Mahindra COMVIVA

TOWARDS TOMORROWS

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CASHLESS SOCIETIES

CONTENTS

INTRODUCTION

The global mobile money space throws up an interesting conundrum. Here's why-on one hand, the service has, without a doubt, made significant inroads globally. To illustrate, as per GSMA's *State of the Industry Report on Mobile Money Decade Edition: 2006-2016*, in end-2016, mobile money was available in two-thirds of low-and-middle income countries. On the other, perhaps it is still too early to celebrate. Especially since the World Bank Group's The Global Findex database has stated that over two billion people (living on less than $2 per day) are currently without bank accounts. This is, by all means, a serious cause for concern.

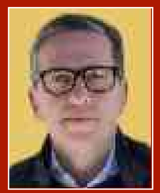
And why not? In essence, this fact throws the limitations of the current global mobile finance system into sharp relief. Despite all the progress made and milestones achieved, 40 per cent of the global population still functions outside the formal financial system. This segment is, to put it mildly, deeply mired in a cash-based economy. This, needless to say, adversely impacts their ability to tend to life's essentials.

In other words, mobile money has, while achieving several significant milestones, still a long way to go. Having said that, however, what's next for mobile money?

That, in a nutshell, is the purpose of the *Towards Tomorrrows*: *Cashless Societies* e-book. We take a look at the trends that have and are likely to make it big in the mobile money space.

1

We Were Kings When Fees Went To Zero



Spiros Margaris is a Venture Capitalist and Thought Leader ranked No. 1 influencer in FinTech and InsureTech by Onalytica.

The title was inspired by the 1996 documentary “When We Were Kings” about the heavyweight fight of 1974 between two boxing legends, Muhammad Ali and George Foreman. In the not-so-distant future, it will also be a fitting phrase for many in the banking and insurance industries.

Readers may ask themselves why I am talking about banking and insurance in such doom-ridden terms. My bleak forecast does not stem from the notion behind the common fintech (financial technology) and insurtech (insurance technology) industry pitch that they will change their respective industries with innovation and better customer experiences. Although I firmly believe that some of the startups will cause significant pain to the incumbents and will indeed change their respective industries. One day, some of the existing and as-yet unlaunched fintech and insurtech companies will also become incumbents that other startups aim to disrupt.

The real threat to the financial industry will come from a radical approach to penetrate the financial market – an approach that I believe has not yet been addressed or even conceived by the competition. The emphasis is clearly on ‘yet’.

What is this new concept? It is simply this: offering financial services at or below cost. I have mooted this idea at many think tank events, and I thought I should write it down to share it more broadly. It is and should be a terrifying thought for many, and I strongly believe this approach will be implemented in the near future. It will bring many of the incumbents to their knees unless they prepare for what is to come by investing in technology and adapting radical business models.

People talk about the limited impact of fintech and insurtech on the incumbent business model. I must agree that at this point many startups have little influence if you look only at the customers they have taken away from incumbents. What the startups are already doing, however, is forcing many incumbents to lower their fees to better match what the smaller players offer to their clients. Moreover, startups have also changed customers’ expectations of the user experience. Startups will also use artificial intelligence and machine learning to compete against the established financial players that have more resources – such as money, data and clients – at hand to compete. Many startups already use machine learning algorithms to build better credit risk models, predict bad loans, detect fraud, anticipate financial market behavior, improve customer relationship management, and provide more customized services to their clients. Arguably, the biggest effect of startups is that they continuously put pressure on incumbent profit margins. Startups will continue to try to change the status quo because they smell blood in the incumbent water.

The real and biggest threat to incumbents will likely originate from tech giants, such as Amazon, Apple and Facebook, and other big non-tech companies that have large customer and employee bases. These organizations will use their customers and employees to sell banking and insurance solutions, and the big financial institutions will become at best dumb pipes. The technical approaches to doing business within the fintech and insurtech industries may provide some of the tools tech giants and other large companies need to execute this strategy.

Yes, I know some readers will say that regulators will stop any attempt by non-traditional players to provide many banking and insurance services. However, I do not think regulators can or will stop the new competitors, because these companies will either obtain the necessary licenses to operate or have a bank or insurer provide third-party financial services to them. This strategy is not unlike the way in which some fintech challenger banks use the licenses of an existing bank to operate.

Why should we expect this scenario of financial industry disruption to happen? In our case, we all seem to agree that the tech giants are the ones to fear because of the big data, platform and technology knowledge they possess. In addition, tech giants have several advantages, such as the trust factor and the constant interaction with satisfied customers. Furthermore, studies have shown that millennials would prefer to bank with tech giants such as Amazon, Facebook or Google than with the existing banking players. And last but not least, are the tech giants and startups that keep setting the bar higher for exceptional customer experience (for instance Apple's simplicity or Amazon's instant gratification) and shape the client behavior and expectations, not the incumbents.

All that speaks to tech giants' favorable circumstances as serious competitors that are not yet ready to come in at full speed and hit the financial industry broadly, but it does not point to the need to fear an extreme disruption as I projected. I do not believe we will see those tech giants providing whole-spectrum financial services anytime soon, but they have the potential to offer services in certain segments, such as providing payment, lending or insurance options for their customers and employees.

What is terrifying to imagine is a situation in which tech giants or other big companies provide financial service solutions at or below production costs. No, that is not a typo; I mean providing financial services for nothing – for free.

If we take this scenario to its extreme – that is, selling banking or insurance services for nothing (yes, for zero pounds, euros, dollars or renminbi) – then we have a situation in which financial institutions in their present forms will die or be reduced to shadows of their current selves.

That can and will happen, and I will tell you why: large companies could do exactly that – selling at or below cost – to win or keep customers. The new competitors would not need to earn money and could even afford to lose money in offering financial solutions if these features entice customers and new potential clients to use the companies' core offerings. Remember that Facebook, for instance, earns the biggest portion of their profits through advertising because they have created a great platform through which people love to interact. Financial solutions would be just another great offering (especially if they are offered for free) to entice many people to join the tech giants' ecosystems. Alternatively, car companies such as GM could provide their employees and customers with very cheap or no-cost (no cost to customers, at cost for the company) banking or insurance solutions. Don't forget that banking and insurance solutions can be provided at very little cost as white-label services from third parties that already have all the necessary licenses, technology and infrastructure.

All is not lost for banks and insurers, but it will be very hard for them to compete against savvy tech giants on their technological home turf. The financial industry has to think fast to find ways to compete before their business oxygen runs out.

One solution that banks and insurers should pursue aggressively is to embrace the fintech and insurtech industries for their innovative business spirit and fast, direct execution approach to new ideas. That means financial institutions should buy what they can or partner with startups to make up for all the shortcomings that legacy brings. Size and regulation will not be enough to protect incumbent financial institutions against new competitors, as we have seen in many other industries.

Another idea might be for financial institutions to place advertisements on their websites or apps to compensate for loss of profit margins. I do not think this is the only solution, but financial institutions must innovate beyond their core areas of expertise and standard industry practices. Why do you think Amazon, Uber and Airbnb have been so successful at disrupting their industries? It is because they thought and acted as if they had nothing to lose and everything to gain.

The 'at or below cost' approach to financial service solutions is not a far-fetched scenario for tech giants and other companies that are trying to find new ways to attract and keep clients. The banking and insurance industries must at least get very comfortable with the idea that low-cost or free financial services are coming.

A tsunami is often unnoticed in the open sea, but once it approaches the shore, it causes the sea to rise in a massive, devastating wave. The financial industry needs to determine if the threat by tech giants and non-tech companies is a small wave or a tsunami and prepare accordingly. My recommendation to all financial institutions is this: you'd better prepare for a tsunami even if all you see is a small wave on the horizon.

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Vamsi Madhav is a seasoned professional in software product management with keen interest in mobile financial solutions. He has over 19 years of work experience spanning over complete innovation lifecycle, from ideation to launch, for complex enterprise-wide software. He is comfortable evangelizing technology to C-level executives across cultures and industries. He is highly analytical and deeply interested in technology management. At Mahindra Comviva he is a Vice President heading Product Management and Product Marketing for Mobile Financial Solutions. He has been instrumental in establishing company's flagship product mobiquity® as the largest mobile money platform in the world.

2

Mobile Money 2.0:

User Experience to Take Centre Stage

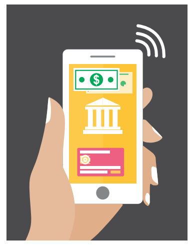
Penning articles and blogs on mobile money ad-nauseam tends to get a bit tricky after a while. Here's why-it is more or less an established fact that the facility continues to grow by leaps and bounds (as expected, really). To illustrate, as per the GSMA's State of the Industry Report 2015 on mobile money, in December 2015, mobile money was available in 93 countries via 271 services. The number of registered accounts globally shot up by 31 per cent, to a total of 411 million. Meanwhile, mobile money providers processed just over a billion transactions for the same time period.

In short, mobile money has, to quote the GSMA, “done more to extend the reach of financial services in the last decade than traditional brick-and-mortar banking has in the last century.” Now to flip the argument. The phase of attempting to establish this facility as a viable method of executing financial transactions is over. It has played (and continues to) a key role in deepening financial inclusion. (A quick side-note-according to data on global financial inclusion released by The World Bank Group, mobile money services are available in 85 per cent of countries where the number of customers with an account at a financial institution is less than 20 per cent.) Last but not the least, mobile money providers have, over the years, launched a wide array of innovative services to net and retain customers. So, (and here's why writing about it can get tiresome), what next?

It's quite straightforward; really. Today's customer expects, no, demands, convenient and immediate service. Ideally, mobile money services ought to be always available, consistent and easy to access and use. Naturally, then, mobile money providers ought to begin focusing on what makes customers tick. It comes as no surprise that enhancing customer experience is thus thrust into the spotlight.

It isn't as daunting as it sounds and is, essentially, a matter of collaboration. Take interoperability, for instance. According to the State of the Industry Report 2015, several mobile operators have already forged partnerships in this regard, in various telecom markets, including Madagascar, Rwanda, and Thailand (2015) and Indonesia, Pakistan, Sri Lanka, and Tanzania in 2014 and 2013 respectively. This can, by all means, be considered a step in the right direction. How? Well, by allowing customers to transact between different mobile money schemes, account-to-account interoperability aims to increase the value of mobile money for providers and customers alike-a larger addressable market for the former and enhanced experience for the latter. Now let's expand the scope of this argument. Interoperability isn't merely restricted to operators. Players like banks, mobile money providers, mobile transfer operators, biggies like MasterCard and Visa, all hold a chunk of the interoperability pie.

This is merely the tip of the iceberg, though. Operators can still cover a substantial amount of ground across several areas. Permit me to identify and elaborate on a few:

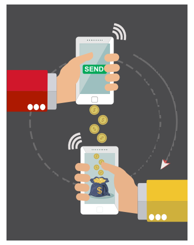


Enhancing the mobile money user experience via mobile applications

Smartphone penetration is on an all-time high. As per data released by Statista, in 2015, over 25 per cent of the global population used a smartphone. By 2020, this number is expected to increase to 37 per cent. As these devices become increasingly ubiquitous, so do the applications that come housed in them. To stand apart from the competition, therefore, operators ought to focus on offering mobile money applications that reduce the time taken to execute a transaction, while obviously offering cutting-edge customer experience, combined with various bells and whistles.

Speaking of which, mobile money providers in Latin America and the Caribbean certainly take their applications seriously. So much so, that these players are raising the global bar by adding various frills to the usual product line-up. For example, according to the GSMA, in Mexico, Telcel's Transfer application permits a customer to generate a barcode for merchant payments. This is then scanned by a cashier's barcode scanner or through the application itself for person-to-person transfers. This facilitates easier interactions with third parties, while not disclosing the customer's mobile number.

Meanwhile, as per the GSMA once again, Brazil-based prepaid payment instrument Zuum permits customers of other operators to access its mobile money application. When a new customer subscribes to Zuum through the application, logic verifies the operator to which a particular mobile number belongs to. Even if the customer falls outside Vivo's domain (Zuum's partnering mobile operator), the customer is still able to use all of the application's mobile money features.



Simplifying merchant payments

In other words, ensuring that each transaction is as simple as paying the merchant cash. Africa, in particular, is chock-full of interesting examples in this context. The continent is using near field communication to simplify USSD-based merchant payments. Let's consider the Airtel Money Tanzania's “Tap Tap” NFC Merchant Payment service. It is, essentially, a one-stop shop that leverages NFC technology to simplify mobile money merchant payments. It also resolves various challenges such as long-drawn transaction times (from a minute to a mere 10 seconds), previously unaffordable payment methods and arguably the most important issue-that of small change, as it offers a convenient payment method.

That's not all-consider the EcoCash Express Debit Card or the “Tap-and-Go” card. All customers need to do is tap the card against the POS machine, after which the payment would be recognised. For transactions valued under $5 and up to a daily limit of $100, a cardholder no longer has to enter a PIN number on a POS terminal. And speaking of transaction values, customers can purchase goods for as little as 10 cents using the card and the Tap and Pay service. Another instance of the convenience I mentioned earlier.

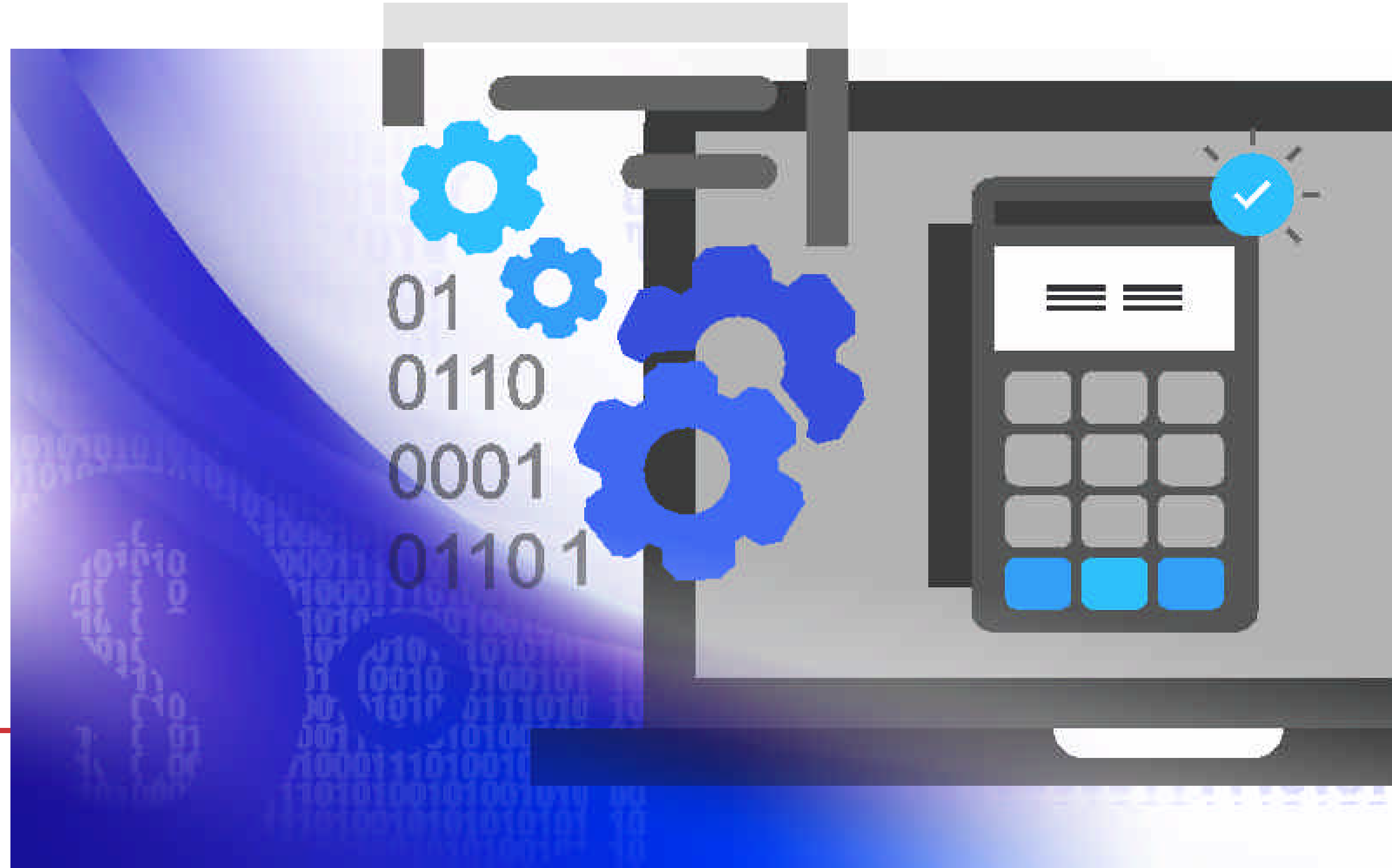
Ensuring seamless online payments

Now, this is where it gets slightly murky. You will be inclined to agree with me when I say that paying online using mobile money isn't the most pleasant or easy experience. This is usually owing to the fact that mobile money still has many miles to go, with regard to making a customer's online experience a seamless one. Permit me to offer two methods to simplify this process:

The MasterCard Virtual Card: This is a prepaid service linked to the existing balance in a customer's Mobile Money Account. The card enables customers to execute online payments at any website that accepts MasterCard. The card is virtual as the customer requests for the same via the USSD channel and receives the card's details (the virtual card number, CVV number and expiry date)in an SMS. It is not physically present.

Linking merchant websites with mobile money: Essentially, while carrying out a transaction, there is no link between the mobile money application and the retail website. For example, if one is browsing an e-commerce website and chooses to pay via Airtel Money, ideally, the customer ought to be linked to the latter once they are ready to pay. There is, however, no link to seamlessly connect the two, which, obviously, reflects badly on the customer's overall experience. However, in near future, we will witness a seamless link between retail websites and mobile money providers, which will go a long way towards making online payments easier.

Net, net, the point is simple-Mobile Money 2.0 is upon us. Customer experience is the new Holy Grail. Is the mobile payments ecosystem geared up to meet this challenge?



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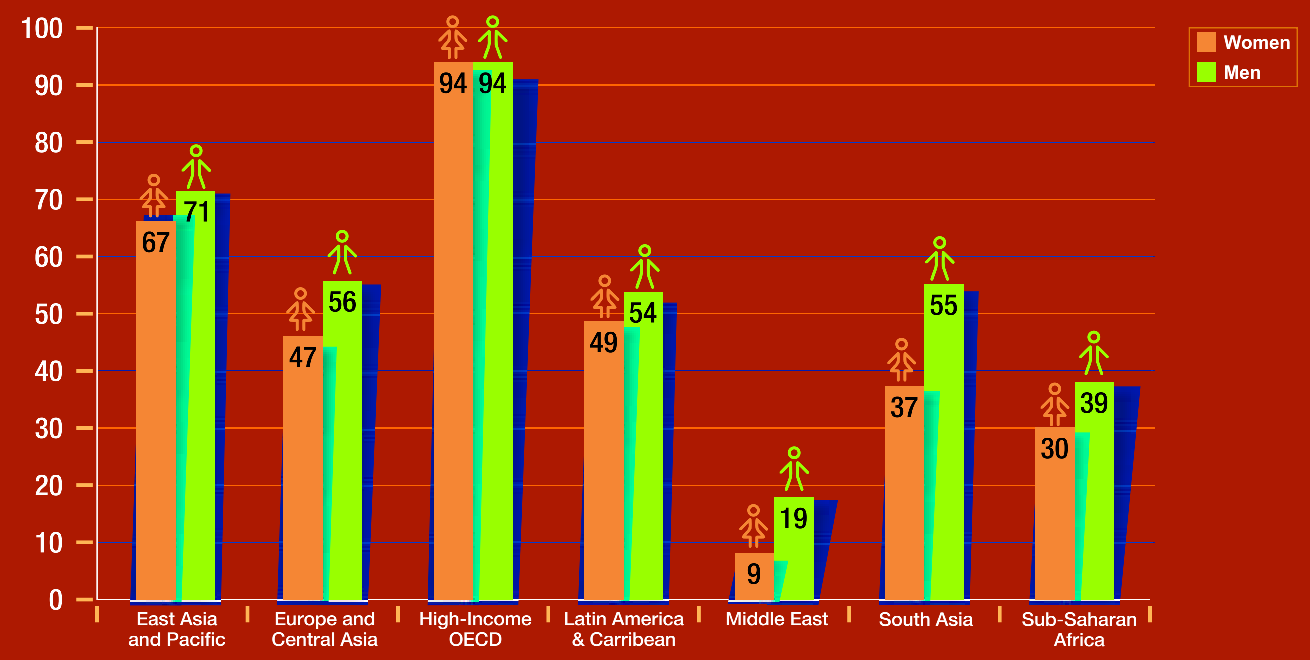
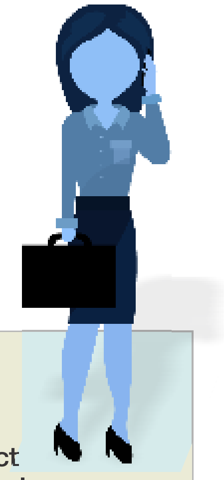
Bridging the Financial Gender Gap through Mobile Money

According to the World Bank's Global Findex database, 62 per cent of adults (aged over 15 years) across the world have access to formal financial structure-that is, having account with banks, microfinance institutions or other formal financial institutions. While women constitute nearly half of the world's population, their financial inclusion is far below compared to men, thus impacting their contribution to economic activities, well being and growth. Globally, only 58 per cent of women have access to accounts in a formal financial institution, compared to 65 per cent of men. From 2011 to 2014, there has been a considerable increase of 13 percentage points of women in developing economies having access to the formal financial sector. While in relative terms the gains have been comparable to those among the male population during same time period, but in absolute terms half of women in developing economies do not have access to formal financial system. The gender gap in these economies for financial inclusion is 9 percentage points, which is evident from the Global Findex data.

DATA IN % WITH AGE 15+





There have been a number of barriers to women's economic empowerment that have constrained their financial inclusion. They are not only restricted to demand side but there are barriers in access to formal financial institutions along with regulatory constraints. There have been number of constraints that have restricted women's access of financial services:

Regulatory Constraints:

According to the 2016 report of World Bank Group's "Women, Business and Law Project", about 90 percent of 173 economies covered in the project have at least one law impeding women's economic opportunities. For example, in some countries such as Saudi Arabia, women are not allowed to open the bank account. In some countries the women are required to furnish specific permission or documentation which is very difficult to obtain. Property or land is normally not titled in the name of women, which is considered a preferred form of collateral among banks. Bank account opening procedure requires identity documents, thus becoming a major barrier for undocumented women in developing countries. Gender gap related to identity document is significant in Middle East and South Asian countries.

Supply Side Constraints:

One example of this barrier is that women find it difficult to interact with male point of contact in banks as female point of contact is less. Women find uncomfortable to visit bank branches which predominantly has significant male population coming for their banking needs. Very few banks have women only branches. The product offerings are not targeted for women in developing nations, considering their lesser ability to manage the risk and high cost of bank account ownership. The access channels are also constrained. Women are burdened with household related work and do not have much time to travel to bank branches. The ATMs are sometimes not guarded that prohibit women to withdraw money as possibility of theft is higher. Further, the ATMs located in isolated places prohibit women from venturing there. There are lower rates of cell phone ownership among women so they again are constrained to access digital financial products such as mobile banking. account opening procedure requires identity documents, thus becoming a major barrier for undocumented women in developing countries. Gender gap related to identity document is significant in Middle East and South Asian countries.

Social Constraints:

Women in developing nations have lesser control over economic resources. According to a study by United Nations in 2015, one-third women in these economies do not have control over household spending on major purchases. They remain dependent upon their husbands and one-tenth of women are not even consulted over how their own earnings are spent. Therefore, the bargaining power and social status of women within their household is significantly low. Further, women have less access to formal education and are mostly involved in lower-paying economic activities or are not working. Women are more sensitized towards privacy. A study by GSMA in 2015 reveals that women are 14% less likely to own a mobile phone than men and even if they do they are less likely to use it due to privacy issues.

Mobile financial services have become the most promising mobile applications in the developing world. Mobile Money is slowly evolving as an ecosystem spread across commerce, healthcare, agriculture and other sectors. It is driving financial inclusion in developing economies and has tremendous potential in bridging the financial gender gap as well. While urban men have emerged as the early adopters of mobile money, the mobile operators are currently involved in expanding their services to reach to have a wider penetration that encompass rural regions as well. While low levels of literacy and mobile phone ownership among women are barriers, still with much simplified usage it can soon become popular among women as well.

GSMA conducted a study in 2016 to identify the gender gaps in the mobile money usage journey in Kenya that has become the most mature mobile money market in the world. Women have very specific needs for financial management:

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CONVENIENCE — Since women take care of the household so they are constrained in terms of time and hence they will be more inclined towards a financial product that is easy to use.

RELIABLE — Women are known to save money for emergencies. So, the financial tool that they use to save money should immediately provide them their savings when they require.

SECURE — In many households, women are responsible for budgeting and taking care of essentials such as payment of school fees of the children etc. Women are concerned that the savings are safe and expenditure can be transacted securely.

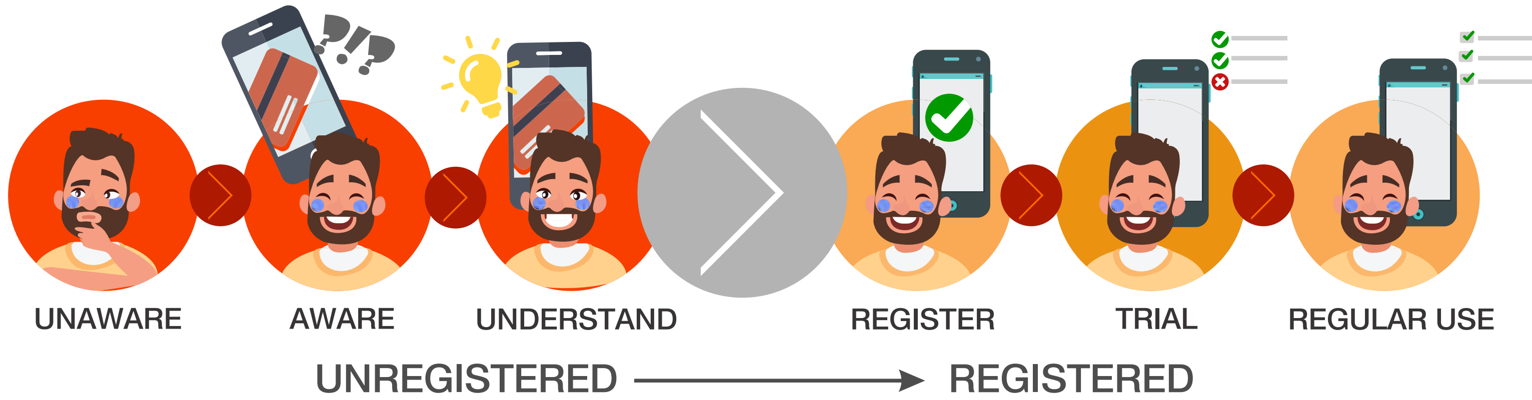
PRIVACY — Women want to independently save and spend the money. They do not like other people interfering with the way they manage the funds.

PRICE SENSITIVE — Women are economic and bargain during spending of funds. They require a financial product that is cost effective.

RISK AVERSE — Women are not known to take risks with their savings. Normally the savings are small and they want to ensure that the same can be liquidated easily as wand when required. Women are less likely to try new financial services compared to men as they perceive the risks involved.

Mobile Money has become a key enabler of financial inclusion in low and middle income economies across the world. According to the GSMA's 2016 State of Industry Report on Mobile Money, there are about 277 mobile money services spanning 92 countries and having more than half a billion active accounts. Mobile Money has created several opportunities for people to manage their savings, invest safely and manage their expenditure in an efficient manner. Mobile Money can empower women and can generate strong appeal among them by creating a sense of security, convenience and reliability of funds.

A typical customer journey of mobile phone adoption has several stages

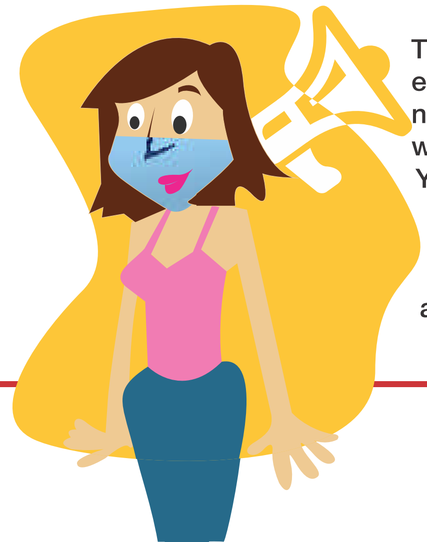


While the ownership of mobile phone among women is cause of concern, the key is to focus transform the women already owning the mobile phone and get them onboarded to Mobile Money platform. Once the women have understood the importance of mobile money the bigger hurdle is crossed and thereafter they can responsibly adopt the mobile money. As per GSMA Report:

"It is estimated that, globally, 80 million unbanked women receive government wages or transfers in cash, 210 million unbanked women receive cash payments for the sale of agricultural goods, 585 million women pay for utilities in cash, and 225 million women pay school fees in cash." [5]

There is a huge opportunity of digitalizing these payments and an estimate suggests that mobile money can unlock an estimated $20 billion market in Africa if mobile money accounts are opened for women as it will generate new revenue streams. Using mobile money platform, following are the key recommendations that can increase adoption of mobile money usage and thus bridge the gender gap in financial inclusion:

Women as Brand Ambassadors of Mobile Money



The key factor that has led to mobile money growth is developing economies is the agent network and its reach in the geographies having no banking infrastructure. The mobile money agents directly interact with consumers by getting them onboarded and doing the KYC (Know Your Customer) verification process to combat frauds. They support the consumers through --out their mobile money journey by disbursing cash or digitizing money. Thus the agent network becomes the backbone of mobile money operations. In 2006, there were only 21584 registered agents in the countries where mobile money services were live.

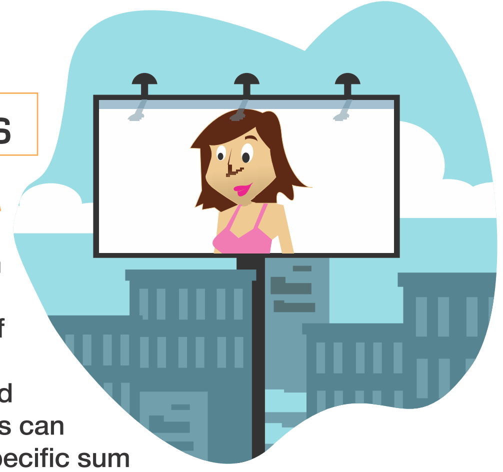
By the end of 2016, this number has gone upto 4.3 million registered agents. To increase mobile money usage among women, it is recommended to have women agents that become representatives or brand ambassadors in the region. Female agents will help to build confidence and trust among women to adopt mobile money and women will be more comfortable in interaction with their female counterpart rather than with male agents. Few key focus points are:

A.	B.	C.	D.
Female agents can be promoted as Brand Ambassadors of mobile money representing a specific region that can bring financial literacy among women in that region.	Female agents can be incentivized with attractive commissions when they onboard new women consumers to mobile money. In order to promote usage, the agent who onboards the consumer can get commission when the consumer does first transaction other than cash in or commission can be spilt between first two transactions and so on.	In few countries where women are not allowed to freely move outside their home, female agents can visit their home and get the women onboarded so as to mobilize their savings and secure their money which is stacked at home in the form of cash.	In few countries, women cover their face and they are hesitant to remove the veil in front of male agents so that their photo can be taken. However, if its a female agent then they can get their photograph taken and KYC done.

Zoona, a startup in Zambia engaged in building mobile money agent network, has found that women tend to be more organized, better at settling credit and reinvesting in their business. Currently they have 70% of the agents as female.

"MoMo Angel Campaign" pilot was launched by Lonestar Cell MTN to recruit and train women as agents in October 2016 in **Liberia**. This has become quite successful and Lonestar Cell has launched attractive schemes to help women purchase mobile phones. The agents are incentivized by not just commission but also financial aid for the education of their children, preferably a girl child.

Promotions and marketing campaigns around women



In order to promote mobile money, it becomes essential that women are portrayed in billboards as well as TV and radio ads. The literacy among women is less and it is difficult for them to understand the value of mobile money services through pamphlets. With the presence of women in the campaigns, the female population can easily relate and realize the importance of mobile money. The mobile money providers can run periodic campaigns such as giving bonus money or airtime of specific sum for women who get registered within the duration of promotion. The marketing campaigns should highlight the two very important aspects:

A. **Security of Mobile Money**

B. **Convenience of usage by showcasing the consumer journey through the agent network.**

Mobile money promotions can also be bundled with selling cell phones to women at attractive discounts. Since women will now see value in mobile money, so they will try to own the mobile phone. Documentation process should be made smooth for women such that women not having ID cards can get the same created through the mobile money agents. There can be a initiative launched by mobile money providers to help women get their national IDs or other KYC proofs at nominal or no cost.

Telesom in Somaliland developed TV advertisements showing women using its mobile money service ZAAD for merchant payments and savings — the two use cases it thought would be most appealing to women.

Disbursing Government grants

Government can make use of the mobile money services to transfer grants to the female population which is below poverty line. This becomes a fast, more secure and less expensive way to disburse funds. The funds will be credited directly to the beneficiary's account and then can be put into better use by the beneficiary. In order to promote female literacy, the government can disburse stipends through mobile money which can only be used by parents to pay for school fees or buy books. The government grants getting disbursed through banks make women to travel to bank branches by spending sum in travelling and then queuing up to get the funds. Further, they can be robbed of the cash on way back to home. When they are disbursed through mobile money, the women can make the better use of funds or get the cashout done through a nearby agent.

In June 2014, **Easypaisa signed an agreement with Sindh Education Reform Program (SERP)** for educational stipend disbursements. Under the SERP program, Easypaisa is providing disbursement services for stipends. The stipend is offered to more than 400,000 girls studying in classes 6 through 10, subject to 80% attendance. In this way they are able to reach rural areas.

Disbursement of medical aid by NGOs

Women health conditions are quite poor in developing nations that are due to maternal deaths, poor nutrition among girls and high prevalence of HIV. The NGOs and UN can partner with mobile money services so that the aid reaches directly to the beneficiary. This not only reduces the cost to disburse financial aid but also prevents corruption and ensures that full money reaches the women in need. Women can then make use of the money to purchase for medicines. Mobile money providers can also collaborate with insurance companies and launch micro savings and micro insurance product for women. The women can save small portions of money on which insurance cover is provided and premium gets deducted automatically every month from the new micro savings mobile money account. Crowd funding can also be done through mobile money

Organizations like World Food Program are disbursing aid in countries like Kenya, Camerc Zimbabwe, as mobile money to women's account which cannot be cashed out. It can only b to purchase meal vouchers so that the problem of malnutrition among women gets addressed.

Vodacom Lesotho has collaborated with Lesotho Ministry of Health, so as to disburse aids to pregnant mothers and HIV positive children. Through this initiative, not only the disbursement of aid but tracking of patients and sending reminders to them is also done.

Family Wallet

Family wallet is a concept where a single mobile money account can be shared between the members of the family. In economies where mobile phone ownership is quite less among women, family wallet concept can be used where women can be onboarded on a mobile money account owned by their husbands. The access of services and limits on mobile money usage can be controlled for each family member. The women can thus deposit their savings in cash to this common family account which can then be put into various uses such as paying for bills, purchasing goods etc. Family wallet can have another variant where single mobile money account is linked to multiple mobile numbers of the family. With the family account, women can do better planning and budgeting and control the expenditure.

Differential pricing of mobile money services

Women are more price sensitive than men and look for cheaper alternatives while making transactions. Therefore, mobile money providers can charge less for same service if the consumer is a woman. Gender based differential pricing can attract a large number of women to get registered to the mobile money services. The family can encourage the women to open mobile money accounts to get same service delivered at lesser rates. Merchants can provide cash back and loyalty points to women on making purchases. Mobile operator can distribute free airtime or joining bonus to women that register to mobile money services. Similarly attractive interest rates can be offered on micro loans disbursed using mobile money. Mobile money providers can also provide interest on the savings by women in their mobile money account. Special campaigns can be launched during International Women Day, Mother's Day etc where charges can be waived off for transactions done by women consumers so as to make them feel special and also promote the usage of services.ent can be accessed by any club member.

60% of all Ecocash Saving Club users are women.

Group Savings

Informal saving groups have come up in the absence of banking infrastructure. Mobile money providers can launch group savings product so as to move away from traditional pooling of cash by the groups that becomes difficult to operate and manage. Women can form groups within the locality and pool funds in a group account. Al members of the groups can view the balance and transactions done on group account so that transparency is maintained. Borrowing can be done on a rotating basis and each group can have its own rules for disbursing of funds out of the group savings account.

Econet has launched a similar product known as “Savings Club” on its mobile money (Ecocash platform). There is a Club Chairman who is the owner of club account. There is one club secretary and a club treasurer. Club member can place a request to borrow a certain sum from the club. The request is required to be approved by club chairman, treasure and the club secretary. Post which funds can be disbursed and the club statement can be accessed by any club member. 60% of all Ecocash Saving Club users are women.

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4

Open Banking

By adopting technology to deliver financial services, banks have always grown - be it credit/ debit cards, ATMs, core banking systems or online commerce gateways. Both financial institutions' and their customers' lives have improved through faster and more convenient services, and banks were never threatened by technology, till recently.

New age 'fintech' companies plan to change the way individuals and corporates buy and access financial services by offering improved customer experience, lesser fees, personalized financial management at their fingertips. But banks have taken solace in the fact that they enjoy the trust of masses, have a near monopoly of all sophisticated and high value financial services such as housing loans, coupled with exclusive access to customer data which enable cross-selling of a gamut of financial products to keep the competition at bay. Even today, employees get paid in a bank account, and fintech providers, in spite of their best efforts and rapid growth, are secondary accounts in the lives of a typical consumer.

Open Banking is an emerging trend which has quickly moved from being an idea to reality threatens to disrupt this state of affairs. Open Banking involves bank and other financial institutions enabling third party developers / applications to access their customer's data through the use of open APIs. It enables customers to share their banking data such as transaction history and account details with any other software application, in a secure manner in real-time.

When external parties have access to consumer's historical data, they can build a whole suite of applications around financial institutions, such as providing a better customer experience, aggregate account information spread across multiple financial institutions at a central place, combine customer's financial history and other personal data to generate more accurate credit profile, offer personalized saving advice, etc. It allows customers to gain a 360 degree view of their finances and manage their money and accounts wisely. With open banking, customers do not just consume the platform, but contribute to it.

The main driving forces behind Open Banking becoming a mainstream phenomenon are:

REGULATIONS

Quite a few regulators have begun mandating that banks open up the data held by them and share them with third party applications. Initiatives such as PSD2 from EU and Open Banking Standards of UK will kick in from 2018, and banks operating in Europe will not have the luxury of not sharing data and allow customers greater control over what they want to share with whom. Even Australia has announced in its 2017-18 budget, a move towards open banking regime and has set up a committee to finalize the provisions. The head of competition bureau has indicated that the Canadian government is looking at regulatory action to promote sharing of transactional data between banks and fintech companies.

COMPETITION

The bar for customer experience is being set by fintechs which offer frictionless digital banking experience through mobile phones for a lesser fee than traditional banks. Incumbents can lower their cost of operations by adopting technology to automate back end operations and decrease personnel required to service customers by offering low-cost self-service channels to their customers.

CUSTOMER EXPECTATIONS

Consumers are increasingly getting comfortable with digital only channels such as smartphones to meet their banking needs, and expect the banking experience to be similar to those offered by technology led organizations such as Uber or Starbucks. If incumbents fail to meet customers' expectations, they risk being disintermediated by fintech companies, who will build relationship with consumers.

We can see the signs of shift towards open banking or platform banking as increasing number of financial institutions are voluntarily providing access to third party applications through APIs. Few of them are:

Capital One
a USA based bank has launched a developer portal - Capital One DevExchange, along with open APIs.

N26
a Germany based digital only challenger bank has forged partnerships with a wide variety of financial service providers such as TransferWise and Allianz, to offer complementary products on its platform.

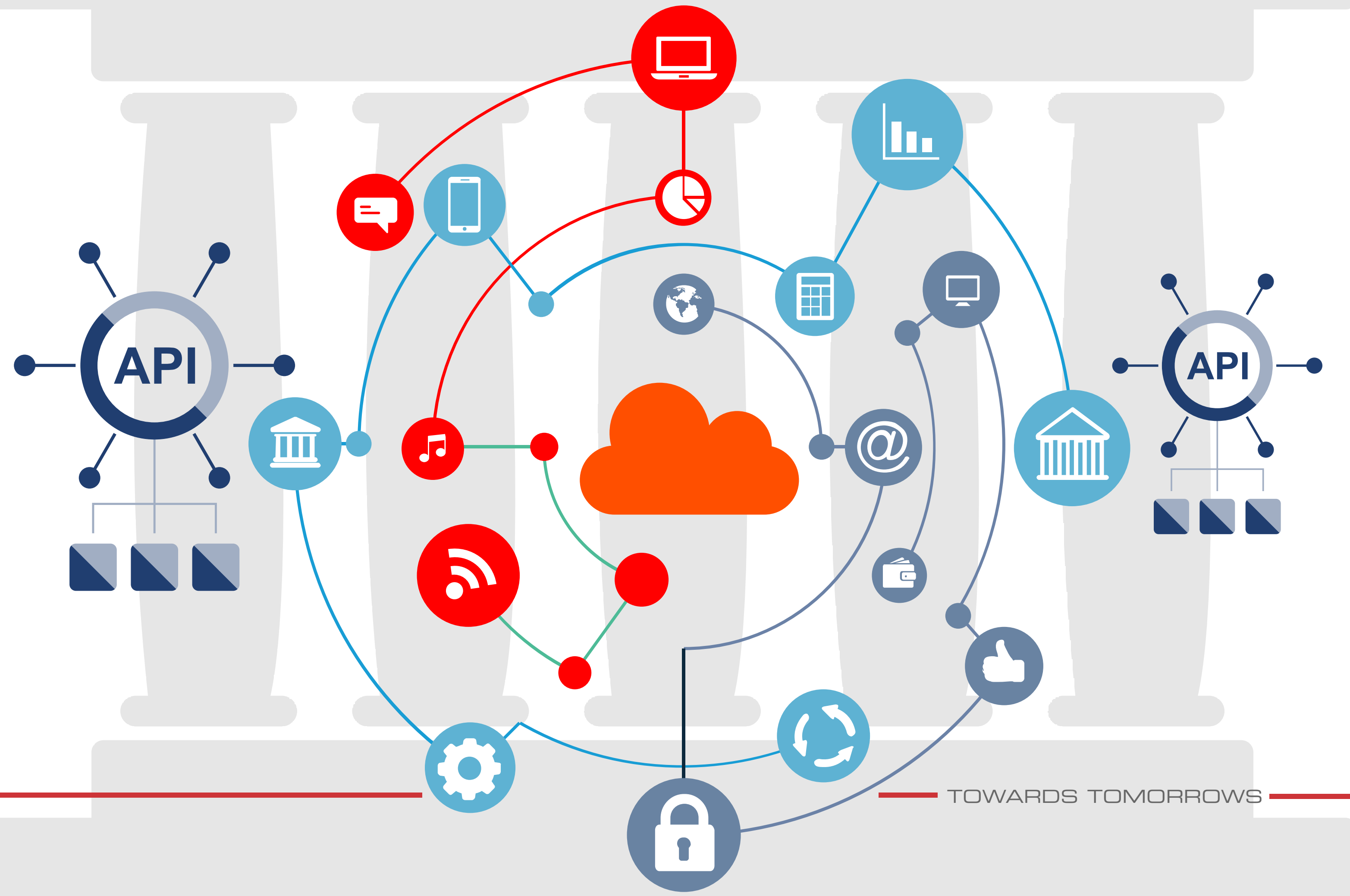
BBVA
a Spanish bank launched “Open Banking Business”, which enables third parties to integrate with BBVA's data to build new applications and use cases.

Credit Agricole
Europe's third largest bank, provides an app store through which customers can download apps which complement its core offerings. It does this by exposing APIs to external developers who can then build novel apps with its data.

MUFG
Japan's largest is reportedly planning to provide secure access to its online banking systems to fintech firms.

Although there is a definite shift towards open banking with push coming from both enlightened regulators across the globe as well as incumbent banks who have realized that the bank of the future will be as much of a technology company as a financial institution, there are few challenges on this path. Without a standard for data sharing or standardized APIs for banking services, each bank will develop its own proprietary API format and integrating all these various formats will be cumbersome and erode some of the benefits of open banking such as easier sharing of data between any two financial institutions or fintech companies. Also, it would be hard for the regulators to evaluate and judge the quality of data shared by a bank through its APIs, and even enforcing the spirit of the regulations which envisages truly open transfer of one's financial data between financial service providers through customer's consent in a seamless manner. Moreover, smaller banks which do not have the technology muscle and capital required to upgrade their IT systems to an open API system will lose out, and their customers who are typically rural or low income customers will be left with lesser choice, and it might create a winner takes all kind of situation where a few large banks only survive.

Banks have always made use of APIs in their banking software; but transition from private and closed APIs to public and open APIs is afoot. The drivers for this change are regulatory pressure, elevated customer expectations and cost pressures. APIs let fintech and banks collaborate with each other; banks find new distribution channel and greater access to customers, help incumbents innovate quickly and reduce time to market for new financial products. Customers' adoption of fintech has been slower than anticipated, but advent of Open Banking can upend some of the competitive advantages that banks have by decoupling the value chain, usurping customer relationships and enable merchants and customers to interact directly with each other. Europe is the clear leader in this transformation, but rest of the world is slowly waking up to the benefits of sharing of customers' financial data.



5

Mobile Money FOR EDUCATION

Leveraging Mobile Money for Quality Education

Delivering inclusive and equitable quality education ranks fourth among the seventeen Sustainability Development Goals (SDG) charted by the United Nations. The vision is to ensure that by 2030 all girls and boys get quality primary and secondary education for free and all women and men get access to affordable and quality technical, vocational and tertiary education. To achieve this goal, information and communication technology (ICT) is playing a major role in transforming and enhancing the way education is imparted. Moreover, the use of digital payments (especially mobile money) in education has simplified access to education. This article talks about how mobile money is making quality education accessible to all.

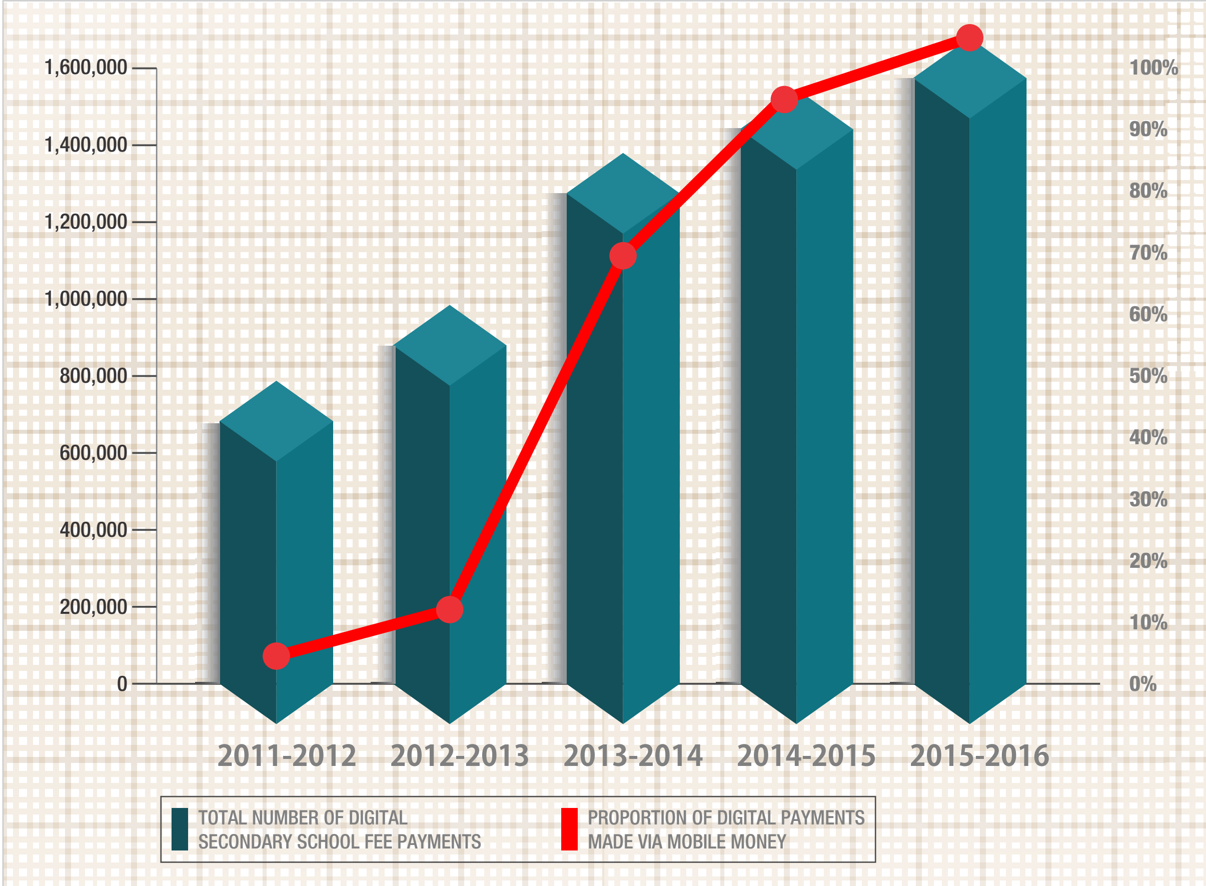
The education sector is going digital. Today we can purchase books online, access e-libraries, attend lectures virtually (distant learning via internet), complete entire course online via webex or videos and even give exams online. With the digitization of education, the payments involved in it are also becoming digital. Digital payments include both online payments and mobile payments. In developing markets, which is characterized by its low internet access and limited usage of credit and debit cards, mobile payments has emerged as the most prominent alternative payment channel. Mobile money is rapidly becoming the most preferred way of making education related payments and is transforming the education sector in multiple ways as discussed below:

Simplifying Fee Payment

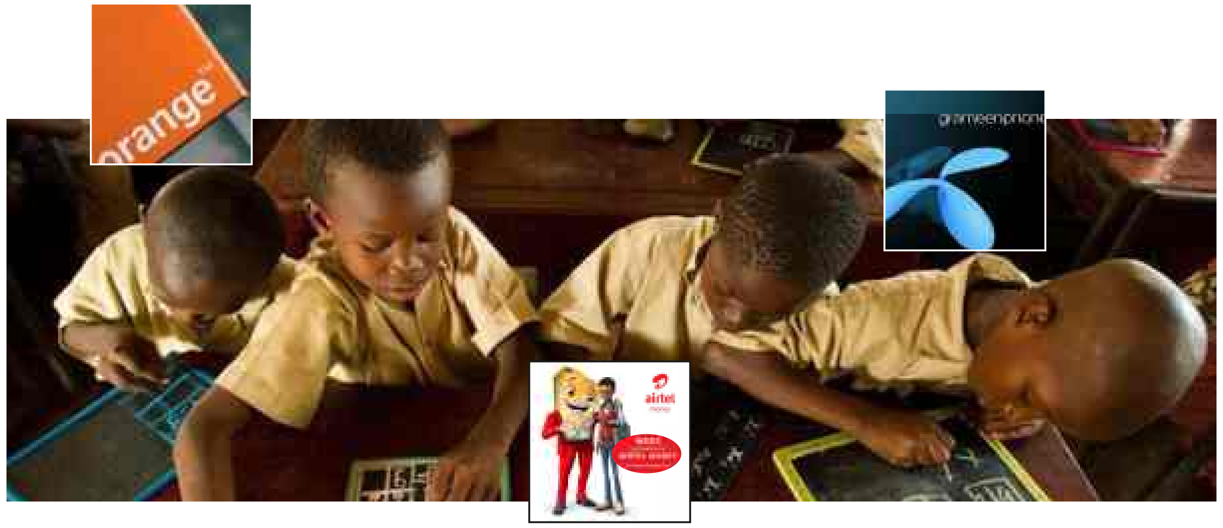
The act of paying fees for school or university, or applying for a course at an institution or enrolling for an examination is time consuming, because of the time it takes to travel to the educational institute or nodal center and stand in a queue to make the payment. The time and money spent on

traveling to the educational institute and paying for fees can be used more productively. The virtual nature of mobile money helps to solve this problem. Thanks to mobile money, it is easier for students or their parents to pay instantly at their convenience, that too remotely and in smaller installments. Many mobile money services such as Orange Money, Airtel Money and EcoCash facilitate fee payments for schools and universities using mobile phones. Mobile money services does not require customers to have a bank account, hence even unbanked users can make payments using these services. Additionally, mobile money services can be accessed from features phone via USSD or IVR, without any internet connection.

Côte d'Ivoire is one of the biggest success stories of school fee payments using mobile money. The Ministry of National and Technical Education (MENET) partnered with four accredited mobile money providers in the country and made it mandatory for secondary school students to pay their school registration fees digitally. The impact of these collaborations and the adoption of digital payments have been phenomenal. In academic year 2015-16, 99.3 per cent of Côte d'Ivoire's 1.7 million secondary school students paid their annual school registration fee via various mobile money services. The service has provided convenience to parents as they can now focus on their work, rather than worry about paying fees. The service has also benefited MENET and schools in multiple ways. Digitization of fee payments has reduced cash handling costs as well as incidences of armed robberies, which was very commonplace before the introduction of digital payments. Secondly, with mobile money, school fees are now collected in full, and that too much earlier in the year, which means that schools have more access to funds function properly and provide better learning conditions to students and working conditions to teachers. Lastly, digital registration of secondary school students allowed MENET to consolidate its student database, eliminate duplicate entries and significantly increasing the quality of its information.1



Source: GSMA



Côte d'Ivoire is not the only country. **In Guinea Conakry, Orange is enabling students to pay counseling fees in universities via Orange Money.** Students can access Orange Money service on their mobile phone to generate a code. They then log-in to Guinea University Online Orientation Platform on internet, and enter the code and their mobile number to make payments. In addition to paying the fees, students also receive free data, SMS and call minutes enabling them to connect with friends, teachers and family. The service has seen great uptake. More than 90% of University counseling fees are paid through Orange Money.2

In **Ghana**, WAEC, the body that conducts the Senior School Certificate Examination in West African countries has partnered with **Airtel Money**, allowing students to buy pins to check their results. Students can also pay for request for certificate, attestation and verification of results using Airtel Money.3

In **Bangladesh, Grameenphone** facilitates payment of exam fees for graduate courses in **Rajshahi University.** The payments can be made over the counter, where the student visits a Grameenphone mobile money agent and pays him the fee in cash. The agent accesses the mobile money service on his handset and makes the payment to generate the transaction ID. The transaction ID is used by the student to obtain his admit card online.

Digitizing payments are leading to new low-cost schools. For example, in Kenya, Bridge International Academies has launched the cashless "academy in a box". School fees are paid in small- monthly payments using M-Pesa mobile money service, which supports salaries for academic staff and other expenses. Entire operations are automated and executed via smartphones and tablets, eliminating accounting and financial management related expenses. Founded in 2009, Bridge International Academies expanded to nearly 400 schools and over 100,000 pupils by 2014.4

Expanding the availability of content

Books, journals, whitepapers are costly and it is not possible to buy all of them. Moreover, most of the learning is restricted geographically, which means that the students have no understanding of what is happening globally. The few copies of books from international authors which are available in libraries have high demand and can be accessed only by a limited number of students. However, digitization of education is changing this scenario. e-Books are available online which are much cheaper than the printed version. The students are able to get exposure to global study material as they are able to buy books from international authors online. The libraries are becoming digital, allowing students to access content online and pay for the subscription via digital medium as per their convenience. Digitization is making education affordable as students are able to just buy the required portion or relevant content and not the entire book.

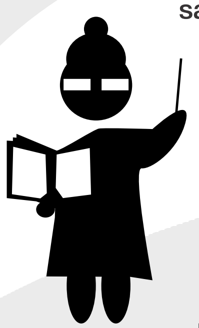
A relevant example in this context is EcoSchool initiative from Econet Wireless, Zimbabwe's largest mobile operator. EcoSchool provides online access to digital content for tertiary students in Zimbabwe. Students get digital books, e-courses, mobile courses and job alerts via a web-based platform at affordable costs. The payments can be made through operator's mobile money service EcoCash.5

Facilitating virtual learning for distance education

Virtual classrooms are making distant learning possible in an efficient manner. Students need no longer be restricted by distance, lack of quality educational institutes or unavailability of courses. Lectures can be attended online, exposing students to world class academicians across the globe. They are able to learn skills by looking at videos. Not only this, students are giving exams online and the checking of papers are also done using IT softwares and result produced within minutes. The results are obtained online and certificates issues in digital formats. All the payments related to distance education are made remotely through online and mobile payments. In future, to make virtual learning specially the practical classes more realistic technologies like virtual reality will come into play.

Enabling quick and convenient salary payments for teachers

In many emerging countries, teachers are paid salary in cash. As it takes time to distribute cash, salary is usually paid late. Sometimes, the salary is not even received in full, as a portion of it is pocketed by corrupt senior officials. As an alternative to cash, the governments in many countries have started transferring money directly to bank accounts. However, in countries with poor banking penetration, this necessities traveling long distances and standing in queues for hours to cash-out salary.



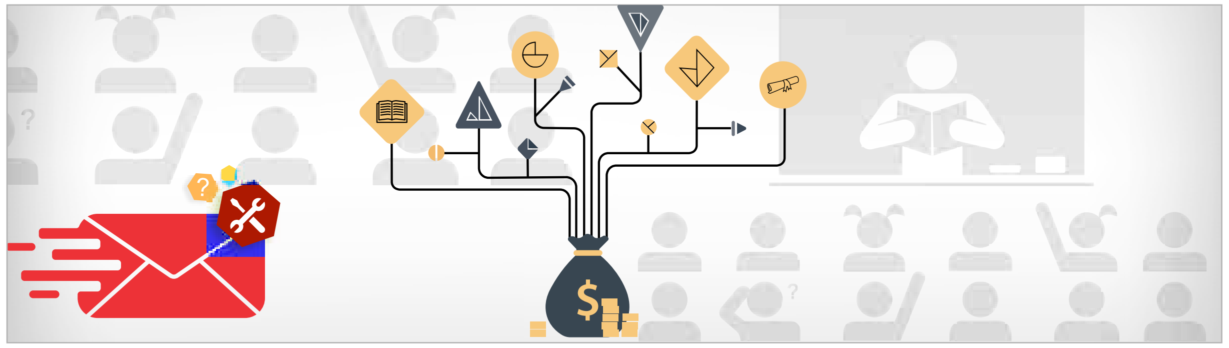
Mobile money has emerged as a viable option overcoming flaws of conventional salary payment system. This can be understood better with an example from Liberia. In rural Liberia, primary school teachers were paid their salary in bank accounts. Many banks have branches only in big cities. Each month, the teachers had to travel over 10 hours by bus to capital city Monrovia to collect their salary. The entire travel and lodging consumed on average US$25 which is 15% of teacher's salary. Moreover, due to all the travelling the teachers would miss classes, which would disrupt the interest of students in the classes. In July 2016, USAID with Ministry of Education and mobile operator Lonestar rolled out mobile salary payments pilot for 67 teachers. The results of the pilot are encouraging. The teachers receive salary instantly and in full in their Lonestart mobile money account. On average they save 14 hours of travelling as they are able to cash out at nearby local mobile money agent. The cost of collecting salary has also gone down by 90% as teacher only have to pay small cash-out fee. Teachers are now able to focus on teaching rather than worrying about collecting salaries. After positive results from pilot, the service is now being scaled-up.6

Providing funding and support for education

Inability to afford education or pay fees is the most important factor for high drop-out rate from schools. Governments, NGOs and financial service providers globally are working together to ensure parents have financial resources to pay for education of their children. Providing low-interest education loans is one of the initiatives run in many countries. According to World Bank Findex report, in low and middle income countries, 8.3% (adult) population borrowed for education or paying school fees. However, a very large portion of loans for education are informal loans as most people in low and middle income countries do not have a bank account and thus the credit rating to qualify for a formal loans from bank.

To bring the loans into formal economy, financial service providers are providing mobile based loans. For example, Airtel in Tanzania provides Airtel Timiza loans. Airtel Timiza offers small-term, low value loans which are directly credited into customer's Airtel Money account. Customers do not need any bank account, or qualify any stringent qualification criteria, or provide any security or do any paperwork to get Airtel Timiza loans. The loan amount depends on customer's usage of Airtel services. These loans allow parents to pay school fees on time, without impacting their household budget. Parents repay the loan when they get next month's salary.

Mobile money providers are also bringing innovative insurance schemes for students. Allianz insurance and Orange Money in Senegal offers a special insurance scheme for students, where in case of death of the paying parent the child gets 1,200,000 FCFA (US$ 1,956) to fund two to three years of schooling. For availing the insurance scheme, the parent has to pay premium of 12,000 FCFA (US$ 19.56) in a single installment or 1,000 FCFA (US$ 1.63) in 12 monthly installments using Orange Money.7



Encouraging parents to educate children

In some countries due to various cultural or economic conditions, parents are uninterested in sending their children, specially the girls to school. As per World Bank, female literacy rate in South Asia and Sub-Saharan Africa is as low as 57% and 52%. The local governments in these regions are aware that educating females is necessary for creating an egalitarian society.

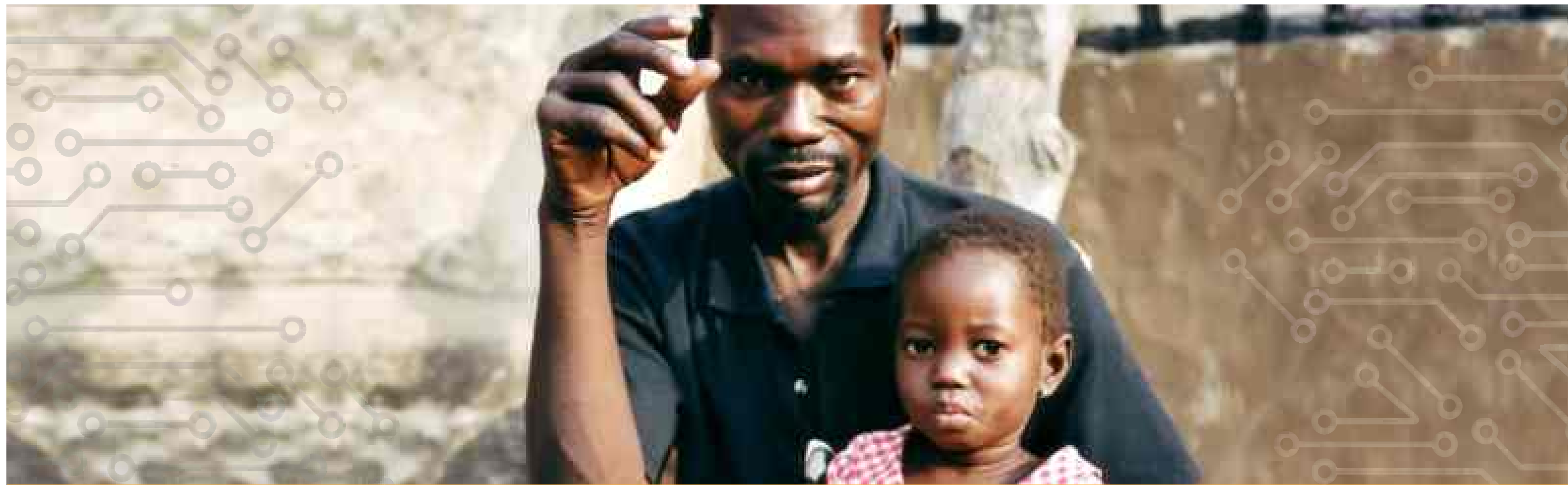
Female literacy in **Sub Saharan Africa** 52%

Female literacy in **South Asia** 57%

Hence, to enhance female literacy rate, governments have started various initiative like giving stipends and providing mid- day meals to girls who attend school. Mobile money can catalyze various government initiatives to improve female literacy. Mobile money can be used in disbursing government stipends which is a big motivation for parents to send their daughters to school. NGOs can now disburse funds directly to parent's mobile money account which allows them to buy school uniform, stationary and books for their daughters.

Telenor Pakistan under the Sindh Education Reform Program (SERP) is disbursing education stipends to female students via EasyPaisa mobile money service. The aim of SERP program is to improve literacy rate amongst girls belonging to BOP families in rural area. The program was started in June 2014 in 23 remote districts of the Sindh province, with 425,000 students receiving stipends.8

Achieving affordable quality education for all by 2030 is a challenging vision, but the above example shows that mobile money is the right tool to accomplish it.



Refrences

1 http://www.gsma.com/mobilefordevelopment/programme/mobile-money/mobile-money-facilitates-1-7-million-school-fee-payments-cote-divoire

2 https://www.linkedin.com/company/orange-money

3 http://www.todaygh.com/airtel-money-partners-waec-enable-wassce-candidates-check-results-online/

4. http://www.mckinsey.com/~/media/McKinsey/Global%20Themes/Employment%20and%20Growth/How%20digital%20finance%20could%20boost%20growth%20in%20emerging%20economies/MG-Digital-Finance-For-All-Full-report-September-2016.ashx

5 http://www.cgap.org/blog/building-digital-finance-ecosystem-zimbabwe

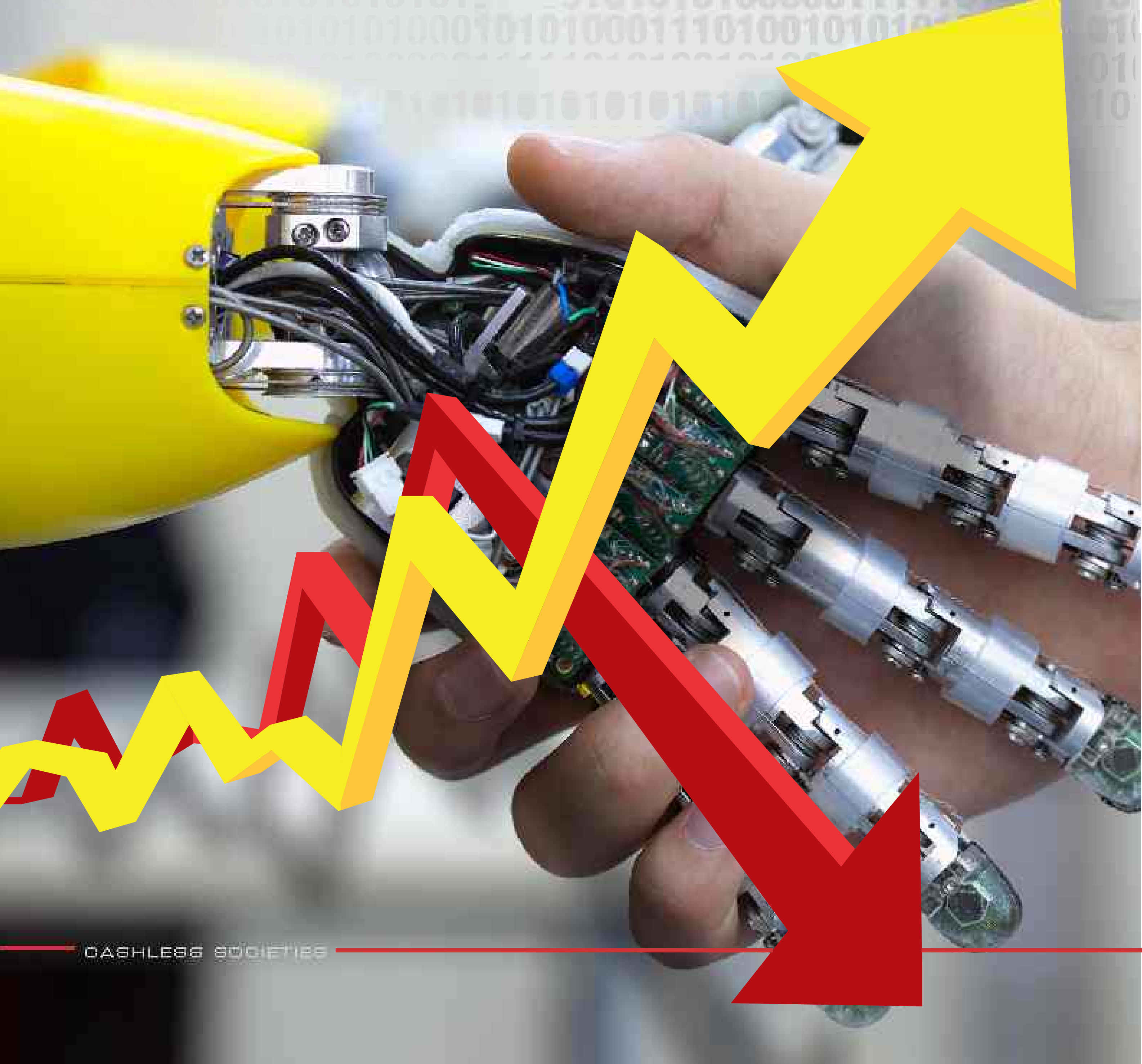
6 http://www.cgap.org/blog/liberian-teacher-epayments-stepping-stones-inclusion

7 http://www.lejecos.com/ALLIANZ-ASSURANCES-VIE-ET-ORANGE-MONEY-lancent-le-produit-Assurances-prevoyance-etudes_a2150.html

8 http://www.gsma.com/mobilefordevelopment/programme/connected-women/unravelling-the-shortlist-for-the-global-mobile-awards-2016-best-mobile-service-for-women-in-emerging-markets

6

Digitizing Wealth Management through Robo-Advisory Services



Roboadvisory is new type of financial service that uses mathematical calculations to allocate wealth across different asset classes and is characterized by minimum human intervention. Some of the principles guiding the working of Roboadvisors are given below -

Markets are fairly efficient in the long run

In the short term, markets rise and fall, but in the long run the losses and gains to the investor averages out. **Over a 40 year period, only 12% of the actively managed funds bettered their indexes.**

Passively managed funds outperform actively managed funds in the long run

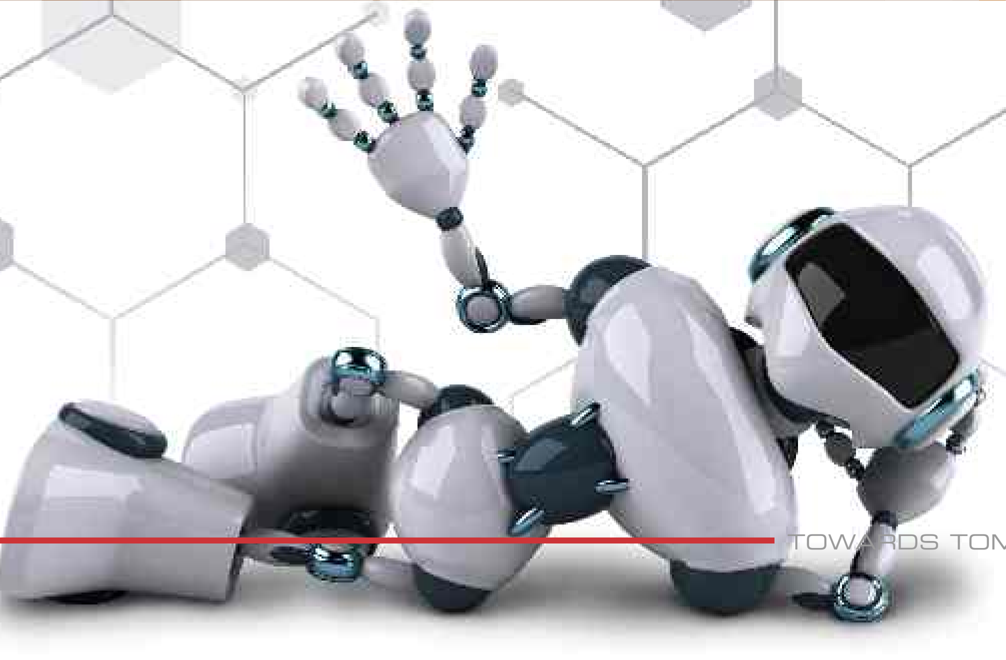
Roboadvisors are based on the philosophy that actively managed funds don't work in the long run and the investor is better off putting his money in a low cost, passive index fund. Legendary investors such a Warren Buffet have recommended on a number of occasions that you simply put your money into the S&P 500 and walk away.

Robo-advisory services provide better and more consistent advice

Human emotions like greed, indecision, irrationality are not played out, because RoboAdvisory services are powered by algorithms.

Educated customers hold equities in their portfolio two to three times higher than less educated clients

Human emotions like greed, indecision, irrationality are not played out, because RoboAdvisory services are powered by algorithms.

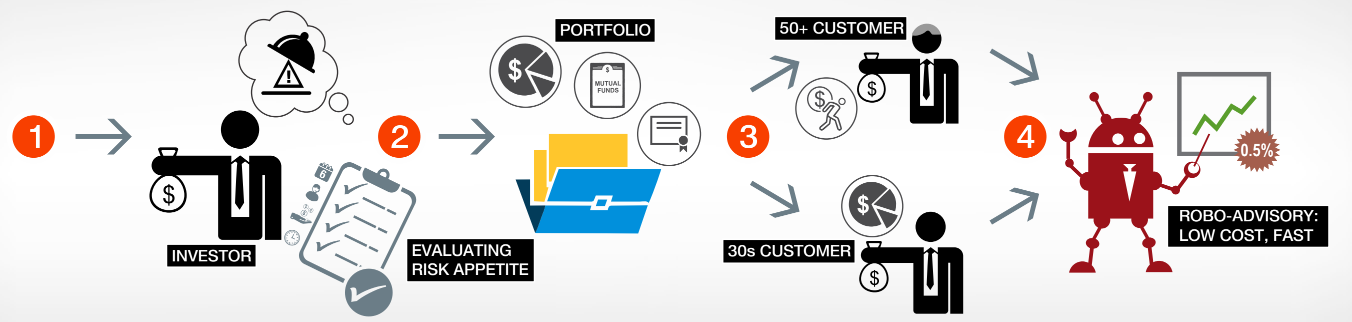


How do RoboAdvisory services work?

In the first step, the investor is provided with a questionnaire that assesses risk appetite through various inputs such as age, occupation, income, long terms goals etc.

Once the risk appetite is understood, the investor is provided a diversified portfolio consisting of various asset classes like mutual funds, equities, bonds and so on. The portfolio is customized for every customer. For example, an investor in his 50's would have more debt than equity in his portfolio. On the other hand, a 30 something would have more equity than debt on his portfolio.

Account rebalancing and tax harvesting facilities are provided for a small fee. Roboadvisory fees are as low as .5%.



Low cost distribution channel to mass affluent segment

Helps fintech startups like Wealthfront compete by lowering expenses ratios by using mobile as a distribution channel

Better and more consistent advise

Since roboadvisory services are based on algorithms, they avoid the irrationality of the crowds. In Milton Keyes words "The market can remain irrational longer than you can stay solvent" Roboadvisors provide better and more consistent advise in volatile markets.

No upfront fees or hidden commissions

In active approach to investing, the cost of research, offices, salaries, bonuses are borne by the investor. In passive investing, the investor benefits because the savings are passed to them in form of lower costs.

BENEFITS WEALTH MANAGERS

BENEFITS CUSTOMERS

Regulatory and risk compliance

A strong regulatory environment emerged after the 2008 financial crisis. Robo Advisory ensures that these regulatory compliances are met through automated portfolio alerts and risk management tools as well as digitally enabled risk and compliance tools and processes.

Faster response times

Since they are automated, Robo Advisors are able to take decisions quicker than their human counterpart. Advances in AI/Machine learning is only going to make the services better over time.

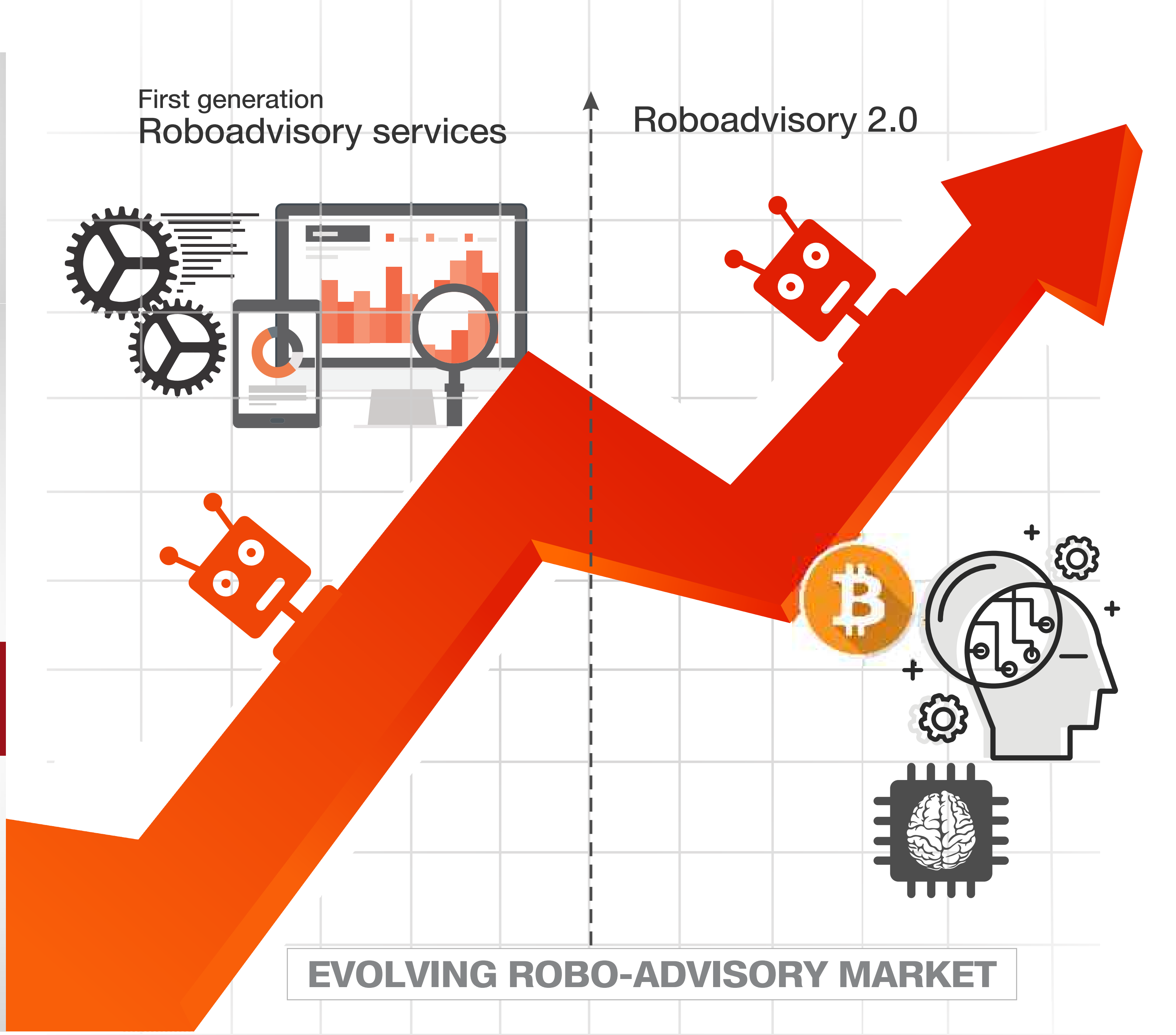
Better education for self-service investors

Self-service option creates more opportunities for learning, which drives the market further.

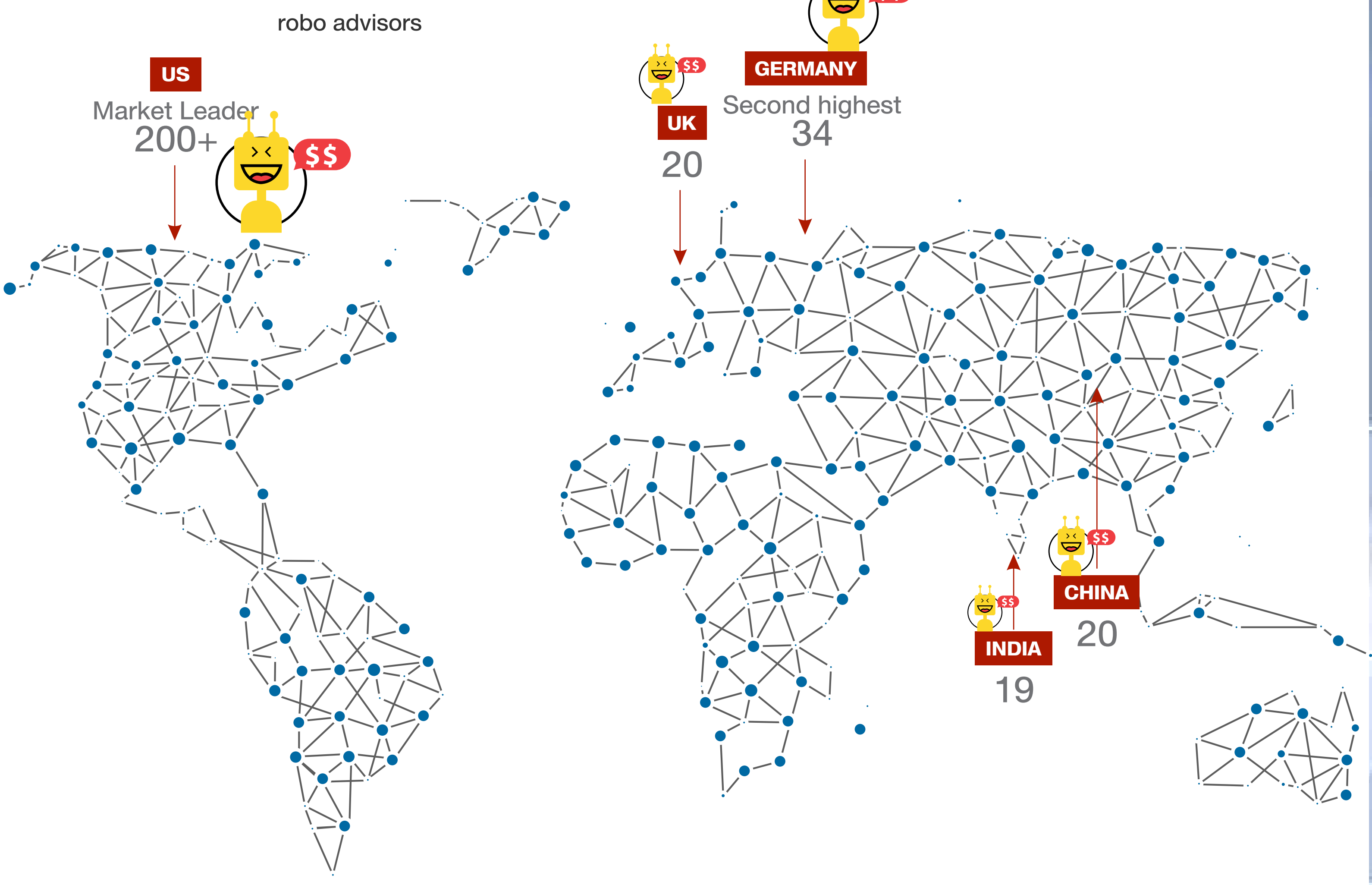
How has the market evolved over the years?

First generation roboadvisory services removed human bias in wealth management services, by bringing automation and reducing costs.

Next generation of roboadvisory services, also called Roboadvisory 2.0, leverages the developments in machine learning to understand client's finances in greater depth and detail. For example, DBS Bank's wealth advisory service is based on IBM Watson's cognitive computing technology, which is able to analyze research and reports using that information to match clients risk appetite with their investment objectives and preferences. Robo 2.0 brings new asset classes like bitcoin and venture capital startups to provide more value to the investors.



Where are Markets heading?



According to Business Insider, **the US is still the market leader, with more than 200 robo advisors. It is followed by Germany (34), UK & China (20) and India (19).**

In the **US market**, roboadvisory services have shown a significant uptake in the market. New services like Betterment and Wealthfront have significant traction in the market. Incumbents are also making quick inroads into digital and scaling quickly.

In **Europe**, there are banks providing roboadvisory services on their own or as white labeled services. Next generation services leveraging self-learning artificial intelligence for scanning client portfolios are becoming popular. Leading players include FIncite, Wealthify, easyfollo, Deutsche bank.

In **India**, fintech startups as well as incumbents have launched roboadvisory services in the last few years. Services include autopilot advisory services for the new investor to providing full services for the matured investor with complex financial requirements. Some of the leading players include FundsIndia.com, Aditya Birla MyUniverse, Scripbox and more.

The economic slowdown in **China** has piqued the interest of its middle class in roboadvisory services. Ant Financial's YueBao wealth management platform has gained significant traction in the last few years. Startups like Xunji, a unit of Pintec group has grown in popularity in millennial segment. According to expert, Baidu, Tencent Group, Aliba are best placed to unlock customer data to drive innovation in this market.

7

Conversational Commerce

The New Kid on the Block

One fine Monday Morning;

Me : Hey Bruce! Good Morning!
Bruce : Good Morning Nelson! How can I help you today?
Me : If you could tell me how much I spent last night?
Bruce : Sure. You spent Rs 45,000/-.
I looked for:
Date: 23/04/2017 to 24/04/2017
Transaction Type: Debit
Category: Entertainment
Me : Are you kidding me? Is that really how much I spent last night?
Bruce : Do you want details of your transactions?
Me : No. That won't be necessary? Could you ask Rohan to pay the money he owes me?
Bruce : Rohan owes you Rs 50,000. Should I send him a reminder about the same?
Me : Just make that 25,000 for now. And do mention it's urgent.
Bruce : Message "Hey Rohan! Sorry to bother you on a Monday morning. If you could help me with Rs 25,000/- as I am running short of funds. Warm regards- Nelson" Should I send this message to Rohan?
Me : Yes, Please!
Bruce : Sent. Anything else I can help you with?
Me : Nothing much! I just need to rest. This weekend has been one hell of a ride!
Bruce : Do you want me to book an Uber ride for you?

A few years back, I could say the above conversation was a work of my imagination; of how I expect an AI to converse with the user. But today, the fiction is rapidly turning into reality. The current buzz word in the world of ecommerce and customer experience is 'ChatBots'!

Social Media is abuzz with the talks of Facebook's annual developer summit, F8 held on 18th April, 2017 at McEnery Convention Center in San Jose, California; the whole world was watching it live. One key aspect of the announcement made by David Marcus, VP of Messaging Products, was about Chatbots. Facebook Messenger platform has more than 1.2 billion users, transmitting over 2 billion messages monthly, connecting people and businesses, in the presence of 100,000 active bots.

Facebook Messenger is not the only messaging app, setting its foot into the futuristic realms of Chatbots. Messaging Apps like WeChat in China, Kik in US, Slack, Amazon's Alexa-enabled Echo, Operator, Google's Allo, Snapchat's Discover +SnapCash, Telegram, Apple's Siri, Magic, and a few others have already started making phenomenal progress in the field of 'Conversational Commerce', as they call it. But where and why did the scope of conversational commerce through messaging apps arise? According to Statista, in a study of 1000 US customers, 44% said they'd prefer AI chatbots for customer relationship management. A Forrester research stated that upwards of 3 billion consumers in the world are heavy users of messaging platforms and prefer silent conversations over verbal ones. So all it took was, to connect the dots and thus the origin of conversational commerce; where brands connect with consumers on a single messaging platform.

As defined by Social technology expert, Chris Messina, conversational commerce is,

"...utilizing chat, messaging, or other natural language interfaces (i.e. voice) to interact with people, brands, or services and bots that heretofore have had no real place in the bidirectional, asynchronous messaging context. The net result is that you and I will be talking to brands and companies over Facebook Messenger, WhatsApp, Telegram, Slack, and elsewhere before year's end, and will find it normal." (Read full article here: https://medium.com/chris-messina/2016-will-be-the-year-of-conversational-commerce-1586e85e3991)

The key trends driving this movement are:

- *Growing usage of messaging platforms*
- *Inflection points being reached in AI and Natural Language Processing (NLP)*
- *Rise of sensors, wearables and advances in data science and analytics*
- *Integration of seamless payment technology into third party applications via APIs*
- *Increased sophistication of notifications that are context-aware to provide an intelligent interface layer to consumers*

Well, what does this mean for the consumers? Simply put, it talks about an era of technological advancement when you will never have to leave a messaging platform in order to perform any daily activity. Shopping, Advertising, CRM, Transport bookings, Banking; every internet service will happen on one platform. Kasisto, the startup that helped create Siri, is working with banks across the globe to provide a simpler way to watch your money- or even control it. Kasisto stated that the essence is to do things that you can't do in other ways. Banks across the globe are jumping on the ChatBot bandwagon to provide Internet services to their customers. Banks today, are already providing their own, voice and text-enabled, digital assistants to help customers in their day-to-day transactions.

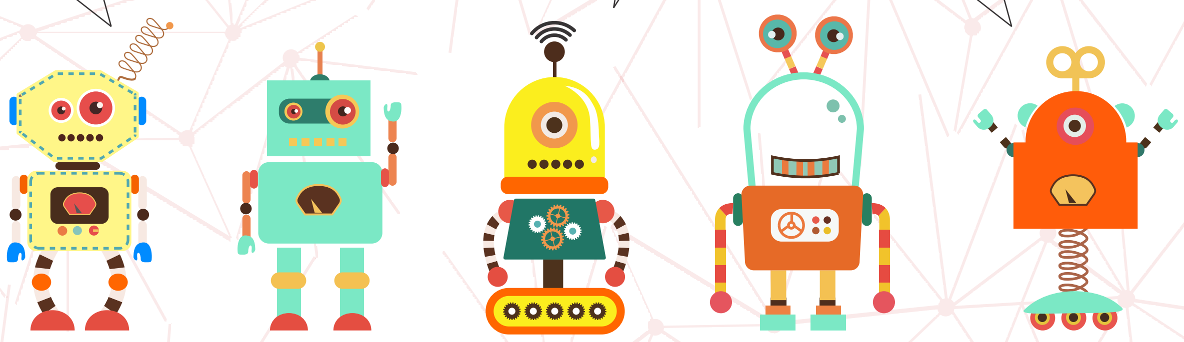
DBS Singapore is working with Kasisto to integrate banking services in a messaging platform using AI. This, although in its early phase, looks very promising for the banking of the future. DBS talks about banking being embedded in other things of life. Capital One with Amazon's Alexa had provided banking services where customers can check their balance, make payments, review recent transactions and understand their spending habits using voice commands. MasterCard and Amex let customers to access their accounts and perform daily activities through Facebook Messenger.

A few examples of Banks and other FI using chatbots for payments:

Bank of America
Erica
Text and voice enabled chatbot;
Sends customer notifications,
identifies areas ofsaving money,
provides updates on FICO score,
facilitates bill pay within BoFA app.

Ally Bank
Ally Assist
Speech and text enabled assistant;
Enables customers monitor accounts
and transactions, pay bills, make
transfers and deposits, and track
spending and saving patterns

DBS Singapore
DigiBank
Voice and text enabled assistant;
Customers can review their transaction
history, check their current interest rate,
make payments and money transfers,
and answer banking queries



Capital One
Eno
Text enabled chatbot;
Allows customers to find out
upcoming bills, check account
balances and pay credit card
bill using voice

Barclays Africa
Chatbanking
Extends banking to Social Media platforms;
Enables customers to check balance,
make payments to friends, review recent
transactions, and pay bills and purchase
data from Social Media platforms

Source: https://www.abe.ai/blog/10-big-banks-using-chatbots-boost-business/

Telecom Operators have used AI for their Customer Service for quite some time now. Now, they are trying to integrate other services including mobile banking through Chatbots. Orange France is launching its own personal assitant 'Djingo' to gain a first movers advantage over others. In light of the launch of Orange Bank, a fully virtual bank to be launched later this year, Djingo will enable its customers to manage all financial services through the mobile banking app. Djingo will also let its customers to control Orange TV.

The current trend of conversational commerce will allow a seamless interaction of all services across platforms; Think about being able to browse through products, get assistance with purchases, pay for services, share the moment on social media, manage your accounts, move money across accounts, register and invite friends on new mobile money platforms, and much more; all while staying on one messaging app. Life seems much simpler, doesn't it?

Although the advancement in the field of conversational commerce promises to change the way brands communicate with customers or how consumers will access all internet services on one messaging platform; it's too early to assess the impact of Chatbots on our daily activities and their place in our lives or maybe it's not?

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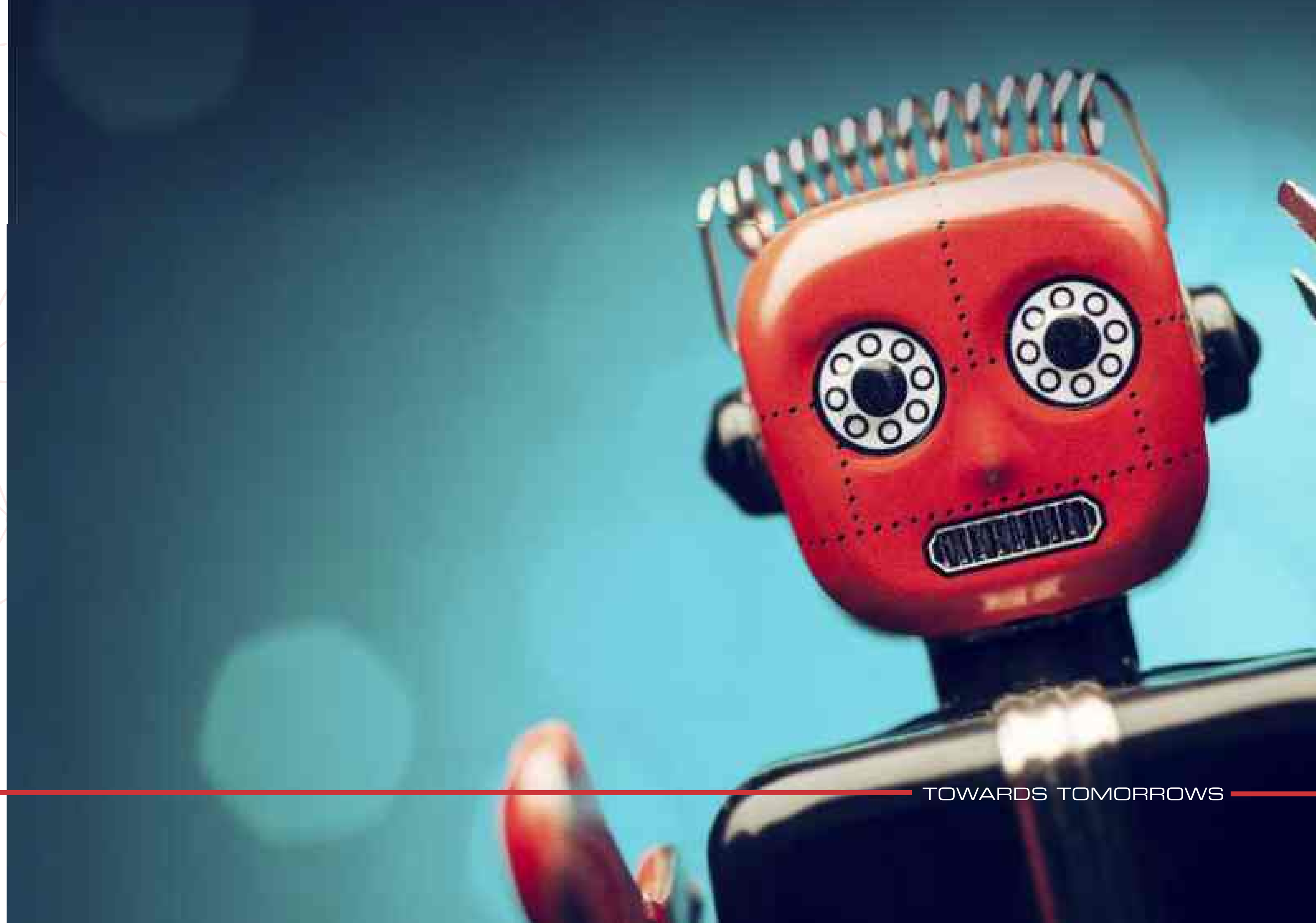
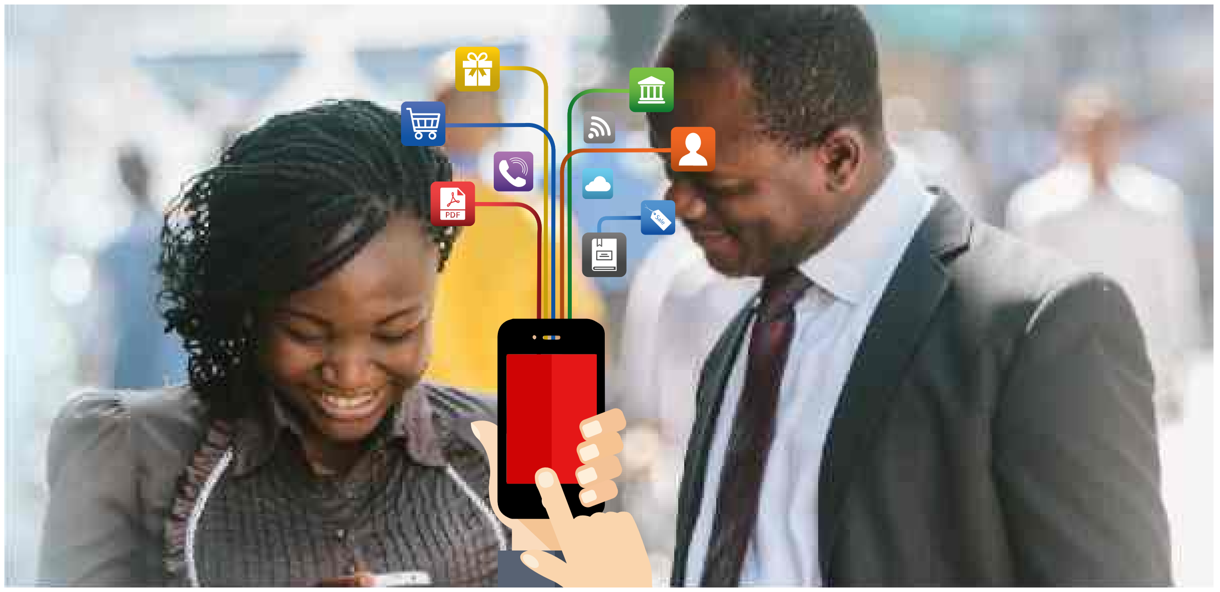


8

Unified PAYMENTS ACCEPTANCE FOR Merchants

In the second half of the twentieth century, credit cards and debit cards ushered financial transactions into digital payments arena. Physical cards continued to rule the digital payments industry for many years. However the evolution of digital payments has accelerated in last decade. Increase in mobile phone penetration, wider access of internet and development of technologies like NFC, QR Code and Biometrics has spurred the digital payments growth. The best part is that the growth of digital payments is happening in both developed and emerging countries, making the global economy cash-light.



All regions and countries are experiencing proliferation of digital payments channels. In developed countries along with cards and online banking, digital wallets such as Apple Pay and Samsung Pay are gaining popularity. In Africa, mobile money services like M-Pesa, Airtel Money, Orange Money, EcoCash, MTN Mobile Money, e-Dahab and Mobicash have transformed the payments landscape banking millions of previously unbanked people. Globally renowned payments processors like Visa and Mastercard are also vying for the Africa's digital payment pie through their QR Code based services mVisa and Masterpass QR respectively. In India, bank led mobile wallets like Pockets and fintech led mobile wallets like PayTM are operating in parallel with government led services like Unified Payments Interface (UPI) and Aadhaar Pay with aim to digitize payments for over a billion people. In China, Alipay and WeChat Pay dominates the payment landscape, with mobile payments set to overtake cash and plastic card payments in the country. All in all every region is teeming with digital payments channels.

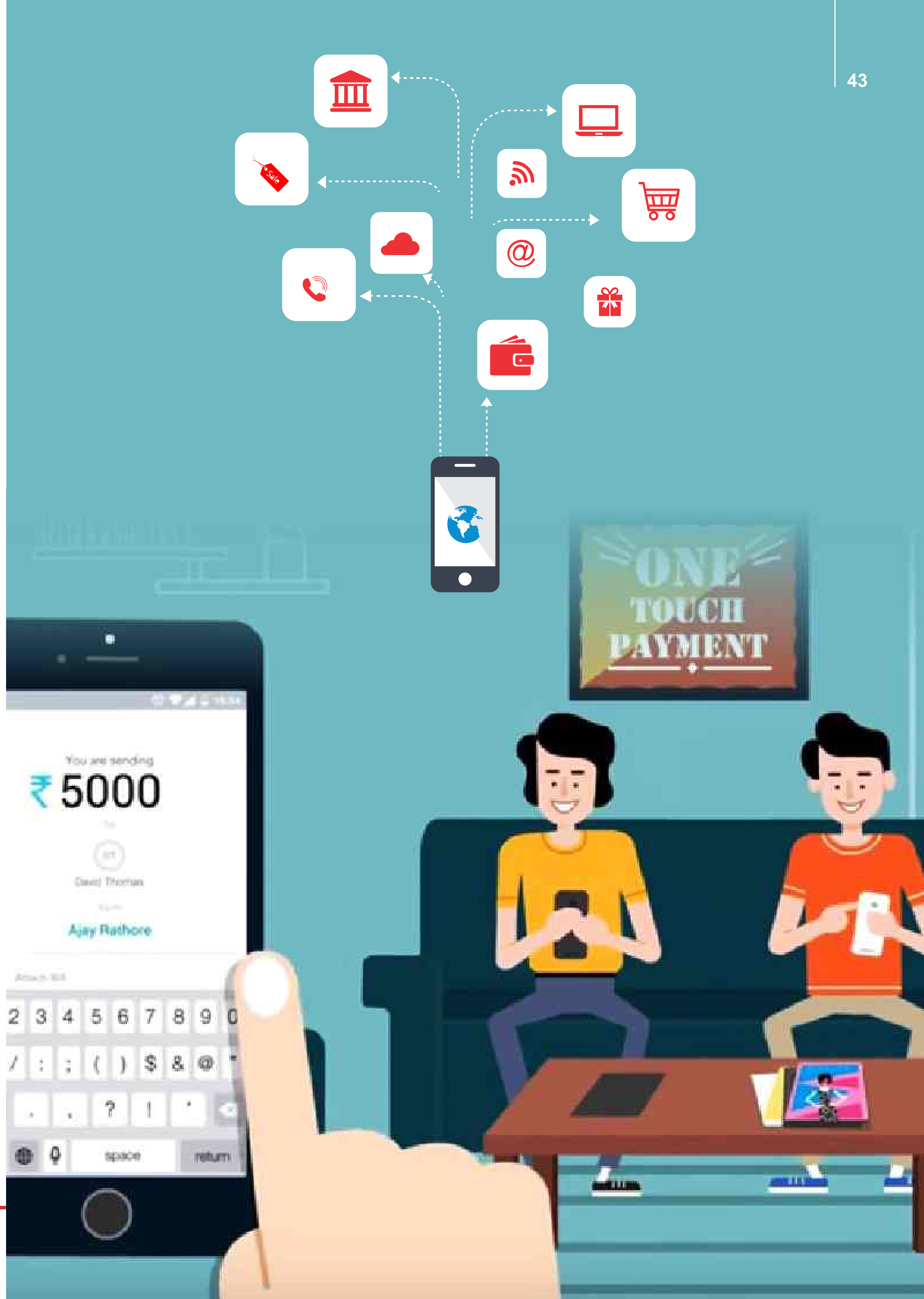
Undoubtedly, multiple digital payments channels are good for consumers as it gives them option to pay as per their convenience. However, for merchants too many payments options are overwhelming and most merchants find it tough to keep up with new innovation and increasing consumer demand. Merchants find it difficult to download multiple payment apps, install different costly payment acceptance hardware, remember multiple usernames and passwords and properly reconcile all channels. A single aggregator for all digital payments channels is need of the hour. This is where Unified Payments Acceptance Platforms for Merchants step in.

Unified Payments Acceptance Platform is a win-win for both merchants and the merchant acquirers or banks. For merchants, Unified Payments Acceptance Platform provides a single application for accepting multiple digital payments instruments such as cards, digital wallets, mobile money wallets, Unified Payments Interface (UPI), QR code based payments (like mVisa, Masterpass QR, Bharat QR) and Biometric payments (like Aadhaar Pay) across channels such as in-store, applications and the web thereby significantly reducing the barriers to adoption of new technologies. With a single application for multiple payment instruments, merchant just need to remember one username and password or he can simply log-in to the application with his biometric credentials. More importantly, Unified Payment Acceptance application simplifies reporting and reconciliation. Merchant gets a single dashboard view of his sales through all digital channels allowing him to take quick and informed business decisions. With collated cash flows properly recorded, merchants are able to qualify for loans and eventually grow business. For merchant acquirers and banks, Unified Payments Acceptance Platform provides a unified merchant & transaction management portal on the back end simplifying operations. Many Unified Payment Acceptance applications allow self on-boarding (with Know Your Customer (KYC) details entered in the mobile phone application and documents being scanned by camera and sent to the merchant acquirer or bank). This significantly reduces time and cost to on-board merchants.

KCB, a leading Kenyan bank has moved towards unified payments acceptance. KCB has launched MyKash service which allows businesses to accept payments from multiple payment platforms e.g. KCB Mobi, M-PESA, M-Visa, PesaLink et al. The payments are settled in real time into merchant's collection accounts. The service uses a mobile phone and no additional device is required to make or receive payment. KCB will also launch a MALIPO Merchant Portal that will enable businesses to do invoice management, transaction reconciliation and print transaction receipt making it easy and convenient for merchants to accept payments across digital channels. Businesses will be able to maintain financial records and with the improved cash flows they are able to qualify for lending.

Source: https://ke.kcbgroup.com/images/downloads/MyKash_FAQs.pdf

KC B is not just one off example. With rapid proliferation of digital payment channels, many merchant acquirers and banks across developed and emerging markets are adopting unified payment acceptance approach. This approach is helping them to keep with new technologies cost effectively and meet the merchant's need of an end to end solution that simplifies digital payment acceptance and optimizes growth across channels.



AWARDS

Aegis Graham Bell Awards
Innovation in mCommerce for
Airtel Money Niger

Cashless Africa Award
Best Low Remittance Provider for
EcoCash Diaspora

West Africa Mobile Awards 2017
Social Impact award for
Airtel Money Niger

Asia Communication Award
The Social Contribution Award for
Idea Cellular Private Recharge

The RemTECH Award
Visionary Game Changer for
EcoCash Diaspora

Juniper Research Future Digital Awards
Highly commended in Mobile Payments Best Consumer Offering category for
EcoCash Merchant Payments

Customer Experience Asia Excellence Award-Gold
in 'Best Use of Mobile' categories fpr
EcoCash

Customer Experience Asia Excellence Award-Silver
in 'Best Digital Experience Award' for
EcoCash

Global Telecom Awards
Mobile Money Mastery

ANALYST MENTIONS

Mahindra Comviva has been mentioned in nine **Gartner Hype cycles**, ranging from digital wallets to mobile money.

- Hype Cycle for ICT in India, 2017
- Hype Cycle for ICT in Africa, 2017
- Hype Cycle for Personal Technologies, 2017
- Hype Cycle for ICT in Latin America, 2017
- Hype Cycle for Communications Service Provider Strategy, 2017
- Hype Cycle for the future of CSP Network Operations, 2017
- Hype Cycle for Digital Banking Transformation, 2017
- Hype Cycle for Digital Commerce, 2017
- Hype Cycle for Digital Marketing and Advertising, 2017
- Juniper Research-Mobile Payment Security - Q2 2017
- Juniper Research - Contactless Payments
- Market Research Future - Global Mobile Money Market Research Report- Global Forecast 2027

THE BUSINESS OF TOMORROWS

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