Visa Economic Empowerment Institute

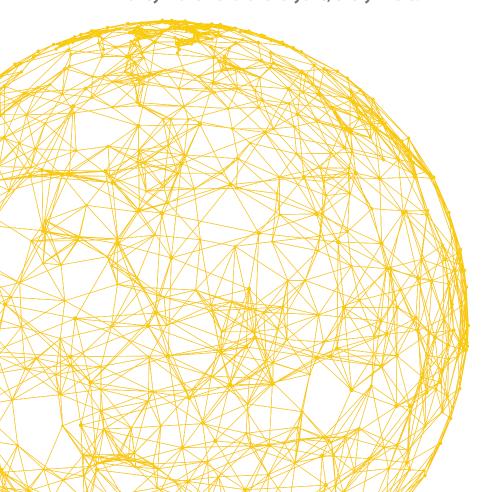




## The rise of digital remittances:

How innovation is improving global money movement

Remittances are monetary lifelines sent by migrant workers back home. They are born of sacrifice and separation, and they are crucial for hundreds of millions of families and for many countries that depend on them. This paper examines remittance trends, takes a look at the advantages of digital remittances, and offers recommendations for continuing to improve global money movement for everyone, everywhere.





### **Synopsis**

Remittances are monetary lifelines sent by migrant workers back home. They are crucial for hundreds of millions of families and for many countries that depend on them. In this paper, the Visa Economic Empowerment Institute (VEEI) study team examines remittance trends, takes a look at the advantages of digital remittances, and offers recommendations for continuing to improve global money movement. By examining World Bank data and through our own remittance modeling, we find that digital remittances are on an excellent cost trajectory. In fact, in many corridors, they are meeting or exceeding the United Nations Sustainable Development Goal 10 of a 3 percent cost. The VEEI study team finds that remittance innovation, in the form of new digital business models paired with global network capabilities, is achieving faster speed, better transparency, and lower costs for people. Further reductions in remittance costs will require regulatory streamlining and, importantly, digital enablement for recipient families and countries, so that remittance flows are truly digital end-to-end. The study team offers five recommendations for achieving improved money movement for everyone, everywhere.



# The rise of digital remittances: How innovation is improving

global money movement



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#### Acknowledgments

A study team led by Chad Harper produced this report. Team members include Hanif Dharamsi, Sabina Frizell, Barbara Kotschwar, Geetha Panchapakesan, Dan Roesbery, and Alex Talati, with the following colleagues from DevTech Systems: Kaitlin Dominski, Jordan Raupp, Haykuhi Sekhposyan, and John Yates. For their helpful comments, we gratefully thank Tania Garcia-Millan, Lindy Mockovak, Susan Onians, Jen Swetzoff, and Amina Tirana.

#### About the Visa Economic Empowerment Institute

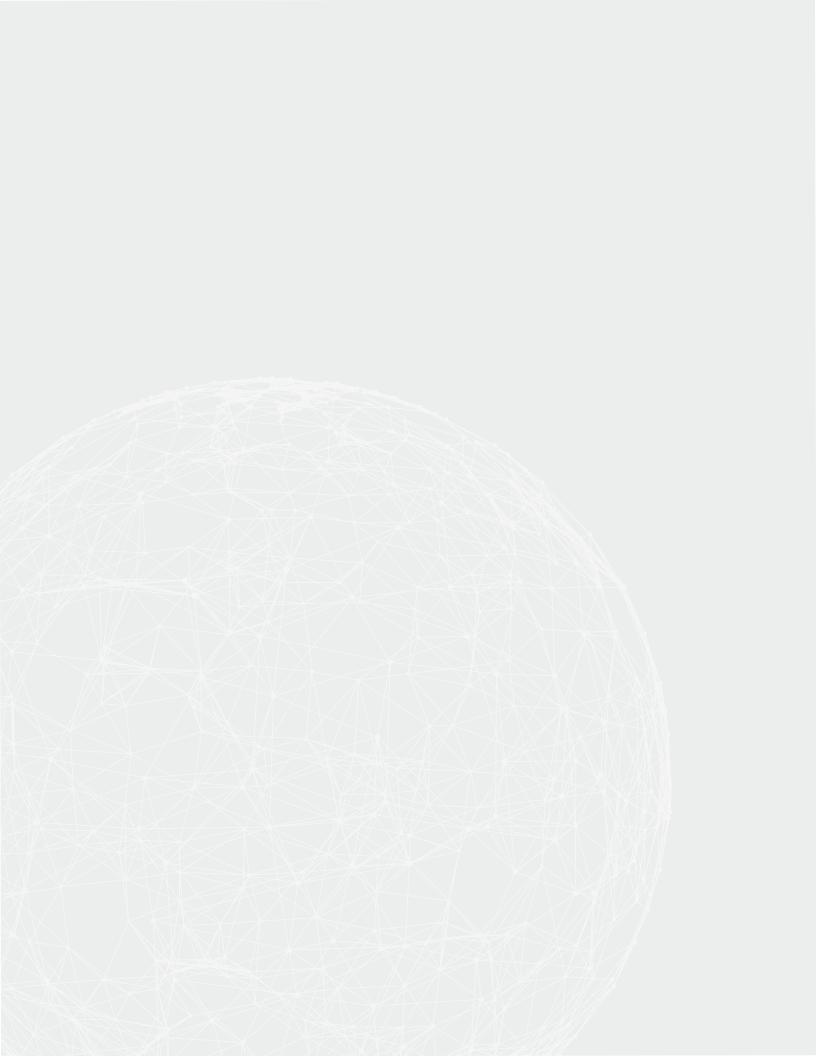
The VEEI is a non-partisan center of excellence for research and public-private dialogue established by Visa.

The VEEI's overarching mission is to promote public policies that empower individuals, small businesses, and economies. It produces research and insights that inform long-term policy within the global payments ecosystem. Visa established the VEEI as the next step in its ongoing work to remove barriers to economic empowerment and to create more inclusive, equitable economic opportunities for everyone, everywhere.

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### **Executive summary**

Cross-border remittances are crucial to families and many countries

Remittances are born of sacrifice and separation. These person-to-person monetary lifelines typically sent by migrant workers to family members back home are crucial for millions of families around the world, and for many countries as well. Annually, workers send hundreds of billions of dollars to their home countries, with workers living in G20 countries sending more than half of all remittances. Global remittances totaled \$706 billion in 2019, establishing a new high. Of this, low- and middle-income countries (LMICs) received a record \$554 billion, which was larger than foreign direct investments (World Bank, 2020a). Around 200 million workers send remittances, and the United Nations believes one in nine people globally could be supported by them (UN, 2019). Remittances are consequential to the macroeconomy as well. World Bank data indicate that as of 2019, 28 countries received remittances amounting to 10 percent or more of their gross domestic product (GDP), with nine of these countries receiving more than 20 percent of their GDP via remittance flows. While remittance flows are important for many countries, they are vital for the families involved, and the traditionally high costs of sending remittances have received well-deserved attention from all quarters of the development and payments communities; there is a global policy objective of getting remittance costs to 3 percent by 2030. The COVID-19 pandemic has dealt a double blow to these cross-border transfers, in the form of lower employment in G20 countries and stay-at-home orders, which have made traditional remittance models more difficult. However, even as overall remittances declined in 2020,1 digital remittances grew strongly and are offering important benefits to those able to take advantage of them.

# Digital remittances are accelerating

Digital remittances are like a person-to-person version of e-commerce, in that there does not need to be an in-person visit to a store or office to initiate a transfer. Sending a digital remittance requires a web browser or an app, combined with the use of a mobile phone, tablet, or computer. There must also be a digital funding mechanism. Over the last several years, digital remittances received a boost from the entry of digital-first money transfer organizations (MTOs), and the established MTOs have responded by rapidly introducing digital initiation and funding capabilities in response. The digital-first MTOs are seeing rapid growth, and the established MTOs have seen nearly a third of their remittances become digital, with the pandemic accelerating digital trends greatly over the last year. Digital remittances can be funded through a variety of means, including bank accounts, cryptocurrencies, and mobile money. The majority of digital remittances through MTOs are sent via debit/credit, and these remittances are currently on the best cost trajectory.



<sup>&</sup>lt;sup>1</sup> Final 2020 global remittance figures were not available as of March 2021, but the general expectation is that remittances declined about 7 percent from 2019 levels.

Digital remittances have improved speed and reduced cost, but barriers remain

Digital remittances have several advantages. The entry of digital-first MTOs, with their lower fixed costs, helped spur competition and promote intense digitization efforts by the established firms. This reduced costs for consumers. Digital remittances are also sent increasingly outside the traditional correspondent banking system; they increasingly take advantage of new global networks that offer fewer "handoffs," better transparency, faster transfers, and lower costs. The World Bank tracks a variety of remittance statistics, including costs by funding mechanism. In its most recent "Remittance Prices Worldwide Quarterly" report (World Bank, 2020d), the World Bank offered a three-year view² of remittances funded via bank account transfers, cash, mobile money, and debit/credit cards. In Q4 2020, the consumer cost of the average \$200 remittance funded by cash and bank account transfer stood at 7.06 percent and 6.66 percent, respectively. Mobile money transfers currently offer the best cost for a \$200 transfer. From Q4 2018 to Q4 2020, the cost of \$200 remittances via mobile money declined from 4.93 to 4.36 percent, which is a nearly 12 percent drop. During the same period, the cost of \$200 remittances funded via debit/credit dropped from 6.13 to 4.82 percent, which is a 21 percent reduction. If these trajectories hold, digital remittances initiated by debit/credit and mobile money will both end 2021 at around 3.8 percent in average cost.

In February 2021, the VEEI study team took a deeper look at the costs associated with sending \$200 and \$500 digital remittances via debit/credit in 28 key corridors, representing a mix of G20 sending countries, large remittance receiving countries, and receiving countries that are quite dependent on remittances. The

The majority of digital remittances are still picked up in cash, and this adds costs that are borne by many people.

average cost of sending a \$200 remittance was found to be 4 percent in the corridors. A well-informed consumer (comparing the costs of several MTOs) would have been able to find a price under 3 percent in 21 of the 28 corridors.<sup>3</sup> While the World Bank costs and our own analyses show that digital remittances are on the right path, barriers to consistently achieving a 3 percent (or lower) remittance cost remain. There are considerable regulatory and compliance hurdles in moving money globally, and bringing innovations to market is often burdensome. These add cost, but a huge

barrier to unlocking the promise of digital remittances is how the remittance is "picked up" on the receiving end. The majority of digital remittances are still picked up in cash, and the VEEI study team believes this adds between 100 and 300 basis points of expense to a remittance, depending on the MTO and the corridor. These costs are currently built into the business model of MTOs; we found that most MTOs did not explicitly charge for the cash pickup of a remittance initiated with debit/credit, so all sending customers are bearing the costs in these cases.

<sup>&</sup>lt;sup>2</sup> Taken from fourth-quarter (Q4) data in 2018, 2019, and 2020.

In a second round of data collection in late February, the sub-3 percent price was available in 20 of 28 corridors. Shifting foreign exchange margins caused the slight difference.

# Five recommendations for further progress

Remittances must be thought of as a two-sided equation. On the sending side, private-sector innovation has made an enormous amount of progress on digitizing remittance initiation, funding, and transfer, enabling remittances to be sent with more speed and transparency, and at lower costs. There are still improvements to be made, but the trajectory is good. However, the majority of remittances—even the digital ones—are still received in cash, and this adds considerable costs that are currently being borne by the sending charges, not to mention the costs borne by the individuals who must go and physically pick up the cash. Addressing the receiving side of remittances will require the public and private sectors to work together on digital enablement of the populations of receiving countries. The VEEI study team believes the following actions are key to further improvements:

### Begin with digital enabling infrastructure, if it does not exist.

For millions of people, a lack of basic infrastructure like electricity will be a barrier to the digitization of remittances, payments, and commerce. Beyond electricity, internet connectivity—and increasingly broadband connectivity—will be crucial. And given that mobile phone adoption outstrips computer penetration in many parts of the world, mobile broadband is the best answer for connectivity moving forward.

#### Focus on digital enablement broadly, keeping consumers and businesses in mind.

While the digital receipt of remittances is critical for further progress on costs, we must keep in mind that the larger goal is to digitally enable everyone, everywhere, to fully participate in this new world. Individuals need to be able to receive remittance funds digitally and then to use them digitally, with ubiquity. If they cannot actually use funds that have landed in a digital wallet or account, people will still need to access cash. Consumers and businesses must both be part of the equation in achieving digital ubiquity, and the countries that have driven digital ubiquity most successfully over the last decade have worked to drive adoption on both sides.

#### Aim for an open digital ecosystem.

As policymakers strive to promote digital remittances (and digital payments), we believe that they should adopt a principle-led and outcome-based approach, giving payment service providers and payment networks the flexibility to innovate in order to deliver on their goals. Given the favorable cost trajectories of digital remittances originated using mobile money and debit/credit instruments, which have been obtained by innovative MTOs working with new global network capabilities, we do not believe that the public sector needs to build new global infrastructure that could stifle competition. Open competition combined with the use of open and global technical standards drives payments innovation.

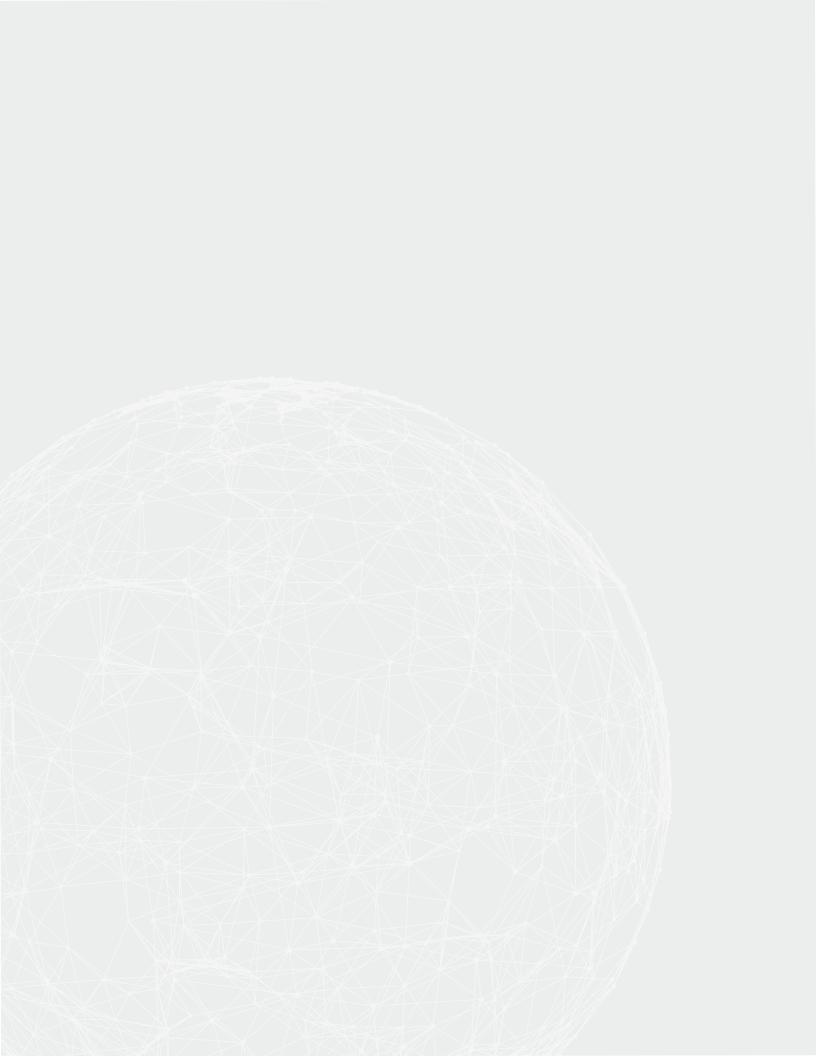


### Streamline the regulatory environment.

While the private sector is innovating, competing, and improving speed and efficiency, policymakers have a key role to play. Remittances and other cross-border payments go through a number of regulatory regimes that currently add frictions. But these frictions can be reduced by harmonizing and aligning rules as much as possible. This includes the development of a consistent anti-money laundering (AML) compliance framework that would improve the efficiency and transparency of cross-border solutions offered by the private sector.

#### Simplify the licensing process.

Policymakers can also help the private sector introduce innovations more quickly and with less burden by reducing the barriers to market entry. The "passporting of licenses," a suggestion from the World Economic Forum in its June 2020 paper on cross-border payments (WEF, 2020), was not directly mentioned in the Financial Stability Board's (FSB's) cross-border roadmap. Even increased consistency of licensing requirements would help fintechs operate across multiple countries with less friction. We believe that the private sector should prioritize creating products that offer better customer experiences and enable more efficient transfers of money. But the public sector can help by streamlining the licensing processes, which will, in turn, help bring the benefits of digital remittances to more corridors, and therefore to more people.



### 1. Introduction

Remittances<sup>4</sup> have been top of mind for policymakers for years, but two recent developments have made them more topical than ever. First, there has been an increasing policy focus on cross-border payments in general, and the public and private sectors are currently mobilized to examine and address the various frictions of cross-border money movement as part of a multiyear roadmap being managed by the Financial Stability Board (FSB). Second, the COVID-19 pandemic reduced employment in typical remittance-sending countries and also made traditional remittances more difficult to send, since many people in these jurisdictions have spent nearly a year living through various levels of stay-at-home orders. Against this backdrop, remittances have been transforming toward digital for several years, the way commerce has transformed toward e-commerce, and this trend has accelerated during the pandemic, even as overall economic activity and remittance volumes have been suppressed.

The Visa Economic Empowerment Institute (VEEI) assembled a study team to examine how innovation, technology, and the power of global networks are affecting remittance behaviors

Remittances have been transforming toward digital for several years, and the trend accelerated during the pandemic.

and costs. This paper explores historical developments and highlights the rise of digital remittances. Using World Bank data and our own research and analysis, conducted in partnership with DevTech Systems, we examine the cost trends of digital remittances and call attention to possible barriers to achieving the targets that policymakers,

development finance institutions, payment providers, and—most importantly—remittance-dependent families desire. Lastly, we suggest some policies for breaking through these barriers, hopefully in the near future.

<sup>&</sup>lt;sup>4</sup> For the purposes of this paper, remittances are defined as cross-border person-to-person payments of relatively low value.

### 2. Global remittance trends

Today, people use money transfer organizations (MTOs) and banks as the world's primary remittance providers. Mobile money has grown as an important remittance vehicle in certain corridors, and there are a variety of nascent digital currency options. People also use informal means such as Hawala<sup>5</sup> to transfer money, and these informal methods are quite important in some corridors. Banks in some parts of the world have shied away from remittances as they are high-volume, low-value transactions, which historically have been administratively burdensome, but they may still move a large share of high-dollar remittances. Over the past 20 years, however, MTOs have come to take a leading role in the remittance market, using a traditional system that involves an individual sending funds through an agent using cash, a check, or a credit or debit card, with instructions to deliver the funds to another individual. The MTO then instructs an agent in the receiving country to deliver funds to the recipient. The MTO generates revenue through transfer charges, currency-conversion margins, collection charges, and earned interest on funds held during the transfer. This legacy remittance industry has consolidated considerably due to the large cost of building out extensive agent networks. New digital-first MTOs are emerging that have significantly lower fixed costs, while more established MTOs are working to offer more digital options.

# Remittances hit a new high in 2019

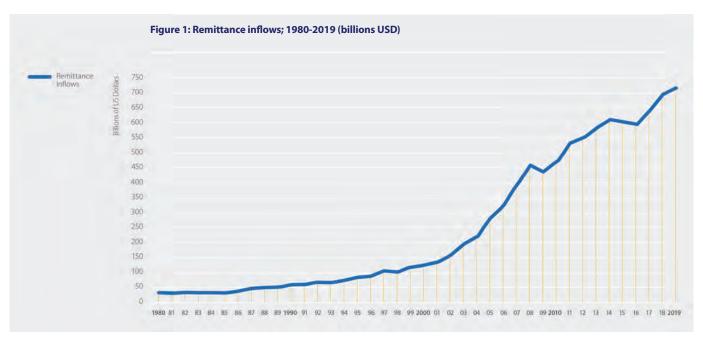
Global remittances totaled \$706 billion in 2019, establishing a new high and surpassing foreign direct investment (FDI) as a source of income for developing countries. Of this, low- and middle-income countries (LMICs) received a record \$554 billion (World Bank, 2020a). In the LMIC category, regional growth rates from 2018 and remittance receipts for 2019 include:

- East Asia and Pacific region grew 2.6 percent to \$147 billion.
- South Asia grew 6.1 percent to \$139 billion.
- Latin America and the Caribbean grew 7.4 percent to \$96 billion.
- Europe and Central Asia grew about 6 percent to \$65 billion.
- Middle East and North Africa grew 2.6 percent to \$59 billion.
- Remittances to Sub-Saharan Africa saw a small decline of 0.5 percent to \$48 billion.

The next figure shows a long-term historical view of worldwide remittances.



Hawala is an informal method of transferring money without any money physically moving from one place to another. It is based on a system of trusted money lenders and is generally used in the Middle East, in Africa, and on the Indian subcontinent outside formal banking systems.



Source: World Bank World Development Indicators, 2019

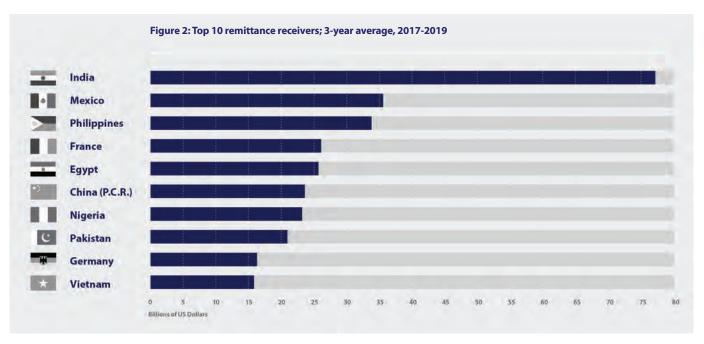
The major remittancereceiving and -sending countries have been quite stable Derived from World Bank data, the following table demonstrates the major remittances receiving and sending trends over the last 40 years. Looking at the outflow trends, the top ten remittance-sending countries are high-income countries except for Russia, which is considered an upper middle-income country according to the World Bank classification system. The top remittance-receiving countries are primarily middle-income countries. Over this four-decade period, Europe and Eurasia sent the most remittances, totaling \$3.1 trillion, followed by the Middle East and North Africa (\$1.8 trillion) and North America (\$865 billion) (World Bank Annual Remittances Data Outflows, 1980-2020). In terms of inflows, six of the top ten receiving countries are lower middle-income countries, two are upper middle-income, and two are high income. The two high-income countries—Germany and France—are also two of the top ten sending countries over this extended period.

Table 1: Top 10 remittance receivers and senders; 1980-2020

RANK	RECEIVING COUNTRY	SENDING COUNTRY		
1	India	United States		
2	China	Saudi Arabia		
3	■ ■ Mexico	United Arab Emirates		
4	Philippines	United Kingdom		
5	France	Canada		
6	Egypt	Germany		
7	Nigeria	France		
8	C Pakistan	Russia		
9	Germany	Australia		
10	* Vietnam	■ Italy		

Source: World Bank Annual Remittances Data, Inflows & Outflows (updated as of October 2020)

A more recent view of the top ten remittance-receiving countries can be found in the following chart. This chart shows the average remittances received, in billions of US dollars (USD), from 2017 to 2019. Interestingly, the countries are the same between the 40- and three-year views; only the ranking positions have changed.



**Source:** World Bank Annual Remittances Data, Inflows (updated as of October 2020)

Remittances are more important to some countries than others

While remittances are received by most countries, the role of remittances in a recipient country's economy can differ drastically, particularly for LMICs. In these cases, remittances are lifelines for families, and for the countries themselves. We used the World Bank's World Development Indicators (2019) to examine remittances as a percentage of a receiving country's GDP from 1980 through 2019. Regionally, Oceania had the highest average remittance received as a percentage of GDP from 1980 to 2019 (7.6 percent), followed by the Middle East and North Africa (5.7 percent) and Sub-Saharan Africa (5 percent). The global average of remittances as a percentage of a country's GDP was 3.7 percent over this extended period. The top ten receiving countries over this four-decade period are listed in the following table.

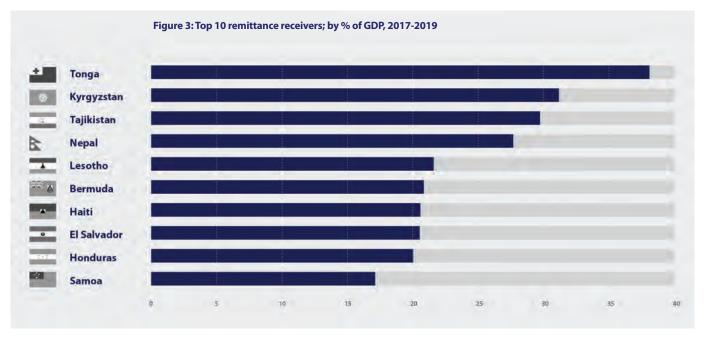
Table 2: Top 10 remittance receivers; by % of GDP, 1980-2019

RANK	RECEIVING COUNTRY	RANK	RECEIVING COUNTRY		
1	Lesotho	6	Moldova		
2	Tajikistan	7	Lebanon		
3	Tonga	8	Bosnia and Hercegovina		
4	Bermuda	9	Jordan		
5	Samoa	10	* Tuvalu		

Source: World Bank World Development Indicators, 2019

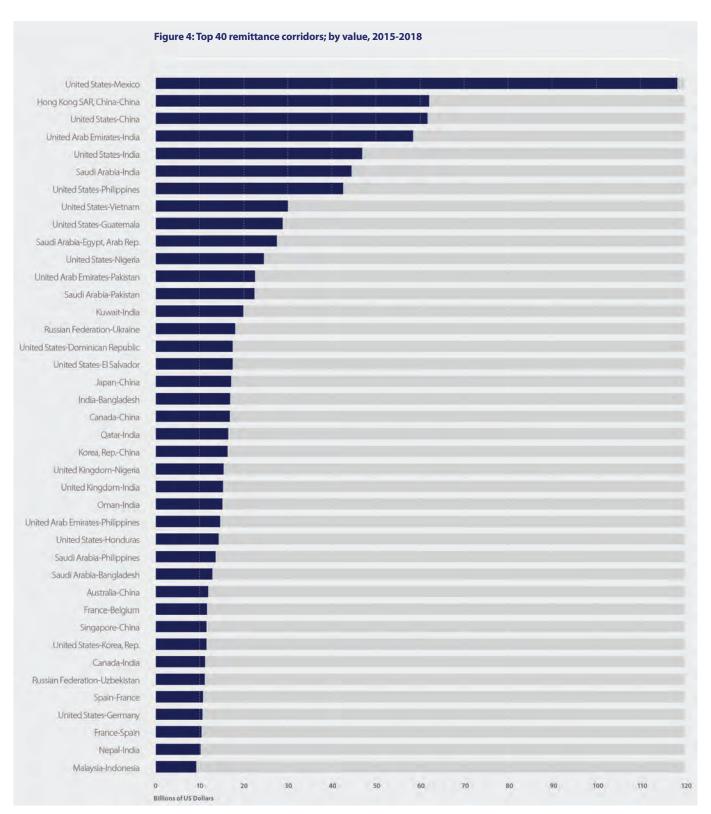


A more recent view of the top ten remittance-receiving countries as a percentage of their GDP can be seen on the next chart. Interestingly, when looking at the last 40 years versus the most recent three years, only five countries overlap these views—having been high receivers over time and more recently. They are Tonga, Tajikistan, Lesotho, Bermuda, and Samoa. The Caribbean and Latin American countries in the chart are newer entrants.



Source: World Bank World Development Indicators, 2019

The major remittance corridors involve many G20 senders and LMIC receivers The following figure represents the most recent available data for major remittance corridors over the last several years. The figure shows cumulative billions of dollars in transfers for each corridor from 2015 through 2018. Not surprisingly, the majority of the top corridors involve G20 sending countries and LMIC receivers. Nearly one-third of these top 40 corridors were among those included in our examination of costs in Section 5.

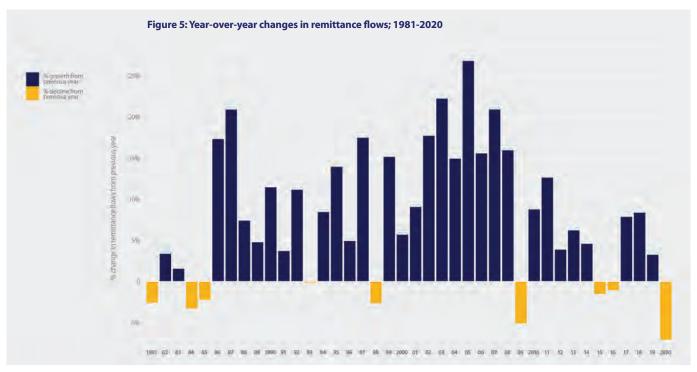


**Source:** Analysis of World Bank Bilateral Remittances Matrices, 2015–2018



# The COVID-19 crisis suppressed remittance flows in 2020

In response to the global COVID-19 pandemic, countries were forced to close their borders and suppress much of their economic activity. According to the World Bank, remittance flows to LMICs were expected to drop by around 20 percent in 2020 (World Bank, 2020b). The World Bank Migration and Remittances Data indicates that as of October 2020, remittances had decreased by 7.16 percent for LMICs. For comparison, global remittances decreased by 4.9 percent to LMICs during the last major recession in 2009. The next figure highlights how unusual 2020 was in the last 40 years of remittance flows.



**Source:** World Bank Annual Remittances Data, Inflows & Outflows

While most countries experienced a decrease in remittances received, there are a few that saw an increase in 2020. For example, Mexico received \$40.5 billion in 2020, a 3.7 percent increase from 2019. The Pew Research Center found that while several Latin American nations experienced sharp

The COVID-19 pandemic caused considerable harm to global remittance flows, though a few countries saw increases.

decreases in April, many of the countries bounced back by June. In the case of Honduras and the Dominican Republic, remittances exceeded the highest amounts ever received prior to March (Noe-Bustamante, 2020). While Honduras ultimately ended the year down 4 percent from 2019, the Dominican Republic finished up about 7 percent. Despite the overall contraction of remittances sent in 2020, digital remittance payment

services continued to grow—and accelerate—in popularity, as a share of all remittances sent. This important trend will be discussed in Section 4.

# The pandemic inspires key policy recommendations

Remittance flows tend to be more stable than capital flows and countercyclical; that is, they increase during economic downturns or after a natural disaster in the migrants' home countries (Ratha, 2020). Job losses for migrant workers in the service sectors of wealthy countries made the pandemic a unique experience. Mobility restrictions imposed through stay-at-home orders have made traditional remittances, with their physical requirements, more difficult to complete. To offset some of the impact, remittance policies have been recommended to reduce the cost of transactions and make it easier to send and receive remittances. As an example, two World Bank leaders (Garcia & Rutkowski, 2020) recommended that public authorities support the remittances sector through several actions, some of which are:

- Treat remittance service providers as essential services,6
- Embrace emerging remittance models that enable originating and disbursing remittances through digital means,
- · Improve universal financial access in sending and receiving countries,
- · Enhance retail payment systems promoting interoperability and fast payment services, and
- Develop comprehensive, integrated, cross-border payment solutions for trade flows,
   e-commerce, and remittances.

Some of these recommendations (especially the last three) were well underway in the form of global initiatives before the pandemic, but they have received new focus with regard to remittance flows. Expanding access to financial services and reducing transaction costs of remittances remain top policymaker priorities for encouraging remittances and maximizing the benefit to recipients. The private sector is making significant progress on the final items above. The VEEI study team will revisit these recommendations and offer its views in Section 6.



<sup>&</sup>lt;sup>6</sup> For purposes of operating during the pandemic.

# 3. Remittance cost targets and trends

Policymakers have focused on remittance costs for years, and remittances have often been the most-discussed "case study" for the various frictions of cross-border payments, which include lack of transparency, slowness, and relatively high costs due to the complexities of regulatory compliance and, in some cases, a lack of competitors. The Bank for International Settlements (BIS) Committee on Payment and Settlement Systems (CPSS) and the World Bank published "General principles for international remittance services" in 2007, and the principles provide a framework for improving the international remittance market.

The UN Sustainable Development Goals (SDGs), seeking to reduce inequality among countries, set forth a 3 percent cost target. The principles address consumer protection, transparency, legal and regulatory frameworks, payment infrastructures, and the roles of the public and private sectors. The G7/G20 later endorsed these principles. In 2009, the G8/G20 established

a target to reduce the cost of cross-border remittances from 10 percent to 5 percent within five years. This goal was not achieved. The United Nations Sustainable Development Goals (SDGs), seeking to reduce inequality among countries, set forth a 3 percent target to be achieved by 2030 (UN, 2015).

More recently, remittances have become an important part of the cross-border payments roadmap being managed by the FSB with significant support from the Committee on Payments and Market Infrastructures (CPMI), World Bank Group, IMF, and others. At the time the FSB roadmap stages were being kicked off, the average cost of sending a \$200 remittance in Q4 2019 was 6.82 percent; another measure of what a well-informed consumer pays put this figure at 4.37 percent (FSB, 2020a). Still, these figures had not fallen as much as the public and private sectors would have liked, and they were above the UN SDGs' target of 3 percent. There have been positive cost trends even over the last year, however.

### Some key players in cross-border payments

**FSB:** Entity that promotes international financial stability by coordinating financial authorities and international standard-setting bodies; responsible for the cross-border roadmap.

**CPMI:** Committee of nearly 30 central banks/jurisdictions that coordinates international efforts on payments policy and standards; a major player in the cross-border roadmap.

World Bank: An international financial institution that provides assistance to the governments of LMICs for the purpose of pursuing capital projects; the World Bank is the major source of data on remittances.

**IMF:** An international organization of almost 200 countries that works to foster global monetary cooperation, secure financial stability, and reduce poverty around the world.

### Cost measurements include transfer charges and foreign exchange margins

When a cost target of 5 percent or 3 percent is mentioned, the total consumer cost of the remittance is envisioned. The cost of remittances is calculated as the simple average total cost for sending \$200 or \$500 (and their equivalents) through remittance service providers, as captured by the World Bank Remittances Prices Worldwide database. The total cost charged by a provider includes the remittance transfer fee and, importantly, the foreign exchange rate applied by the remittance service provider. The World Bank tracks costs in a variety of ways.

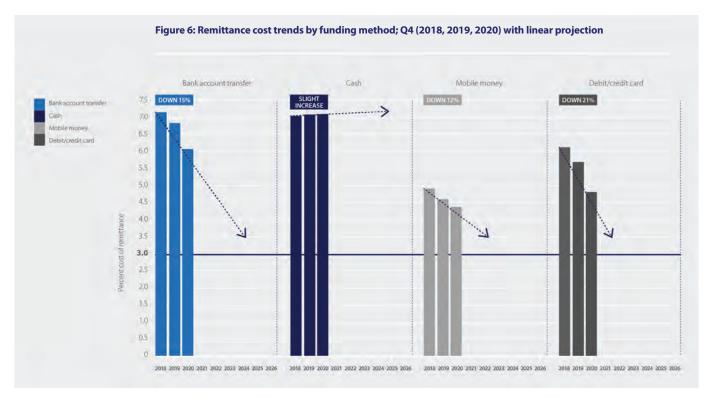
### World Bank reports highlight positive cost trends

The Q4 version of the World Bank's "Remittance Prices Worldwide Quarterly" report was published at the end of last year. The report found that in all seven regions being monitored, the "costs for non-digital services are consistently higher than those for digital services regardless of the region where the money is being sent to" (World Bank, 2020c). The report contains several key findings and observations, some of which are highlighted below:

- The Global Average remittance price decreased from 6.75 percent in Q3 2020 to 6.51 percent in Q4 2020.
- The Global Weighted Average price decreased to 4.82 percent in Q4 2020, from 5.00 percent in Q3 2020. The report noted that Q4 2020 was the first quarter in which this figure had been recorded below 5.00 percent. (The weighted average accounts for the relative size of the flows in each remittance corridor.)
- The Global SmaRT Average for Q4 2020 was recorded at 4.00 percent. (The SmaRT Average reflects the cost that an informed consumer with access to sufficient information could pay to transfer remittances in each corridor.)
- The Digital remittances index decreased from 5.29 percent in Q3 2020 to 5.11 percent in Q4 2020. (This reflects the price of remittances initiated digitally.)
- Mobile money, as the instrument to fund the transaction and as the means to disburse, has been the least costly instrument consistently. Banks remained the most expensive type of service provider, with an average cost of 10.73 percent.

While it was not highlighted in the report's key findings, the report contained a very insightful chart showing the three-year trend (using Q4 data from 2018 through 2020) of remittance costs according to how they are funded (bank account, cash, mobile money, and debit/credit cards.) While mobile money did indeed show the lowest cost over the last three Q4s, remittances funded by debit/credit card have experienced the steepest decline trajectory and, if this path continues, the cost could overtake mobile money as the lowest by 2022. The next chart depicts the World Bank data, along with a linear projection toward the 3 percent target. Of course, this does not mean the target will actually be achieved in just a couple of years—there are some significant barriers to overcome, which will be discussed in the next sections. Nevertheless, the figure shows that remittances funded by debit/credit card are on the best cost path, and we believe it is because these remittances are most likely, of the four types depicted, to be transmitted via digital-first MTOs (or the digital-first capabilities of established MTOs) combined with the use of new global money movement networks. This will be further discussed in Section 5, after an exploration of digital remittances in the next section.

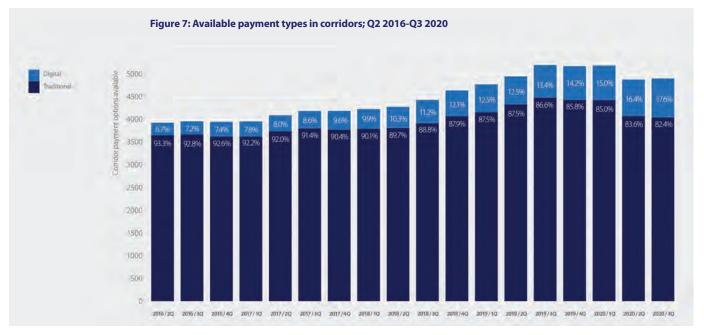




**Source:** World Bank Remittance Prices Worldwide Quarterly, December 2020

# 4. Innovation and the rise of digital remittances

Digital remittances are generally understood to be those that are initiated as a version of e-commerce; that is, they happen online, via computer, mobile browser, or app. They do not involve an in-person visit to a bank or MTO, so cash is not an option for initiating a digital remittance. Remittance corridors with digital payment options have increased every quarter since 2016, according to World Bank data; they have nearly tripled in the past four years (see Figure 7).



Source: World Bank data

# Digital remittances are accelerating

The growth in mobile wallets has been an enabler of digital remittances. There are now more than one billion mobile money wallets around the world, and remittance providers integrate with new mobile money providers every day, which gives more people access to affordable transfer services. In 2020, \$12.7 billion in cross-border remittances were processed via mobile money (GSMA, 2021). This represents a little less than 2 percent of global remittances in value. Cryptocurrencies have also gained some traction in remittances, and there are dozens of startups that involve cryptocurrencies in the money transfer process. These methods notwithstanding, debit and credit card payments account for the majority of digital remittance initiations and, as seen before, these digital remittances are currently on the best cost trajectory.



Digital remittance use is growing as more migrant workers gain access to digital wallets (which may contain a variety of payment methods) and bank accounts, and the pandemic accelerated this trend. Writing for *Forbes* in May 2020, fintech writer Daniel Webber noted, "Four years of digital growth has

Remittances rapidly shifted to digital as stay-at-home orders affected mobility. Years of digital growth happened in months.

been compressed into two months in the money transfer space. Leading incumbents such as Western Union and MoneyGram and the Fintechs such as WorldRemit, Remitly and TransferWise<sup>7</sup> have all reported tremendous growth in their digital businesses driven by the stay-at-home orders and the Covid-19 crisis" (Webber, 2020). While the World Bank does not track remittance

volumes according to payment method (unlike costs), Webber notes that even the established MTOs reached about 30 percent of digitally initiated remittances by April 2020, and of course the newer MTOs are digital by nature.

### New global networks help enable digital advantages

In concert with other MTO innovations, digital remittances can offer faster and more efficient transfers because they take advantage of new money movement networks, avoiding correspondent banking movement in many instances. Correspondent banking has been critical to global money movement for decades, but as can be seen in the next figure, this money movement method inherently involves more touches by more players, and this will always increase costs. In fact, simply maintaining the "nostro and vostro" accounts needed to move money through the correspondent system can be quite costly for the banks involved. Correspondent banking is also facing a variety of challenges, notably a broad-based retreat in the number of cross-border relationships (Rice et al., 2020).



Source: VEEI study team analysis

<sup>&</sup>lt;sup>7</sup> TransferWise is now simply Wise.

In recent years, several newer global money movement capabilities have been developed. These models typically involve a central network that is "always on" and that avoids multiple hand-offs. These services are faster, often completing cross-border transactions in minutes, and they provide greater visibility and certainty for both the sender and the receiver. The following figure shows a general, generic view of this newer money movement method, where a network resolves the complexity of interacting with multiple payment systems, settlement, and foreign exchange. (See Box 1 for a real-world example of one of these next-generation networks, which is powering millions of digital remittances today.)



Source: VEEI study team analysis

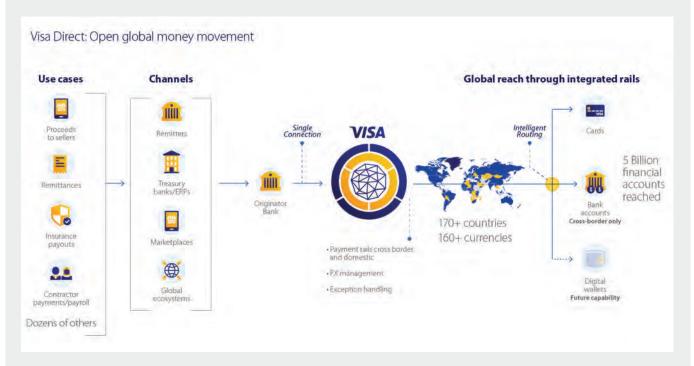
Remittances initiated with debit and credit instruments are likely to traverse these newer networks and to be advantaged by their speed and lower costs. Not surprisingly, MTOs are increasingly interested in enabling more people to send remittances this way. (See Box 2 for how one digital-first MTO is enabling migrant workers to send digital remittances and to participate in the digital world more generally.)

#### **BOX 1:**

Visa Direct and global money movement

Visa Direct is a fast and secure push payments platform that enables financial institutions, enablers, and partners to offer real-time\* person-to-person (P2P), business-to-small business (B2b), business-to-consumer (B2C), and government-to-consumer (G2C) payments and funds disbursements. Visa Direct can reach more than 5 billion accounts and cards globally (with a goal to expand to reach wallets in the future) in more than 170 countries, greatly expanding payout and money transfer opportunities over the Visa network.

From October 1, 2019, through September 30, 2020, Visa Direct completed nearly 3.5 billion transactions involving 16 card-based networks, 65 domestic ACH schemes, seven faster payment schemes, and five payment gateways.



Visa Direct is increasingly being used to facilitate remittances. MoneyGram, an established MTO with an aggressive digital strategy, noted that its transactions using Visa Direct had increased 650 percent year-over-year in Q4 2020 and shared the following insight about digital remittances during its earnings call on February 22, 2021:

"Our continued expansion of Visa, utilizing Visa Direct, is a critical component of our efforts to improve customer experience for providing a frictionless customer journey and real-time transfer capability. Debit cards are simple, reliable and billions of consumers have them at their fingertips. Consumers are used to buying things online using their card" (Motley Fool, 2021).

\* Actual funds availability varies by receiving financial institution, receiving account type, region, and whether transaction is domestic or cross-border.

#### **BOX 2:**

Remitly's Passbook and the digital enablement of migrant workers Key to achieving cost savings in remittances is the digital enablement of senders and receivers. There are well-known barriers to digital enablement, and Remitly is addressing them.

The mobile-first provider of remittances and financial technology for immigrants, Remitly makes international money transfers faster, easier, more transparent, and more affordable through its global network. Remitly's reliable and easy-to-use mobile app eliminates the long wait times, complexities, and fees typical of traditional remittance processes, returning millions of dollars in savings and spending power to immigrants every year.

Remitly is also expanding its portfolio to include additional critical financial services for immigrants. The company partnered with Sunrise Banks to introduce Passbook as a modern banking solution that eliminates fees and other common barriers to creating a bank account, and introduces new cross-border money transfer benefits. *Time* magazine named Passbook one of the top 100 inventions of 2020 (Time, 2020). Key Passbook characteristics include:

**Reduced barriers to access.** Remitly brings its advanced identification technology and compliance to Passbook, enabling new customers to be verified digitally. Passbook accepts forms of identification common to immigrants and their families such as an ITIN, passport, and other foreign government-issued IDs like the Matricula Consular ID. A Social Security number is not required to sign up.

**No account fees.** There are no monthly fees, no minimum balances required, and no overdraft fees, and there is access to to surcharge-free ATMs. Passbook account holders can access special pricing when using Remitly to transfer money internationally.

Established in 2011 and headquartered in Seattle, Remitly operates from numerous offices around the world, in cities including London, Kraków, Manila, and Managua.

For more information, visit Remitly.com and Passbook.app.



# 5. VEEI's examination of digital remittance costs

To further evaluate the debit and credit cost trends highlighted by World Bank data in Section 3, we examined digital remittance costs in 28 corridors in mid-February and repeated the analysis in late February to account for any anomalous results.8 The study team was particularly interested in the costs of digital remittances powered by the new global money movement networks, and debit/credit are used to initiate more of these transfers. In other words, debit- and credit-initiated remittances were used as a proxy for digital remittances using the new global networks. The corridors were chosen to represent a good number of the top receiving countries—both the ones that receive the most in value and the ones that receive a high percentage of their GDP in remittances.

# We used publicly available tools to model costs

A very positive aspect of digital remittances is that consumers can shop around. Of the five MTOs we looked into, four allowed "modeling" of a remittance via their website or app. That is, a user is able to select a corridor, payment method, and pickup method and see the costs, broken into transfer fees and foreign exchange margins. We used this modeling capability to examine costs for \$200 and \$500 remittances (or the sending country's equivalent) for the corridors in mid- and late February 2021. This analysis obviously is not comprehensive—we wanted to examine the impact on costs of digital remittances using the newer global networks. Data were gathered for a couple of established MTOs that offer a digital remittance product and for a few of the new digital-first MTOs.

# A consumer can find sub-3 percent costs in most of the 28 corridors

The following figures show the average, lowest, and highest remittance costs for the corridors, followed by a compilation of the average foreign exchange costs. Foreign exchange costs are a component of the total costs depicted in Figure 10 and, in some cases, they are quite determinative of the overall cost.

<sup>&</sup>lt;sup>8</sup> This discussion focuses on the mid-February data. Annex 1 contains the results of the late February data collection. There were variations between data collections, mostly associated with foreign exchange margin fluctuations.

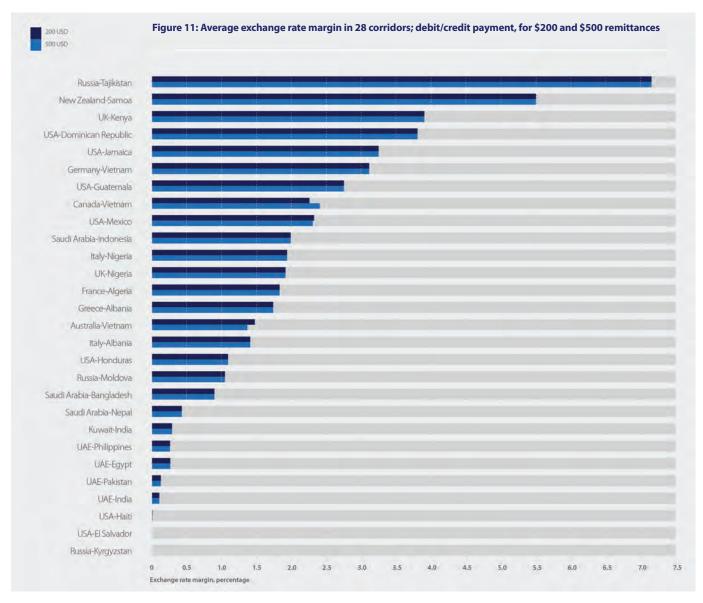
Figure 10: Average, lowest, and highest customer costs in 28 corridors; debit/credit payment, for \$200 and \$500 remittances\*

CORRIDOR	200 USD			500 USD		
	AVERAGE %	LOWEST CUSTOMER COST %	HIGHEST CUSTOMER COST %	AVERAGE %	LOWEST CUSTOMER COST %	HIGHEST CUSTOMER COST %
Australia-Vietnam	3.36	2.21	6.65	2.36	1.40	5.07
Canada-Vietnam	4.57	1.77	7.51	4.06	1.77	7.34
France-Algeria	4.11	4.11	4.11	2.75	2.75	2.75
Germany-Vietnam	5.16	2.54	11.35	3.97	1.75	9.99
Greece-Albania	3.21	0.65	4.07	2.39	0.50	3.01
Italy-Albania	2.76	0.65	4.07	2.02	0.50	3.01
Italy-Nigeria	2.50	2.48	2.54	2.24	1.76	2.48
Kuwait-India	1.92	1.70	2.15	0.95	0.72	1.17
New Zealand-Samoa	7.62	7.62	7.62	6.36	6.36	6.36
Russia-Kyrgyzstan	2.68	1.96	2.92	1.82	1.77	1.96
Russia-Moldova	3.48	2.92	5.16	2.62	1.77	5.16
Russia-Tajikistan	8.13	8.13	8.13	8.13	8.13	8.13
Saudi Arabia-Bangladesh	3.38	3.13	3.86	1.90	1.80	2.10
Saudi Arabia-Indonesia	4.47	3.73	5.23	2.99	2.39	3.89
Saudi Arabia-Nepal	2.67	2.67	2.67	1.33	1.33	1.33
UAE-Egypt	3.59	2.34	5.99	3.78	3.21	4.81
UAE-India	2.24	0.15	4.42	3.15	2.40	3.94
UAE-Pakistan	3.10	2.10	4.92	3.55	3.08	4.30
UAE-Philippines	3.15	2.33	4.74	3.61	3.31	4.16
UK-Kenya	5.04	2.43	9.50	4.40	1.67	8.73
UK-Nigeria	2.12	0.61	2.88	2.00	0.25	2.88
USA-Dominican Republic	6.91	3.90	8.99	6.14	2.46	8.80
USA-El Salvador	4.70	2.91	6.10	3.01	1.19	4.40
USA-Guatemala	4.91	2.07	10.05	4.06	1.63	8.67
USA-Haiti	4.70	2.22	5.66	2.73	0.92	3.84
USA-Honduras	5.90	3.90	7.21	4.19	2.17	5.51
USA-Jamaica	6.06	2.75	7.83	5.80	1.87	8.14
USA-Mexico	4.93		6.41	3.73		4.88

Source: VEEI study team analysis

\*Costs under 3% are noted with shading





Source: VEEI study team analysis

There are several key observations from this remittance modeling:

- The average cost for the 28 corridors for \$200 debit/credit-initiated remittances was 4.07 percent, though a weighted average reflecting the magnitude of the flows would be 3.9 percent.
- Costs for \$500 debit/credit-initiated remittances were nearly always lower than \$200; this is common and expected. The average cost for a \$500 remittance was 3.3 percent (same for weighted average).
- The lowest costs were often under 3 percent. These are analogous to the World Bank SmaRT numbers, reflecting what well-informed customers would be able to shop for. For \$200 remittances, a sub-3 percent cost was available in 21 of the 28 corridors.
- For the two highest "lowest cost" \$200 corridors (Russia-Tajikistan and New Zealand-Samoa), foreign exchange costs were the key drivers. Those corridors had by far the highest average foreign exchange costs during the review period.

A key barrier to further remittance cost progress is the receipt of cash Regulatory complexities remain a challenge with cross-border payments generally, and for remittances specifically. Nevertheless, it is clear that digital remittances are achieving 3 percent (or lower) costs in many corridors, and the trends are positive even where the target is not being achieved. In some corridors, foreign exchange volatility will be a barrier to further improvement, and some currencies are just harder to trade on the open market and cost more. There is another barrier, however—one that many firms are working on diligently, and the pandemic has shown this work to be critical. The problem is that digital remittances are still typically received in cash. According to our conversations with MTOs (and numerous public statements by the firms), the vast majority of digital remittances are still ultimately picked up in cash, perhaps 80 percent or higher for more established MTOs, and still perhaps 70 percent for the digital-first MTOs. The traditional MTOs maintain vast networks for this, and the digital-first MTOs have likewise engaged numerous third parties to facilitate the transfers on the receiving end. There are usually

Further reductions in overall remittance costs will require digital receipt, and this requires the digital enablement of people in the receiving countries.

some banks and many retail partners set up to facilitate these cash pickups, and these arrangements are quite expensive. Based on discussions with MTOs, we believe these arrangements add 100-300 basis points of expense to remittances picked up in cash. These costs are "assumed" in the business model of many of the new remittance providers, and they do not take into account the time and

effort the receiving person must spend on the cash collection. Our evaluation of digital remittance costs revealed that there was usually no difference in the "cost to remittance sender," according to the disbursement (pickup) method; these costs are built into the overall pricing. Because of the high costs associated with cash disbursement, and because the majority of remittances are still picked up in cash, it stands to reason that further reductions in overall remittance costs will require digital receipt, and this requires the digital enablement of people in the receiving countries.



MTOs have suggested to the study team that know your customer (KYC) requirements, suspicious activity report (SAR) thresholds, office of foreign asset control (OFAC) screening, and anti-money laundering (AML) requirements are topics worthy of policymaker attention.

# 6. Achieving a 3 percent remittance cost for everyone, everywhere

To continue the positive path that digital remittances are on, policymakers must focus on removing more barriers. Two critical ways to do that, as already articulated by the World Bank, are: improving financial access in sending and receiving countries, and embracing digital remittance models (Garcia & Rutkowski, 2020). When it comes to enhancing payment systems and developing new cross-border capabilities, the private sector is making significant progress on fast and efficient global money movement. Based on its research and analysis, the VEEI study team believes that public-sector resources would be best allocated to the digital enablement imperatives and to further enabling the private sector to innovate, and these five recommendations are a good place for policymakers to start:

Begin with digital enabling infrastructure, if it does not exist

For millions of people, a lack of basic infrastructure like electricity will be a barrier to the digitization of remittances, payments, and commerce. Beyond electricity, internet connectivity—and increasingly broadband connectivity—will be crucial. And given that mobile phone adoption outstrips computer penetration in many parts of the world, mobile broadband is the best answer for connectivity moving forward. Countries with policymakers who prioritize digital infrastructure will have an advantage in this new era. Aside from making digital remittances possible, these capabilities enable e-commerce and digital marketplaces for small businesses, and they enable telework for many types of employees, which has proven important during the pandemic.

Focus on digital enablement broadly, keeping consumers and businesses in mind

While the digital receipt of remittances is critical for further progress on costs, we must keep in mind that the larger goal is to digitally enable everyone, everywhere, to fully participate in this new world. Individuals need to be able to receive remittance funds digitally and then to use them digitally, with ubiquity. This requires digitally enabling businesses, especially small businesses, helping them to accept digital payments and to connect them to digital marketplaces. Consumers and businesses must both be part of the equation in achieving digital ubiquity, and the countries that have driven digital ubiquity most successfully over the last decade have worked to drive adoption on both sides. Digital ID will play a key role in digital enablement and will likewise require a dual focus, with adoption by people on one side, and public institutions and businesses on the other, being key to overall adoption.

## Aim for an open digital ecosystem

As policymakers strive to promote digital remittances (and digital payments), we believe that they should adopt a principle-led and outcome-based approach, giving payment service providers and payment networks the flexibility to innovate in order to deliver on their goals. Interoperability should be favored over uniformity. Given the favorable cost trajectories of digital remittances originated using mobile money and debit/credit instruments, which have been obtained by innovative MTOs working with new global network capabilities, we do not believe that the public sector needs to build new global infrastructure that could stifle competition. Open competition combined with the use of open and global technical standards drives payments innovation. For example, in the banking sector, SWIFT has needed to compete with the large MTOs and has developed a real-time messaging platform, which should continue to help bring prices down and improve speed for cross-border money movement overall. Open competition will attract more parties that can help innovate with respect to the consumer experience and needs, meeting high standards of security and protection, all while ensuring broad digital payments use.

# Streamline the regulatory environment

While the private sector is innovating, competing, and improving speed and efficiency, policymakers have a key role to play. Remittances and other cross-border payments go through a number of regulatory regimes that currently add frictions. But these frictions can be reduced by harmonizing and aligning rules as much as possible. This includes the development of a consistent AML compliance framework that would improve the efficiency and transparency of cross-border solutions offered by the private sector. We therefore believe that it is critical for the public sector to address the "regulatory, supervisory, and oversight frameworks" (FSB, 2020c) focus area of the FSB cross-border roadmap. Though global coordination will no doubt be challenging, we believe progress in this focus area would offer the greatest return on the time invested.



# Simplify the licensing process

Policymakers can also help the private sector introduce innovations more quickly and with less burden. The "passporting of licenses," a suggestion from the World Economic Forum in its June 2020 paper on cross-border payments (WEF 2020), was not directly mentioned in the FSB's cross-border roadmap. Even increased consistency of licensing requirements would help fintechs operate across multiple markets with less friction. We believe that the private sector should prioritize creating products that offer better customer experiences and enable more efficient transfers of money. But the public sector can help by reducing the barriers to market entry. Currently, with vastly different license requirements around the globe that need to be navigated, companies must spend large amounts of time and money to navigate the different policies and requirements. Advisors at the Consultative Group to Assist the Poor (Sbeih et al., 2019) have highlighted license simplification as key to improvements made in the Malaysia-Philippines remittance corridor. Streamlining the licensing processes more broadly will help bring the benefits of digital remittances to more corridors, and therefore to more people.

### **Parting thoughts**

Remote work: What if some migrant workers do not need to migrate?

Just as the pandemic accelerated the adoption of digital remittances, it highlighted another trend: remote work. The past 12-13 months have been an enormous "proof of concept" for remote working. Companies around the globe have taken a crash course on functioning remotely, and a sizeable number of them have liked what they have seen. Some businesses have untethered their workforces from physical locations altogether, while others plan to adopt a hybrid approach.

For many of these firms, recruitment will become more global. This will not immediately affect the majority of migrant workers (and therefore their remittances), but it poses some interesting questions for the future. Instead of some types of workers migrating to large international hub cities for employment, might the companies find them where they are? Another trend has been the rise of gig work, and with remote work having been proven successful, will businesses or people be more willing to hire a remote worker for projects?

A variety of digital platforms have emerged that facilitate connecting remote workers to jobs, and also sending payments to the workers. This new world still involves a cross-border money transfer—it is one to the worker in another country, and not from the worker back to their family. Many of the policy issues are similar. We would still want these payments to be fast and efficient, and digital enablement on the "receiving end" of the payment would still reap a variety of benefits.

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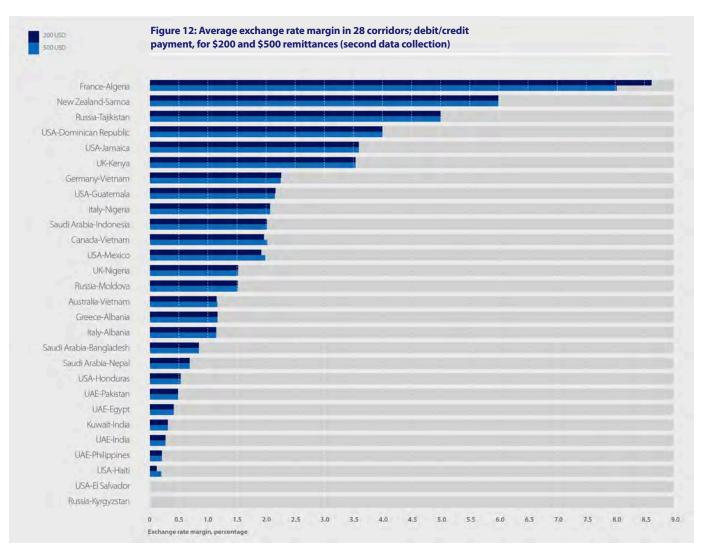
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# Annex 1: Remittance cost detail from late February 2021 data collection

The figures below represent costs and exchange rate margins from a second data collection performed in late February 2021. We modeled remittances twice over a two-week period to assess cost volatility. In this round of data collection, a consumer sending a \$200 remittance and who was able to compare alternatives could find a sub-3 percent cost in 20 of the 28 corridors.



Source: VEEI study team analysis

Figure 13: Average, lowest, and highest customer costs in 28 corridors; debit/credit payment, for \$200 and \$500 remittances (second data collection)\*

CORRIDOR	200 USD			500 USD		
	AVERAGE %	LOWEST CUSTOMER COST %	HIGHEST CUSTOMER COST %	AVERAGE %	LOWEST CUSTOMER COST %	HIGHEST CUSTOMER COST %
Australia-Vietnam	3.09	1.95	6.04	2.19	1.26	4.97
Canada-Vietnam	4.29	2.00	7.45	3.72	2.00	7.27
France-Algeria	10.94	10.94	10.94	8.97	8.97	8.97
Germany-Vietnam	4.44	2.48	10.63	3.24	1.66	9.25
Greece-Albania	2.72	0.65	3.40	1.88	0.50	2.34
Italy-Albania	2.56	0.65	3.49	1.81	0.50	2.69
Italy-Nigeria	2.70	2.46	3.17	2.43	2.38	2.46
Kuwait-India	1.96	1.73	2.19	0.98	0.76	1.21
New Zealand-Samoa	8.15	8.15	8.15	6.87	6.87	6.87
Russia-Kyrgyzstan	0.52	0.03	1.96	0.51	0.02	1.96
Russia-Moldova	1.82	0.03	7.20	1.81	0.02	7.20
Russia-Tajikistan	5.99	5.99	5.99	5.99	5.99	5.99
Saudi Arabia-Bangladesh	3.05	2.84	3.48	1.76	1.68	1.94
Saudi Arabia-Indonesia	4.19	3.48	4.98	2.90	2.31	3.81
Saudi Arabia-Nepal	2.67	2.67	2.67	1.50	1.50	1.50
UAE-Egypt	3.70	2.54	5.94	3.94	3.48	4.77
UAE-India	2.37	0.37	4.49	3.24	2.51	4.01
UAE-Pakistan	3.41	2.54	4.97	3.83	3.48	4.35
UAE-Philippines	3.04	2.21	4.66	3.47	3.14	4.08
UK-Kenya	4.62	2.89	9.92	3.97	2.10	9.13
UK-Nigeria	1.79	1.13	2.13	1.67	0.75	2.13
USA-Dominican Republic	7.06	4.29	9.06	6.29	2.87	8.88
USA-El Salvador	4.70	2.91	6.10	3.01	1.19	4.40
USA-Guatemala	4.43	2.13	9.97	3.56	1.49	8.44
USA-Haiti	5.27	4.90	5.66	3.22	2.15	4.06
USA-Honduras	5.33	3.93	6.59	3.63	2.24	4.82
USA-Jamaica	6.42	4.46	7.85	6.16	3.57	8.38
USA-Mexico	4.60	2.62	5.84	3.67	1.56	5.31

Source: VEEI study team analysis

\*Costs under 3% are noted with shading



# Annex 2: Text descriptions of figures and tables

### Figure 1: Remittance inflows; 1980-2019 (billions of dollars)

This graph shows the growth of remittance inflows over the past four decades, from 1980 to 2019. Starting at approximately \$40 billion of total inflows in 1980, that figure increased quite consistently for two decades, rising to approximately \$125 billion in 2000. From 2000 to 2019, we see a much higher rate of remittance inflow growth, increasing to approximately \$450 billion in 2000, and over \$700 billion in 2019. While there are isolated instances during this time period when the global remittance inflow figure dropped over a period of one or several years—notably, in 2008 and 2015—the overall trend has been pronounced growth.

### Table 1: Top 10 remittance receivers and senders; 1980-2020

The top ten remittance corridors, from highest to lowest, were: the United States to India, Saudi Arabia to China, the United Arab Emirates to Mexico, the United Kingdom to the Philippines, Canada to France, Germany to Egypt, France to Nigeria, Russia to Pakistan, Australia to Germany, and Italy to Vietnam.

#### Figure 2: Top 10 remittance receivers; 3-year average, 2017-2019

This graph shows the average value of inflows to the top ten remittance receivers, based on a three-year average from 2017 to 2019. India is the highest remittance receiver by far, with a three-year average inflow of more than \$75 billion. The next two top receivers are Mexico and the Philippines, whose three-year average falls in the \$33 billion to \$37 billion range. Next are France and Egypt, each receiving on average just above \$25 billion over the past three years. The sixth through eighth top receivers are China, Nigeria, and Pakistan, in that order, which all received \$20 billion to \$25 billion on average from 2017 to 2019. Finally, Germany and Pakistan each received on average a little above \$15 billion over those three years.

#### Table 2: Top 10 remittance receivers; by % of GDP, 1980-2019

The top ten recipients of remittances as a percentage of the country's GDP, from 1980 to 2019, were as follows: Lesotho, Tajikistan, Tonga, Bermuda, Samoa, Moldova, Lebanon, Bosnia and Hercegovina, Jordan, and Tuvalu.

### Figure 3: Top 10 remittance receivers; by % of GDP, 2017-2019

This graph shows the top ten remittance receivers globally as a percentage of their GDP over the three years, from 2017 to 2019. The percentages shown are three-year averages during that time. The top remittance receiver as a percentage of national GDP is Tonga, which receives a value of remittances equaling nearly 40 percent of its GDP. Next are Kyrgyzstan, Tajikistan, and Nepal, in that order, which all receive between approximately 26 and 32 percent of their GDP in remittances. Next, Lesotho, Bermuda, Haiti, El Salvador, and Honduras (listed starting with highest receiver of this group) all receive remittance inflows totaling between 20 and 23 percent of their GDP. Finally, Samoa, the tenth-highest remittance receiver as a percentage of GDP, received approximately 17 percent of its GDP in remittances.

### Figure 4: Top 40 remittance corridors; by value, 2015-2018

This graph shows the total cumulative value of remittance flows in the world's top 40 remittance corridors, from 2015 to 2018. The top remittance corridor by far is the United States to Mexico, with a value between \$115 billion and \$120 billion. Next come Hong Kong to China, the United States to China, the United Arab Emirates to India, the United States to India, Saudi Arabia to India, and the United States to the Philippines, all totaling between approximately \$42 billion and \$62 billion from 2015 to 2018. The next top corridors are the United States to Vietnam, the United States to Guatemala, Saudi Arabia to Egypt, the United States to Nigeria, the United Arab Emirates to Pakistan, and Kuwait to India, all between \$20 billion and \$30 billion. Next, Russia to Ukraine, the United States to the Dominican Republic, the United States to El Salvador, Japan to China, India to Bangladesh, Canada to China, Qatar to India, Korea to China, the United Kingdom to Nigeria, the United Kingdom to India, and Oman to India all range from approximately \$15 billion to \$18 billion. After that, the United Arab Emirates to the Philippines, United States to Honduras, Saudi Arabia to the Philippines, Saudi Arabia to Bangladesh, Australia to China, France to Belgium, Singapore to China, the United States to Korea, Canada to India, Russia to Uzbekistan, Spain to France, the United States to Germany, France to Spain, and Nepal to India are all between \$10 billion and \$15 billion, and finally, Malaysia to Indonesia is just under \$10 billion.



### Figure 5: Year-over-year changes in remittance flows; 1981-2020

This graph shows the percentage change year-over-year in total remittance value inflows, from 1980 to 2020. Most years, remittances increased. From 1981 to 1985, year-over-year changes ranged from about 3-4 percent increases, to 2-4 percent decreases, with increases in just two of the five years and decreases in the remaining three years. However, from 1986 to 1997, remittances increased by between about 4 percent to a little over 20 percent for every year except one (1993, which saw a fraction of a percent decrease). 1998 saw a decrease of approximately 2-3 percent, followed by another period of increases from 1999 to 2008, this time ranging from over 5 percent to over 25 percent. Remittances decreased by approximately 5 percent in 2009, followed by increases of between about 4 and 13 percent from 2010 to 2014. Both 2014 and 2015 saw slight decreases of about 1-2 percentage points, followed by increases of between 3 and 8 percentage points from 2017 to 2019, and finally, the largest decrease of the entire four-decade period in 2020: over a 5 percent decrease.

### Figure 6: Remittance cost trends by funding method; Q4 (2018, 2019, 2020) with linear projection

This graph shows the average cost of remittances by various instruments used to fund the transaction, from 2018 to 2020. The instrument types included are bank account transfers, cash, mobile money, and debit/credit card. The average cost for all but cash declined over the 2018-2020 time period. Across all three years, cash cost was highest, and mobile money cost was lowest.

Bank account transfer costs started at an average of 7.11 percent of the total value of a remittance in 2018, declined to 6.83 percent in 2019, and dropped to 6.06 percent in 2020, representing a 15 percent decline. Cash cost started at 7.02 percent in 2018, and rose to 7.06 percent in 2019, staying level at that rate in 2020. Mobile money's average cost was 4.93 percent in 2018, 4.61 percent in 2019, and 4.36 percent in 2020, representing a 12 percent decline. Finally, debit/credit card average cost was 6.13 percent in 2018, 5.69 percent in 2019, and 4.81 percent in 2020, representing a 21 percent decline.

### Figure 7: Available payment types in corridors; 2Q 2016-3Q 2020

This graphic shows the number of payment options available for remittance corridors (cumulative) divided into digital and traditional categories. The chart shows data quarterly, going back to the second quarter of 2016, when there were just under 4,000 payment options/corridors, and 6.7 percent of them were digital. By the second quarter of 2018, over 10 percent of the payment options were digital. By the first quarter of 2020, there were more than 5,000 payment options/corridors, and 15 percent of them were digital. By the third quarter of 2020, the payment options/corridors had declined to less than 5,000, reflecting the impact of the pandemic, but 17.6 percent were digital, reflecting a shift toward digital remittances.

#### Figure 8: Cross-border payments using correspondent banking

This graphic shows the flow of cross-border payments using correspondent banking. It highlights that cross-border money flows often undergo several hand-offs and "hops" as they move from country A to country B, which introduces more compliance checks, increased costs, lack of transparency, and lack of predictability. Cross-border payments through correspondent banking can take days, and a sender often does not know when their payments will arrive.

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### Figure 9: Cross-border payments using next-generation global networks

This graphic shows the comparatively less complex cross-border payment process using a global network. A payer in country A will leverage their financial institution, which is linked up with the global payment network. That network likewise is linked to the financial institution of the recipient in country B. The network handles details such as settlement, foreign exchange, and compliance checks.

### Figure 10: Average, lowest, and highest customer costs in 28 corridors; debit/credit payment, for \$200 and \$500 remittances

This chart shows the average cost, lowest cost, and highest cost, all as a percentage of total remittance value, by corridor, for debit/credit payments. The lowest costs were those that could be obtained by a consumer through checking multiple MTO options. The table shows these costs for both \$200 remittances and \$500 remittances in February 2021. The chart indicates that there is quite a wide range in what a customer may pay, both between and within corridors. For a \$200 remittance, the average cost ranges from 1.92 percent (Kuwait to India corridor) to 8.13 percent (Russia to Tajikistan). The corridor with the lowest customer cost for \$200 was the United Arab Emirates to India, at just 0.15 percent, and the corridor with the most expensive highest customer cost was Germany to Vietnam, at 11.35 percent. For a \$500 remittance, the lowest average cost was 0.95 percent (Kuwait to India again), and the highest average cost was 8.13 percent (Russia to Tajikistan). The cheapest "lowest" customer cost for a \$500 remittance was 0.25 percent (UK to Nigeria) and the most expensive "highest" customer cost was 9.99 percent (Germany to Vietnam). Generally, the higher costs in the table were driven by high foreign exchange margins in the corridor.

### Figure 11: Average exchange rate margin in 28 corridors; debit/credit payment, for \$200 and \$500 remittances

This graph shows the average exchange rates for both \$200 and \$500 remittances, for debit/ credit payments, by corridor. For all corridors listed, the rates for \$200 and \$500 remittances are the same or close (within a fraction of a percent). The highest exchange rate margin was for Russia-Tajikistan, at between 7 and 7.5 percent. Next was New Zealand-Samoa, at 5.5 percent. The UK-Kenya, US-Dominican Republic, and US-Jamaica corridors were all between 3 and 4 percent. Next, Germany-Vietnam, US-Guatemala, Canada-Vietnam, and US-Mexico's average exchange rate margins all fell between 2 percent and just over 3 percent. Saudi Arabia-Indonesia, Italy-Nigeria, UK-Nigeria, France-Algeria, and Greece-Albania all had average margins of between 1.5 and 2 percent. Australia-Vietnam, Italy-Albania, US-Honduras, and Russia-Moldova were all between 1 and 1.5 percent. Saudi Arabia-Bangladesh was between 0.5 and 1 percent, and Saudi Arabia-Nepal, Kuwait-India, UAE-Philippines, UAE-Egypt, UAE-Pakistan, and UAE-India were all under 0.5 percent.



### Figure 12: Average exchange rate margin in 28 corridors; debit/credit payment, for \$200 and \$500 remittances (second data collection)

This graph shows the results from a second modeling of the average exchange rates for both \$200 and \$500 remittances, for debit/credit payments, by corridor. It represents an updated version of Figure 11. The highest average exchange rate margin was for the France-Algeria corridor, at over 7 percent, whereas for the first data collection (see Figure 11), Russia-Tajikistan had the highest exchange rate margin, and France-Algeria came in as the 13th of 28. Across both data collections, many of the corridors originating in the United States tended to have lower exchange rate margins, with the exceptions of US-Dominican Republic and US-Jamaica, both of which landed in the five most expensive corridors for both data collections.

# Figure 13: Average, lowest, and highest customer costs in 28 corridors; debit/credit payment, for \$200 and \$500 remittances (second data collection)

This chart shows the results from a second modeling of the average cost, lowest cost, and highest cost, all as a percentage of total remittance value, by corridor, for debit/credit payments. It represents an updated version of Figure 10; we modeled remittance costs for a second time (twice during a two-week period) in order to assess changes/volatility in cost. There were some changes between the two data collections. For instance, in this figure, the corridors with the lowest customer cost for \$200 were Russia to Moldova and Russia to Kyrgyzstan, both at 0.03 percent, whereas for the initial cost modeling shown in Figure 10, the lowest cost was 0.15 percent, for the UAE to India. These same two corridors—Russia to Moldova and Russia to Kyrgyzstan—had the lowest costs for a \$500 remittance, at 0.02 percent. One of the most notable increases in costs from the first to second modeling was for the France-Algeria corridor, where the average cost for sending \$200 was 4.11 percent in the first modeling/Figure 10, but jumped to 10.94 percent in this chart (Figure 13), showing results from the second modeling.

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