
KEY
INSIGHTS
Powering the next payments frontier

CRYPTOCURRENCY, CBDC AND THE FUTURE OF PAYMENTS

Bitcoin is the original cryptocurrency, released in 2008. While it's still the most popular cryptocurrency, there are now thousands of other digital assets. There is no centralized payment service when cryptocurrency is involved. Depending on who you are in such a transaction and your motivation for using cryptocurrency, that could be viewed as positive or negative. Requiring no currency conversion, crypto has proven to be a means to move funds across the world in a matter of seconds, and for a fraction of the costs associated with traditional methods such as wire transfer.

ADD SPECIAL EFFECT

Crypto trading, whether in the form of direct trading or futures, has become such a popular form of investing that some mainstream brokers are making it possible for users to buy and invest crypto within their platforms. With the aggregate market value of cryptocurrency exceeding $2 trillion, it's not a passing trend.

Contradictions in the global crypto response

The role that cryptocurrencies will play in the future global economy, including what parts of the world will deem it legal and which will intervene to restrict cryptocurrency, has become nearly as unclear as the value that any volatile cryptocurrency will command. In September 2021, the People's Bank of China (PBoC) said all cryptocurrency transactions are illegal. Financial institutions in Colombia are not allowed to facilitate Bitcoin transactions. Russia passed laws in July 2020 to regulate cryptos. The Central Bank of the Republic of Turkey issued a regulation banning cryptocurrency in April 2021.

But the view is very different in other parts of the world. In October 2021, the United States Federal Reserve Chairman said he has "no intention" of banning cryptocurrency, but the Federal Reserve is extensively examining how to best regulate cryptocurrencies.

At the same time, large merchants are increasingly moving toward cryptocurrency acceptance.

In early 2021, PayPal announced that it would enable nearly 300 million consumers to use cryptocurrencies to buy from the platform's merchants--without exposing sellers to currency risk. Venmo and Square Cash App now allow users to buy and/or sell crypto. Microsoft accepts it, Tesla has an on-and-off stance on crypto acceptance, and Starbucks customers can use the Bakkt app to pay with converted Bitcoin. Visa recently announced plans for a hub that would accommodate multiple blockchain networks to improve crypto interoperability.

Nabil Manji, senior vice president and head of Crypto and Emerging Business at Worldpay from FIS® expects that the momentum will continue. "Cryptocurrency users are becoming more comfortable with the technology that operates a cryptocurrency wallet, and some now have a significant amount of money in it that they would like to be able to use to transact. We're seeing many large merchants, particularly in the United States, show interest in how they'll accommodate that."

> **"Cryptocurrency users are becoming more comfortable with the technology that operates a cryptocurrency wallet."**
>
> **– Nabil Manji**, senior vice president and head of Crypto and Emerging Business at Worldpay from FIS®

The rising role of central bank digital currency (CBDC)

Whether driven by the desire to offer a competing yet stabilized form of digital currency, reclaim influence on monetary policy, reign in criminal activity, reduce payments friction, enhance payments security, improve inclusion or all of the above, the Bank of International Settlements reports that 86% of central banks are actively researching central bank digital currency (CBDC) as

of 2021. CBDC is issued as a legal tender, like cash is today. But unlike bank deposits, CBDC would represent a claim on the central bank.

Central banks are in the race to launch a fully functional CBDC because of various private cryptocurrencies. But much like real-time payments adoption, a country's unique financial infrastructure, existing payment preferences, levels of access to them and involvement by regulators influences the speed of innovation and uptake of a new payment option. Yet, there are many potentially useful benefits CBDC could serve, including:

- A mechanism for new monetary policy tools and greater transmission of monetary policy for central bankers
- Enhanced financial stability, in the case of a black swan event
- Increased penetration of central bank money in the economy
- Greater innovation to the payments landscape with new features like programmable money
- Reduction of existing payment frictions, especially in wholesale and cross-border applications

Following China's digital yuan live trial, Alibaba's online grocery stores now allow some clients to pay using the digital currency, and some retailers are accepting digital yuan physically where the trials have been carried out. In certain regions of China, 21 million users have opened a virtual wallet and transacted up to U.S. $5.3 billion, as of July 2021. The Bank of Japan has completed its digital yen trial, and Sweden's phase one e-krona pilot is also complete. The Bahamas and Cambodia have issued their own quasi CBDCs.

How regulation will influence the digital currency future

Cryptocurrency, stablecoins, CBDC and non-fungible tokens (NFTs) are very different things, but ultimately, all are digital assets that could be used to exchange value. Through that lens, **Aman Cheema**, FIS senior vice president for Global Real-time Payments, Strategy and Innovation, says the real question is, "which of them have demand going forward?" Cryptocurrency may have been founded on the idea of decentralized and unregulated currency, but he predicts regulation will be exactly what influences which digital currencies reign supreme. "The world watches what China, the United States, Europe and the United Kingdom does. We've seen this before when new payments instruments have been introduced. There's been uptake, and then regulation follows to make sure it doesn't create any instability in the financial markets. This digital asset category will be no different."

Regulators in some regions are grappling with how to handle cryptocurrency, in order to provide basic consumer protection and address instability of the financial system without hindering innovation. But Manji thinks the perceived guardrails and rate at which they do come into effect could be key enablers to more mainstream adoption if they relieve consumer and merchant concerns with cryptocurrency. At the same time, the regulation could also create space for central banks to accelerate their activities around CBDC. With

regulation, a country may have more freedom to focus on how to potentially complement their financial system, without having to necessarily solve the cryptocurrency issues they currently face.

The domino effect on payments

Regulation may determine how (or whether) consumers are able to use cryptocurrency and/or CBDC moving forward, but it will have a trickle-down effect throughout the value chain. The consumer side will likely lead the way, but that will act as a catalyst to the impact that has on institutions and businesses. “Institutions, much like consumers, are going to become familiar with the technology because they have to—either by market or regulatory forces. As a result of that, they’re probably going to realize the potential for other use cases within their business, whether it’s internal treasury management, cross-border payments or vendor payments,” says Manji.

Many governments and central banks that are considering CBDCs are also experimenting with different design and technology options. “Central banks motivated by a decline in cash usage and the threat posed by cryptocurrencies are seriously considering whether they should launch a digital version of cash. They are also looking at whether CBDCs can advance their economies and have societal benefits such as greater financial inclusion. CBDCs would give consumers and business greater choice to a new innovative format of money and would ensure that public access to central bank money is maintained,” says Cheema.

THE SWEEPING POWER OF SUPER APPS

Super apps are the always-open front door to a new generation of immersive digital experiences. One that uses data, artificial intelligence and the cloud to give users a contextually relevant experience that spans well beyond a single need or purpose, whether that be making a payment or communicating with a friend. The rise of super apps raises competitive stakes for brand experiences everywhere. They're shaping a new future of commerce that redefines how consumers shop, pay and connect with brands.

ADD SPECIAL EFFECT

What makes an app super?

Super app is an umbrella term to describe combinations of popular digital services all housed within a single app. A super app provides a single entry point and user experience to access many services consumers expect – under one roof. From social interactions and shopping to delivery and ride hailing, banking and investing to budgeting and payments, super apps combine an ever-expanding range of services in a singular immersive experience.

Many super apps begin as digital wallets, search engines, messaging, taxi or even delivery services and then undergo an evolution by attaching different products and services. “The growth of a super app requires a balance between offering a strong localized version of the product, along with the ability to use that localized product globally,” says **Phil Pomford**, Worldpay from FIS® senior vice president and general manager, global e-commerce for APAC.

Once super apps build sufficient scale, they have the power to use their volumes of rich first-party data to create a comprehensive customer profile and experiment with new ways to transform and elevate the customer experience.

Asia’s super app leadership

Super apps first emerged in Asia as powerful disruptors and economic innovators, and the region remains the primary hub of super app leadership. The rise of super apps in China followed a development pattern that leveraged the best technologies of the time. Lacking legacy banking and payment infrastructure, growth in large APAC economies coincided with the widespread availability of inexpensive mobile technology. Hundreds of millions of consumers were coming online at once. Relatively few emerging APAC consumers had access to bank accounts or physical credit cards, but virtually all of them had a mobile phone.

For consumers in China, it’s becoming difficult to go through a typical day without using WeChat or Alipay. The same is true of Grab for consumers in Singapore, Gojek in Indonesia and KakaoTalk in South Korea.

For APAC consumers, a single app opens doors to virtually everything they need or want to do, from social media to payments, ride-hailing and gaming. Super apps are not just a glimpse into the future –

they're the living future. From Paytm in India to Zalo in Vietnam, the world will continue to look to APAC for leadership in super app best practices. India's proposed Consumer Protection (e-commerce) Rules, 2020 amendment could soon change super app strategies for Indian players, if rules around related parties, data sharing and cross-selling are impacted. Because the amendment would not allow e-commerce providers to sell their own goods on their own platform, for example, The Tata Group announced in September that it would postpone the launch of its planned super app until there is further clarity.

Super apps have also come to address critical financial inclusion. China's COVID-19 tracking system, Health Code, was implemented as a mini program within WeChat and Alipay. The app was downloaded more than 50 million times within the first two weeks of release, reaching more than 90% of the population of Hangzhou, Zhejiang province.

Payments anchor the experience

Safe, reliable, consistent payments are the glue connecting super app experiences. Super apps use security best practices to authenticate users. Once safely inside the walled garden, payments are simple, secure and, in many cases, instant. Super apps are growing adept at leveraging trust with customers established through critical touchpoints like payments to broaden and deepen customer engagement and bring a growing share of their spend within their apps.

The role payments play in the growth and success of super apps is seen in the number of prominent super apps that started as payment tools: Alipay in China, Paytm and PhonePe in India, PayPal and Square's Cash App in the U.S. Adding a native payment platform unlocks the "super" achievement for super apps such as Grab's GrabPay and Gojek's GoPay.

Super apps are innovation multipliers, helping open payments become more accessible and driving adoption beyond traditional acceptance networks. Payment innovations like QR codes have gained broad global acceptance in large part by the wide exposure offered by super apps. China-based UnionPay reports that 85% of their users paid via a QR code in 2020.

The table stakes of financial super apps

Once a super app gains the trust of the consumer to manage their payments, that brand may leverage the trust it has established toward adjacent services,

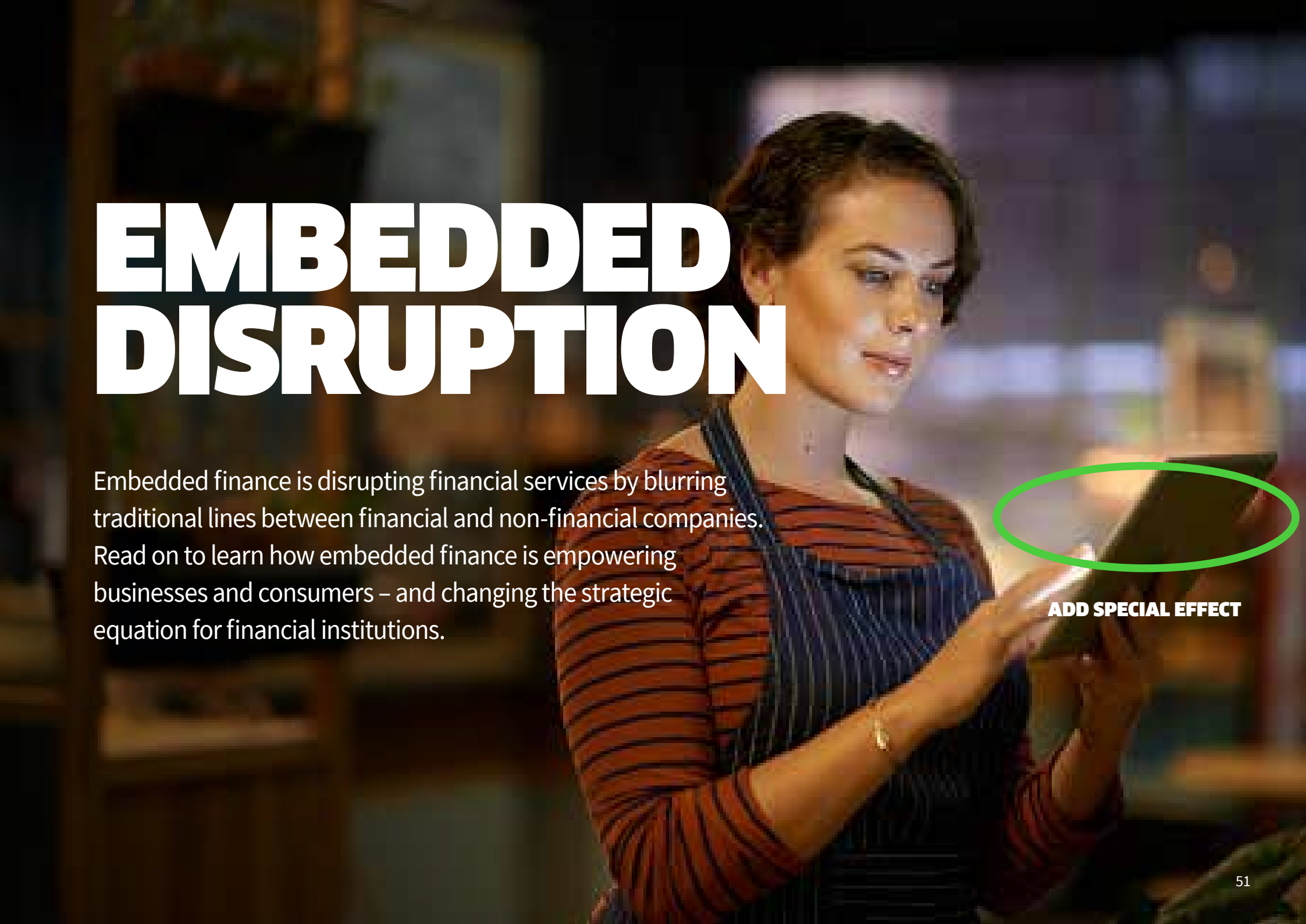
including traditional banking and functions like insurance and financing. Particularly now that it's so easy to move money with nothing more than a mobile phone, Pomford says super apps bring about yet another form of serious competition to card rails. Financial institutions, neobanks, person-to-person (P2P) payment companies and even retailers could all find themselves caught in the crossfire of super app competition. "For retailers, keeping up with the pace of interaction with all the different payment methods in a super app requires a very different marketing approach. It's not just the 'set up and leave it' like you do with a credit card network. You've got to work with various different tools, including data and information about your customers you didn't necessarily know before, that could impact your approach these customers."

"For retailers, keeping up with the pace of interaction with all the different payment methods in a super app requires a very different marketing approach."

The unprecedented competitive advantages super apps offer has spurred U.S. and other technology and fintech firms to catch-up to their APAC counterparts. Amazon, Facebook, PayPal, Square and Walmart have all taken steps to morph their existing offerings into super apps. Yet, there are currently broad regional differences in the prevalence super apps play and, perhaps, the cultural comfort level that comes with relying on one app to handle so many parts of a user's life. "People in the East tend to be very happy to have a single source for everything, but in the U.S. and Europe, that's not necessarily the case. People also have data and privacy concerns that exist in the West that don't exist at that level in the East. That may be one of the challenges that any super app faces in becoming truly global," says Pomford. Whatever the future holds for super apps, competitive pressures are enormous as they push the industry toward bundling, consolidation and simplicity. These platforms are shaping the next frontier of commerce and payments.

EMBEDDED DISRUPTION

Embedded finance is disrupting financial services by blurring traditional lines between financial and non-financial companies. Read on to learn how embedded finance is empowering businesses and consumers – and changing the strategic equation for financial institutions.



What is embedded finance?

Embedded finance involves banking and other financial services being placed in contexts other than financial institutions themselves. Embedding financial services breaks down the barriers that once guarded traditional banking by making financial services available to customers when and where they need them most. From e-commerce platforms to quick-serve restaurant apps, embedded finance puts tools that once required a trip to the bank within a single tap or click.

> **"Embedded finance puts the banking experience into the same front end and same workflow and experience businesses use most."**

Matt Collicoat, vice president of strategy and business development for B2B at FIS®, explains the impact embedded finance can have on a small business. "Consider a seller on an e-commerce marketplace who uses half a dozen tools every day—like banking, accounting and payroll—to operate their business. Now imagine all of those services in one central place-- where they're all most useful. Embedded finance puts the banking experience into the same front end and same workflow and experience businesses use most," says Collicoat.

Embedded finance in action

Embedded finance is all around us, seamlessly blending into the flow of everyday consumer and business journeys. Embedded payments are most familiar to consumers, so much so that it's easy to forget that they're still in their infancy. Embedded payments make ordering coffee or breakfast via their favorite quick-serve restaurant effortless, their payment rendered virtually invisible in the background. From paying for cars, subway fares and scooters to groceries, take-out restaurants and weekly grocery shopping, embedded payments make once complex multi-party transactions instant and effortless.

In the same way, embedded finance makes banking processes faster, simpler and more convenient. If a business owner wants to pay a bill or a supplier, transfer money, manage payroll or apply for insurance, embedded finance enables all those functions to happen in one place. As importantly, the business owner gains one view of money coming in, payments going out and a single snapshot of cash flow. If there is a cash flow concern, the business owner knows immediately—and has options to address it. Through embedded finance, consumers can apply for bank account overdraft protection, obtaining short-term financing or moving money in from another account without disrupting their journey.

But Collicoat says that's also the secret sauce embedded finance offers. Regardless of how the user wants to pay or send out an invoice, the underlying complexity should be mostly invisible to payer and payee. "The business owner doesn't need to understand the complexities beneath the surface. They should be able to express what they want — and the embedded finance experience delivers. If they want to get paid as fast as possible, they'll see only options that deliver that. If they want to get paid as cheap as possible, they'd see only low or no-cost options. It's about being able to let them make really

simple business decisions about how they want money to move in and out," says Collicoat.

Embedded finance is empowering brands

There are many non-financial companies that want to make embedded finance part of their experience, with good reason. Consumers are embracing financial services offered by the businesses they trust most and that offer attractive combinations of service and convenience. By leveraging their brand equity and customer loyalty, companies across industries can deepen those relationships by offering payment and deposit accounts, and value-added services like insurance, credit cards and financial advising.

"We're seeing more non-financial companies brand their financial services offering as their own. Rather than making the experience complex for the consumer by exposing that they're actually working with several different companies, embedded finance keeps the complexity in the background," says Collicoat. Also known as white label banking or banking as a service, embedded finance lowers what have historically been impenetrable barriers to entry for non-financial companies.

Changing the competitive equation for financial institutions

Embedded finance is empowering non-banks to boost revenues by delivering lucrative value-added services, reshaping the competitive landscape and opening new distribution channels for traditional financial institutions. For financial institutions, embedded finance demands a shift in thinking. While financial institutions will continue to own and operate their unique brands, and some customers will want to continue to work directly with them for some or all of their financial needs, embedded finance will begin to push some financial services toward commoditization. That's the double-edged sword of embedded finance: it enables financial institutions to vastly expand their distribution channels, but also invites entirely new classes of competition that displace the customer ownership that financial institutions have long enjoyed.

"Financial institutions still expecting all of their business to come to them directly will miss out. They have to be able to provide the services, but also make their services available for others to sell. There's a real marketplace there."

– Matt Collicoat, vice president of strategy and business development for B2B at FIS®

Embedded finance will serve as a catalyst that changes how banks, non-banks and technology partners collaborate. If a fintech company is building an app using Amazon Web Services and there is a workflow where the end user is offered the option to open a bank account, for example, the app developer may potentially turn to an API marketplace to plug in an "open bank account" module. As demand for embedded finance increases, partners that understand the risk appetite, goals and capabilities of both players could also play a critical facilitation role in establishing mutually beneficial arrangements between banks and technology companies.

Benefits of embedded finance

Consumers:
Embedded finance greatly expands financial services options for consumers, making the movement and management of money easier and more convenient. Consumers follow their own individual journeys without leaving traditional banks behind.

Financial institutions:
Embedded finance helps banks reach more customers with lower costs of acquisition, expanded distribution channels and the development of new value-added services, creating unprecedented opportunities of scale.

Non-financial brands:
Without bearing the burden of being a bank, businesses can leverage their ability to deliver financial services at a fraction of the costs of incumbent financial institutions, helping non-financial companies expand into adjacent services and increase lifetime customer value.

FURTHERING THE FUTURE OF FINANCIAL INCLUSION

Financial technology products and services are essential tools to promote inclusion in the financial systems of the future, helping communities around the world build long-term economic resilience and enable financial growth. Given the dynamic challenge of financial inclusion and its connectivity into many global social and economic goals, it is recognized as a target in eight of the seventeen UN 2030 Sustainable Development Goals.

Financial inclusion includes efforts to make products and services accessible and affordable by removing barriers that prevent participation in the financial sector. In order to do so, technology plays an important role in overcoming historic barriers to the financial system with new digital and innovative ways of reach more consumers. In its High-Level Principles, the G20 Global Partnership for Financial Inclusion (GPFI) notes that digital financial services combined with effective supervision are an essential aspect to closing the gaps that remain.

While the COVID-19 pandemic created incredible hardships for people around the world, it also helped catalyze fintech-enabled digital solutions that play a critical role in improving access to financial products and services for underserved populations. Recognizing the need to limit physical contact and expedite the distribution of funds, nearly 60 low- and middle-income markets have used digital payments to deliver emergency relief since the pandemic began. Brazil, which has an estimated 34 million consumers outside of the formal financial system, used its recently launched real-time payments system, Pix, to help distribute COVID-19 relief funds. In that process, 70 million new accounts were opened – many by unbanked Brazilians.

Martin Boyd, FIS president for fintech solutions, explains that using technology to deliver financial capabilities that the underserved can easily access, engage with and already know how to use is key to improving financial inclusion through fintech. “No matter the capability it provides, the technology needs to be embedded into a process someone is already comfortable with, but that enables them to do something more. That’s fundamental to how you reach and spread your service to include people who can’t otherwise afford it,” says Boyd. This also requires understanding the full scope of the barriers that lead to exclusion – demographics, education, credit worthiness or location – and addressing them as part of the solution.

Financial inclusion entails far more than just payments. Improving access to the financial system for unbanked and underbanked populations around the world is the first step in achieving broader financial inclusion goals. The World Bank notes that access to transaction accounts is essential to financial inclusion, allowing people to store digital funds and exchange payments.

Beyond payments, consumers and businesses are seeking additional tools, such as access to credit and insurance, to help them achieve their overall professional and personal goals. That might entail building a new business, investing in their education and careers, or building wealth to help create a more sustainable financial future for their family and community. Supporting global efforts to improve access to financial tools and solutions will open new opportunities for fintech to continue building the innovative solutions of the future. In 2020, FIS developed a comprehensive framework for financial inclusion built on four pillars to help drive transformational and sustainable change for clients and communities. Solutions and services are at the forefront of that framework, as they, directly and indirectly, increase the accessibility and affordability of financial services for end users.

A rising tide lifts all boats

Financial inclusion disproportionately impacts markets with developing and emerging economies, but it's a broad and multifaceted issue to which no market is immune. For example, countries such as Morocco, Vietnam, the Philippines and Mexico have large underbanked populations, yet approximately 13% of consumers in the United States also qualify as underbanked or fully unbanked (5%). Methods to promote financial inclusion are as varied as the populations themselves. For some, financial inclusion can be improved with more access to basic payment and money movement tools. In others, education that helps to overcome cultural obstacles like a lack of trust in modern financial infrastructure may be required.

For underbanked consumers who can't access traditional credit, financial technology helps promote inclusion by offering alternatives to predatory lending products. Financial technology also provides tools that encourage users to save money incrementally, by automatically setting aside small change from each purchase, or even investing through the purchase of fractional shares. These types of services highlight the many ways fintech is making a positive impact in traditionally underserved communities.

On its own, fintech won't be able to solve the complex challenges of poverty or inequality. However, it's increasingly clear that it will play a central role in promoting a more inclusive future. The U.K. fintech charity Pennies, for example, allows users to donate a penny to charitable causes whenever they make a digital payment. Its chief executive officer, Alison Hutchinson, says the concept was inspired by the fact that the world was moving away from paying with cash, yet dropping change into a jar or box was how people were accustomed to donating. All those microdonations add up to make a real impact. "It all starts with the penny," says Hutchinson. "If every banked adult in the U.K. donated the equivalent of a chocolate truffle once a week, that would be 10% of all the giving in the U.K. You springboard that onto a global scale and you could transform communities across the globe."

Financial technology that promotes inclusion isn't limited to moving money. It can also be a means to teach people how to use money in a way that positively supports their life long before they're concerned with it. Louise Hill, co-founder and chief operating officer of GoHenry, a prepaid debit card

and financial education app for kids as young as six years old, is doing exactly that. “When it comes to financial education, the best way to learn is by doing in a real-life environment. This is where fintech comes in, particularly as the pandemic has accelerated the move to a cashless society,” says Hill.

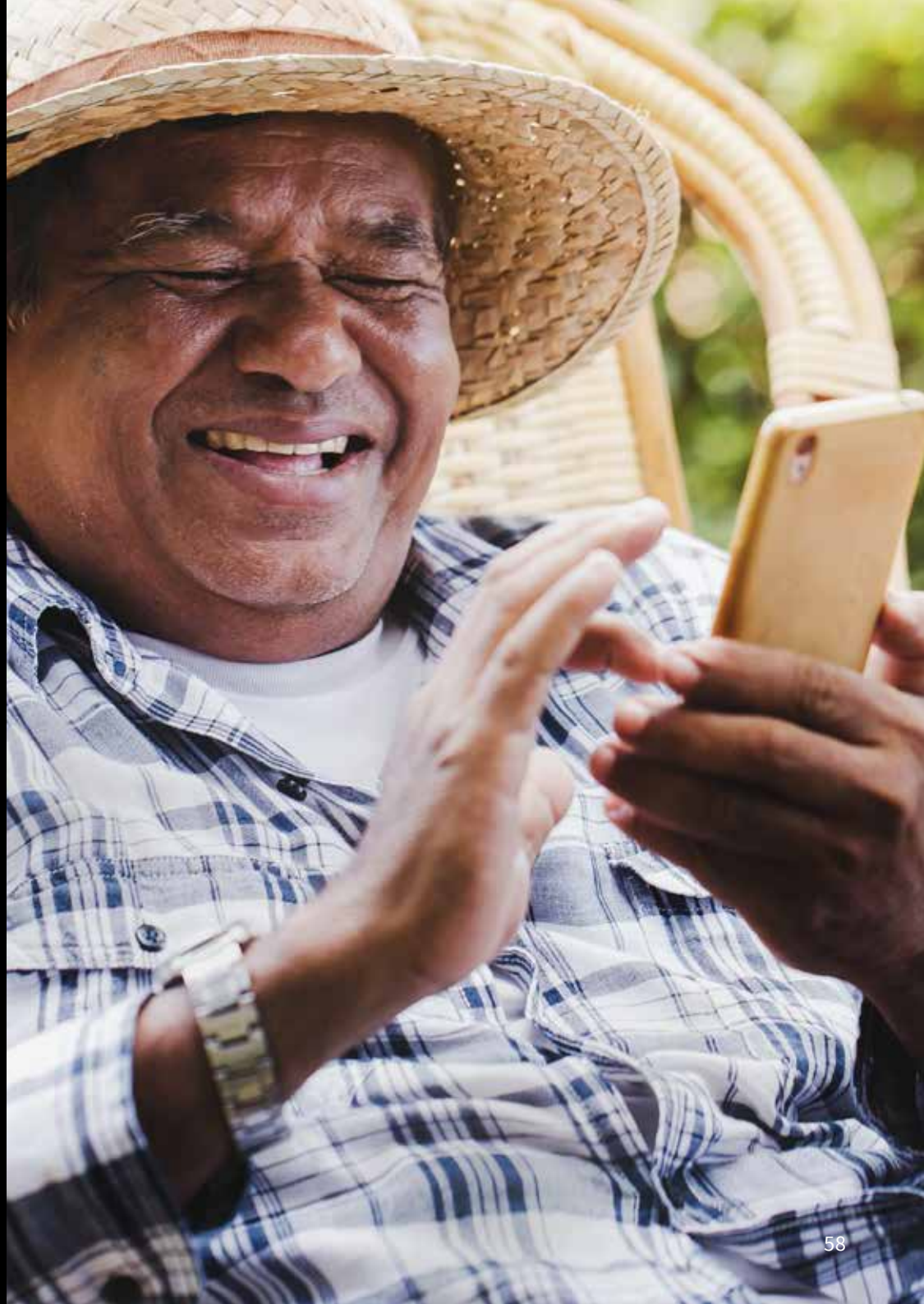
Tackling the next frontier of financial inclusion

The United Nations Capital Development Fund (UNCDF) works to connect last-mile financial services to underserved individuals, businesses and municipalities in 39 countries around the world. For UNCDF, financial inclusion is a means to an end:

“Meaningful digital financial inclusion has to provide outlets for low-income account holders to engage in the economy in order to meet their daily needs and improve their skills, productivity and marketability in the digital-economy age.”

Financial technology continues to make great strides in positively influencing financial inclusion, particularly with increased mobile penetration and the accelerated adoption of digital and contactless payments. In the future, Boyd predicts we’ll see financial inclusion expand across even more channels, including connected devices like smart speakers and TVs, making it easier for people to access and manage their money.

By improving access to bank accounts, transactions, credit or even financial literacy content, fintech is providing a digital lifeline that’s closing the accessibility gap and fueling opportunity by enabling connections that transcend distance. It’s helping promote a sustainable future by providing broad access to the essential tools that individuals and businesses need every day to help power the next payments frontier.



THE REAL-TIME RACE TO REVOLUTIONIZE PAYMENTS

Real-time payments have been a reality to financial industry insiders for nearly fifty years, beginning with Japan's real-time payments system in the 1970s. It would take another several decades until markets like the United Kingdom, China and India would introduce their own real-time payment rails. But the momentum started to take off in the years that followed. When FIS published our first Flavors of Fast report in 2014, we counted 14 live faster payments schemes in the world.

By 2020, 56 markets were live with real-time payments. Since then, four more schemes have launched in Russia, United Arab Emirates (UAE), Argentina and Colombia. Now, up to 72% of the world has a live real-time payments infrastructure, or one soon to launch.

"More and more, we are moving into a real-time economy. Real-time payments have been the catalyst in actually creating the real-time economies we are starting to see implemented in markets like Europe," says **Bernd Richter**, FIS senior vice president for the Global Real-time Payments Network in Europe.

The regional influence of real-time payments

The pandemic accelerated the use of real-time payments, but regional differences are significant. India led the world in the largest daily real-time payments volume in 2021 with 70.2 million, followed by China with 42.8 million. The U.K., which has had a real-time payments infrastructure since 2008, ranked fifth for daily real-time payments volume of 7.9 million. In the U.S., where real-time payments are still a fairly new concept outside of P2P use cases, **Norm Marraccini**, FIS senior vice president and group executive for Commercial and Retail Payments, thinks it may be another 12 to 18 months until consumers, merchants, corporates and financial institutions see their true potential.

For real-time payments to become truly global, says Marraccini, the many different schemes and real-time payment methods that currently exist eventually need to lead to a common way to accept and move money in real time. This past year has brought greater collaboration among regions, with the shared goal of increasing interoperability. In July 2021, P27 in the Nordics received the EU commission's merger approval to start preparing to onboard customers. It is intended to create a future-proof, digital highway of sorts that will enable domestic and cross-border, multi-currency, real-time payments initially across Sweden, Denmark and Finland, with Norway considered later. Expected to facilitate economic growth and trade, it could serve as a blueprint of sorts for how other regions approach their real-time payments.

India led the world in the largest daily real-time payments volume in 2021 with 70.2 million, followedby China with 42.8 million.

In October 2021, EBA Clearing, SWIFT and The Clearing House completed a proof of concept as part of a new initiative, Immediate Cross-Border Payments (IXB). Using ISO 20022 messaging standards, it would synchronize settlement into one instant payment system with settlement in the other and convert real-time messages between both systems. There is no official timeline for next steps, but the move demonstrates how existing infrastructure could facilitate cost-effective, transparent and real-time cross-border payments. Aiming to launch sometime in 2022, according to *Fortune*, the European Payments Initiative (EPI) also seeks to create a new pan-European payments

network intended to enable seamless in-store and online purchases, debit and credit payments and instant peer-to-peer money transfers.

Overlays encouraging real-time use

Government agencies are increasingly using real-time payments for pensions, benefits, fees and fines. In the U.S., APAC and EU regions, business/corporate use cases related to salary, accounts payable, mandates for direct debits and bulk payments are bringing high-volume/high-value payments into real time. Richter says companies are now realizing that real-time payments can change their business model, how they interact with companies and suppliers, and how they conduct business. "With real-time payments, a business can actually innovate and enter new markets to sell to customers they don't sell to today," says Richter. Consider an insurance policy company based in Europe that wants to serve customers in Asia, as an example. With real-time payments, the insurance firm can advertise ad-hoc insurance underwriting and activate the policy immediately, when receiving the activating premium payment for the policy as a real-time payment. Many insurance companies are also using the real-time rails for instant payout of approved claims, even globally where available, adding a competitive edge to their proposition – fueled by payment innovation.

"With real-time payments, a business can actually innovate and enter new markets to sell to customers they don't sell to today."

Overlay services that sit atop real-time payments rails, like Request to Pay (R2P) and e-invoicing, are also stimulating new use cases and uptake by consumers, merchants and corporate customers. As a standardized financial messaging scheme that allows a payee to digitally initiate a payment request from a payor via bank channels or third-party fintech applications, R2P can be a cheaper, faster, more efficient and potentially lower risk means of moving money, compared to traditional methods. It enables straight-through processing of e-invoices and payments for corporates, and for merchants, could mean avoiding card interchange fees, reducing chargeback risk and expediting funds transfer. Depending on how the secure R2P messaging reaches the end user (which could be from a banking app or a third-party app), it could also be used to deepen customer relationships and add new revenue streams. When a customer's R2P due date is near, for example, a bank could present the customer with new and/or flexible payment options like short-term installment loans, a business version of the buy now, pay later (BNPL) wave that's changing retail payments currently across the globe.

The role of real-time payments in commerce

Real-time payments are being used in e-commerce in some parts of the world, but **Sri Kothur**, general manager and head of Enterprise Payments at FIS, says it's still very much in its infancy. Once they do become more commonly used globally online and at the point of sale, he expects they'll be yet another payment type—not one that will displace other mechanisms. Ultimately, the role real-time payments play in commerce will depend on what it offers each specific party involved in the transaction.

“It’s tricky because there are different economics behind payments and each participant has their own desired outcome,” says Kothur. Artificial intelligence (AI) will play a crucial role in facilitating intelligent payment routing on the front end and resolving conflicting needs of all involved in a real-time payment transaction. “The payor can easily choose the payment type, and the payee can decide how to receive the money based on when they want funds to move and what they are willing to pay for that method,” says Marraccini.

Much the like significant impact BNPL has had a significant impact on banks, large merchants and card schemes, real-time payments will play a similar role in continued payments innovation. “We’ve seen that BNPL is not just about payments. It was a way to get into the relationship and create a fantastic customer experience,” says Richter. The combination of open banking and real-time payments infrastructure will create new payment alternatives for customers, and new ways for merchants and corporates to accept payments. The payments innovation already underway will continue; real-time payments will help fuel growth, and the redistribution of market shares and payment types.

ALL EYES ON EUROPE

As a historical leader in payments innovations, the European payments community continues to be home to many of the leading solutions on the cutting edge of global payments change. Home to 45 markets, each with its own unique mix of regulatory, demographic and economic variables, Europe is a wellspring of payments innovation. The intentional patchwork of diverse organic solutions in Europe is a microcosm of the global payments landscape.

As multiple payments solutions are causing simultaneous and overlapping disruption, Europe can be considered an early indicator of global payments trends. The remarkable growth of buy now, pay later (BNPL) and the emerging importance of open banking and real-time payments are leading all eyes of the global payments community to Europe.

BNPL enters the mainstream

BNPL solutions found fertile ground in Europe, where they've grown in just a few short years from fringe upstart to the very center of the mainstream of contemporary global payments options. BNPL solutions accounted for over 8% of Europe's regional e-com and nearly 2% of regional POS transaction value in 2021, each more than twice the value of the next highest regional BNPL tallies. The three top e-com markets for BNPL are all located in Europe, with BNPL as the leading e-com payments option in Sweden (25%) and among the leaders in Germany (20%) and Norway (18%).

"Consumers are clearly embracing the ease of use and flexible financing BNPL offers. Now it seems like every merchant is looking to offer BNPL to satisfy growing demand," said **Peter Wickes**, FIS general manager, EMEA, Enterprise. "The bigger companies are prepared and may even welcome appropriate regulation, whereas smaller providers may find regulation burdensome. I think that's when you may start to see some consolidation of those companies."

Yet, the rush to share in BNPL success has created a market that's increasingly saturated. "There are now so many companies that offer BNPL services, some form of consolidation in the market feels inevitable," says Wickes. "Merchants need help to make decisions about the number of payment methods they actually need to offer. There's no need to offer six BNPL options on their payments page when two will more than suffice."

Another challenge for the biggest providers is how many countries they can expand to, and how quickly. "That may well supplement organic growth with acquisition of targeted competitors in local markets, where it's going to take them one or two years to expand," says Wickes.

Open banking's heyday delayed, not necessarily denied

There's a big focus on open banking in Europe and appropriately so given collaborative pan-European efforts including Open Banking Europe and PSD2,

the EUs second Payment Services Directive that seeks to increase security and stimulate competition among payment service providers.

“We haven’t seen a material movement toward open banking that many had predicted. Some of the open banking products and solutions can cause significant disruption in the market, not only from an e-commerce payments point of view, but also from a point-of-sale and omnichannel payments point of view,” says Wickes. Ultimately, the success or failure of open banking will come down to consumer choice, and whether consumers see open banking as a payment method that creates a positive experience and provides additional benefits that surpass other options.

Getting real about real-time payments

The European story on real-time payments is one of innovation and renovation. Europe continues to wholeheartedly embrace real-time payments. With over half of the world’s real-time payments enabled countries, it continues to be positioned as a global leader and center of excellence and innovation.

“I think you are going to see the availability of real-time payments becoming a requirement across the whole ecosystem--not just for real-time payments going out, but also coming in,” says Wickes.

A decade ago, Europe led the world with instant clearing and settlement of payments. Today, the need to offer innovative overlay services on top of the real-time payment rails is obliging many of these early adopters to adapt once again. Europe’s center of gravity for real-time payments is the European Payment Council’s SEPA Instant Credit Transfer (SCT Inst). SCT Inst develops services including a request-to-pay service launched in 2021, as well as the

“The ability to transact instantly will evolve from innovative convenience to baseline expectation among consumers and merchants alike.

– Matt Collicoat, vice president of strategy and business development for B2B at FIS®

forthcoming availability of an API open gateway. API-focused architectures are fueling innovation and enabling a wealth of use cases including e-invoicing, supply chain finance and trade finance.

All eyes are on Europe’s continuing innovation in real-time payments solutions. A decade ago, the UK Faster Payments scheme sent a strong message of modernization to the world, but the service is already being reviewed. Pay UK is planning a replacement with the New Payments Architecture (NPA). Further north, Project 27 (P27) aims to establish a single pan-Nordic payments infrastructure for the region’s 27 million inhabitants. This infrastructure will enable real-time payments over a secure platform between Denmark, Finland and Sweden, with Norway showing an increasing interest in joining.

“The card schemes and payments providers will need to react to the development and adoption of real-time payment rails. The major card schemes will need to improve the speed at which money passes to the acquirer and, ultimately, on to the merchant,” says Wickes. “The ability to transact instantly will evolve from innovative convenience to baseline expectation among consumers and merchants alike.”