat Pay**, with over **1 billion users**, **with a handful of companies controlling the majority of the market**. The high **mobile-first digital payment traffic, generating revenue, and the ease of use** has contributed to their dominance.
- Even though the competition is strong and tends to be oligopoly, the digital wallet market is still growing and is projected to reach a value of USD 1.5 trillion by 2027 and Europe, such as Nordic Cash, Vipps and others, are gaining traction, with the Nordic region being a leader in adoption thanks to the digital wallet market.