

The Quest to Lower High Remittance Costs to Africa: A Brief Review of the Use of Mobile Banking and Bitcoins

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Abstract

The paper reviews the latest technological tools that arguably can contribute to reducing the excessively high costs of remittance transactions in Africa. Indeed, despite huge remittance inflows to and within the continent, Africa is the most expensive destination to send money to. As remittances have become more important than Overseas Development Assistance and Foreign Direct Investment inflows in some countries, it has become crucial to explore technological advances that can contribute to reducing their transaction costs. Such reduction would enable the end beneficiaries to capture a larger share of these external resources, which in turn could have an even bigger impact on development in Africa.

In addition to revisiting the role of mobile banking in lowering remittance transaction prices, the paper takes a closer look at the newest available technology, the Bitcoin blockchain technology that underpins digital currencies. Although, a few top schools, such as Cambridge University's Judge School of Business, Georgetown's McDonough School of Business, and UNSW Business School in Sydney, have conducted research into bitcoin and the blockchain, at this early stage, still very few social science researchers have addressed the role that such digital currency could play in the reduction of the remittance transaction prices, in addition to a few innovative Bitcoin operators.

The paper proceeds as follows. It first looks at the causes of the high remittance transaction costs. Then, it reviews, presents and analyses the official remittances data downloaded from the World Bank's Remittances Prices Worldwide database. It also briefly reviews a few remittance transfer technological instruments. Given the novelty of the topic, the review of the most recent existing "literature" on Bitcoin is mainly retrieved from either online news sources or information from a few leading Bitcoin operators. In the light of the UN Global Working Group Post-2015 Development Agenda and Sustainable Development Goal proposal to reduce by 2030 the remittance transaction costs to even less than 3%, the effectiveness of these new technological instruments to reach such objective are discussed. Finally, a number of appropriate policy actions to foster the economic impact of remittances are proposed.

Keywords: Remittances, Mobile Banking, Crowdfunding, Bitcoins, Africa

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1. Introduction

The Post-2015 Development Agenda represents a paradigm shift in the development agenda, establishing, for the first time, a collectively agreed set of universal goals for an inclusive and sustainable global development process. 2015 was the year for setting sustainable development goals (SDGs) and signing on to global commitments, whereas 2016 could be the year of figuring out how to pay for it. The cost of implementing the comprehensive 17-points SDG plan is expected to run into trillions of US dollars spanning over the next 15 years. Hence, the question that the global community needs to ask itself is: *What kinds of policies at the sub-national, national and international levels will generate resources for development and fund projects aimed to improve global and local welfare?*

The UN Inter-governmental Committee of Experts on Sustainable Development Financing, in its August 2014 report, divided the playing field of sources of finance into four areas: public domestic, private domestic, public international, and private international. However, for these four possible funding sources to be effective, it is necessary to encourage tax reforms, technology transfer, efforts to stop illegal financial outflows (IFF), capacity building, and **reductions in the costs of transferring remittances**. Mobilizing all these initiatives successfully, will make the international community meet its needs to achieve the SDGs, according to Wu Hongbo, UN Under-Secretary General for ECOSOC & Secretary General of the Third International Conference on Financing for Development held in Addis Ababa, although, uncertainties related to the fact that targets are “aspirational” with each of the 193 UN member states setting its own national targets, it is difficult to predict or quantify the actual amount of money needed.²

This said, “despite witnessing exceptional growth in development finance in recent years, Africa is still faced with the arduous task of mobilizing adequate resources to fund its growth and future transformation. Given the paucity of external Official Development Assistance (ODA), and low commodity prices for its goods and services, Africa has awakened to the fact that it must rely on its own financial resources to achieve the SDGs” (Mukeredzi, 2015). Therefore, Africa’s greatest challenge is ensuring that its transformation is bolstered by sufficient and innovative sources of funding through innovative financial products and by setting-up effective national and regional financial institutions and services, as stated by Côte d’Ivoire’s President Alassane Ouattara at the Ninth African Development Forum in 2014.

This would go in the direction of the significant progress made globally, namely in mobilizing financial and technical resources for development from an increased number of actors, since the adoption of the Monterrey Consensus at the first UN Summit on Financing for Development in 2002. According to UNECA, Africa has developed a financing framework that prioritises domestic resource mobilization (e.g. strengthening tax administration) and trade and IFF lowering (e.g. combating tax evasion).³ Consequently, as the main sources to achieve African SDGs and finance structural transformation, with a focus on infrastructure, human capital and sustainable agriculture, African countries may rely on: almost \$530 Billion (Bn) p.a. raised from domestic taxes, almost \$75 Bn p.a. received from private flows and 51.4 Bn p.a. received from ODA out of \$137.2 Bn in 2014 (i.e. 0.30% of GNI). Also, Africa could raise \$550 Bn from Official Foreign Reserves, \$200 Bn from Pension funds, \$150 Bn from sovereign wealth funds (SWF)⁴ [out of \$5 Trillion total assets across the globe], \$50 Bn from FDI; \$20 Trillion from monetizing natural resources (e.g. DRC is estimated to have \$24 Trillion worth of natural resources), excluding Monetizing biodiversity. Finally, Africa could raise \$60 Bn from remittances of which 25% (i.e. \$15 Bn) is looking for structured investment in Africa.

² UNCTAD in its 2014 World Investment Report estimated the total annual investment needs to be \$3.9 Bn p.a. With the current annual investment only at \$1.4 Bn, this means that the annual investment gap is \$2.5 Bn.

³ Africa lost \$22 Bn in finance from IFF (estimated to have been \$854 Bn from 1970-2008).

⁴ According to the Africa Growth Initiative at the Brookings Institution, 12 Sub-Saharan African (SSA) countries raised \$15 Bn in international sovereign bonds in 2015.

Thus, amongst these many different sources of finance, **international remittances**, the money migrants send home, have become one of the major international financial inflows to developing countries. It is hard to estimate the exact size of remittance flows because many transfers take place through unofficial channels.⁵ The official recorded international migrant remittances are expected to reach \$636 billion globally, \$479 billion of which sent to developing countries by 2017 (World Bank, 2015b), exceeding ODA flows since 1996. As for Africa, it is expected that Middle East and North Africa (MENA) receive around \$55 billion (in 2016) and \$57 billion (in 2017) and Sub-Saharan Africa (SSA) receive, \$34 billion (2016) and \$36 billion (in 2017) (World Bank, 2015b). In terms of GDP percentages, which give a more exact proportion of the impact of the transfers of funds on national incomes, the main African beneficiary countries were Liberia (26%), The Gambia (22%), Lesotho (19%), Senegal (10%), Cape Verde (10%), Sao Tomé and Príncipe (9%), Togo (8%), Mali (7%) and Guinea-Bissau (4%) (World Bank, 2015).

Remittances, whatever may be their use, i.e. consumption (smoothing) and/or investments, are considered to be one of the tools that can contribute to reduce poverty, as they provide recipient households with extra incomes, which, in turn, increase the aggregate demand, and they are an income stream to locales where credit and labour markets often do not work. Regrettably, the remittance transaction cost still remains high, which, inevitably, reduces the amounts beneficiaries actually receive. This will eventually undermine the impact of remittances on inclusive growth and structural transformation. In the fourth quarter of 2015, according to the Remittance Prices Worldwide database (RPW) of the World Bank, the global average cost of sending money was 7.37% of the amount transferred, while the Send Money Africa (SMA) remittance prices database of the African Institute for Remittances estimated the average cost of sending money to and within Africa at 8.52%,⁶ which makes Africa the most costly remittance market globally. Also, perhaps surprisingly, nine of the top ten most expensive corridors in Africa are intra-African: six of them originate from South Africa and the rest three from Tanzania. The most expensive corridor is Tanzania – Uganda, with a cost of to 17.66% of the amount transferred.

According to the Overseas Development Institute (ODI, 2014), the Africa's highest remittance transaction costs imply an annual loss of around \$1.8 billion for African remittance recipients. Such "remittance super tax" of nearly \$2 billion a year, instead of being spent in fees, may provide receivers with extra income, which would give them further opportunity to consume, save, and invest. In other words, reducing remittance transaction charges to world average levels and reaching the 5% target of the 5x5 Objective⁷ would have a real impact on poverty reduction (ODI, 2014).

This brief aims at exploring what has been put in place to reduce remittance transaction costs in Africa. Special attention is paid to new technological tools and whether they can successfully contribute to reducing transaction cost for sending remittances in Africa. The brief is organised as follows. It first looks at the causes of the remittance transaction high costs, especially in a context where the most expensive corridors are intra-African. Then, some remittance transfer technological instruments, with a focus on Bitcoins, are reviewed. Finally, in the light of the UN Global Working Group (OWG) Post-2015 Development Agenda and SDG proposal to reduce by 2030 the remittance transaction costs to even less than 3%, the effectiveness of these new technological instruments to reach such objective are discussed.

⁵ Unrecorded flows through informal channels are believed to be at least 50 percent larger than recorded flows.

⁶ These are average costs for sending \$ 200 or the local currency equivalent. The current brief refers to such amount, as RPW and SMA database reports used in this paper refers to the same amount.

⁷ The 5x5 Objective aimed at reducing the global average costs of transferring remittances from 10% to 5% in 5 years. It was first adopted in 2009 by the G8 at its L'Aquila Summit's G8, before the G20 committed in 2010 to a "significant reduction in the cost of remittances" and established a Development Action for Remittances. In 2014 in Brisbane, the G20 renewed its commitment. The RPW was launched in 2009 within such global effort to monitor the trend of the global average costs of remittance transactions.

2. Causes of the high transaction costs of remittances to and within Africa

The transaction costs of international remittances to and within Africa are high for several reasons. Underdeveloped financial and payment infrastructures, especially in rural areas, contribute to keep remittance prices high, since money sent and received may not circulate easily and that makes inefficient remittance services (Committee on Payment and Settlement Systems & The World Bank, 2007). Inefficient remittance services result in social costs for remittance senders and receivers, as the former may not have easy access to remittance service providers (RSPs) and the latter may not be able to collect the funds transferred in a timely manner. This relates to the underdeveloped financial system in Africa, as witnessed by its under-bankarization (the low level of access and use of formal banking services). The consequence of this will be the limited use of the financial services, which contributes to increasing remittance prices (Aggarwal, Demirgüç-Kunt, & Martinez Peria, 2006; Ratha et al., 2011).

Such an underuse of the existing formal financial infrastructures will result in a lack of transparency in the market and in a lack of competition among RSPs. The transparency issue is related to whether the remittance sender is sufficiently and correctly informed on all the components of the total transaction cost (direct fee charged, exchange rate applied and any tax charged to him, on the one hand, and possible fees charged to the receiver, on the other hand) and on the speed of the transaction service (Committee on Payment and Settlement Systems & The World Bank, 2007). The lack of transparency by RSPs is the most important factor explaining high remittance prices, because it gives no chance to remitters to compare prices and to make an informed decision. Fortunately, online databases that offer valuable information to migrants, and help them compare RSPs' services now exist (for example RPW, Tawipay, and many others).⁸ This should positively contribute to address the lack of transparency issue. Lack of competition means that major money transfer operators (MTOs) in a region, namely Western Union and MoneyGram that in SSA control 2/3 of the market, are unchallenged and free to impose their own – usually high – prices (ODI, 2014; UNCTAD, 2012). Thus, there clearly exists an issue of regulatory barriers to the provision of remittance services (Committee on Payment and Settlement Systems & The World Bank, 2007). Furthermore, some African governments (for example, Tunisia, Senegal, and many countries in the African Franc Zone) put in place RSPs exclusivity arrangements⁹ that limit the institutions authorized to offer remittance services to banks and foreign exchange bureaus. This, has further reduced competition amongst RSPs (UNCTAD, 2012). Other causes of the high prices of remittances include exclusive partnerships between banks and MTOs (see for example IFAD 2009; Irving, Mohapatra, and Ratha 2010), although there have been initiatives in recent years to end these agreements. Also, the anti-money laundering and combating the financing of terrorism (AML-CFT) regulations have contributed to this, although there have been initiatives in recent years to simplify AML-CFT regulations for low-value transfers.¹⁰

It must be argued that, although lifting or eliminating exclusivity clauses open the market's competition, as it happened in Morocco and Senegal, the remittance price reduction will not depend solely on such a

⁸ The **RPW** database (<https://remittanceprices.worldbank.org>) monitors remittance prices across all geographic regions of the world. It was launched by the World Bank in September 2008 and remains one of the main tools used to monitor the international remittance transaction costs. Covering 300 "country corridors" that include 35 major remittance sending countries and 99 receiving countries, RPW is used as a reference to measure progress towards the "5x5" objective. **Tawipay** (<http://www.tawipay.com>), whose comparison website went live in August 2013, has as its mission to empower migrants with clear, transparent and complete information to help them find the best money transfer service for their needs - be it the cheapest, fastest or most convenient. Other international remittance comparison tools include **Mandasoldiacasa** (<http://www.mandasoldiacasa.it/en>), **SendMoneyAfrica** (<http://www.sendmoneyafrica-au-air.org>), l'Observatoire des coûts d'envoi d'argent à l'étranger (<http://www.envoirdargent.fr>). For the list of national and regional databases certified by the World Bank, visit: <https://remittanceprices.worldbank.org/en/national-and-regional-databases-certified-by-the-world-bank>.

⁹ "Exclusivity agreements forbid domestic remittance service providers from using other transfer companies to provide international services to their customers" (Épargne sans frontières, 2014, p. 28).

¹⁰ This is a big issue for Somalia in particular but in many other countries.

policy measure. Indeed, an effective reduction of remittance transaction costs will also depend on the diversification of the market, in terms of attractive and innovative financial products and services that better meet the remittance users, i.e. senders and receivers (Épargne sans frontières, 2014). The absence of such diversified market keeps remittance prices high and encourages the use of remittance informal channels (Net Present Value Limited, 2014). Such channels encompasses carrying cash during migrant visits to home, sending money through friends and relatives who travel to home or through buses and transport companies, using informal funds transfer systems such as *hawala*¹¹ (Mahamoud, 2006) or even settling small trade transactions. The above mentioned diversification of the market will have a broader beneficial effect if carried out within the General principles for international remittance services (Committee on Payment and Settlement Systems & The World Bank, 2007), that assist countries to improve their remittances market by promoting transparency and competition. Indeed, the implementation of such guideline, together with other global initiatives, such as the G20 Plan to Facilitate Remittances Flows (G20, 2014) and with actions performed at the country level to reform national payment systems (for example in Nigeria, Uganda or Rwanda), have contributed to lower the average global remittance prices, with a subsequent savings estimated to \$16 billion (see Figure A.2) (World Bank, 2015c). In the same vein, although the most expensive place worldwide where sending money in Q4 2015 remains Africa, with 8.52% of the amount transferred, which is still much higher than the global average cost of remittance transactions (7.37% in Q3 2015),¹² this is much lower than the average cost in SSA in Q1 2009 (13%) when the RPW was released. Also, and – perhaps most importantly – since Q2 , with 9.74%, such average cost has gone below the psychological barrier of 10% in Africa (Figure A.1), which gives positive forecast for the years to come.

3. New technologies to reduce remittance transaction costs: Mobile Banking

3.1. Transaction Costs of remittances to and within Africa: a brief overview

Migrants typically use both formal and informal channels for remitting. Remitters choose their channels, amongst others, on the basis of cost, trust, reliability and accessibility (UNCTAD, 2012).¹³ The financial or non-financial nature of RSPs, that is whether RSPs are banks, MTOs or post offices, will influence the price level of remittances, due – in part – to the different administrative costs and procedure that they require. Also, the price will depend on the product through which remitters decide to send money, i.e. cash, bank account, card, etc. Thus, the average cost of sending money to and within Africa should be looked at with this in mind (World Bank, 2014b).

For example, financial institutions tend to have higher overhead costs than MTOs due to the high fixed costs related to their network of branches, automated teller machines (ATMs) and regulatory compliance requirements. Those items feed into higher remittance fees (UNCTAD, 2012). This may explain why, according to the African Institute for Remittances (2015), in the fourth quarter of 2015, banks were the most expensive RSPs for sending money to and within Africa, with an average total cost of 13.34% of the transferred funds, while MTOs were the least expensive, with an average cost of 7.13%. In the third quarter of 2015, banks still were the most expensive RSPs, with an average cost of 15.54%, while the

¹¹ The *hawala* is defined here as the informal money transfer system, where the trust amongst the agents constitutes the contract that make transfers function. The amount of money, which is transferred through a - non-formal financial - intermediary that generally speaking may not run the money transfer as a main activity, may be then collected in the same – monetary – form or in another one (GAFI, 2003; Mahamoud, 2006)

¹² Data from Q3 2015 are almost unchanged: 9.78% of the amount transferred in SSA compared to 7.52% globally.

¹³ This paper refers to formal remittance transfer prices and to official channels, which include RSPs that may be banks and non-bank financial institutions, such as *bureaux de change*, and dedicated MTOs like Western Union and MoneyGram, to name but a few.

post offices were the cheapest of the continent, with an average cost of 7.03%,¹⁴ followed by MTOs (7.42%). Postal systems possess numerous comparative advantages (economies of scale, affordable prices, positive network externalities and advantages of being the incumbent in a contestable market) when it comes to the financial industry (Arcand, Garbouj, & Morgandi, 2013).

As for the methods of sending money, bank accounts were the most expensive way, with an average total cost of 15.07% (in Q3 2015) and 12.70% (in Q4 2015) of the funds transferred, while the cheapest method was the mobile phone, with an average total cost of 6.15% (in Q3 2015) and 6.26% (in Q4 2015) (African Institute for Remittances, 2015). According to the figures of the fourth quarter of 2015, between the two extremes, the average total costs of the other methods of sending money were as follows: debit/credit card services were estimated to 9.36%; cash services, the far most used method and mainly provided by MTOs, were estimated to 7.13%; and the online services (especially 'online to cash') were estimated to 6.34% (Figure A.3). This is to say that costly problem of transferring cash via a bank or a MTO is indeed real (Figure A.4).

This said, worldwide, as highlighted before, in Q4 2015 Africa remained the most expensive place for sending \$200, with an average cost of 8.52% compared to 7.37% globally. Furthermore, the nine most expensive corridors in Africa are intra-Africans. These were Tanzania – Uganda (17.66%), Tanzania – Rwanda (17.66%), South Africa – Angola (15.25%), South Africa – Swaziland (13.67%), South Africa – Lesotho (13.67%), Tanzania – Kenya (13.51%), South Africa – Botswana (13.01%), South Africa – Mozambique (12.76%), and South Africa – Zambia (12.09%). The tenth most expensive corridor originates from UK to Sierra Leone (11.43%) (African Institute for Remittances, 2015). Moreover, taken singularly, remittance costs may reach almost 30%, as in the Tanzania – Uganda, Tanzania – Rwanda, and Tanzania – Kenya corridors, when customers remit through bank accounts.¹⁵

On the other side, it is worth noting that, apart from the Senegalese-Malian corridor, where remitting costs only 4.80 % of the transferred amount, the least expensive corridors originate outside Africa. These are United Arab Emirates – Egypt, the cheapest corridor ever with an average total cost of 3.08%, U.S.A. – Liberia with an average total cost of 4.87% and Italy – Morocco, with an average total cost of 4.91% to name a few (Figure A.5).

3.2. New tools to reduce remittance transaction costs in Africa

Remittance transfer payment systems in the South, in general, and in Africa, in particular, are evolving quickly and new remittance channels and technologies are now emerging. In such context, *the Internet* has played a crucial role. On the one hand, it has played an active role as a source of information, which has contributed to redefine the remittance market share and to reduce the transaction costs of remittances. On the other hand, it has ensured the success of new companies entirely based on online money transfers, such as the **WorldRemit** born in 2010,¹⁶ and has made possible the adoption of online

¹⁴ Such services are convenient when the post offices offer their own financial services. Partnering either with MTO or a financial institution will result in a sharp increase of the remittance transaction cost (Arcand et al., 2013)

¹⁵ The high remittances prices in South Africa may be explained by two reasons 1) the anti money laundering regulation: financial institutions used to require a proof of residency or SA tax number even for small amounts (this has recently been relaxed). Also, There are controls on capital outflows into South Africa (OECD, 2010; USA international Business, 2011). Indeed, "every single transaction in South Africa that involves a movement of money into or out of the country is regulated by the exchange controls. There are no exceptions – it does not matter what the amount is, or who is involved in the transaction" (Source: Foreign exchange regulations in South Africa: <http://www.moneytransfersouthafrica.org/foreign-exchange-regulations/>, retrieved on 9 October 2015). 2) The exclusive partnerships between banks and MTOs.

¹⁶ WorldRemit, a low-cost alternative to traditional money transfer companies, allows people to send money quickly, simply and securely by using industry-leading privacy and payment security systems, through three easy stages: (1) by selecting the country located in more than 120 destinations; (2) adding the recipient details; and (3) sending the money. The money can then be received as a bank deposit, cash pick-up, mobile money, or mobile airtime top-up. In 2015 WorldRemit continues to expand internationally

money transfer procedures by traditional remittance companies, such as Western Union.¹⁷ As a result, the market of remittances is increasingly diversifying in terms of innovative financial products. In particular, the emergence and growth of 'mobile-banking', a "form of branchless banking based exclusively on the use of mobile phones and the capacity of telecommunications operators to provide payments and assets storage i.e. electronic wallet", will be beneficial to remitters and recipients (Épargne sans frontières, 2014, p. 14).

Africa's mobile market is now the second largest after Asia and is the fastest growing one. Experts believe that the market will grow to 350 million users by 2017, and 80 percent of SSA's 800 million people should have access to mobile telephones by the end of the decade, double the current rate, although government help is needed to reach remote areas. The African continent continues to lead the rest of the world in the adoption and usage of the payment technology. This progress is expected to attain a new leap according to WorldRemit. As many as 30% of cell phone users in Africa report that they participate in mobile banking.

First, mobile banking helps reduce remittance prices because, as a study by the World Bank (2015d) has showed, its overhead costs are generally lower than those of the traditional financial products, and its branchless characteristic definitely contributes to this. Moreover, thanks to its sound infrastructure and the fact that mobile phones are easy to use virtually anywhere, mobile banking helps both urban and – especially – rural residents to better access financial services (UNCTAD, 2012). In some ways, this will reduce the widespread under-bankarization on the continent and facilitate financial inclusion. The use of mobile banking will also lift the use of formal channels and raise the security level of transactions, on the one hand, and reduce the use of informal channels, related to a limited access to financial services and to the high costs of formal remittance transactions, on the other hand. Indeed, since the prominent part of cross-border international informal transactions are made by cash ('cash-to-cash') and includes the risk of material loss of liquidity, the use of electronic money instruments, such as mobile banking or prepaid cards, helps reduce the flow of liquidity and increases the security of transactions (Maloumy Baka & Kingombe, 2012). In general, and interestingly, such technological instruments may be used in other development areas, such in the agriculture.¹⁸

In fact "**diaspora investing** exists in the space that's between investing and charity," according to Liesl Riddle, who runs the Diaspora Capital Investment Project at George Washington University. She said her researchers have carried out more than 20 studies on the diaspora's motivation for remittances and discovered that they are typically motivated to invest in their countries of origin "for emotional or social status reasons, not just to make a profit". However, moving into a frontier market where returns for savvy investors have been as high as 15 to 20 per cent for the last decade is a prospect that could attract diaspora professionals the world over looking for pure investment opportunities while being faced with small deposit rates in western banks and, at best, an uncertain performance in major stock markets.

while adding innovative ways to receive money, and developing new products and services such as their mobile apps (Source: <https://www.worldremit.com/en/about-us> (Retrieved on 20 October 2015)).

¹⁷ Western Union now allows customers to send money online 24/7. Money may be picked up as cash at a Western Union branch or, in certain countries, deposited in a bank account or received in a mobile wallet with one of Western Union's partner mobile operators. The latter option allows the receiver to get the money even more quickly and easily via SMS notification when the money is delivered (Source: <https://www.worldremit.com/en/about-us> (Retrieved on 20 October 2015)).

¹⁸ "In 2012 the Nigerian Ministry of Agriculture launched the Growth Enhancement Support scheme, which used mobile technology to transfer fertilizer subsidies directly to 10.5 million farmers all members of a mobile wallet network. The switch meant that the Nigerian government was no longer in the business of procuring and distributing fertilizer. The direct subsidies have helped up to twice as many farmers compared to the previous non-digital scheme—at a sixth of the cost of fertilizer, thereby creating a virtuous cycle by making a dent in smallholder farmers' production costs". (Source: <http://www.cgiar.org/blog/bringing-mobile-wallets-nigerian-farmers>, retrieved on 9 October 2015).

A range of **innovative business models** to *secure cash flow for income generating activities* exists. All those models aim at replacing the current slow, expensive and insecure scenario (in person, via agent, through MTO to MTO - to agent - to person, etc.) with a new and more direct person-to-person (P2P) scenario (Kingombe, 2012). Some market leading examples include **Homestrings**, which originally targeted only the African diaspora investors but has since opened up to any investor with over \$1,000 to invest in emerging markets, targets access to vetted investment opportunities detailed in a fact sheet to provide due diligence and with consistent track records spread in hitherto 13 African countries for a multitude of productive sectors, such as infrastructures, agribusiness, commercial real estate, financial services, telecoms, key small-to-medium sized enterprises for diaspora finance, facilitated by *the internet or the mobile technology*.¹⁹ It has raised more than \$25 million for projects since launch in July 2011 using an interactive web-based investment platform (aggregating demand from individual investors/remitters), which provides individual investors with a means to direct their resources towards institutional private equity funds, projects, public-private partnerships and in sovereign debt programmes (e.g. diaspora bonds) that were, until the launch of this unique proposition, not available to individual investors. That kind of *model of pooling* of what might be called angel investors or early stage Venture Capital to support entrepreneurship abroad is one of the best forms of connecting entrepreneurship and value of risk-taking with knowledge and aspiration brought by the diaspora community.²⁰

The challenge and opportunity is to be able to service the high demand for new investment project options for socio-economic impact (e.g. a registered prospective sponsor must show evidence of its strict adherence to impact investing) and investment profitability. In addition to Homestrings.com *new aggregating platforms* have emerged. These platforms take advantage of a new web-based phenomenon called **Crowd-Funding** to pool investment and on-invest to credible and viable underlying projects. Crowd-funding platforms have the advantage of being omnipresent, being on the internet, and of being responsive to the needs to the Diaspora, in real time. By creating many inter-mediating investment platforms, such as *Homestrings*, enables investors to scroll through multiple investment catalogues covering all the key pillars of development (i.e. SDGs), is critically important because there is nothing more powerful than robust committed emotional capital seeking to transform the diaspora's home countries. According to **AlliedCrowds**, which built the world's most comprehensive crowdfunding analytics engine,²¹ there are 180 crowdfunding platforms operating in the developing countries.

Another interesting example is **Belgacom's** wholesale subsidiary BICS, which, through the eServGlobal technology of its HomeSend Remittance Hub platform, enables users to send amounts smaller than €400 instantly and regardless of location; this is done through e-banking and mobile money payments. BICS works with Airtel Africa and has been facilitating mobile money transfers throughout Africa since 2012 for unbanked customers via mobile numbers, after signing a deal with Xpress Money, one of the world's biggest money transfer companies.²²

The most recent example is **Malaik**, a global portal for high impact investing in African businesses (i.e. democratising impact investing into impact-driven African start-ups), offering the global community clear and well-documented opportunities for high impact investing in African businesses that provide jobs and

¹⁹ *Homestring* circumvented the regulations between the Diaspora and traditional development finance institutions (DFIs) by aggregating funds and investing them on behalf of the Diaspora on equal footing with the DFIs

²⁰ *Equity based incubators* invest early, and feed into *angels*, who in turn feed into *Venture Capitalists*. They all build up stake in the company, which they hope will exit one day and return money.

²¹ The *AlliedCrowds* Crowdfunding many reports provide information on: what is trending; what countries are raising most; annual forecast of key metrics; insights into the global state of crowdfunding; countries crowdfunding potential; platform profiles; diaspora crowdfunding; crowdfunding regulations; crowdfunding and the SDGs etc. Source: <http://alliedcrowds.com/reports> .

²² Source: <http://www.mobileeurope.co.uk/News-Analysis/bics-postfinance-team-up-to-launch-p2p-mobile-payments-e-banking-service> (retrieved on 9 October 2015).

solve social and infrastructural issues in African nations while maintaining profitability. Malaik's impact-focused approach to *equity crowdfunding* is unique and focused on Africa. Malaik gives investors access to the continent's opportunities by offering stakes in young African companies. Malaik is the first platform in the world to track impact as well as financial reports. Malaik tracks a company's impact using its unique impact tracker that tracks the company's progress using measurable SDGs and reports it in an easy to understand dial system. For example, Malaik's unique job index allows investors to view how many jobs are created by investing in the start-ups' scale up plans. Malaik is targeted at sophisticated investors, who understand the risks of investing in start-ups, and mediates its risks with a four-step due diligence process. The global portal will fund *seed stage businesses* requiring funding between \$200,000 to \$2,000,000.

George Washington University's (GWU) Center for International Business Education and Research, in conjunction with Western Union and USAID, conducted an investment interest survey targeted at US-based African professionals and entrepreneurs who participated in a 2010 venture financing competition. The results show an overwhelming interest in investing "back home". However, the study also reveals a dramatic gap between the "*desire to invest*" in a range of opportunities as e.g. proposed by Homestrings from real estate to manufacturing and services, and the "*ability to invest*" in those same opportunities, as members of the Diaspora. This suggests the existence of structural impediments preventing the Diaspora from accessing opportunities with ease. A closer examination reveals that these structural blocs fall into three key categories: transparency (i.e. most opportunities sought by the Diaspora are not structured for ease of access by them), host country regulations²³ and administration (i.e. the need to administrate these small amounts into larger pools that can command institution-like influence is critical).

4. The emergence of Bitcoins

An emerging digital instrument is increasingly being referred to as even cheaper than cell phones, that is **the cryptocurrency Bitcoin** (payment system) made possible by the Internet. This is an innovative peer-to-peer online payment system based on cryptography²⁴ that conceptually was introduced in 2008 in a white paper with the network launched in 2009. But it was only through the first Angel investment in 2011 that more started to pay attention, with thousands of merchants all over the world adopting it in 2012.²⁵ It is believed to be able to revolutionize the remittances market worldwide, in terms of **reducing remittance transaction costs drastically**. It is generally asserted that because transactions are performed amongst users directly, that is, without the need of banks or any other financial intermediary in an entirely decentralized way, transfer fees will be significantly lower. This is due to the fact that users and volunteer developers keep track of transactions (i.e. transfers of value between Bitcoin wallets) and update the records of transactions in real time. It is worth highlighting that no single user, company or central authority, but all the Bitcoin network is in charge of keeping track of such transactions and updating their records. "The records of all confirmed transactions are then kept on a *shared public ledger* — that is, a big

²³ For example only those with *financial sophistication* as defined by the regulators—with private net worth exceeding \$1 million—can invest in opportunities that are not listed on a public exchange.

²⁴ "Cryptography is the branch of mathematics that lets us create mathematical proofs that provide high levels of security. Online commerce and banking already uses cryptography. In the case of Bitcoin, cryptography is used to make it impossible for anybody to spend funds from another user's wallet or to corrupt the block chain. It can also be used to encrypt a wallet, so that it cannot be used without a password" (Source: <https://bitcoin.org/en/how-it-works>, retrieved on 9 October 2015).

²⁵ They get 100% of the transaction when accepting bitcoins, unlike using credit cards.

publicly available spreadsheet — known as **the blockchain** that is visible to anyone and has, at least so far, proven impossible to tamper with²⁶.

The blockchain doesn't work without the Bitcoin. They are one and the same thing. It is possible to build applications on top of that technology but not take Bitcoins away, although venture investors are increasingly talking about the value of this type of distributed ledger system as a basis for all kinds of applications, not just currency.²⁷ The blockchain, whose performance and integrity are enforced with cryptography to ensure validation of transactions, allows Bitcoin wallets to know what their balance are and to make new transactions by the spender (Bitcoin Project, 2015).²⁸

Another most cited advantage of Bitcoin is its *transaction speed*, which is claimed to be much quicker than that of traditional transfer instruments: a few minutes for a transaction to clear using Bitcoin, according to Michael Kimani, African Digital Currency Association's head, versus up to 6 days or more remitting through consolidated instruments, such as bank accounts, cash, and prepaid cards, according to the World Bank's RPW database. And no two users are able to claim the same digital dollar, as in the case of fraud.

"Hence, this infant technology could *change the financial system* (e.g. think of the Internet before browsers). It could reduce the cost and increase in the speed and accuracy of financial transactions; it could truly disrupt the banking business. Or it could fizzle. But already it is raising a host of policy questions – about financial stability, consumer protection, choking off terrorists' finances, and tensions between established and upstart financial institutions and between regulatory agencies".²⁹

For diaspora communities who provide critical aid and capital flows to developing countries, the technology of a distributed ledger can drastically **reduce the time and costs to send money overseas**. Notwithstanding the above mentioned concerns, the interest for Bitcoin in Africa is quite evident, as Bitcoin companies have emerged in the last years on the continent. This is the case of the start-ups **Beam** and **Kitima**, in Ghana, and **BitPesa**, in Kenya, to name a few. Those companies convert Bitcoin remitted into local currencies, i.e. Ghanaian cedi and Kenyan shillings (KES). This interest is understandable, as the number of African users of Bitcoin is increasing and their interest goes well beyond the mere money transfer operations. According to **Xoin**, a South Africa-based Bitcoin start-up, about 30.000 online stores already accept Bitcoin in South Africa. Moreover, just like it happened in Vancouver (Canada), where the first ever Bitcoin ATM opened in 2013, recently **the first African Bitcoin ATM** opened in Johannesburg (South Africa) and now allows people to *convert cash into Bitcoin*. In 2014, *the volume of Bitcoin transactions* worldwide was about US\$23 billion;³⁰ for mobile payments on **M-Pesa** in Kenya, it was about US\$24 billion; for the online payment platform **PayPal**, it was US\$228 billion; and for the credit card issuer **Visa**, it was US\$4.7 trillion (World Bank, 2016).

²⁶ Source: http://www.nytimes.com/2015/08/31/business/dealbook/bitcoin-technology-piques-interest-on-wall-st.html?_r=0 (retrieved on 9 October 2015). It is believed that **Bitcoin and other blockchain-based technologies** have the capacity to disrupt whole industries and could revolutionise the way business is carried out across the world. <http://www3.imperial.ac.uk/bitcoin/about> (retrieved on 2nd February 2016).

²⁷ Blockchain would warrant a completely different conversation. One of its most "intriguing" use cases; are the traceability of diamonds and illegal exports from the African continent, specifically from the Democratic Republic of Congo.

²⁸ *Bitcoin wallets* will allow you to create a signature, a private key and a text from a transaction (message) are fed into a special cryptographic function. Another function allows other people to check the signature making sure it was created by the account owner and that it applies to that specific transaction. Unlike the handwritten signature today, these mathematical signatures can't be copied or used in the future as they are unique to each transaction.

²⁹ Source: <http://www.brookings.edu/events/2016/01/14-beyond-bitcoin-blockchain-disruptive-financial-technologies?> Retrieved on 14th January 2016.

³⁰ \$300 Mn transactions per week in 2015 with about 200,000 transactions every single day. Source http://www3.imperial.ac.uk/newsandeventspggrp/imperialcollege/newssummary/news_18-11-2015-14-9-38 Retrieved on 18th November 2015.

However, the crypto-currency in Africa brings **concerns**. First, users see *the absence of a regulatory system of Bitcoin* as risky, because no regulatory entity may protect consumer's interests. The high level of Bitcoin anonymity that explains this no-regulatory system is considered a way through which illegal activities, such as money laundering, may be taking place within this payment system (Blundell-Wignall, 2014). Another concern is related to *Bitcoin's price volatility*, which undermines its credibility as a payment system (European Central Bank, 2015) and a reliable medium of exchange, while exerting an even greater risk to the poorest and most vulnerable recipients. In this regard, coindesk, for example, shows that Bitcoin went from a through value of US\$ 0.05, in July 2010, to a peak value of US\$ 1,165.89 – its highest ever – in November 2013, to drop to US\$ 377.58 in February 2016.³¹ Also, not only are such *activities illegal* in some countries, but when undertaken on a large scale and in a weak regulatory environment, they could have a *destabilizing effect* on the financial sector, according to the World Bank (2016).

Notwithstanding these risks, without **reliable and legal online payment systems** in many African countries, firms have been resorting to riskier solutions, including Bitcoin. And, just like it happened with mobile banking years before, Bitcoin is now progressively entering into African financial habits. The first **Bitcoin Africa Conference** that was held in Cape Town (South Africa) in April 2015 and gathered experts to discuss and share lessons learnt on advantages and risks of this crypto-currency is a tangible signal of the extent to which there is an important technological change taking place on the continent. In the same vein, a recent OECD working paper by Blundell-Wignall (2014) recognizes the importance of the technologies associated with crypto-currencies and the fact that they may become a serious disruptive technology for financial intermediaries. However, the author argues, it is not plausible to think that such crypto-currencies may replace legal tender like dollars, for the issues raised earlier and that make the Bitcoin's future in Africa somehow still uncertain. **Bitcoin might not replace legal tender, but it will certainly be used to further speed up transactions** in several industries, including accounting, music and law. It is also progressively believed that such instrument may bring a *new way of transacting in finance*, as the interest of some of Wall Street's major banks has shown (New York Times, 2015).

Some actors in Africa are convinced that **Bitcoin will play a central role in the market of remittances** very soon. In fact a few start-ups are already operating on the bitcoin/remittance market. For example, **BitPesa** has recently raised \$1.8 million in the first year of operating to ease bitcoins transfer from the UK to Africa and has been live with their product since May 2014.³² According to Elizabeth Rossiello, CEO of BitPesa (former bank rating analyst with Credit Suisse in Zurich – looking at the IT systems of Banks in several African countries), the company aims at building *Africa's first and largest digital currency payments hub* by making remittances work in real time to change the face of payment transfers in Africa.³³ This is done by using Bitcoin for remittances in Kenya and Tanzania. That is, users from anywhere in the worlds are able **to send Bitcoin to BitPesa**, which converts it to M-Pesa and load it into the receivers' M-Pesa account. Such a system helps *M-Pesa users getting money quickly and efficiently, with only 3% of fee*, significantly cheaper than the traditional transfer methods. Given the success of the combination of

³¹ Source <http://www.coindesk.com/price> retrieved on 7 February 2016.

³² Footprint: UK License as Payment Institution and UK trading entity. **BitPesa** has local incorporations in progress Ghana, Cote d'Ivoire and Senegal. BitPesa is already incorporated in 4 African countries: Kenya, Tanzania, Uganda and Nigeria. BitPesa is exclusively dedicated to the specific regional needs, and hence won't go global.

³³ It should be mentioned that **Azimo**, the digital money transfer service, was awarded the best low cost remittance service by Africa's sixth annual Kalahari Awards in February 2016. In the last year alone, Azimo has seen exponential growth in Africa helping thousands of people send money to family and friends at a fraction of the cost. For example, consumers across Europe can now send money to recipients in Benin, Burkina Faso, Ivory Coast, Guinea-Bissau, Mali, Niger, Senegal and Togo in *West African CFA francs* for instant cash pick-up. Moreover, Azimo has introduced direct payment to any bank account in Nigeria with the service free for the next three months. With unmatched rates on the market, the service is also among the fastest, with funds being received in under two hours, thereby significantly challenging BitPesa's business model of speeding the transferring funds across the globe at lower costs.

M-Pesa with Bitcoin in Kenya and Tanzania, BitPesa is significantly disrupting the money transfer market in the EAC region.³⁴

In Kenya, for example, the cheaper and more efficient solution to the slowness of the local (KES) to foreign (USD) communication between local bank-to-foreign banks is **the Blockchain Technology**, which is in a *cloud*. This means that it is not necessary to recreate it for every single institution across the continent, because it is *open source*. It also means that it is a very cheap scalable software, which the company can grow by using the blockchain to instantly notifying the company, when transactions are coming in and out. There would no longer be the need for an employee in a wire room to check numbers and waste time going through poor existing on-line banking platforms. Moreover, customers may buy bitcoins from BitPesa in KES, which are used to shop on-line and to send money abroad. *BitPesa appears to be one of the fastest places in the world to buy bitcoins*, because it uses mobile money in different payments,³⁵ and because it is localized within one jurisdiction's regulation, which allows almost instant purchase. However, clients can only cash bitcoins and sell them to their own bank account.

Moreover, since Kenya has this unique feature of having mobile money tied to passports or national ID cards, the client can put in a phone number and sent bitcoins to anybody's mobile wallet. Instead of just withdrawing the bitcoin, the client can withdraw it and sent it to a family member or to 10 people all at once in real time. With 97% of Kenya's population using the widely popular M-pesa mobile currency, which has become virtually a mainstream second national currency, a huge portion of the GDP goes through it. In **Tanzania** the situation is even better, because there are *3 key operators* using it instead of only one company in Kenya.³⁶

BitPesa's experience demonstrates that it is worth having much higher expectations of any further development of the use of the Bitcoin in Africa at the second Blockchain and Bitcoin Africa Conference, which took place from 3rd to 4th March 2016 in Johannesburg Africa.³⁷

Another example is **Rebittance.org**. This platform allows senders to find and transact with rebittance³⁸ cash-out partners worldwide. To perform transaction, the sender picks up the country where he needs to send the money to, and will be able transact if there are rebittance partners in such country. Sending a rebittance would require that clients first exchange legal tender like dollars or euros for the completely digital and decentralized Bitcoin. Within the transaction infrastructure, Rebittance.org forwards the received Bitcoin to the partner within 60 minutes of confirmation on the blockchain. Partners are charged 0.3% (one-third of a percentage point) of the total rebittance amount as a processing fee.³⁹ As of today, **the Money Wiki** is a good source of information on the topic, because it has provided an updated list of all *the companies engaged worldwide in money transfer services* (whether legally or without a license).⁴⁰

Despite the obvious threats and risks - such as money laundering, hacking, currency exchange rate risk etc. - associated with *an open-source technology*, which relies on P2P network (i.e. connecting buyers and sellers to arrange currency exchanges) to operate, **the Bitcoin technology** "has a lot of property to attract digital remittance operators, starting with its decentralized technology and low-cost operating structure, and some money has been invested in this market as *the remittance industry is quickly shifting to digital*"⁴¹ as explained above. William Blair partner **Brian Singer** explains how Bitcoin and Blockchain

³⁴ Sources: <https://www.youtube.com/watch?v=cTVWasymExg> and <https://www.bitpesa.co/>

³⁵ **BitPesa** is the first company in the World to link mobile money to Bitcoin.

³⁶ Ghana, Philippines, Romania, Turkey, Senegal, Burkina Faso and Azerbaijan all have very advanced mobile money systems in addition to Kenya.

³⁷ Source: <http://bitcoinconference.co.za/> (Retrieved on 9 October 2015).

³⁸ "Rebittance" is the term used for remittances powered by Bitcoin. It describes the core process that Rebittance.org uses to make money transfers cheap.

³⁹ Source: <https://rebittance.org/how-it-works> (Retrieved on 20 October 2015).

⁴⁰ The full list can be retrieved here: <http://themoneywiki.com/wiki/alternative-currency-rebittance-bitcoin-remittance>

⁴¹ See 'Bitcoin Might Be The Next Big Thing In The Remittance Market' posted May 25, 2015 by Florian Grailot Source: <http://techcrunch.com/2015/05/25/bitcoin-might-be-the-next-big-thing-in-the-remittance-market/> (Retrieved on 20 October 2015).

encryption has a greater ability to bring more of the world's population out of poverty than anything we have seen in decades. Digital transfer of ownership in a completely transparent and public way. It means that you can record ownership in public in a digital means. In 2020 90% of world's population will have mobile phones up from 50% today. In *"The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else"* Hernando De Soto(2003) identified that ownership of property can be used as collateral and made sure that it is sustained for future generations of family. The public ledger is what this poor households needs to get out of poverty by giving them the right of ownership to property, which has the ability to bring them out of property.

Ben Parker, co-founder and former director of humanitarian news service IRIN, has seen firsthand how the digital currency could play a crucial role in *fragile states* such as Somalia and Syria. **Somalia** provides an interesting *case study for bitcoin*. In May 2013, Barclays, the last major bank to provide remittance services to Somalia, announced plans to shut down approximately 250 MTOs. Moreover, Somalis have been using *Hawalas* – an informal value transfer system run by brokers – to remit funds home, but they too came under scrutiny after another terrorist attack in neighboring Kenya. The Somali remittance market is suffering the consequences of lost relationships overseas, primarily in the UK and the US – both of which have relatively big Somali communities. Parker(2015) urged the relevant authorities to consider *bitcoin regulation*, noting how this should be a priority for developing countries where, perhaps, the digital currency is needed the most. However, for bitcoin to really take off in Somalia, Somalis would need to have access to modern mobile phones and these would have to reach wider adoption in rural areas. But as of December 2013, only 1.5% of Somalia's population used the Internet. According to 2012 data, the country's mobile penetration rate stood at 16.3% in stark contrast to Kenya – where mobile penetration is alleged to have reached 80%. Nevertheless, there is one problem with the Kenyan mobile money system M-Pesa, powered by SMS technology, namely that it has become a forceful quasi monopoly on the part of [mobile network operator] Safaricom. If a user wants to send or receive money he/she would need to be on Safaricom. Bitcoin achieves the same thing but is more frictionless, has less transactional cost, is cross-border and is less dependent on a particular mobile phone operator.⁴²

The technology, of course, is fraught with **numerous potential downsides**, stemming in large part from its still enigmatic functionality. Fears of the unknown can trigger regulatory burdens and hamper the development of innovations. Regulators compare the advent of policy toward Bitcoin to similar dilemmas they faced at the onset of the Internet. *"Can we create a framework for positive innovation that still has the flexibility to protect the consumer?"* they ask.

Bill Gates (2015), whose own organization is interested in developing and promoting new digital transaction methods, recently said that while bitcoin and its underlying technology can make transactions easier to move – and cheaper to do so – he believes problems like the fluctuation of value and a lack of transaction reversibility within the network are significant barriers to broader adoption. Gates concluded that we need things that draw on the revolution of bitcoin, but bitcoin alone is not good enough.⁴³

Nonetheless, according to **Xapo Wences Casares** Bitcoin is the most important social experiment of our time 5000 years after the birth of the old gold standard with a new standard – not replacing the national currency but becoming *the currency of the internet* over the next 20 year (i.e. leap forward of democratization of money).

⁴² Source: Ben Parker: Bitcoin Has Potential in Fragile States, retrieved 3rd of March 2016 from <http://www.coindesk.com/ben-parker-bitcoin-has-potential-in-fragile-states/>

⁴³ Source Bill Gates: Bitcoin alone won't solve global payments challenges. Sunday February 1, 2015. Retrieved 3rd of March 2016 from <http://blog.homestrings.com/bill-gates-bitcoin-alone-wont-solve-global-payments-challenges/>

The still nascent stage of Bitcoin in industrialized markets means that it is too early to expect a substantial uptake in developing countries anytime soon. But its potential to disrupt finance and *make an impact on development are huge*, while taking serious note of long-term Bitcoin developer **Mike Hearn's** recent conclusion, after having left the Bitcoin protocol industry, explaining that Bitcoin is in “dangerous” territory given that the network’s capacity is now almost completely exhausted, but not all is lost.⁴⁴ Michael Casey (2014) advised earlier that the Bitcoin developers should recast their current marketing strategy and abandon a pitch to retail merchants and customers, since this has had only limited success so far and instead go after big institutions that move large amounts of money around the world. Whether businesses or governments, these entities can far more readily grasp the financial cost savings that bitcoin’s middleman-free network could bring to their operations than merchants and consumers. If bitcoin can win over the business-to-business (B2B) or government-to-business (G2B) crowds, everyone else would follow in their footsteps. He further argues that the conversation should be about supply chains, *remittance networks* and the underlying infrastructure of the global monetary system. That’s where the truly big problems lie, where the dominance of centralized financial institutions adds trillions of dollars in waste to the global economy and creates opportunities for corruption and exploitation. And those are problems that decentralized cryptocurrency, properly implemented, can solve.

One way forward has perhaps been shown by **Ripple Labs Inc.**, which has created a decentralized payments network that helps validate transactions using a digital currency technology similar to bitcoin-like technology. The goal is to reduce the cost and time it takes to make cross-border payments in various currencies. The company is targeting use by banks and *remittance providers*, rather than consumers. The company signed on two American banks, Cross River Bank and CBW Bank, in 2014, as well as Fidor Bankin Germany, to use the Ripple network to enable *customers to instantly send money internationally*. The network allows smaller banks to avoid the use of large intermediate Wall Street banks that take fees on such transactions. Ripple is tapping into the promise of the distributed verification systems that underlie digital currencies such as *bitcoin and Ripple’s digital coin*. These systems can help speed up and reduce the cost of financial transactions, as well as a variety of other transactions.⁴⁵

5. Conclusion and Policy Recommendations

Worldwide, **the most expensive remittance corridors** are for intra-Africa money transfers. The high cost of sending money within Africa is attributable to the fact that there are limited formal channels for sending money between African. The implications of high remittance costs are significant. According to the World Bank, international migrants may save up to \$16 billion a year if remittance prices were cut by at least 5 percentage points. The UNCTAD (2012) estimated that if the cost of remitting money to Africa had matched the global average cost, annual remittances sent to SSA could have generated an additional \$6 billion for recipients, with the subsequent benefits for development. Remittances via money transfers in SSA will grow exponentially to more than a hundred billion dollars by 2017, according to research by VISA, the global leader in card payments. Hence, remittances can contribute to economic growth especially if the receiving household saves or puts the money into the formal financial system which would channel the money into public and private investments. Digital finance, especially, has an enormous potential to capture remittances for investment in the formal financial system. The Diaspora, therefore,

⁴⁴ Right now, the Chinese miners are able to — just about — maintain their connection to the global Internet and claim the 25 BTC reward (\$11,000) that each block they create gives them. But if the Bitcoin network got more popular, they fear taking part would get too difficult and they’d lose their income stream. This gives them a perverse financial incentive to actually try and stop Bitcoin becoming popular (Redman, 2016).

⁴⁵ Source: blogs.wsj.com (retrieved 3rd of March 2016).

presents a significant opportunity to introduce **a paradigm shift in how development is financed** (cf. ADB Forum on Promoting Remittances Development Finance, 18-19th of March, 2015).⁴⁶

Mobile money and digital currencies are being used to boost remittances into Africa and drive down the cost of sending money to the continent. However, attracting the Diaspora to *invest in the productive sector* is a combination of education, effective structuring, transparency and active promotion and engagement. All vested parties much work together to facilitate Diaspora investments. Each party has leverage that the other doesn't. By working together, *Diaspora investment capital* can be a sustainable, effective and efficient source of development finance for Africa since in many countries today money sent home by workers is more than foreign direct investment and official foreign aid combined. *Appropriate policy actions* to foster the economic impact of such significant amount of money inflows could be taken and these may be as follows:

Actions to foster the efficiency of the payment system

The African business models provide new channels for payment and banking (AfDB, 2010; Zhang, 2012). When services are offered by banks, they comply with banking regulations. The Vodafone Status Reports in December 2008 reported: "M-Pesa has been successful because it relies on traditional practices and structures and modernises these features. It is indeed a model based on indigenous payment practices, extended mobile phone networks and a large distribution network. The distribution network is based on agents who were already present in markets. Agents receive basic training from M-Pesa. Only three months after the launch of M-Pesa, the service had 400 agents, compared to 450 bank branches and 600 ATMs in Kenya. By 2009 M-Pesa had 3 400 agents. It is simple and quick, taking less than 30 seconds to carry out a transfer".

Therefore, the development and the continuous modernisation of the payment system is an essential tool when it comes to remittances flows. Unfortunately, "by comparison with international practices, African payment systems are often inefficient in terms of cost, time, convenience, adaptability and finality" (UNECA/AU/AfDB, 2010, p. 267). This relates to the fact that most of the African economies are cash-based, which highlights the insecurity and inefficiency of their payment systems, generally small, fragmented and uncompetitive (UNECA/AU/AfDB, 2010).

New technologies have given rise to new financial models that could positively transform the poor and unbanked in Africa. The AfDB, together with other multilateral development banks, considers digital financial services as a real opportunity for Africa's next generation of entrepreneurs to achieve universal access to financial services (Kingombe, 2015).

In the light of the above, some actions may be put in place to increase payment systems efficiency in order to lower remittance costs. Those may be:

- Redesigning the regional and national regulatory framework to stimulate the diffusion of new technology financial products, such as mobile banking. To implement such an action, interaction between monetary policy and international policy coordination between central banks within the same regional economic community is a pre-condition;
- Incentivizing the provision of banking services in rural areas (among financial institutions), and facilitating the networks development of dedicated credit officers and itinerant banking solutions;

⁴⁶ More information about the ADB event can be retrieved here <http://www.adb.org/news/events/forum-promoting-remittances-development-finance>

- Promoting capacity development programmes for postal offices to improve its staff's knowledge of remittances and their skills on how to process them. Also, improving the clearing mechanism of the postal system's electronic money transfer services may be of help (Arcand et al., 2013);
- Promoting the integration of post offices with international payments networks.
- **The World Bank** can persuade organizations with large retail networks – including Amazon, Facebook, Google, Walmart, national post office systems in rich and poor countries – to get into the money transfer business and make a lot of money for themselves while helping the poor.
- **VISA** has launched a programme that seeks to crack the stranglehold of Western Union and MoneyGram, two global money transfer giants accounting for two-thirds of remittance transfers, by using a network of connecting banks across 200 countries to send money from one VISA card to another at a tenth of the price of the traditional players. Consumers can now send money via cell-phones, a bank branch, an ATM, internet banking or a point of sale machine at a retailer, in real time. Equity Bank in Kenya was the first sub-Saharan bank to launch the programme last year. This programme should be scaled-up to the rest of the continent by speeding up the process of certifying banks and retailers interested in sending and receiving remittances.
- *Rely on the private sector* to a larger extent to help the international community and the UN understand in which direction the alternative finance, such as crowdfunding platforms, is going to avoid the risks and mistakes that occurred during the evolution of the microfinance industry.
- Find out how much remittances are going through *the existing 180 crowdfunding platforms*: To which countries does it go; to which sectors in those countries does it go; and what type of crowdfunding is it. This kind of information is useful for regulators and policy makers and for the diaspora who wants to invest at home.

Actions to implement an appropriate regulatory framework

During the last years, and in particular after the beginning of the global financial crisis, African countries have been improving their financial systems through the implementation of reforms which include more effective regulatory systems and enhanced supervision on the banking sector. New technology – like the mobile phone – may also deliver mobile banking services. This could be encouraged in the context of the central bank's regulatory framework for branchless banking (Kingombe, 2012).

Just like in other parts of the world, **encouraging competitive financial intermediation in Africa** is a key element to reducing costs of sending money home and diversifying the number and the typology of providers available to offer such services. Although some countries are trying to put in place some strategies and policies to reverse this situation, such as Senegal and Morocco, and Tunisia that successively lifted the major MTO's exclusivity clause, further actions are needed to reach the effectiveness of remittances' market competition and transparency. For instance, *revising regulatory frameworks* in certain areas, such as in ECOWAS, may be crucial to identify possible inconsistencies on remittance operations (Net Present Value Limited, 2014), in particular, in relation to the nature of authorized institutions.

Indeed, "even though efforts are being made to strengthen national level regulatory frameworks and supervision, without harmonized regulations governing the structure and terms of financial products, the development of uniform products for cross-border transactions and associated economies of scale will be difficult to achieve [...] From a supervision perspective, it is unclear whether the Central Banks effectively

monitor the exposure of commercial banks' holding companies that have lending operations or subsidiaries across a number of countries [...]. The EAC and COMESA as well as the Tripartite Arrangement have **provisions to strengthen the regional market in financial services**. Envisaged actions include

- the harmonization of banking regulations, legal framework, licensing, accounting, disclosure standards, internal and external audits, and IT systems.
- The EAC has developed a financial integration policy with the objective of creating a single harmonized market in financial services. An assessment of progress made in this regard by the EAC Monetary Affairs Committee (MAC) showed that Partner States have made progress in *modernizing and integrating payment and settlement systems* [...]
- Specific measures being taken include *developing and operationalizing legal and regulatory frameworks* for anti-money laundering, credit information sharing, microfinance, risk-based supervision, supervision coordination, and cooperation in Business Continuity Management” (AfDB, 2011, pp. i, ii, Annex 7).
- In the short-term, it is imperative that industry stakeholders begin to discuss and develop common standards for complying with the Financial Action Task Force's framework for anti-money laundering and countering the financing of terrorism.
- The World Bank can work with commercial banks and government regulators worldwide to *streamline the anti-money laundering regulations* that are at the root of the commercial banks' hesitation in staying in the remittance business.

Actions to promote investments

An example of good practice is *Homestrings* (www.homestrings.com). In July 2011, it launched an interactive web portal and investment platform, which provides experienced private individual investors with a means to send their resources towards initiatives in Africa that have previously only been accessible to institutional investors and that makes a difference.⁴⁷ Homestrings is a unique proposition inspired by the personal experience of Eric Vincent Guichard, the Guinea-raised Founder and CEO of Homestrings, who identified a market demand from the community of African diaspora, who wanted to be able to invest in projects in their home countries and simultaneously benefit from the growth potential of the emerging markets. To help the diaspora do so, Homestrings aggregates experienced individual investors' demand and targets access to vetted opportunities with great track records across Africa. It provides direct access to institutional private equity funds, projects and public-private partnerships that were, until now, not available to private individual investors.⁴⁸

In the light of the above, some of the actions that can be put in place to increase investments by the Diaspora in their origin countries may be related to two following points:

- *To channel remittances for investments*, it is essential to expand access to formal financial services.

⁴⁷ “Homestrings is an independent entity, majority owned by boutique asset management firm, Gravitas Capital. It is available to those the financial regulators designate as ‘Qualified Investors’. Minimum investment is less than \$1,000, although most of the projects in the investment catalog has a minimum amount of \$25,000, usually Treasury Bills and Treasury Bonds or 2 - 12 year Treasury Bonds. London, 27 July 2011”.

Source: <https://www.homestrings.com/investment-catalog> (retrieved on 9 October 2015).

⁴⁸ Source: <https://www.homestrings.com> (retrieved on 11 May 2015).

- *Upper ceiling of transferred amounts*: often claimed to be too restrictive, the transferred amounts ceiling – usually imposed to fight against money laundering - should be revised upwards to ease African Diaspora in their engagement into investment projects (crucial to sustainably reduce poverty through inclusive growth) which generally require amounts higher than those frequently transferred through conventional channels;
- *Bank accounts in local and foreign currencies*: revising the requirements for opening both typologies of accounts, namely in terms of documents needed, time needed, costs, and permission by the central banks, may encourage international transactions and eventually support investments and development.
- *To tap diaspora investments* home countries should develop the right structure, marketing and distribution channels, and build long-term relationships with the target investors.
- *Foreign Embassies' and Consulates' economic sections*: Could do much more to challenge members of the diaspora to participate more fully in the development and growth of their home countries as has been done e.g. by Nigeria, Kenya, Ghana, Uganda and Tanzania. This could be done by organizing a series of dinners, events and fora with the diaspora communities focusing on country/regional opportunities, while bearing in mind that not one financial product will appeal to the whole diaspora. The embassy need to promote a portfolio of options: Reward, Equity, Lending, Donation etc. taking advantage of the diversity of interest within the Diaspora.
- *Investment Promotion Agencies (IPAs)* have a key role to play in attracting Diaspora capital. As a facilitating agent they should be engaged in selling the investment program to their respective Diaspora and, more importantly, working with financial players to structure these opportunities in such a way that it facilitates access to them by the Diaspora. IPAs are also critical in the education of investors – which in turn requires them to have a good grasp of financial presentation practices.
- *Domestic Private Sector*: As targets of Diaspora investments, the domestic private sector, in conjunction with the IPAs, should create avenues of investment that facilitate access by the Diaspora. Whether it's listing in the host country's stock exchange (AIM) or providing much needed due diligence transparency and education. These efforts, combined with the sustained and targeted marketing efforts of IPAs, form a powerful galvanizing mix that could only be beneficial to the home country. Once the impediments removed it comes down to constant marketing to the Diaspora with the Israel Bond agency being the global benchmark in Diaspora engagement.

Actions to promote and expand financial literacy, investment & social entrepreneurship

Financial literacy is a crucial issue both in Africa and worldwide. In this regard, it is important to raise awareness of risks related to remitting through informal channels. This could be done, for example, by promoting campaigns that address such risks and encourage the use of most cost-effective but formal facilities, such as the mobile banking that experts consider to be characterized by reasonable costs, safety and speed (Maloumy Baka & Kingombe, 2012).

This said, some key questions still remain to be answered if African countries take full advantage of solutions offered by this leap-frogging development instrument (Kingombe, 2012). It is worth highlighting, amongst others, issues related to:

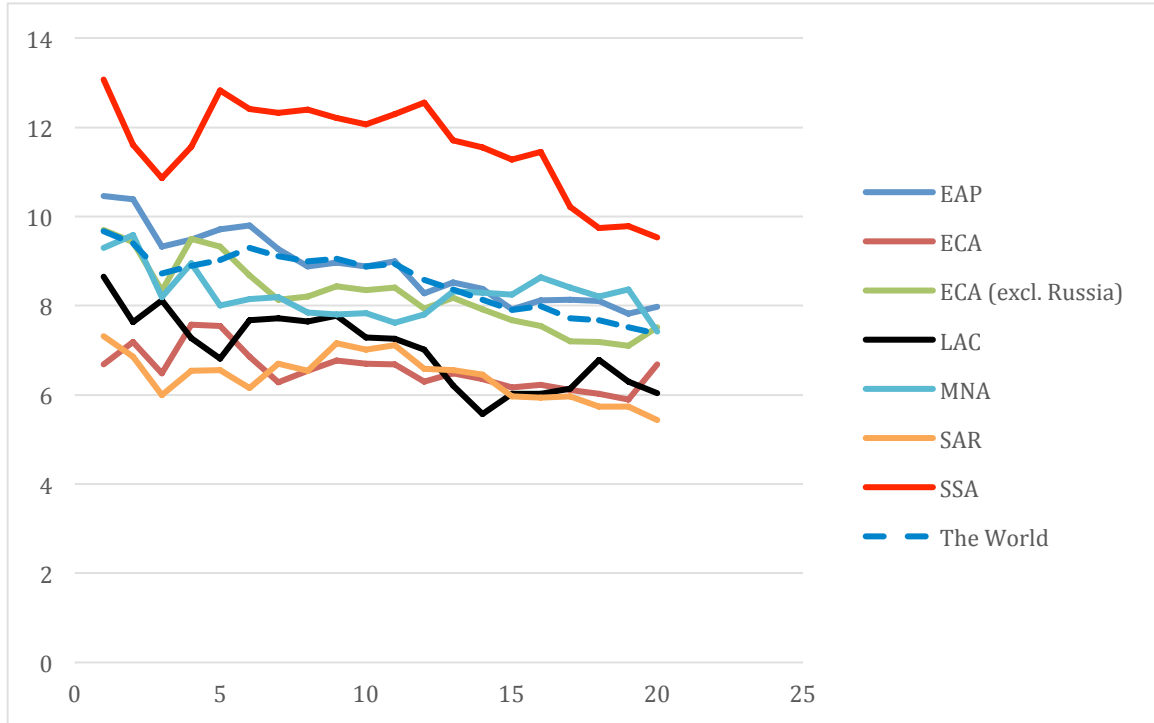
- *Technology*. The existence of a reliable network of agents and a critical mass of frequent users is considered a precondition to ensure that mobile money provide a large payout network for remittances: Are platforms put in place sufficiently reliable to make this happen?
- *Donors* can support developing financial sector infrastructure IT systems such as core banking system, e-payment and networks to promote digital finance. They can also help develop enabling legal and regulatory frameworks for remittance securitization and diaspora bonds.
- *Governments and donors* must have a vision to leverage remittances to develop viable local industries to generate local employment opportunities, so in the long run workers can find good jobs at home rather than migrate out of necessity.
- *User-friendly mobile banking*. It is essential to have a good domestic functioning payment system to take advantage of cross-border remittances. In particular, the ability to regularly pay out money is crucial for the mobile banking to take off effectively: How to ensure this happen, so that customers fully trust such instrument, and how to protect consumers, in general, and illiterate consumers, in particular, from scams and rip-offs?
- *Diaspora*. The private savings of the diaspora could be transferred much faster towards productive projects in Africa, and would this entail both higher social benefits and higher economic returns to the investments:
 - Encourage professional members of the diaspora working in the financial sector to establish emerging market *venture capital funds and/or private equity funds* to buy staked in companies operating in the SDG sectors⁴⁹ in the frontier markets (i.e. the LDCs) to divert a larger share of the growing remittances into sustainable economic growth by improving the performance of local companies, enabling them to hire more staff and provide high-quality, locally made goods and services for the remitted money to be spent on.
 - As the World Bank (2014a) points out, some developing countries are taking initiatives in order to link, on the macro-side, migration and capital market access through *diaspora bonds*, and, on the micro-side, migration and development through *financial products for individuals and SMEs*. Hence, it will be useful to look at best practices on diaspora bond projects that address the untapped potential of diaspora savings.
 - Establish *international and national coalitions* amongst willing stakeholders able to advocate for lower international remittances costs.
 - Encourage *comparison websites for MTO services*, such as RPW and Tawipay, to work closer with diaspora for inputs to ensure a fuller picture covering both formal and informal channels.
 - Further explore how *Bitcoin and blockchain technology* will impact the African economies.
 - One of the targets of Bitcoin developers' marketing strategy should include developing-country governments, which not only need to reduce procurement costs but also have an interest in technological solutions that allow their poorer unbanked citizens to inexpensively send and receive money.
 - Investigate how Bitcoin can help build the next generation of financial services.

⁴⁹ For example in healthcare, education, agriculture, finance, ecotourism and renewable energy (e.g. hydro/solar power projects).

- Formulate Bitcoin regulation and compliance to reduce risk and protect consumers.
 - According to the World Bank (2016), emerging countries should focus on enforcing existing business regulations and competition and antitrust laws. This is important because most countries have laws that define some degree of competition or antitrust regulation but that are seldom enforced.
 - It is important to pay attention to how business regulations are implemented, to make sure they do not discriminate, increasing regulatory uncertainty.
 - Prudential regulation of digital finance reduces the systemic risk to the banking sector caused by financial innovations. But that may involve high compliance costs that raise barriers to entry, and thus to competition.
 - Since the anonymity, speed, ease of transaction, and global reach of digital finance make illegal and illicit transfers easier, including through the ability to split large transactions into small tranches, it is important to take actions that avoid such operations, like reinforcing the electronic trail that Internet payments leave.

Annexes

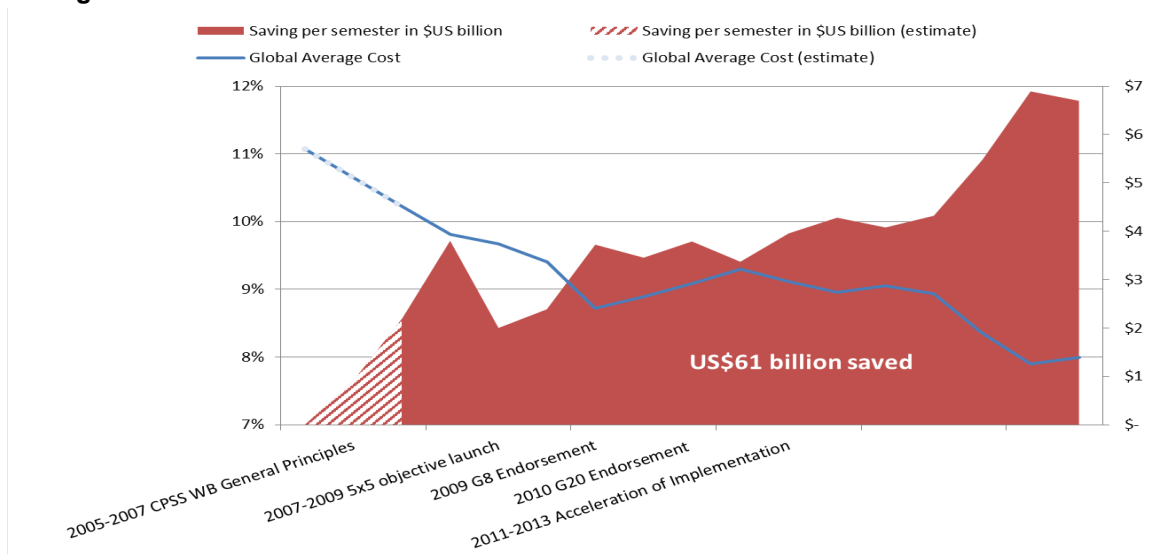
Figure A.1: Average total costs (%) of remittances by regions



Source: World Bank (2015e)

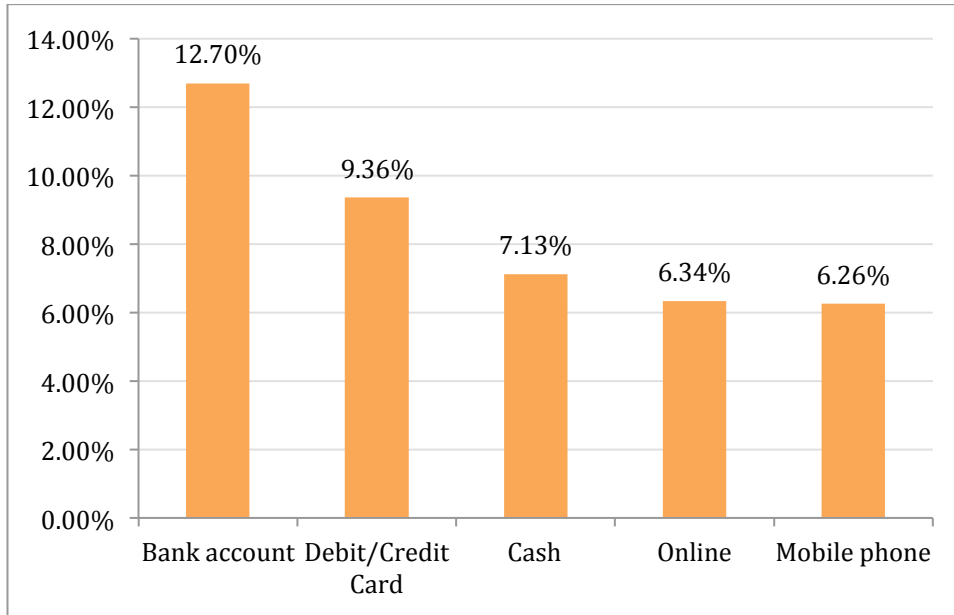
Notes: EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin American countries; MENA = Middle East and North Africa; SA = South Asia; SSA = Sub-Saharan Africa.

FIGURE A.2: Global trends in remittance costs, global policy actions and related possible savings



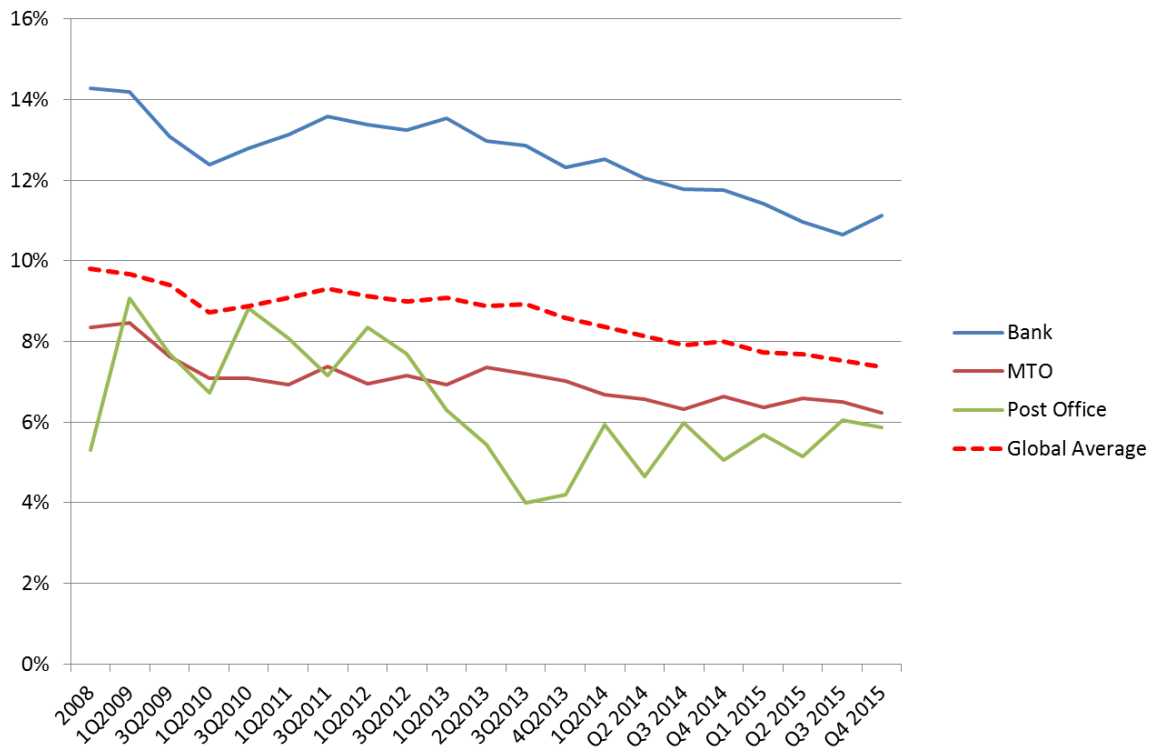
Source: World Bank (2015c).

Figure A.3: Total average cost (%) for remitting to and with Africa by the main formal channels



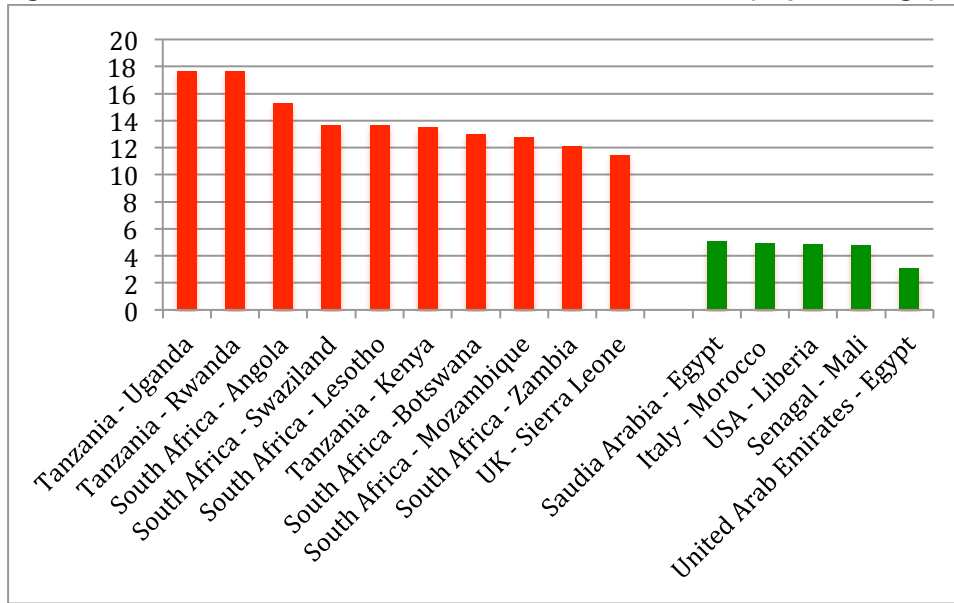
Source: African Institute for Remittances (2015)

Figure A.4: Total average cost (%) for remitting worldwide by RSP type



Source: (World Bank, 2015f)

Figure A.5: Remittances fees to and within Africa, Q3 2015 (in percentage)



Source: Authors calculation based on Remittances Prices Worldwide database (World Bank, 2015f) and African Institute for Remittances (2015).

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