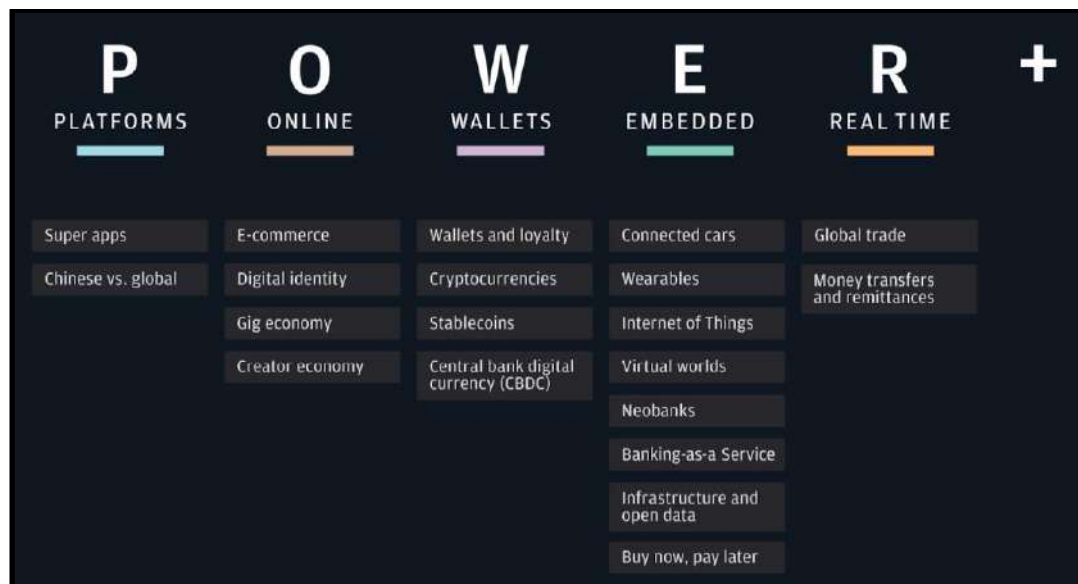
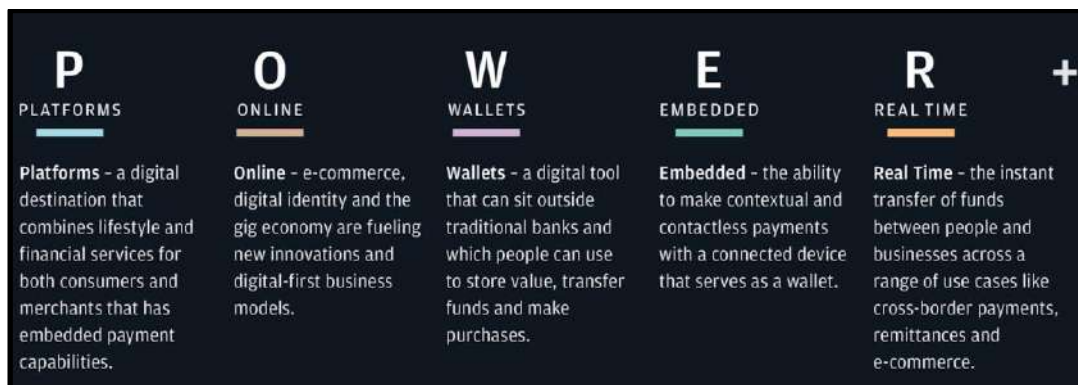


Maturing Economic Services, Evolving Digital Payments Dynamics And Financial Globalization Trends

Sohil Sreerangam



Source: J.P. Morgan - Payments are eating the world

Abstract

The key business accomplishments of the 21st century can be categorized as the advancement of software technology to build a digital economy and the fast development in financial services leading to economic globalization. These transformations can be attributed to the growth of smart devices, the refinement of internet and data connectivity services and the expansion of fintech companies and online payment techniques. The research paper examines these evolutions along with the transnational payment and revenue channels based on a mega-themes framework including - Platforms, Online, Wallets, Embedded and Real-Time. Some of the micro-themes under this framework comprise super apps, e-commerce, cryptocurrency, stablecoins, digital identity and wallets, gig economy, money transfers and remittances, neo banks, connected devices, buy now pay later services and central bank digital currency. Hence, digital payments tend to ignite innovation, and innovation propels payments beyond a purchasing power role into a function that binds digital communities.

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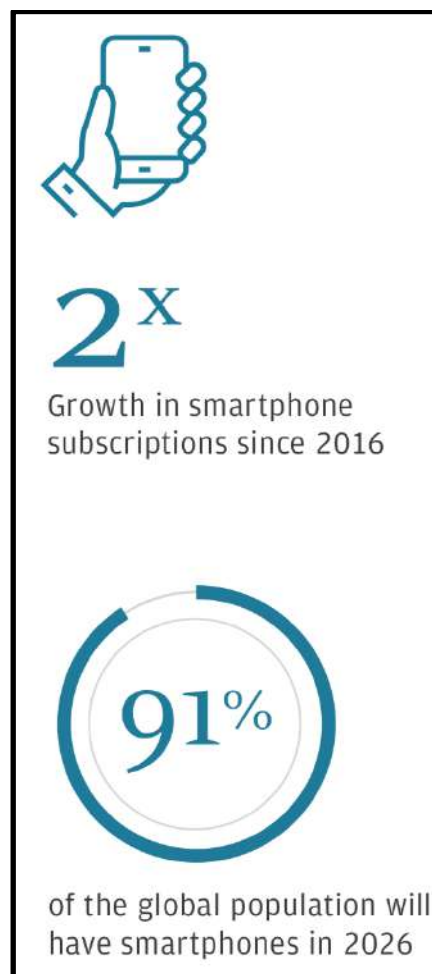
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Opening Statement

Over the last two decades, rapid globalization trends have accelerated enhancing connectivity, and the development of fintech platforms and companies have eased financial transfers, remittances and payments. High-speed technical revolutionization, access to high-speed data services and the growth of smart devices, particularly mobile devices, have sped up the growth of digital payments across the globe and expanded favorable upheavals in the fintech industry hence leading to the growth of the e-commerce sector.

During 2016, 3.67 billion global smartphone subscriptions were estimated. Currently, this assessment has evolved to double and by 2026 it is foreseen that 91% of the global population will own a smartphone, thus improving digital payment platforms.¹ Exhibit 1 which exemplifies this vision diagrammatically.

Exhibit 1 - Growth in global smartphone subscriptions since 2016



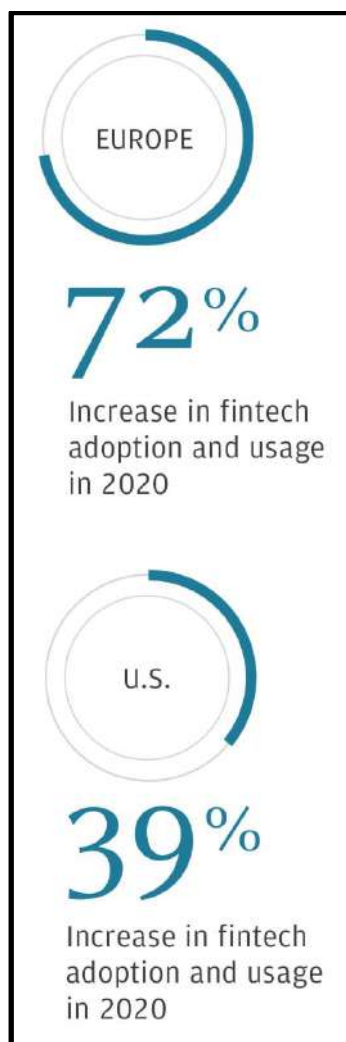
Source: J.P. Morgan - Payments are eating the world

¹ Statista. 'Mobile internet usage worldwide - statistics & facts.'

The COVID-19 pandemic and the prevailing social distancing regulations oversaw an unexpected rise in digital advancement and e-commerce trends. Additionally, the easy access to economical, fast, customer-centric, skillfully modifiable, roaming data services has united people globally, enabling easy and safe communication channels. Also, in the next ten years, it is expected that digital payments will go on to link people and financial payment devices while spanning digital and virtual areas and expanding fresh business prototypes.

With technological progress, the fintech industry has advanced fast and this has led to the usage of technical skills to facilitate easier, faster and smoother financial services. In 2020, in Europe the fintech services adoption rate and usage increased by 72% and in the U.S. the values surged by 39%.² Exhibit 2 depicts these details.

Exhibit 2 - Rise in fintech adoption and usage



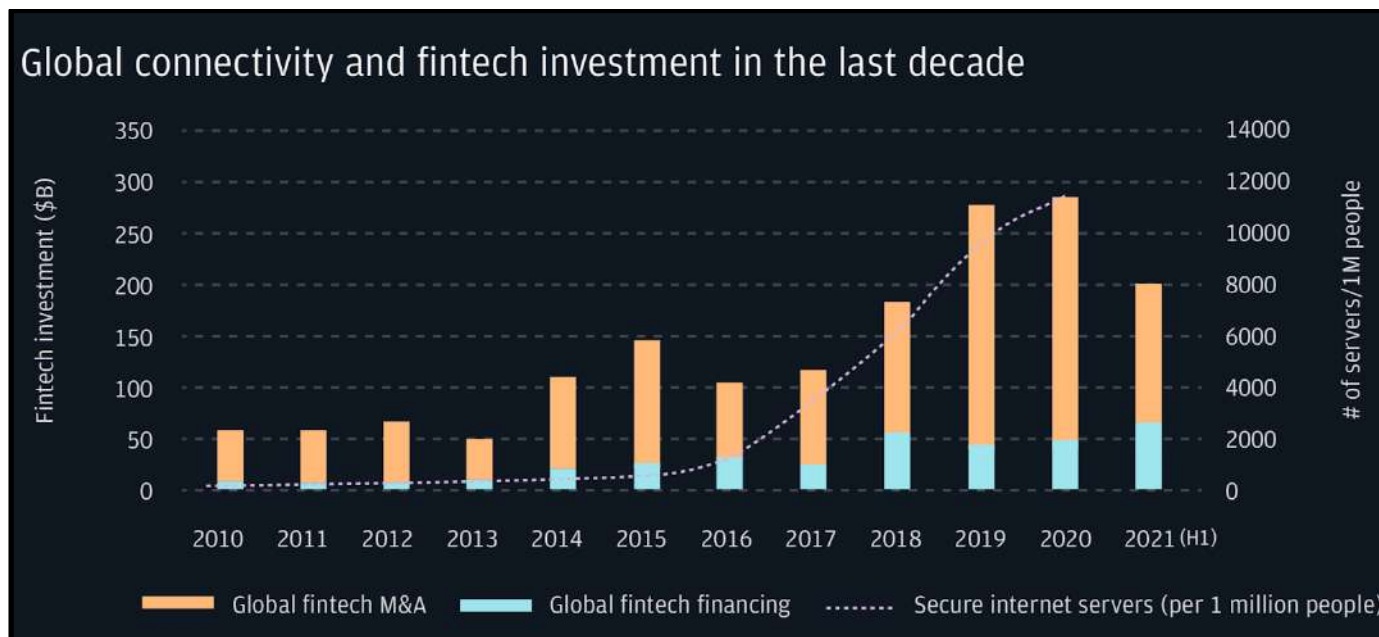
Source: J.P. Morgan - Payments are eating the world

² Finextra, Feb 2021. 'The state of FinTech: a recap of 2020 and a glimpse into 2021.'

<https://www.finextra.com/blogposting/19849/the-state-of-fintech-a-recap-of-2020-and-a-glimpse-into-2021>

Furthermore, according to the FT Partners, it is assessed that US\$1.5 trillion of fintech investment and merger and acquisitions (M&A) action took place between 2010 and 2020.³ The main upward trend was from 2019 to 2020, which can be primarily attributed to the pandemic crises. Refer to Exhibit 3 for further details. Correspondingly, it is anticipated that by 2025, the across-the-board adoption and huge use of digital financial services can increase the GDP of all developing nations by around 6%, estimated at US\$3.7 trillion, creating 95 million new employment opportunities.⁴

Exhibit 3 - Growth of fintech firms from 2010 to 2021(H1)



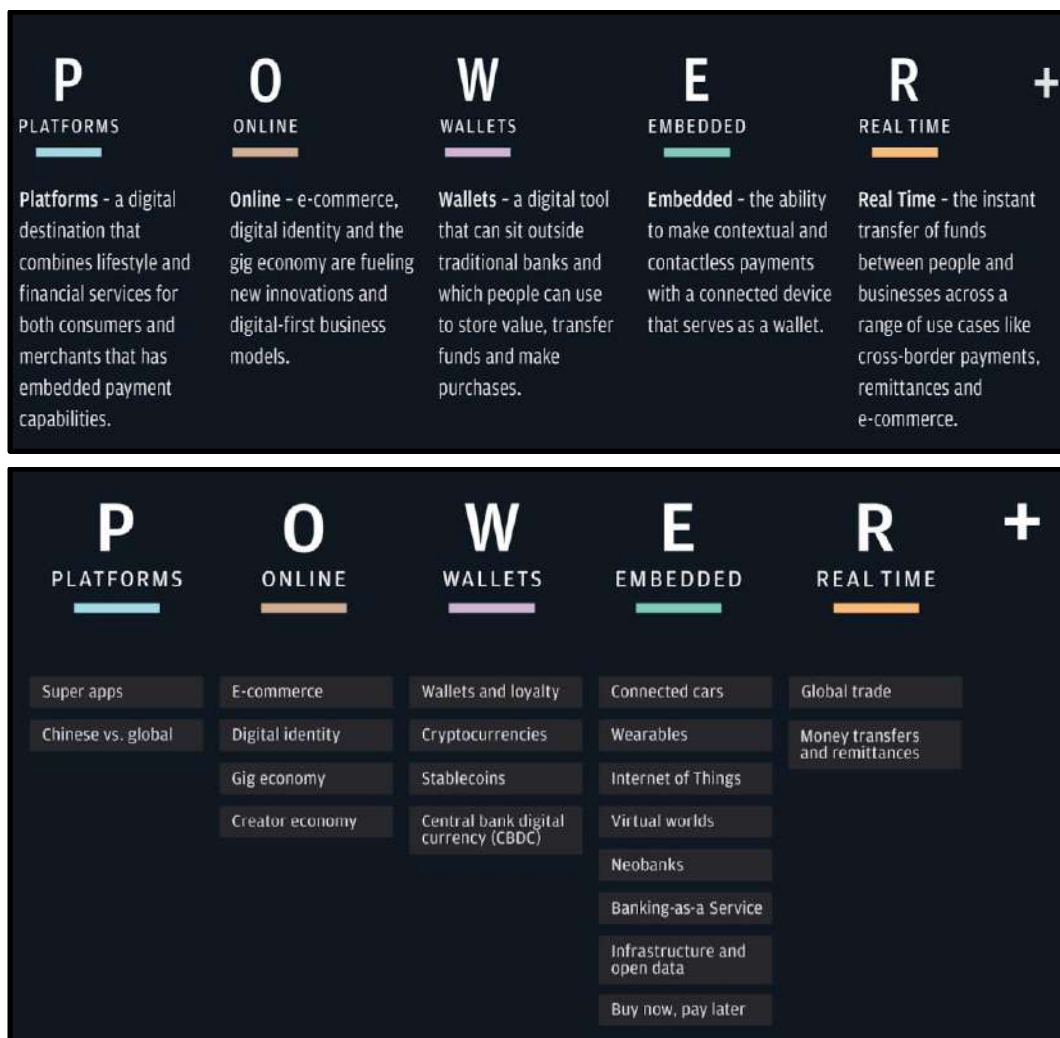
Source: J.P. Morgan - Payments are eating the world

In 2020, the preponderance of the transnational payment outpour could be attributed to five mega-themes related to the POWER+ framework comprising - Platforms, Online, Wallets, Embedded and Real Time. The integration of the micro themes under this framework and the associated value-added services have ushered in payment discharges for shoppers and sellers. Refer to Exhibit 4 to study the micro themes of the POWER+ framework. The establishment of 5G data services and advancements in artificial intelligence (AI) algorithms, quantum computing and blockchain, the introduction of the new generation conversational AI, the Internet of Things (IoT), the development of connected cars and increased virtual reality evolution in marketplaces, have recontoured business economies.

³ FT Partners Research, July 2021. <https://ftpartners.docsend.com/view/igaby8kcxzv3bqu7>

⁴ Dignited, March 2021. <https://www.dignited.com/79861/africas-tech-unicorns-heres-a-look-at-all-six-of-them/>

Exhibit 4 - Themes related to the POWER+ framework



Source: J.P. Morgan - Payments are eating the world

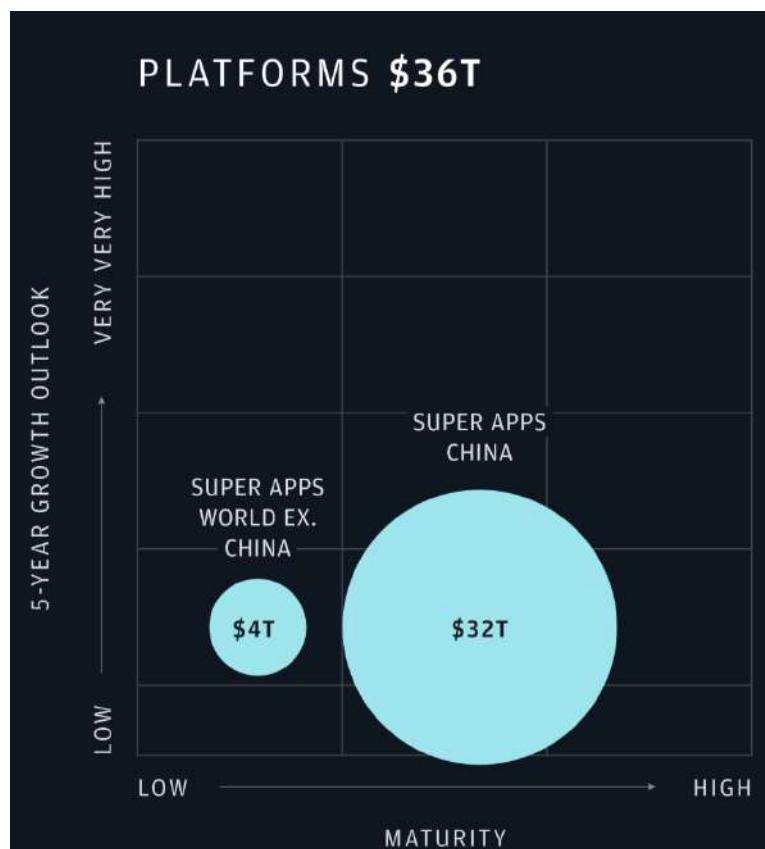
Expansion Of E-commerce Activity Due To Evolution Of Digital Platforms And Advancement Of Super Apps

E-commerce business activities are founded on the evolution of super apps and digital platforms that facilitate customers and sellers to come together and begin financial dealings. These digital platforms and super apps aggregate an extensive collection of services where buyers can avail of a myriad product spectrum and retail services, with substantial embedded payment abilities. These artificial intelligence creations facilitate business dealings to be completed effectively and probable customers can transact without exiting the app. Therefore, buyers are tempted by the idea of a one-stop mart, which organizes the definitive aspects of all their apps.

In fact, for sellers tying up with a super app implies they no longer have to invest in crucial infrastructure to lure digital customers. Instead, they can benefit from the larger range, customer actions and distribution of the super app, which hosts and facilitates e-commerce marketing for them.

Sometimes, this implicates hazards like the digital platform can learn from consumer behavior and manipulate that data information to formulate products and services with competitors cannibalizing their company interests in favor of the platform’s gain. Also, the expense that super apps take from merchants can be high. Exhibit 5 depicts the growth of digital platforms from 2015 to 2020. Furthermore, the international expenses for digital entities have risen to US\$36 trillion, generating them to be tremendous disruptors for both conventional retail prototypes and multinational banking and financial strategies. Occasionally, strict data security criteria may prevent super apps from flourishing, as this can be experienced in diverse nations as compared to China as the growth in super apps globally excluding China was only US\$4 trillion.

Exhibit 5 - Growth in digital platforms from 2015 to 2020

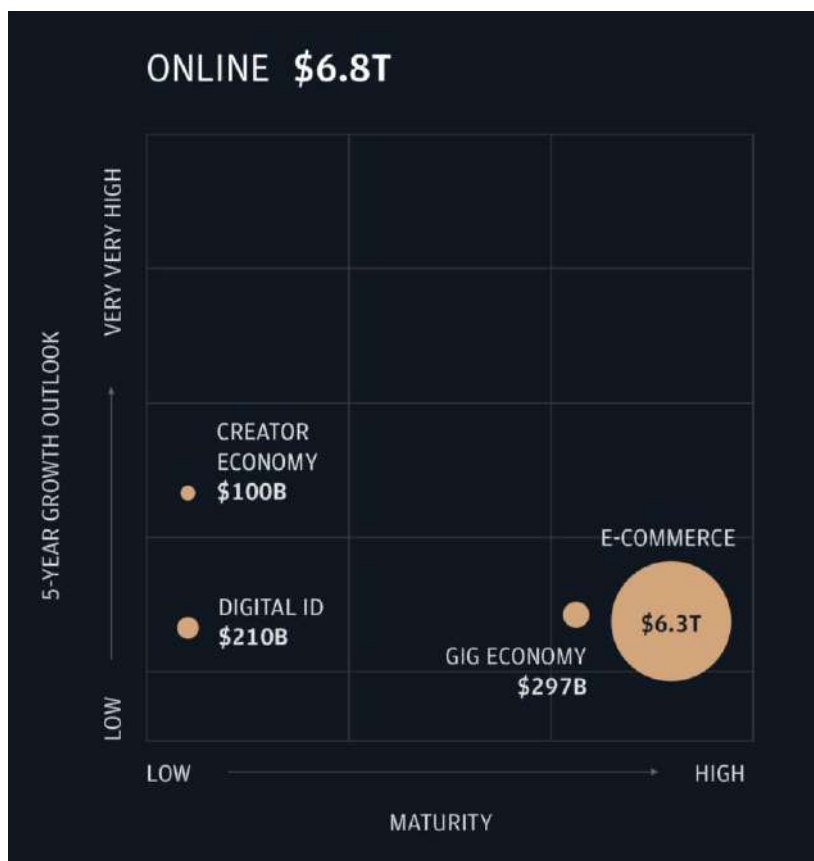


Source: J.P. Morgan - Payments are eating the world

Earlier to the onset of the current pandemic, e-commerce was already transforming its path from proprietary websites toward online marketplaces which usually have potent sales volume and are expanding to be vertically integrated. According to the Boston Consulting Group, US\$5 trillion of annual multinational retail sales swung around from offline to online due to the pandemic-related effects and this metamorphosis is

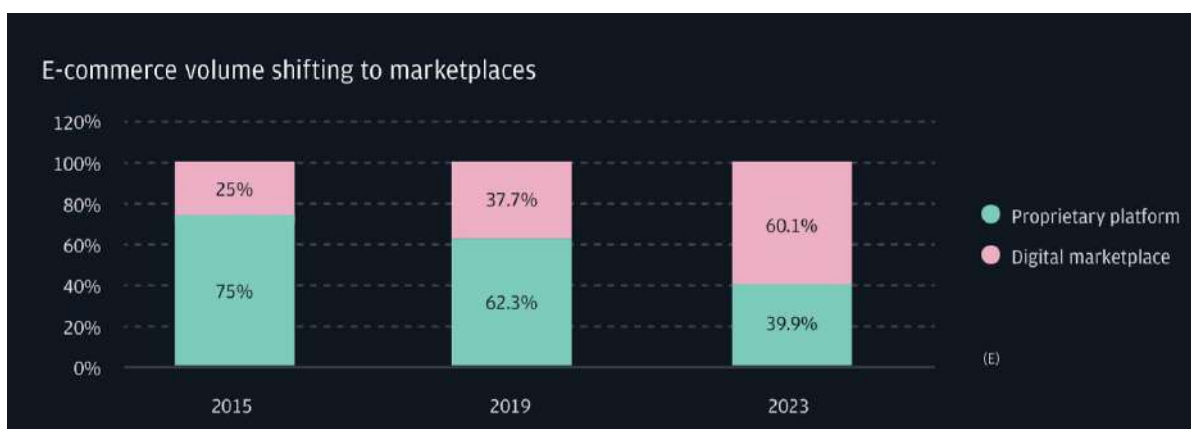
likely to continue in the future also post the pandemic period.⁵ Exhibit 6 portrays the full growth in the online sector which can be attributed to the e-commerce industry. Exhibit 7 exemplifies the boost in the digital marketplace vis-a-vis proprietary platforms from 2015 to 2023.

Exhibit 6 - Growth in global online business from 2015-20



Source: J.P. Morgan - Payments are eating the world

Exhibit 7 - E-commerce volume from proprietary platforms shifting to digital marketplaces from 2015 to 2023



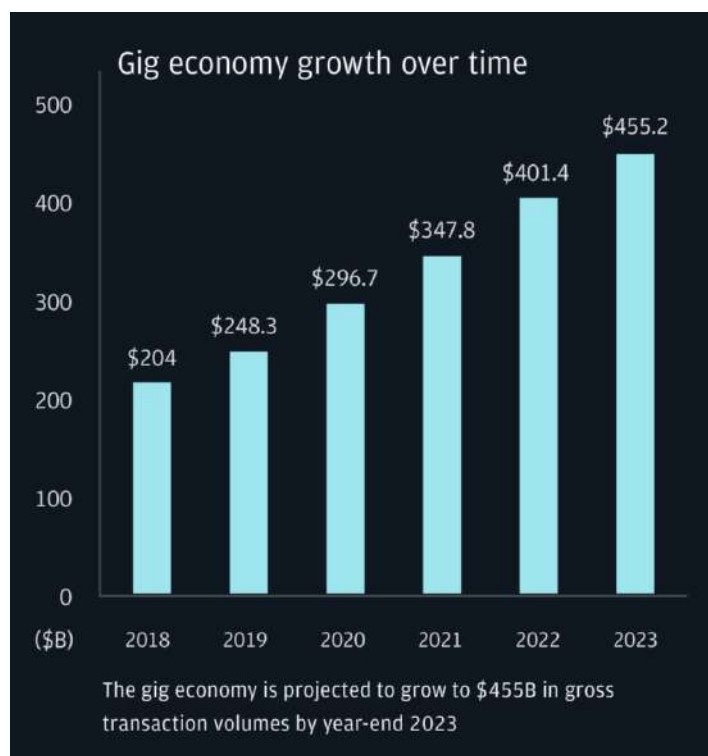
Source: J.P. Morgan - Payments are eating the world

⁵ BCG, August 2020. 'How Retailers Can Capture \$5 Trillion of Shifting Demand.' <https://www.bcg.com/en-gb/publications/2020/demand-centric-growth-compass-for-retailers>

Digital identifications facilitate a secure procedure of determining an online customer and are essential in formulating trust between transacting customers, their devices and businesses. The digital identity ecosystem has multiple relevant stakeholders like public bodies, financial organizations such as banks, non-governmental organizations (NGOs), healthcare companies and substantial-tech firms, which strive to offset trust with ubiquity.

According to MasterCard, the gig economy which is characterized by interim and adjustable job possibilities brokered by online platforms and independent contractors or freelancers exceeded nearly US\$300 billion in gross transaction volumes by 2020 and is predicted to grow to US\$455 billion by 2023.⁶ Exhibit 8 illustrates this data.

Exhibit 8 - Surge in the global gig economy from 2018 to 2023



Source: J.P. Morgan - Payments are eating the world

While the gig economy monetizes commodity talents, the creator economy monetizes the passion and ideas of self-employed workers, such as social media influencers, monetizing their creative talents via online platforms. This industry was estimated at US\$100 billion in 2021 and is prospering quickly.

⁶ Mastercard, May 2019. ‘The Global Gig Economy: Capitalizing on a ~\$500B Opportunity.’ <https://newsroom.mastercard.com/wp-content/uploads/2019/05/Gig-Economy-White-Paper-May-2019.pdf>.

Evolution Of E-wallets Cryptocurrencies And Neo Banks

Up to 1990 commercial banks retained the sole license to accumulate financial value, however, with technological advancement and enriched digital security led to the creation of cryptocurrency and digital wallets. PayPal was one of the first global American financial technology firms to employ online payment procedures launched in 1999. Initially, the firm conducted primarily as a supply of payment credentials like customer credit card numbers and bank account data, but gradually this fintech company developed to evolve as a real wallet where monetary reserves could be kept outside bank accounts and finances could be transferred between a customer wallet, bank account and other users. Nevertheless, with the fast penetration of smartphones and technology, the number of digital wallets increased, like Apple Pay in 2014, Samsung Pay in 2015 and Google PayTM in 2015.

Currently, in the everyday economy, multiple layouts of finances exist, like traditional “fiat currency” which is cash or commercial bank deposits, cryptocurrencies, stable coins, tokens, central bank digital currencies (CBDCs) and “narrow money” such as Starbucks or Amazon rewards. Digitized financial marketing’s are nowadays holding a growing ratio of total marketing’s with cash marketing’s decreasing from a 40% share a decade ago, described in relation to a 26% share currently.⁷ Exhibit 9 examines the expansion of digital wallets from 2015 to 2020. CBDCs have the highest five-year growth rates and cryptocurrencies have the highest-value terms of US\$3.9 million.

Exhibit 9 - Surge in digital wallets



Source: J.P. Morgan - Payments are eating the world

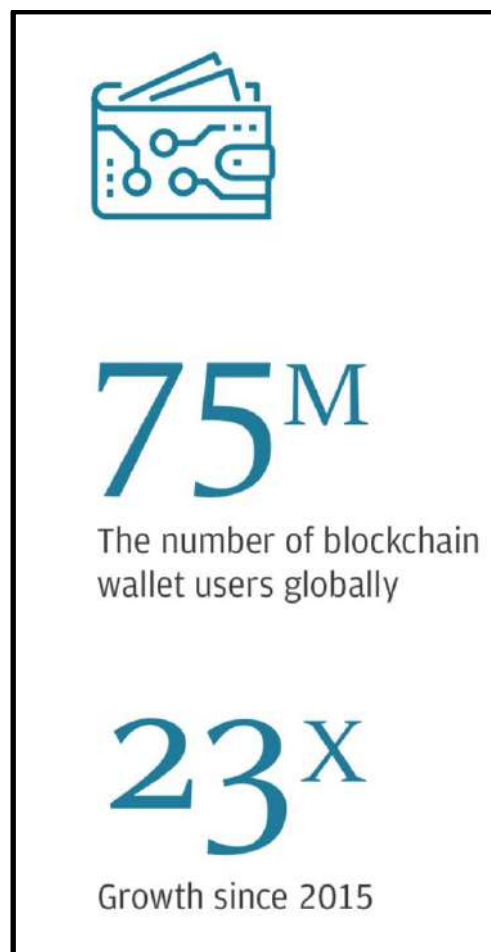
⁷ SUERF, May 2021. ‘Digital Disruption: The Inevitable Rise of CBDC.’

<https://www.suerf.org/policynotes/25525/digital-disruption-the-inevitable-ris%20e-of-cbdc>

The prospective expansion of wallets takes two distinct directions: a universal wallet where a single wallet functions everywhere and functions employing biometric identifiers and the other is a contextual wallet where individuals have separate wallets for different functions. Furthermore, with the refinement of cryptocurrencies, the concept of financial value being collected mainly in a bank account is being modified.

Block chain technology enables cryptocurrencies to perform so uniquely that there is no centralized ledger and the financial value is held in decentralized networks and are able to create an honorable record of financial transactions. Exhibit 10 portrays that as of July 2021, there were greater than 75 million block chain wallet users globally, which implied a proliferation of 23 times since 2015.⁸ However, there are multiple obstacles to the wider approval of cryptocurrencies, which include rising price volatility and issues with the speed, scalability and security protection of block chain networks. Exhibit 11 represents the evolution of international block chain wallet users from 2015 to 2021.

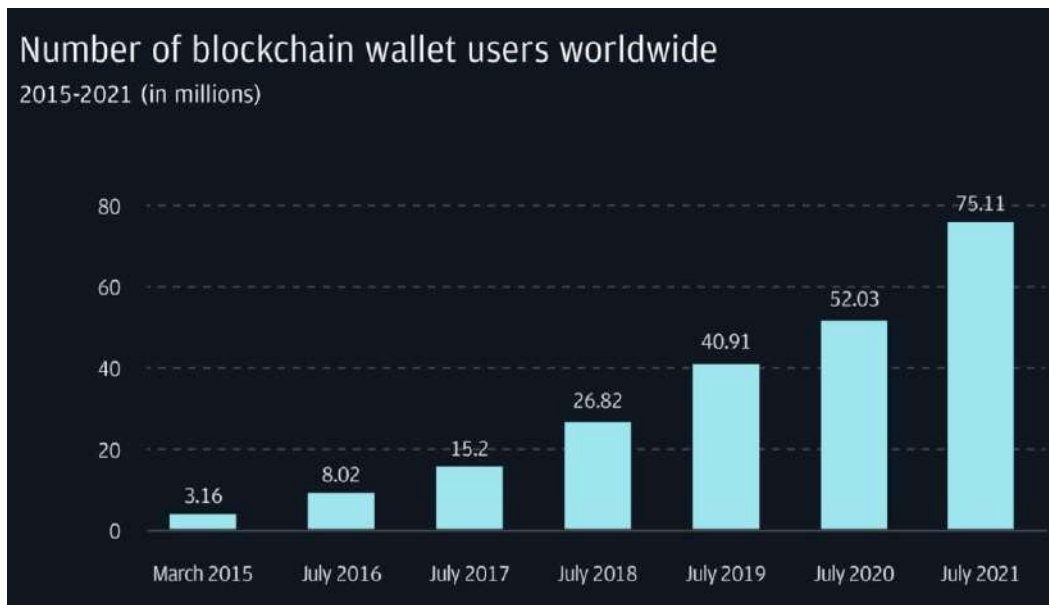
Exhibit 10 - Increasing use of global block chain wallet users



Source: J.P. Morgan - Payments are eating the world

⁸ Financesonline.com. 'Number of Block chain Wallet Users 2021/2022: Breakdowns, Timelines, and Predictions.' <https://financesonline.com/number-of-blockchain-wallet-users/>

Exhibit 11 - Growth in the global block chain wallet users from 2015 to 2021



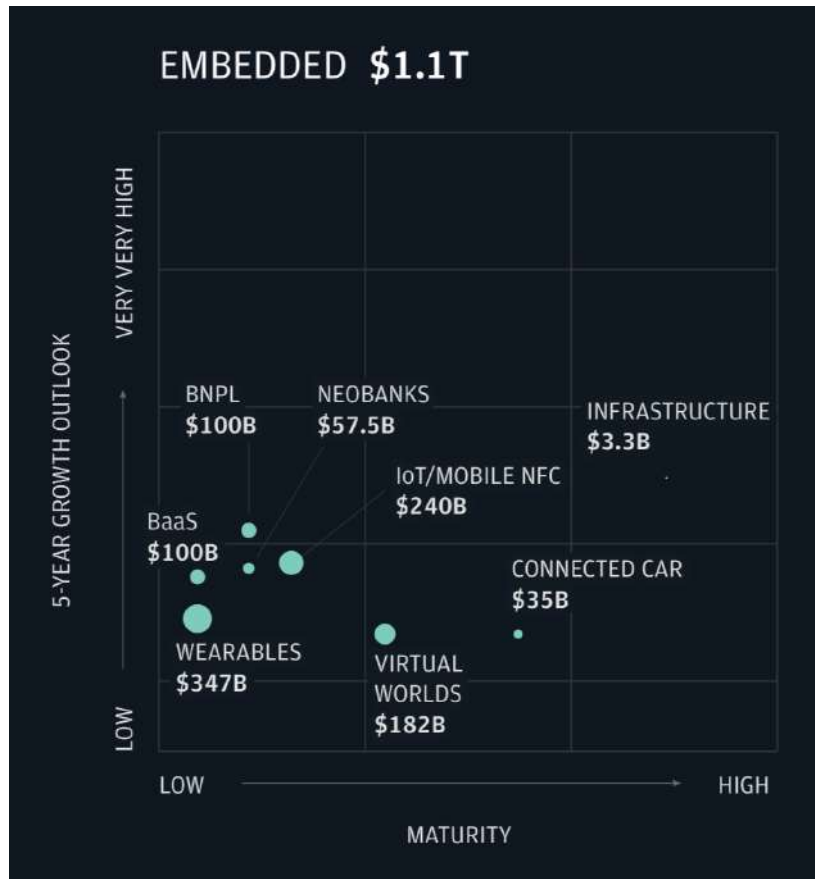
Source: J.P. Morgan - Payments are eating the world

Additionally, stable coins are cryptocurrencies that are pegged to diverse assets such as fiat money or tangible commodities like silver and gold. From 2015 it took five years for stable coins to gain a supply of 6 billion, but in 2020 it took only four months to double that supply to 12 billion.⁹

Embedded payments imply the straightforward way buyers are able to put together contextual and contactless financial dealings at any time, at any given location via connected devices that operate like wallets, connected cars, wearable technology etc. and therefore form a key characteristic of the invisible banking notion. Exhibit 12 examines the expansion of embedded payments internationally from 2015 to 2020. Exhibit 13 confers the expected 95% growth in connected cars by 2030, as described in relation to its competitive value of roughly 50% in 2020.

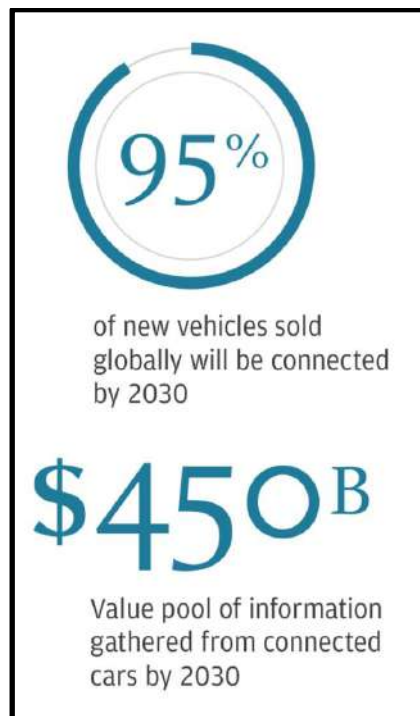
⁹ Bitcoin.com, July2020. 'Stablecoin Supply Doubles to 12 Billion Following a 50% Cryptocurrency Market Price Drop.' <https://news.bitcoin.com/>

Exhibit 12 - Rise in embedded payments



Source: J.P. Morgan - Payments are eating the world

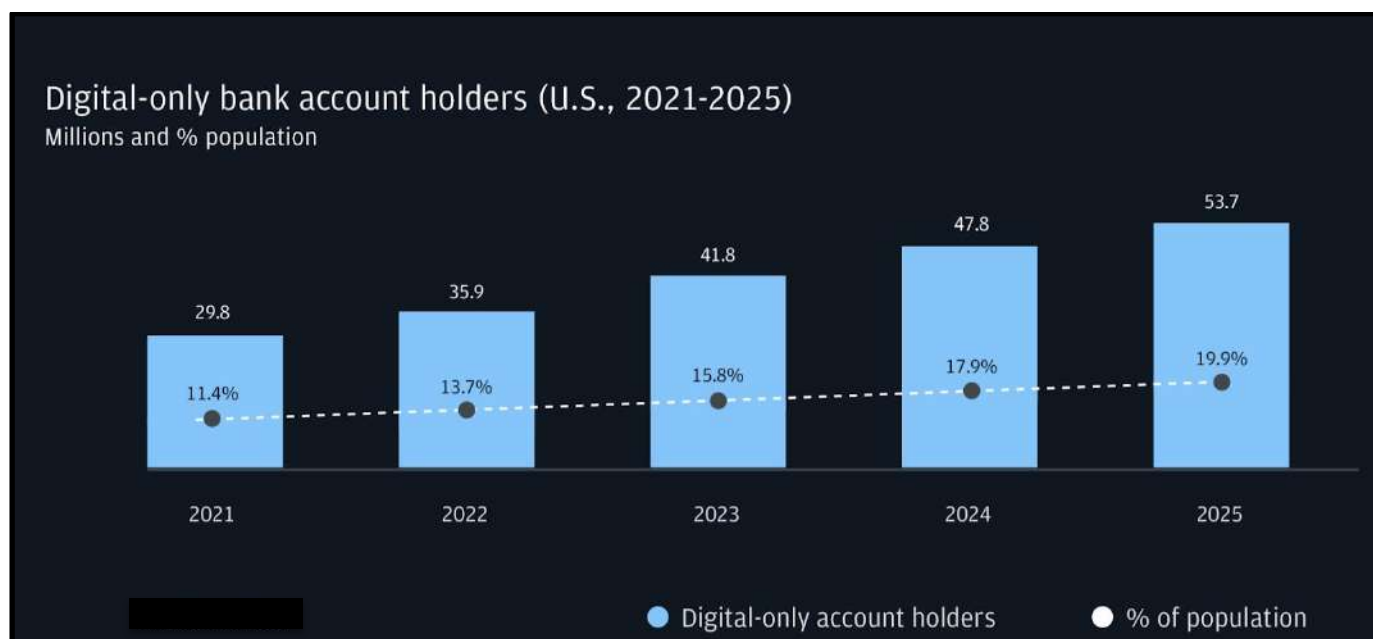
Exhibit 13 - Growth in the volume of connected cars



Source: J.P. Morgan - Payments are eating the world

Wearable technologies are a kind of electronic device that can be employed as an accessory to make payments, like an I watch. The Internet of Things (IoT) portrays the strategy of devices and customer inventory that are able to share data and communicate over the Internet, for example, Amazon Echo Voice. Neobanks are digital-only banks that operate virtually without the presence of physical units, for example, a bank app on smartphones. Such banks function APIs to deliver goods and services in an engaging technique building a tremendous consumer experience. Exhibit 14 depicts the rise in digital bank account holders in the USA from 2021 to 2025.

Exhibit 14 - Increase in digital bank account holders in the USA from 2021 to 2025

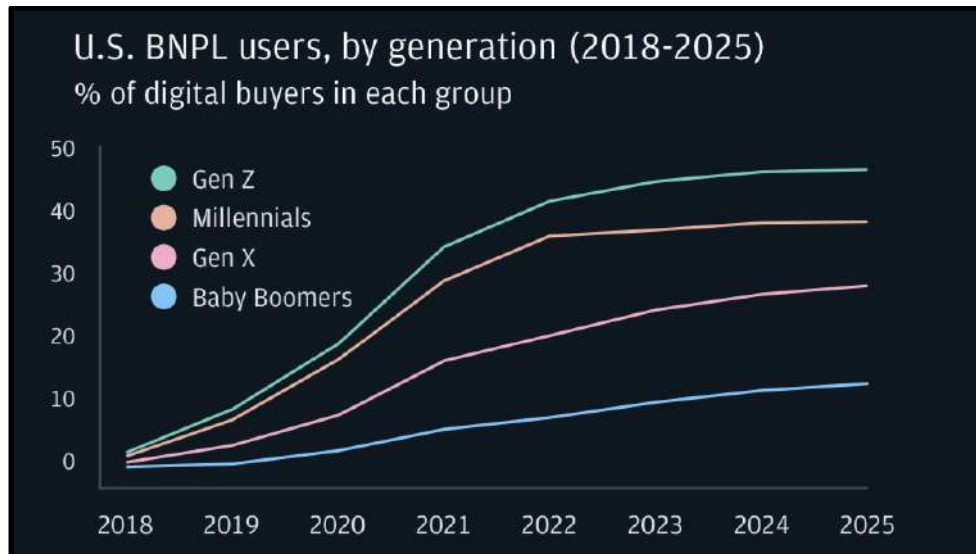


Source: J.P. Morgan - Payments are eating the world

Furthermore, APIs aid any software company in adding payments and banking outgrowths and corresponding services directly to its buyers under its own brand ownership. This is known as Banking-as-a-Service (BaaS). Summing up payments derivatives is not only a supplementary revenue stream, but it has matured enormously to a software company’s brand and profit gains. For example, Uber’s Visa debit card, which arose especially for its motorists, offers no expenditures, immediate payment, overdraft security and targets to provide loyalty rewards.

The buy now, pay later (BNPL) option can be enabled with digital payments. Exhibit 15 depicts the various classifications of buyers using this facility. Millennial and Gen Z buyers are urging for adjustable, inclusive and transparent methods to settle payments rather than conventional interest-bearing alternatives, hence preferring buy now, pay later solutions.

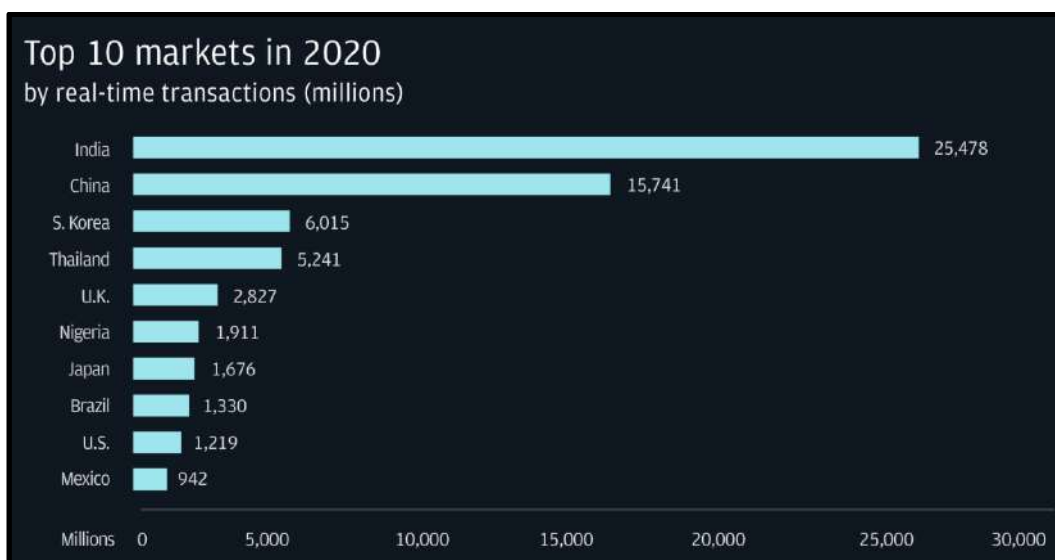
Exhibit 15 - Different categories of buy now, pay later shoppers in the USA from 2018 to 2025



Source: J.P. Morgan - Payments are eating the world

Real-time payments comprise revenues from international trade and financial transfers such as, an employee dispatching remittances to his own country or e-commerce customers making immediate financial marketing's. The global demand for real-time payment abilities is increasing and Exhibit 16 portrays the top 10 international markets in 2020 in terms of real-time marketing. Nevertheless, there is a vast network yet to be achieved before the reality of instantaneous payments can be totally realized and significant progress towards this objective will be put together in the future.

Exhibit 16 - Top 10 global markets in 2020 in terms of real-time transactions



Source: J.P. Morgan - Payments are eating the world

Closing Statement

Over the last twenty years, the biggest technological achievement was associated with connecting individuals across the world with the internet, data services, cellular phones and mobile communications. Now over the last decade, tremendous digital financial advancement has evolved due to refinement in the fintech services and software revolution. And currently, the globe is effectively internationally online and the impediments to entry for fresh digital business prototypes no longer exist.

This artificial intelligence outburst will greatly influence mankind's activities. Quantum computing, 5G and AI will ultimately merge into brilliant devices with cognitive capability beyond man's abilities. E-commerce is the future now. Consumers who maximize these technologies would embrace superhuman productivity and capacities in their private lives and professional careers. The champions of the future are likely to be those individuals who "*connect the connected*" and the interoperability between digital platforms with secure, effective and dependable database transfer will characterize the future. Payments as the value trade are the key to this interoperability limitation between platforms and are at the hub of a stimulating digital future. The POWER+ framework, as payments and value-added services, are evolving to be more competent, universal and effective, they congregate into the five value pools namely, Platforms, Online, Wallets, Embedded and Real-Time.

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