

# Digital Remittances:

Enhancing Financial Health  
for Families around the World

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**xoom**  
A **PayPal** Service

## Executive summary:

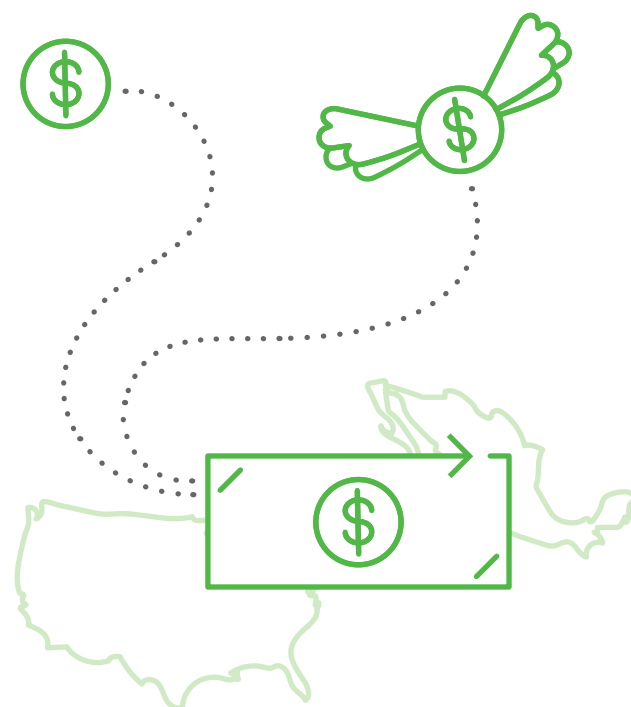
In 2015, the United Nations (UN) estimated that there were 244 million people living in a country other than the one they were born in.<sup>i</sup>

Many immigrants move to find a better life; some are escaping poverty, war, or famine; others are seeking an education; and, some simply want to start anew. When people move abroad they often keep close ties with family and friends back home. Money is often sent to relatives in order to support the family or invest in local opportunities.

The World Bank estimates that immigrants will send more than \$600 billion in remittances in 2016.<sup>ii</sup>

The remittances market is a valuable external source of funding for many families around the world. The traditional costs of securely and efficiently managing and moving money across borders have been relatively high. In the early 2000s, the cost of sending a \$200 remittance to Latin America was nearly 10%, and some remittance corridors continue to have fees in the double digits.<sup>iii</sup>

The reduction of remittance costs has become a strategic focus for multilateral development organizations. In fact, the UN Sustainable Development Goals (SDGs), which came into effect in January 2016, includes a target of reducing remittances costs to less than 3% by 2030.<sup>iv</sup>



Digital technology – in particular mobile – is enabling a significant reduction in remittances costs.

Advances in digital technology – in particular mobile – are enabling a significant reduction in remittances costs. This study looks at the digital remittance solutions developed by Xoom and PayPal. Xoom

is a digital money transfer product designed to leverage technology to make it easier to send money across national borders. PayPal acquired Xoom in 2015. PayPal operates a payments platform that enables money transfers for approximately 188 million user accounts in more than 200 markets.

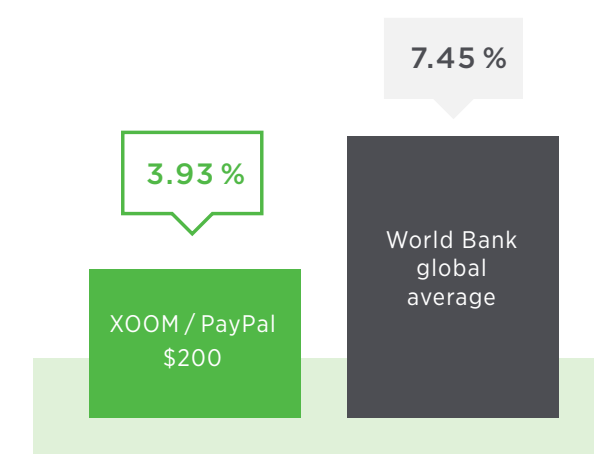
This study uses a Xoom and PayPal dataset of about 9 million transactions from June to November 2015 and compares the costs associated with digital remittances with World Bank data on remittance prices worldwide.

## Here are the key findings from our research:

- Sending money overseas with Xoom/ PayPal costs on average just 3.93% of the amount sent compared with World Bank data demonstrating that the average cost of sending a remittance is 7.45%. Digital remittances are well on the way to achieving the UN Sustainable Development Goal of lowering remittances costs to less than 3%.
- Innovative solutions like Xoom Bill Pay are even lower cost. Doing a bill pay using Xoom costs on average just 2.87% of the remittance.
- Digital remittances are consistently lower cost than sending \$200 or \$500 by bank or money transfer, when compared across comparable corridors & time periods.

- With global remittances expected to be \$600 billion in 2016, according to the World Bank, a 3.52 percentage point cost savings from switching to digital remittances (7.45% less 3.93%) is equivalent to \$21 billion in cost savings.

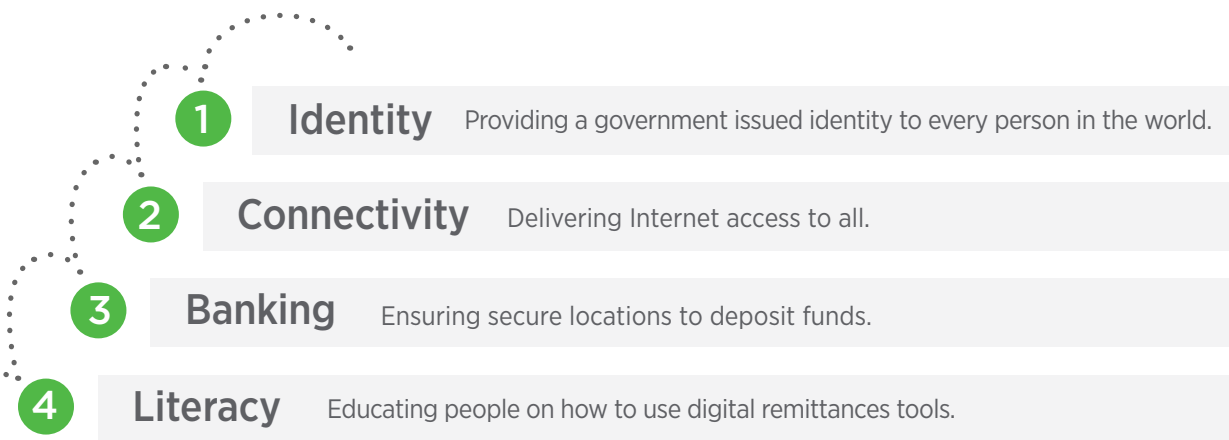
Cost of sending remittances  
(as % of the amount sent)



Source: Xoom / PayPal data for Q3 and Q4, 2015 and Sidley calculations. Costs are the percentage of the amount sent, and were calculated as total fees divided by amount sent. Total fees include cross border, service fees, and exchange rate fees.

- World Bank studies suggest remittances are generally responsive to prices. The lower remittance prices offered by digital remittances could spur an additional 10% in remittances. More importantly, these additional remittances could lift nearly 30 million people out of poverty according to estimations by the UN Center for Trade and Development.

The opportunity presented by digital remittances is currently limited. Four key pillars must be established if we are going to see the benefits of digital remittances spread around the world:



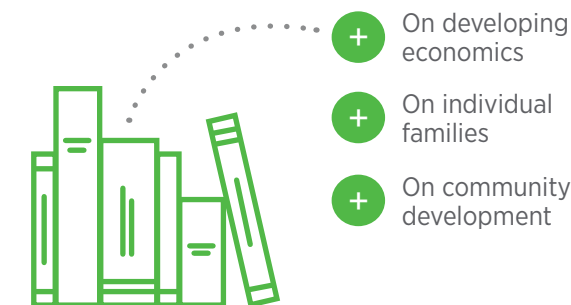
The private sector, government, multilateral institutions, and non-governmental institutions need to work together to build the support infrastructure that would enable digital remittances to thrive.

This work comes at a pivotal moment. According to the UN Refugee Agency, forced displacement hit a record high in 2016.<sup>v</sup> Remittances can be a lifeline for refugees and can be helpful in rebuilding their lives.<sup>vi</sup> Digital technology can help to reduce the costs of these lifeline payments and yield positive development outcomes for those that need them most.

# 1. Understanding remittances

“[A]s they elevate a family’s standard of living, contribute to business formation, and lead to community improvements, [remittances] represent a tangible accomplishment of which migrants can be justly proud.” – Durand, et. Al.<sup>vii</sup>

## Studies show remittances have a positive impact :



A number of existing studies on the topic of remittances demonstrate its positive impact on developing economies, individual families, and community development. Remittances have been an important source of family income in the developing world for decades, but only recently have governments, multi-lateral institutions, and academics really begun to focus attention on this important segment of the global economy.<sup>viii</sup>

Early literature on remittances focused on whether remittances were good for emerging markets because of the lost economic output of adult immigrants. More recent literature has analyzed the economic flows of remittances. Empirical research has consistently shown that household income is higher in a world with immigration and remittances.<sup>ix</sup>



Remittance flows are the second largest source of external funding for developing countries.

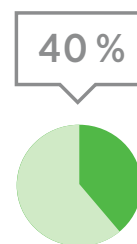
Remittances are a key contributor to global Gross Domestic Product (GDP) in many countries and can stabilize household income in the face of adverse income shocks. Dilip Ratha of the World Bank notes that remittance flows are the second largest source of external funding for developing countries.<sup>x</sup> The Bank of Mexico reported that money sent home by Mexican immigrants was nearly \$24.8 billion in 2015, overtaking oil revenues as a source of foreign income for the first time.<sup>xi</sup> Over 40% of Somalis rely on remittances to meet basic daily needs.<sup>xii</sup>

Remittances also tend to be a steady source of earnings that don't falter when other parts of a domestic economy might be affected.<sup>xiii</sup> Remittances can even offset poor domestic economic policymaking.<sup>xiv</sup> Thus, during challenging economic times remittances serve as a lifeline.

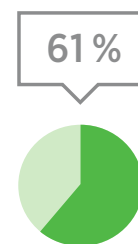


Money sent home by Mexican immigrants in 2015.

Remittances clearly help to stabilize household income and respond to income shocks, but several studies have demonstrated that remittances can also be used for savings or investment. A survey of businesses in three rural Mexican communities demonstrated that 61% of businesses were founded as a result of remittances from the US.<sup>xv</sup>



40% Somalis relying on remittances to meet basic daily needs.



61% Rural Mexican businesses founded as a result of remittances from the US.

Remittances can enable investments that would have been impossible due to credit constraints and upfront costs.<sup>xvi</sup> Research has also shown that the benefits of remittances accrue to households other than the ones receiving the remittances; families often spend or invest the remittance money locally and therefore have impact on the local economy.<sup>xvii</sup> **Child schooling and educational expenditures rise due to remittances, while child labor falls.**<sup>xviii</sup>

Finally, several studies have shown that remittances enhanced health care outcomes (ie. lower mortality rates, improved sanitary conditions).<sup>xix</sup>



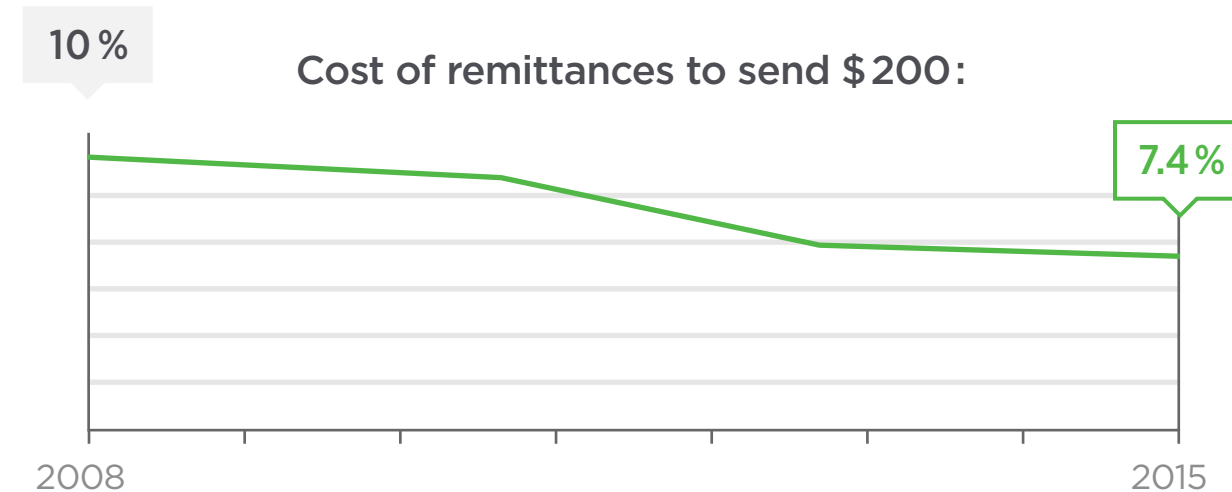
## 2. Digital remittances

“In addition to dirt cheap pricing, mobile phone technology seamlessly bundles message transfer, value transfer and account keeping. The potential for this line of business is vast.”

– Dilip Ratha, Head of Migration and Remittances, World Bank <sup>xx</sup>

Scholars have written a great deal on the potential effects of regulatory reform and enhanced competition on remittance costs. <sup>xxi</sup> Yet, little has been written on the impact of technology on remittances. This is understandable as technology has only recently begun to impact the business of remittances. World Bank data demonstrates the declining trend in the cost of remittances, with the cost of sending \$200 falling from about 10% in 2008 to roughly 7.4% in 2015 <sup>xxii</sup>

The decline in remittance costs can translate into relatively large savings: those figures would suggest that people sending money from the U.S. to India, Mexico and the Philippines alone saved \$1.2 billion annually between 2008 and 2015. <sup>xxiii</sup> The decline in costs may reflect regulatory reform and competition, it may also reflect cost efficiencies enabled by technology — for instance, these three corridors are the largest corridors for Xoom.



There are several reasons why advances in technology and digital transactions can yield lower costs in remittances:

### SPEED

Digital transactions can be completed in seconds regardless of where the sender and receiver are in the world.

### REACH

There are more mobile phones than there are people in the world.

### ACCESS

Most physical remittance locations have set times in which they are open, whereas digital remittance services are available 24 hours a day.

### EASE OF USE

A mobile app can enable remittances to be sent in just a few taps.

### TRANSPARENCY

Pricing can be displayed up front.

### CHOICE

Senders are able to choose from a range of payments methods and recipients may be able to choose from a host of acceptance methods.

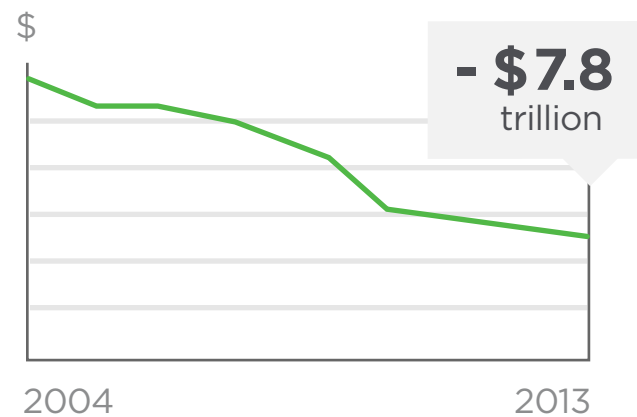
### SECURITY

Theft of cash delivered through most types of remittance networks is a major cost that digital can help remove.

This last point is worth highlighting. Informal remittance networks often involve cash, which can be stolen after a recipient leaves through unsecure networks. Even formal remittance networks often involve cash pickups, which can be stolen after a recipient leaves the safety of a bank branch or agent network.

Over the past decade, the developing world has lost US \$7.8 trillion to fraud, theft and money laundering. <sup>xxiv</sup> Digital can help to reduce the security costs of remittances. The tremendous efficiencies provided by digital enables remittance providers to charge lower fees and enhanced services. We conducted a pure fee-based analysis of costs. We looked at the fee costs [fixed and variable] of Xoom and PayPal. We compared these costs with reports from the World Bank to demonstrate that the cost savings benefits of digital are starting to be realized.

### Loss due to fraud, theft and money laundering:



### A. Total cost savings

The World Bank tracks formal remittances across all countries and various payment transfer instruments such as a bank account, money transfer operator, non-bank financial institution, and debit/credit card. <sup>xxv</sup> The cost of sending money varies across corridors and payment instruments, ranging from 0% to over 20%, with the majority of corridors falling in the range of 5-10%. Over time the number of corridors with lower costs has increased. Overall, most recent data indicate that on average, globally, sending a remittance costs an average of 7.45% of the amount sent.

these informal channels are less expensive and therefore are used, while others argue that these channels are often more expensive. <sup>xxvii</sup> Costs aside, these informal channels have higher risk for theft, money laundering, and terrorist financing, which do not make them a viable solution to addressing the high costs of remittances.



World Bank numbers show that sending remittances costs 7.45% of the amount sent

The social and economic importance has led the UN to label reducing remittances as one of its targets for Sustainable Development Goal 10: Reduce Inequality Within and Among Countries.

“By 2030, reduce to less than 3% the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5%.”

### SDG Target 10.c states: ...

When we looked at digital remittances sent through Xoom and PayPal from June to November 2015 we found that on average digital remittances cost just 3.93% of the amount sent, which is about half of what the World Bank reports on traditional remittances. (Figure 1). <sup>xxviii</sup> Moreover, this figure demonstrates that digital remittances are well on the way to helping to achieve the Sustainable Development Goal target of 3%.

Xoom enables users to fund their remittances using a card product or a bank account, known as eCheck. These eCheck transactions are even cheaper to send than the average Xoom/PayPal transaction, coming in at just 3.8%. Figure 2 compares remittance prices across various payment channels.

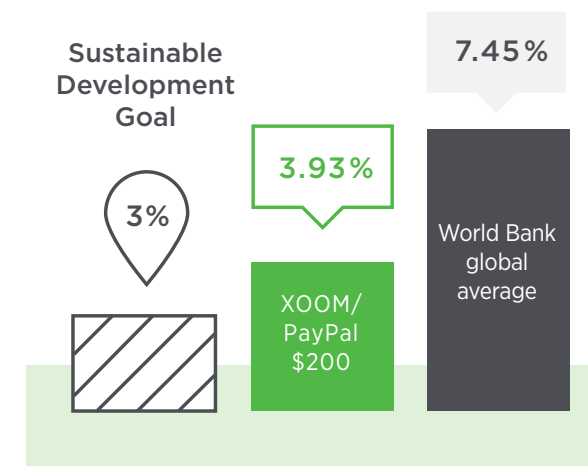
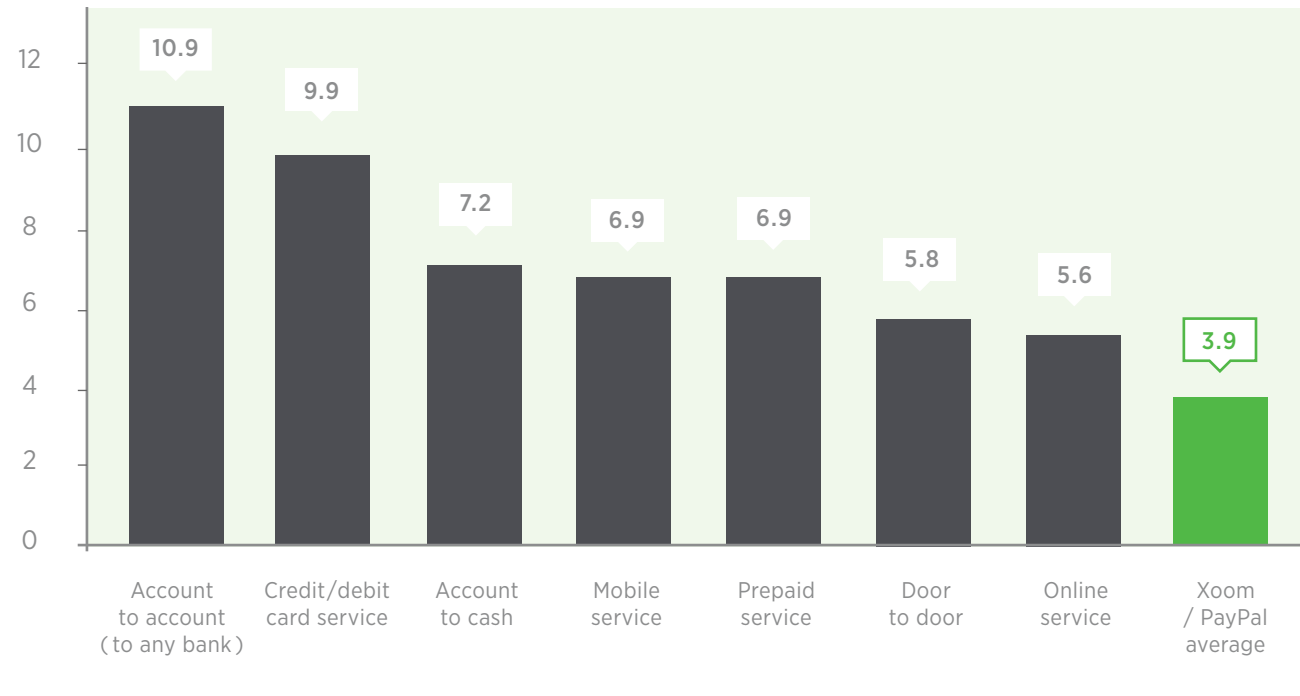


Figure 1: Average remittance costs as percent of amount sent

Source: World Bank, Remittance Prices Worldwide, June 2016; and Xoom/PayPal data.

**Figure 2:** Average remittance prices worldwide, 2015 as % of amount sent



Source: "Remittance Prices Worldwide", Issue no. 16, Dec. 2015, World Bank ; and Xoom/PayPal data

A further innovation that digital enables is the ability for an immigrant to pay particular expenses of his / her family. Xoom has a product called Bill Pay, which enables an immigrant to pay utility

bills for family back home directly. These transactions were the cheapest we observed averaging just 2.87% of the amount sent.



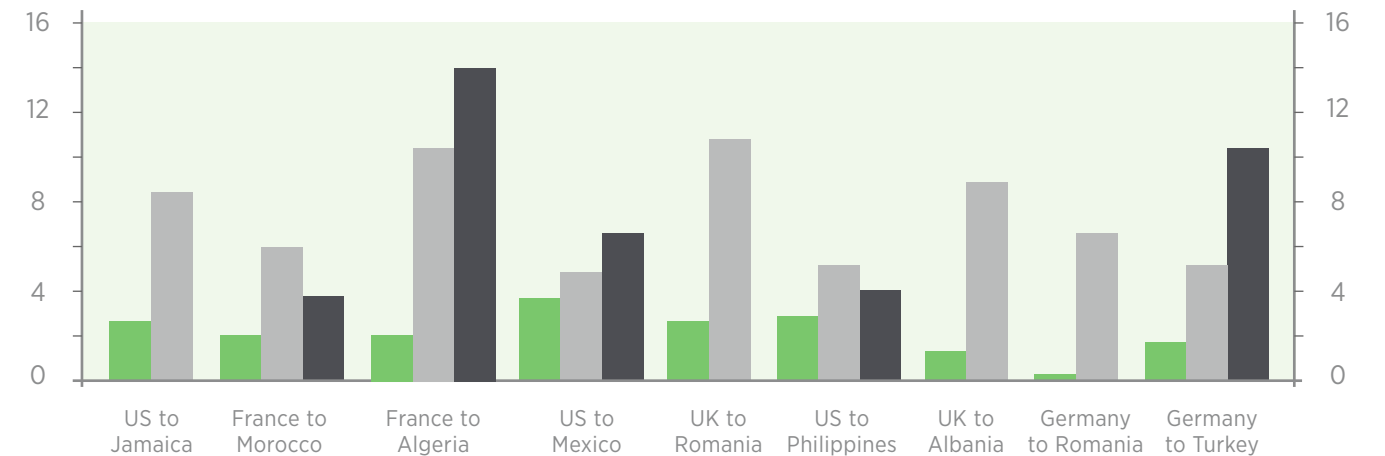
## B. Corridor cost savings

The cost savings reported above are made more robust through an analysis that we conducted looking at particular common remittance corridors. The World Bank has standardized its corridor measurement costs to \$200 and \$500 transactions. The World Bank looks at only remittance transactions that are exactly \$200 and \$500, but for robustness we looked at transactions between \$150 & \$250 as well as transactions between \$450 and \$550. Our results suggest that digital remittances tend to be cheaper for both \$200 and \$500 remittances across a wide variety of common corridors.

The average price for sending funds of \$200 overseas with a digital remittance service is 4.5% lower than the average price of sending by bank or money transfer, when compared across comparable corridors and time periods. Some of those corridors are included in Figure 3. The average remittance transaction tends to be small, usually below \$200. <sup>xxix</sup> And, it is in these lower value remittances where digital can be particularly low cost.

**Figure 3:**

The cost of sending 200 USD by Xoom / PayPal, money transfer and bank transfer, selected corridors (as a percent of amount sent)

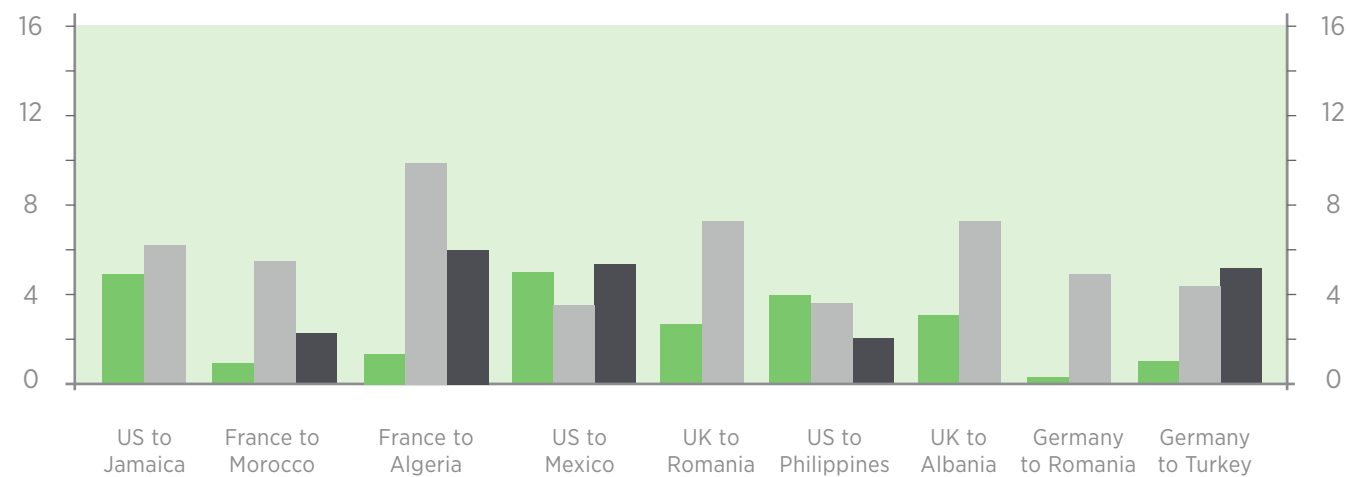


The average price for sending \$500 overseas using a digital remittance service is also lower than traditional methods, 2.6% lower than sending the funds by bank or money transfer, when compared across comparable corridors and time periods.

If every remittance were to be conducted through the more efficient digital channel the cost savings would be immense. With global remittances expected to be \$600 billion in 2016, a 3.52% point savings (7.45% less 3.93%) is equivalent to \$21 billion in cost savings.

**Figure 4:**

The cost of sending 500 USD by Xoom / PayPal, money transfer and bank transfer, selected corridors (as a percent of amount sent)



**Figure 5: Potential Cost Savings through Digital Remittances**

A	B	C	D	E
Average cost of sending money with Xoom/ PayPal	Average cost of sending money with bank or money transfer	% point difference between Xoom/ PayPal and bank/ money transfer	Expected total global remittances in 2016 (World Bank)	Total savings through switching all remittances to digital remittances
3.93 %	7.45 %	3.52 %	\$600 billion	\$21 billion

## C. Impact on poverty

The impact of remittances on poverty has been well understood for some time. A 1991 study on rural Egypt demonstrated that the number of poor households declined by 9.8% when the household income included remittances.<sup>xxx</sup> More recent World Bank studies looking at household surveys have shown international remittances having significant effect on poverty in Uganda, Bangladesh, and Ghana.<sup>xxxii</sup>

The World Bank estimates that 767 million people live below the international poverty line of \$1.90 per day.<sup>xxxiii</sup> The additional remittances provided by cost savings from digital could lift 29.9 million people out of poverty according to estimations by the UN Center for Trade and Development (Figure 6).<sup>xxxiv</sup>

The cost savings from digital remittances could multiply the impact on poverty due to the cost savings and efficiencies it enables. The decline in prices from digital remittances through services like Xoom and PayPal could lead to an additional 10% in remittances (Beck and Peria).<sup>xxxii</sup>

**Figure 6: Potential Impact on Poverty through Digital Remittances**

A	B	C	D	E	F
Decline in prices using digital remittance services [from 7.45% of value for traditional tools to 3.93% of value for Xoom/ PayPal]	Behavioral response by senders to decrease in prices: by how much do remittances increase if remittance prices decline by 1%? (Beck and Peria)	Percentage increase in remittances from decline in remittance prices [a*b]	Estimated percentage decline in poverty head-count as a result of a 10.34% increase in global remittances (UNCTAD)	Number of people living below the poverty line (World Bank)	Number of people that could be lifted out of poverty as a result of decline in prices from digital remittances [d*e]
47 %	.22	10.34 %	3.9 %	767 million	29.9 million



### 3. Creating an enabling environment

“Public authorities in today’s developing countries should try to maximize the impact of remittances by adopting policies aiming to promote financial democracy”

– David Khoudour-Casteras and Rui Esteves<sup>xxxv</sup>

The literature on what constitutes an enabling environment for traditional remittances is fairly robust.<sup>xxxvi</sup> Digital remittances, however, are unique. The vast majority of remittances go to developing countries, many of which lack the infrastructure that would enable digital remittances to unlock cost savings for citizens.<sup>xxxvii</sup> Interestingly, however, many of developed countries also fail to have an enabling

environment for digital remittances. Below we list a set of preconditions that are needed in order for digital remittances to thrive. Public sector, private sector, and nongovernmental organizations need to come together to ensure that these conditions exist in economies that received and send remittances.

#### A. Identity

Regulation often requires verification of a person’s identity before delivering financial services for anti-money laundering and fraud-reduction purposes. It is nearly impossible for a financial service provider to verify identity if a consumer has no government-issued identification.



Approximately, 1.5 billion people globally do not have an officially recognized document to prove their identity.<sup>xxxviii</sup> Most of these individuals are forced to utilize high-cost and high-risk informal methods for receiving remittances. There are robust programs that are being built out to resolve the identity problem. Technology can help to resolve this gap as India has demonstrated through its Aadhaar digital identity program, which provides a unique identifier number linked to biometrics, and can be leveraged to conduct paperless identity authentication. Mobile phones can also be leveraged to help verify identity. But, beyond technology, it will take commitment from government to reach out to the unidentified, most of whom live in rural parts of the world, to ensure that they are provided with a government verified form of identification.<sup>xxxix</sup>

The World Bank’s Identification for Development (ID4D) program is an important effort designed to help developing world economies with capacity building for identity.<sup>xl</sup>

Proper identity and registration for immigrants in developed economies is also important, as digital remittances also require legitimacy on the sending side. The US has adopted a program that could be replicated in other markets. The Martricula Consular enables Mexicans living in the US who may not have a proper US identification to establish an account at a financial institution. These accounts are central to sending formal remittances.

Number of people who do not have an officially recognized document to prove their identity.



## B. Connectivity

Remittances can now be delivered over mobile telecom networks, as evidenced by recent partnerships between mobile-network operators in Africa as well as partnership between Xoom and M-Pesa.<sup>xli</sup> The Internet, offered over a smartphone, offers a far more effectively tool for delivering a robust remittances experiences that is truly interoperable and would enable real-time financial management.

Only about 40% of the global population has access to the Internet.<sup>xlii</sup> The private sector is innovating through new technologies (balloons, wi-max, etc.) to expand Internet access, but the public sector also has a role to play in building out this technology. Fair and non-discriminatory spectrum, rights-of-way, and competition policies will be essential to expanding Internet access in developing economies. Non-profit organizations are also doing tremendous work in this area.

The Alliance for Affordable Internet helps developing government on policy and regulatory good practices that can help drive down the cost of Internet access.<sup>xliii</sup> The problem of connectivity is not limited to the developing world.



Only about 40% of the global population has access to the Internet.

An estimated 34 million people in the United States lack access to broadband.<sup>xliiv</sup> While 60% of unbanked people in the US have a smartphone, only 33% have an unlimited data plan.<sup>xliv</sup> The issues in the developed world for lack of connectivity are surprisingly similar to those in the developing world: the unconnected tend to be less educated, older, less affluent, and rural populations.<sup>xlvi</sup> Again, it will require public private partnership to build connectivity out to the unconnected and to create meaningful use cases for their needs.

## C. Banking

Banks provide a baseline regulated service to consumers, enabling them to hold deposits in a safe environment. The World Bank reports that 2 billion adults – or 38% of adults in the world – in the world are unbanked. Roughly 700 million people became account holders between 2011 and 2014; and if that trend continues then the World Bank will be able to meet its goal of universal financial access by 2020.<sup>xlvii</sup> The problem in achieving this goal, however, is that the costs of serving rural customers in the developing world using the traditional retail banking model are prohibitive. This is again where a mix of digital technology and smart policy making could make the difference.

Digital technology can significantly lower the cost of providing financial services. A McKinsey Global Institute Report entitled “Digital Finance for All” finds that for financial service providers, the cost of offering customers digital accounts can be 80 to 90% lower than using traditional means (ie. branches).<sup>xlviii</sup> According to McKinsey, digital finance has the potential to provide access to financial services for 1.6 billion people in emerging economies, more than half of whom are women.



The opportunities for the banking industry are notable as well as the report finds that digital finance could result in \$4.2 trillion in new deposits.

The private sector will no doubt drive the growth in digital banking, but governments must also play a role. The McKinsey report suggests that governments utilize risk proportionate regulations and foster open markets for innovation. The public sector could also deliver benefits payments directly to newly created bank accounts in cooperation with the private sector.

Multilateral institutions and non-governmental organizations can also drive digital banking by helping to foster interoperability between existing banking products and educating people on the value of joining the formal economy.

## D. Literacy

Dartmouth Economics professor Diego Comin has written extensively on the problems associated with the successful diffusion of technology into the developing world.

Professor Comin has demonstrated that technologies resulting in tremendous economic gains in the developed world have not have a similar effect in the developing world. <sup>xlix</sup> He attributes the divergence to a lack of education in the developing world on how to utilize new technologies.



The public sector has a role to play – through formal schooling as well as through adult educational initiatives – in developing peoples’ awareness of digital remittance tools, the best practices for utilizing these tools, and the benefits of using these tools. Government can also work with other ecosystem players to design new approaches to financial education that combine digital and financial literacy.

Public-private partnership can more effectively deliver financial education programming through the products/services people use to manage and move their money. These tactics need to be utilized in both the developing and developed world, as there is still a significant lack of awareness in the developed world of how to leverage digital remittance tools.

## Conclusion

Digital remittances have the potential to engender positive development outcomes. The pure fee-based cost savings that result from digital remittances could have a significant impact on immigrant workers, as well as families back home.

Beyond the pure fee costs, important time, reach, and security benefits accrue from digital remittances. The cost savings from digital remittances could be a meaningful boost to global GDP and have a noteworthy impact on poverty. In order for all of these positive developments to be realized, and enabling environment for digital remittances must be created.



The cost savings from digital remittances could [...] have a noteworthy impact on poverty.

Identity, connectivity, banking, and literacy solutions for all must be developed by the public and private sectors in collaboration. With the current refugee crisis, the time is ripe for digital remittances to provide enhanced economic opportunity for those that need it most.

## Footnotes

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<sup>i</sup> <http://www.un.org/sustainabledevelopment/blog/2016/01/244-million-international-migrants-living-abroad-worldwide-new-un-statistics-reveal/>

<sup>ii</sup> <http://pubdocs.worldbank.org/en/661301460400427908/MigrationandDevelopmentBrief26.pdf>

<sup>iii</sup> <http://www.thedialogue.org/wp-content/uploads/2016/02/The-Costs-of-Sending-Money-to-LAC-on-Template.pdf>

<sup>iv</sup> <http://unstats.un.org/sdgs/files/metadata-compilation/Metadata-Goal-10.pdf>

<sup>v</sup> <http://www.unhcr.org/en-us/news/latest/2016/6/5763b65a4/global-forced-displacement-hits-record-high.html>

<sup>vi</sup> Carlos, Vargas- Silva, Literature Review, Remittances Sent to and from Refugees and Internally Displaced Persons KNOMAD Working Paper 12 [http://www.knomad.org/docs/working\\_papers/KNOMAD%20WP%2012%20Lit%20Review%20Remittances%20tofrom%20Refugees%20and%20IDPs.pdf](http://www.knomad.org/docs/working_papers/KNOMAD%20WP%2012%20Lit%20Review%20Remittances%20tofrom%20Refugees%20and%20IDPs.pdf)

<sup>vii</sup> Jorge Durand; William Kandel; Emilio A. Parrado; Douglas S. Massey, International Migration and Development in Mexican Communities Demography, Vol. 33, No. 2. (May, 1996), pp. 249-264.

<sup>viii</sup> Re-thinking Remittances: Social and Political Dimensions of Individual and Collective Remittances By: Luin Goldring Dept. of Sociology, York University Email: goldring@yorku.ca CERLAC Working Paper Series February, 2003

<sup>ix</sup> Bradford Barham \*, Stephen Boucher, Migration, remit-

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<sup>x</sup> Ratha, Dilip, "Workers' Remittances: An Important and Stable Source of External Development Finance" (2005). Economics Seminar Series. Paper 9.

<sup>xi</sup> The Bank of Mexico says money sent home by Mexicans overseas hit nearly \$24.8 billion last year, overtaking oil revenues as a source of foreign income for the first time, Associated Press, Feb 2, 2016.

<sup>xii</sup> By Teresa Welsh, Remittance Cutoffs Threaten Somalis, US News, Feb. 19, 2015, <http://www.usnews.com/news/articles/2015/02/19/remittance-cutoffs-threaten-somalis>

<sup>xiii</sup> Id.

<sup>xiv</sup> John Foster, The Relationship Between Remittances and Savings in Small Pacific Island States: Some Econometric Evidence, Asian and Pacific Migration Journal (1995)

<sup>xv</sup> Edward J. Taylor, The New Economics of Labour Migration and the Role of Remittances in the Migration Process, International migration (1999)

<sup>xvi</sup> Dean Yang, International Migration, Remittances and Household Investment: Evidence from Philippine Migrants' Exchange Rate Shocks, The Economic Journal

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<sup>xx</sup> Dilip Ratha, Mobile phone technology and remittance services for the poor, World Bank blog (Sept. 2010)

<sup>xxi</sup> Dilip Ratha, Remittances: Funds for the Folks Back Home FINANCE & DEVELOPMENT <http://www.imf.org/external/pubs/ft/fandd/basics/remitt.htm>

<sup>xxii</sup> Migration and Remittances, World Bank Group, April 2016 (p.9)

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