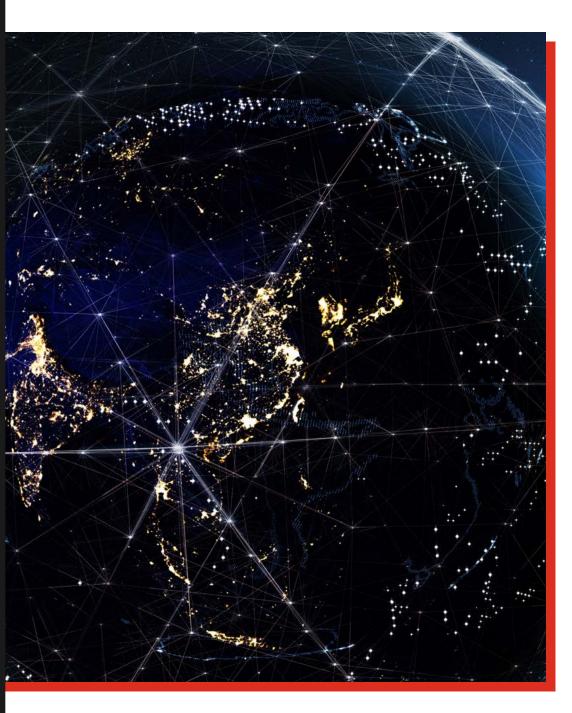
THE FI'S GUIDE TO

MODERNIZING DIGITAL PAYMENTS



OCTOBER 2020

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MODERNIZING DIGITAL PAYMENTS

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ACKNOWLEDGMENT: The FI's Guide To Modernizing Digital Payments is done in collaboration with Red Hat, and PYMNTS is grateful for the company's support and insight. PYMNTS.com retains full editorial control over the following findings, methodology and data analysis.

What's INSIDE

Payments have always been a critical part of the global economy, and the digital age has made funds flow faster than ever. Payments often hit snags when crossing borders, however, as government authorities must check each transaction for fraud, money laundering and terrorist financing. Many of these transactions must also be funneled through multiple financial institutions (FIs) via a process called correspondent banking before they reach their final destinations.

Experts predict that more than \$27 trillion in payments will flow between businesses internationally in 2020 — a substantial sum, even though it represents a record low because of the COVID-19 pandemic and its effects on the economy. The values and volumes of these payments require treasury staff to spend countless hours agonizing over cross-border payment frictions, including their sluggish processing times, potential fraud issues and lack of transparency. A recent survey found that one-third of businesses were concerned about cross-border payments fraud while 26 percent were worried about data security. Another study found that 61 percent of treasury professionals believe that the time taken to determine

why cross-border payments failed is a drain on company resources.

Old-fashioned cross-border payment methods clearly no longer suffice, and FIs are now turning to cheaper, faster and more secure ways of conducting these transactions. The SWIFT network recently began collaborating with technology giant Microsoft and FI BNY Mellon to move its payment technology to the cloud, for example, allowing more banks than ever to move away from correspondent banking and toward providing superior payments experiences for corporate and retail customers.

Such innovations are just the start, however. Additional technological developments and adaptations will be necessary to simplifying international payments, and greater investments in cloud tools could make all the difference.

AROUND THE WORLD OF PAYMENTS MODERNIZATION

The ongoing COVID-19 pandemic has slowed cross-border payments' growth. One recent **study** predicts that cross-border business-to-business (B2B) payments will total just \$27 trillion by the end of

this year and that their value will not exceed the \$35 trillion reached in 2019 until 2022. The pandemic itself is not the only factor to blame — businesses are expected to be more frugal and cost-conscious as they recover lost traffic and establish new business connections after the pandemic recedes.

Cloud services are mitigating slowed cross-border payments growth, however. A recent <u>study</u> projected that the cloud services market will reach \$266.4 billion by the end of this year, a 17 percent year-over-year increase. It also determined that as much as 55 percent of all workloads will be cloud-based by 2022, up from 33 percent this year. The pandemic is contributing to this growth in cloud services adoption, with companies introducing new ways to aid employees who are working from home.

The demand for cloud services is driving many FIs that would not otherwise leverage these solutions to forge partnerships. Standard Chartered Bank recently **formed** a partnership with Microsoft to leverage the latter's Azure cloud platform. The FI plans to move all of its core banking and trading systems to the cloud by 2025 and will utilize Microsoft 365 and Microsoft Teams as part of its shift. Standard Chartered plans to take advantage of the cloud network's artificial intelligence (AI) and data analytics capabilities to modernize its customer personalization efforts.

For more on these stories and other payments modernization developments, read the Guide's News and Trends section (p. 10).

HOW MONEY TRANSFER ORGANIZATIONS CAN SAFELY ACCELERATE INTERNATIONAL TRANSACTIONS

Consumers looking to send money to friends and family members abroad often must contend with lengthy waits and expensive processing fees due to their payments traveling between many different banks before finally reaching end recipients. This approach, known as correspondent banking, is becoming outdated as consumers come to expect faster payments, however, according to Nicholas Lembo, head of growth, Americas for money transfer service TransferWise. In this month's Feature Story (p. 6), Lembo explains how financial service providers can abandon the correspondent banking system and adopt more direct, streamlined approaches to facilitating international transfers.

DEEP DIVE: LEVERAGING CLOUD TECHNOLOGIES TO ACCELERATE AND SECURE CROSS-BORDER PAYMENTS

Trillions of dollars flow across international borders every year, yet these cross-border payments are surprisingly complicated despite being commonplace. They are often fraught with delays and security risks and prone to a lack of transparency, but banks are becoming more adept at harnessing cloud technologies to mitigate these weaknesses. This month's Deep Dive (p. 13) explores how old-fashioned correspondent banking models can lead to payments frustrations as well as how cloud technology can boost cross-border transactions' speed and security.

Executive INSIGHT

KELLY SWITT

senior director of ecosystems and financial services at Red Hat

A recent survey found that 81 percent of businesses say that round-the-clock transaction processing will "dramatically transform the way business is done." How can banks leverage cloud-based systems to support 24/7 payment capabilities?

"Real-time processing is an important capability for banks as they seek to differentiate themselves and provide more value to their customers in markets dominated by parity. Attempting to do this with traditional technologies and architectures can be a complex, costly and ultimately ... painful endeavor.

Fortunately, cloud platforms were created from the ground up to support an always-on, real-time service. Things like adding capacity or applying software updates are performed automatically so that critical services remain available to customers when the service is being updated. Moving to a cloud-native architecture means that banks can take full advantage of this automation, but it also provides the ability to perform smaller and more frequent updates so that [banks] can be more malleable to change. Lastly, cloud platforms have powerful, built-in service recovery capabilities that can detect system communication issues and take automatic measures to recover without impacting the customer experience.

Making the change can seem daunting at first, but advancements in cloud technology can enable banks to take incremental steps as they adopt cloud platforms to support their real-time needs."

\$27T

Expected total value of cross-border B2B payments in 2020

\$266.4B

Projected value of the cloud services market by the end of this year

81%

Share of businesses that say real-time payments will transform their day-to-day operations

26%

Share of businesses concerned about the data security of their cross-border payments

60%

Portion of total cross-border payments conducted on the SWIFT network Five Fast FACTS

Feature STORY

TransferWise On The Faster Future Of Cross-Border Payments

Many transactions made in today's highly digital world are handled without senders or recipients ever physically touching the money. Consumers send funds by tapping or swiping payment cards, clicking a few buttons on banking websites or payments apps or keying in details into online checkout pages, and payees receive them via bank accounts or digital wallets. This kind of digital environment ought to open the door to rapid-fire payments — even for transactions that move across country borders and convert into different currencies — but legacy approaches often hold banks back from providing such swift international transactions,

according to Nicholas Lembo, head of growth, Americas for London-based money transfer service <u>TransferWise</u>.

"Moving money from one currency to another sounds like it should be pretty straightforward, especially in an era where moving money is basically moving bits of information across the internet," Lembo said in a recent interview with PYMNTS. "It should be as cheap and easy as sending an email—because it's essentially just packaging information the same way—but it's not."

The traditional correspondent banking network is one major speed bump that stops FIs from

It should be as cheap and easy as sending an email — because it's essentially just packaging information the same way — but it's not.

providing speedy, inexpensive, cross-currency and cross-border transfers, Lembo explained, but financial services providers can adopt new technologies and approaches to safely streamline these transactions.

BREAKING FREE FROM CORRESPONDENT BANKING

FIs looking to send funds from one country to another are often not set up to directly transfer money to recipients' banks. International payments instead pass through a handful of different banks — each

one handing transactions off to the next player – before reaching their final destinations.

"If I wanted to send money from Australia back to my parents in the U.S., the money doesn't actually go from my Australian bank account straight into my parents' credit union account," Lembo said. "What it actually does is [go] to my Australian bank's correspondent bank, probably in Southeast Asia [in] Hong Kong or Singapore. They might send it to another clearing bank somewhere else in Europe or Asia, and it eventually may bounce between even two or three more banks before it arrives at the recipient in the U.S."

This method involves many steps and adds costs because each participating bank charges a fee for its role in transmitting the funds. Lembo said that a swifter, simpler way of offering international payments would have financial services providers create and leverage their own networks of local bank accounts in countries around the world. This would allow a money transfer provider to accept funds from consumers in one country via its local operation and then direct the accounts it holds in the recipients' countries to pay out the amounts due after adjusting for foreign exchange rates.

"The money never actually crosses borders," Lembo explained.

Avoiding sending money between different financial players and instead balancing funds between a single company's own various accounts allows money transfer service providers to streamline operations, speeding up transactions. The process also avoids the fees that intermediaries would have charged.



STAYING SECURE

Companies looking to modernize the cross-border payments space must attend not only to speed but also security. These players need to be wary of fraud or they will lose customers and risk being fined or shut down. Fraudsters are often eager to abuse international payment services to transfer ill-gotten funds and finance criminal operations, so Fls and other money transfer organizations must carefully follow the anti-fraud regulations of each country in which they operate.

"Compliance with our licenses is a big part of making sure our business works and is compliant with the letter of the law, and [it] is also a big part of how customers know they can trust us as well," Lembo said.

Keeping up with regulations around international fund transfers involves checking that recipients are not in countries that have been blacklisted or placed under financial sanctions. It also entails performing a variety of checks on customers who are

looking to send money, including anti-money laundering (AML), counter-terrorist financing (CTF) and know your customer (KYC) evaluations.

Tapping advanced technologies can help financial service providers manage compliance effectively, Lembo said. These companies can use ML tools that check transactions for red flags and then alert staff in cases where deeper manual review is needed, for example.

Consumers are living in an ever-more connected world, and their demand for swift and affordable cross-border payments is likely to continue and even heighten. Financial services providers looking to win bigger shares of this market likely will need to be able to assure customers that their money will arrive safely and on time.

News and TRENDS

Payments modernization trends

COVID-19 PANDEMIC DECELERATES CROSS-BORDER PAYMENTS

The COVID-19 pandemic, its associated social distancing and stay-at-home orders and the resulting economic downturn are drastically affecting the global economy and thus the flow of cross-border B2B payments. A recent study **found** that these payments will total just \$27 trillion in 2020 and are unlikely to exceed last year's B2B cross-border payments value of \$35 trillion until 2022. The pandemic — as well as businesses' expected frugality and cost-consciousness once it passes — are behind this slow growth, and firms are working to recover lost traffic and forge new business connections.

Evidence suggests that automation can play a significant role in the post-pandemic recovery as businesses attempt to reduce costs, limit errors and increase their transaction speeds. These

beneficial effects could be hampered by the uneven rollout of instant payments, however, which are projected to account for 9.3 percent of all B2B transactions but only 6.3 percent of total transaction values by 2022.

BUSINESSES PLACE GREATER EMPHASIS ON INSTANT PAYMENTS

Companies around the world are prioritizing instant payments more than ever before. A recent <u>survey</u> of business leaders found that access to such payments was the second most important consideration when choosing an FI with which to partner and that 81 percent said that real-time payments will dramatically transform their day-to-day operations. Only 9 percent had no plans to adopt real-time payments.

Businesses that prioritized instant payments gave various reasons for doing so, according to the study. Fifty-two percent said they planned to leverage such payments for more accurate cash flow measurement, while 46 percent said it would improve their accounts payable (AP) procedures.

Payroll and payments collection were also cited as popular areas that the adoption of instant payments could improve.

CLOUD SERVICES MARKET EXPECTED TO REACH \$266.4B IN 2020

Cloud technology is also accelerating payments, and the demand for such tools has increased significantly in the past several years. A recent study projected that the cloud services market would hit \$266.4 billion by the end of this year — a 17 percent year-over-year increase. One expert predicted that up to 55 percent of all workloads will be cloud-based by 2022: 33 percent are currently. This estimation could even be conservative, as the current pace of cloud innovation indicates that such a level could be reached a year earlier. Cloud migrations have become more prevalent during the pandemic as a large share of the workforce conducts business from home rather than the office.

Cloud services' increased adoption has raised questions about their regulation and security, however. One 2018 report found that a major cloud services provider (CSP) outage could lead to \$15 billion in economic losses, prompting calls for government regulations to ensure that such outages do not happen. Cloud services are also mostly concentrated in a small number of large CSPs, such as Amazon Web Services (AWS), Google Cloud and Microsoft Azure, meaning that attackers could do significant damage by targeting just one.



New cloud payment solutions

MICROSOFT PARTNERS WITH STANDARD CHARTERED BANK TO FUEL CLOUD TRANSFORMATION

Banks around the world are tapping into cloud technology with the help of services providers. One such partnership comes from Standard Chartered Bank, which recently <u>teamed up</u> with Microsoft to leverage the latter's Azure cloud platform. The bank aims to make its core banking and trading systems

completely cloud-based by 2025, but it must take several steps to achieve this. Standard Chartered Bank will leverage Microsoft's data centers to ensure its customer security is up to snuff and that it is meeting privacy and compliance requirements.

Azure's AI and data analytics capabilities will help the bank modernize its personalization services as well as provide instant payments via application programming interfaces (APIs) and internet of things (IoT) technologies. Standard Chartered also plans to leverage Microsoft 365 and Microsoft Teams as part of its cloud transformation.

FORM3 AND COUNTINGUP PARTNER ON CLOUD PAYMENT SOLUTIONS FOR SMBs

Cloud payments are also proving useful for small to mid-sized businesses (SMBs), especially those looking to quickly and affordably transact across borders. Cloud payment technology provider Form3 recently partnered with payments solution provider Countingup to provide a new service that converts transactional data in real time and simplifies payment flows, allowing SMBs to process payments faster and more efficiently. Many SMBs have to juggle several partnerships to handle these processes, according to Countingup CEO and founder Tim Fouracre, meaning that switching to a single provider could save the businesses time and resources.

A recent PYMNTS <u>study</u> found that up to 15 percent of businesses' annual operating costs go toward maintaining outdated procedures. Cloud and Al technologies can modernize and streamline these processes, however, allowing SMBs to devote their resources to more productive endeavors.

Cloud payments go international

NETS PARTNERS WITH SINGTEL AND AWS TO ACCELERATE CROSS-BORDER PAYMENTS IN SINGAPORE

Another cloud technology integration to enhance cross-border payments comes from Singaporean payment services provider Network for Electronic Transfers (NETS), which recently partnered with telecommunications conglomerate Singtel and AWS to leverage their cloud platform. The partnership aims to help Singaporeans more easily make purchases internationally while also offering travelers simpler payment solutions when they are in Singapore. The partnership will combine NETS' network infrastructure and AWS' cloud database, serverless storage and container platforms to accelerate these cross-border payments.

Such partnerships could be crucial to offering financial access to Southeast Asia's underbanked population, which is expected to hit \$1 trillion in paying power by 2025. These underbanked consumers are extremely likely to have internet access, as the region will have more than 300 million web users by 2025. This makes cloud-powered banking service platforms a natural fit to serve their needs.

ACI WORLDWIDE POWERS 75 PERCENT OF REAL-TIME PAYMENTS IN HUNGARY

Hungary is also getting invested in the real-time payments push, with the country's government mandating that all payments totaling less than 10 million HUF (\$34,000 USD) be processed instantly.

More than 75 percent of Hungarian FIs chose cloud payment solutions provider ACI Worldwide as their partner to enable such payments, including several of the country's top banks and FinTechs, like Erst Bank Hungary, OTP Bank and Takarekinfo. ACI Worldwide partners Capsys and T-Systems also aided in the transition to instant payments.

Hungary is one of many European countries — including <u>Denmark</u>, Romania and Sweden — that have <u>enabled</u> widespread instant payments adoption in recent years. These transformations are being encouraged by the European Union's revised Payment Services Directive (PSD2), which mandates cooperation among the continent's banks to enable such services.

PAYONEER EXPANDS CROSS-BORDER PAYMENTS GLOBALLY

Financial services provider Payoneer is also driving the spread of instant cross-border payments with the Launch of its new Payoneer for Banks platform. The service integrates numerous APIs to enable FIs to make cross-border payments in real time without leveraging correspondent banks. The program's goal is to reduce the costs and frustrations associated with current cross-border transaction schemes, which often take days to process as they flow from one bank to the next. Its debut was also driven by the growing number of open banking applications on the market, which have made customers much more open to API- and cloud-based solutions.

Payoneer for Banks launched with 10 eBanks and digital wallets, but the company plans to expand this service in the near future. PYMNTS' recent

Up to 15 percent of businesses' annual operating costs go toward maintaining outdated procedures. Cloud and AI technologies can modernize and streamline these processes, allowing SMBs to devote their resources to more productive endeavors.

Payments Powering the Platform Economy Report

found that such API-driven payment systems also have the potential to reduce fraud, which constantly worries banks and other businesses.



Accelerating Cross-Border Payments With Cloud Technology

Digital payments form a critical part of the world's economy, facilitating the flow of tens of trillions of dollars among individuals and businesses each year. These common payment methods are rife with frictions, however, including slow processing times, exorbitant fees and the potential for interception by hackers who can pilfer the payments or the personal data that accompanies them.

These challenges are only exacerbated when payments move across international borders, which is usually accomplished via correspondent banking. Banks are typically required to establish direct links with FIs in other nations to make or receive cross-border payments, but not every FI has a counterpart in any given country. This means that

money must often be transferred between numerous banks in different countries until it reaches its final destination. The typical cross-border payment flows through no fewer than four banks before a transaction is complete.

The following Deep Dive explores cross-border payments' challenges, including time-consuming government inspections, lack of transparency and the potential for fraud. It also examines how cloud payments could mitigate these challenges and usher in more seamless and speedy payments experiences.

THE INTRINSIC CHALLENGES OF CROSS-BORDER PAYMENTS

Cross-border payments between businesses are expected to reach \$35 trillion by 2022, and the market value for cross-border person-to-person (P2P) payments could reach \$240 billion by 2024. Remittances between migrant workers and their families could also account for hundreds of billions of dollars. The sheer number of cross-border payments belies the challenges that individuals and companies face when conducting them, however.

The biggest hurdle the cross-border payments industry faces is navigating the networks that govern payment flows in every correspondent bank through which funds pass. Each payment must be inspected to ensure that it is not facilitating money laundering, terrorist financing or other illicit activities. Up to 5 percent of all cross-border B2B payments are subjected to additional inquires or investigations beyond basic levels of scrutiny, causing significant payment delays and carrying hefty price tags. Handling such investigations costs banks up to 35 times more than payment processing itself.

A lack of transparency regarding these payment processes leads to additional frictions for senders and recipients. Senders could receive complaints from receivers that payments did not arrive on time, for example, but the former would be left in the dark about what caused the issue. Such payments may have been stalled in regulatory checks or could have been intercepted by hackers, which could result in broken trust and lost business between the two firms, even though neither party is

at fault. Sixty-one percent of treasury professionals in a recent survey said that the time involved in finding out why payments failed has represented a drain on company resources.

The worst-case scenario for a cross-border transaction is interception by a hacker or other bad actor. These fraudsters can make off with hard-earned funds, but cash is not the only target. Some bad actors look to harvest senders' or receivers' private data by using payments as entry points. A recent <u>survey</u> found that one-third of businesses were worried about cross-border payments fraud and that 26 percent expressed data security concerns.

HOW CLOUD SYSTEMS ACCELERATE AND SECURE CROSS-BORDER PAYMENTS

New cloud-based technologies have shown promise in securing cross-border payments as well as making them faster and more transparent. Dozens of FIs have ditched correspondent banking models over the past few years in favor of SWIFT, a global network that allows banks to make payments directly to participating FIs without relying on correspondent banks. The SWIFT network processed \$77 trillion in cross-border transactions in 2019, accounting for approximately 60 percent of all cross-border transactions.

Integrating the SWIFT network is often a financial and logistical challenge for banks, which must have the networking technology located at their branches. SWIFT is partnering with Microsoft and BNY Mellon to move this technology to the cloud, allowing banks to use the network digitally and removing

many of the pain points associated with correspondent banking while also preventing FIs from needing to undertake expensive system revisions.

Banks that adopt the cloud-based service can tap into the SWIFT network's speed and transparency as well as take advantage of the security that cloud systems inherently provide. Studies have found that cloud infrastructures experience 60 percent fewer security incidents than traditional data centers, for example, and this improved security experience is amplified because only the sending and receiving banks are involved in the cross-border payments process when using the SWIFT network.

This restricts potential fraudsters to only two secure entry points through which payments or data can be intercepted, rather than the numerous opportunities that exist as routing occurs through different correspondent banks.

The nature of international commerce regulations means that cross-border payments will almost always be more complicated than domestic ones. The migration of the SWIFT network to the cloud means that more banks than ever can extend simple, transparent and secure payments to their customers.



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MODERNIZING DIGITAL PAYMENTS

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