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Mobile Banking in Africa: Taking the Bank to the People

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KEY ISSUES

- Mobile telephony penetration in Africa has increased exponentially from less than 2 million subscribers in 1998 to over 400 million in 2009.
- Mobile banking offers an opportunity to serve the "unbanked": only 20 percent of African families have a bank account.
- Mobile banking is staging a true "revolution" in access to finance. A mobile phone can serve as:
  a virtual bank card;
  a point of sale terminal;
  an ATM;
  an internet banking terminal.
- Mobile banking offers more opportunities for partnerships between banks, non-bank financial institutions; mobile telephony enables MFIs and IFIs to increase access to finance, especially in rural areas for households and SMEs.

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1 – Introduction

Improving access to financial services can contribute to transforming peoples' lives in developing countries. However, the majority of the ordinary people in these countries still have limited access to these services. Today, an estimated 2.7 billion people in developing countries have no access to financial services. Over a billion people in Africa, Latin America and Asia are currently without bank accounts but do have a mobile phone. This number is set to reach 1.7 billion by 2012[1].

In Africa, the majority of the population has no access to banking services, with only 20% of African families having bank accounts[2]. For instance, in 2007, only about 30% of household in Kenya had bank accounts; and in Benin, with a population of 7 million had only 35 bank branches in 2006.[3] The limited access to financial services in Africa stems particularly from deficient infrastructure, physical-geographical isolation or inaccessibility, financial illiteracy, all of which culminate into exceedingly high cost of providing banking services. Ethiopia, Uganda and Tanzania for instance, each have less than one bank branch per every 100,000 people compared to 100 in Spain. This ratio however shows a high disparity across the continent, with Namibia having more than four, Zimbabwe more than three and Botswana nearly four bank branches per 100,000 people.

Sub-Saharan Africa (SSA) has the lowest deposit institution penetration in the world standing at an average of 16.6% compared to 63.5% in developing countries.[4] This level of penetration gives 166 banks per 1,000 adults for the SSA region. Again there is a wide variation among countries in SSA, with Guinea-Bissau recording the lowest 0.6% and Mauritius the highest of over 210% deposit account penetration. Most of these deposits in SSA are held in commercial banks, with few exceptions such as in Niger, Burkina Faso, Cote d'Ivoire and Benin

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[1] Efam Dovi, 2008, 'Boosting Domestic Savings in Africa', Vol. 22, No. 3, www.un. To invest more, countries must tap assets now outside the banks , www.un.org/ecosocdev/geninfo/afrec
[2] Same as Foot Note 1.
[3] Mwangi Kimenyi and Njuguna Ndungu, 2009 October, Expanding rhe Financial Services Frontier: Lessons From Mobile Phone Banking in Kenya, Brookings, www.brookings.edu/media
[4] Financial Access 2010, SSA Factsheet, CGAP-World Bank, www.cgap.org/financialindicators

"It is this gap in the financial services market that is creating a unique niche for mobile phone banking to develop on the continent, enabling a growing number of people to access financial services for the first time"

"Subscribers can now open accounts, check their balances, pay their bills, transfer money, and cater for their daily basic needs"

"In 1998 there were less than 2 million mobile phone users in Africa"

which have more deposits in microfinance institutions (MFIs), and Burundi in cooperatives and credit unions. Even Africans with bank accounts often face high charges for moving their cash around, due to high transactions costs. It is this gap in the financial services market that is creating a unique niche for mobile phone banking to develop on the continent, enabling a growing number of people to access financial services for the first time.

In this context, new technology-based financial services, such as mobile phone banking and the use of smartcards, have the potential to substantially increase people's access to finance. In South Africa, the DRC, Zambia and Kenya for instance, mobile phone banking is taking services to remote areas where conventional banks have been physically absent. Subscribers can now open accounts, check their balances, pay their bills, transfer money, and cater for their daily basic needs. Mobile phones are also being used now for other public services such as monitoring elections and delivering public health messages.

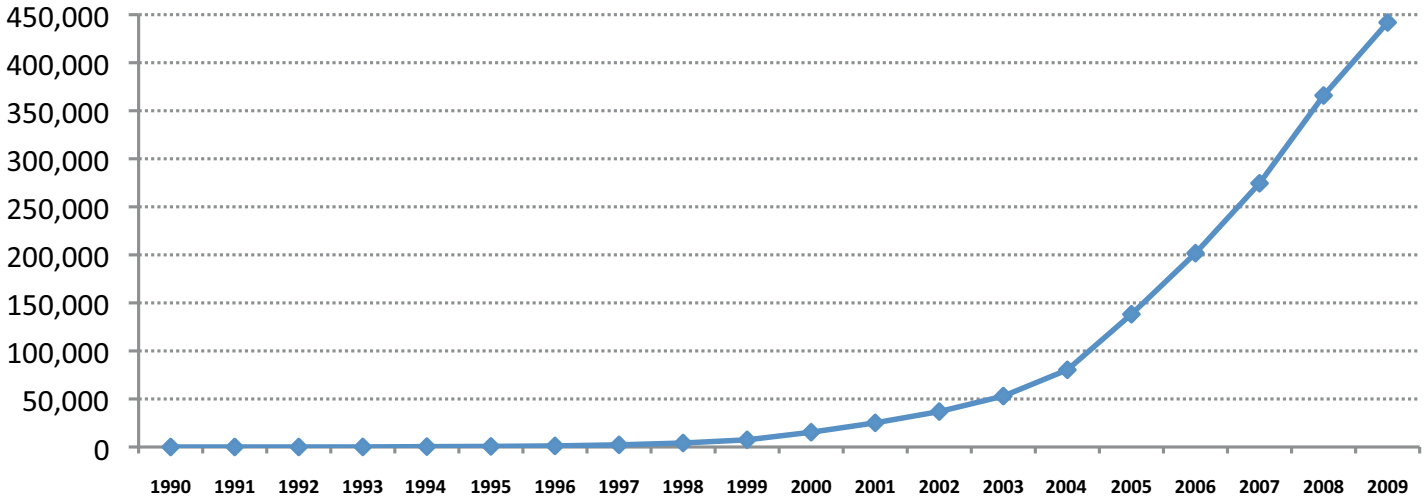
In the past 30 years, three (3) products that are seen to have had the most impact on the world are in the ICT sector: the internet, PCs and mobile phones. Ofthese, the mobile phone has the highest penetration in developing countries. For instance, between 1998 and 2009, mobile phone penetration in China increased from 1.92 per 100 people to 55.9 per 100; in India it rose from 0.12 per 100 to 44.7 per 100 people. In this period, Africa also witnessed a significant increase from 0.53 per 100 people to 42.82 per 100 people.[5] Many African countries also experienced robust increase in mobile penetration during 2003 and 2009: from 45.4 per 1000 people in 2003 to 937.94 per 1000 in 2009 in Algeria; from 248.09 per 1000 to 961.19 per 1000 in Botswana; from 359.88 per 1000 to 926 per 1000 in South Africa; and from 46.80 per 1000 to 486.52 per 1000 in Kenya during the same period,[6] At the same time, the average price of a '2G handset' decreased from USD150 in 2003 to USD75 in 2008[7]. The annual growth rates of mobile phone penetration in the developing world has ranged between 30% and 50% or higher, and penetration has been rapidly increasing.[8]

The rapid development in Africa's ICT sector, particularly mobile telephony is sending a strong message about the continent's potential to innovate. Africa is now considered as the fastest emergent continent in the ICT sector growth. Mobile phone penetration has exploded since 2000 (Figure 1). Most of the operators in this market are local firms. In 1998 there were less than 2 million mobile phone users in Africa. The number has grown to over 400 million in 2009[9] (Table 1, and Annex 1). The compounded annual growth rate is around 2000% over a decade and there is still potential for further growth.

However, the mobile telephony industry still faces a number of challenges.

[5] Jerry Hausman, "Mobile phones in developing Countries", May 2010, www.crei.cat/conferences/cornucopia/confpapers; and ITU, World Telecommunication/ICT Indicators Database 2010, 1th Edition.
[6] See Annex 2.
[7] Jerry Hausman, ibid.
[8] Jerry Hausman, ibid.
[9] www.worldbank.org/connectafrica.

Figure 1: Africa - Mobile cellular telephone subscriptions (Thousands)



Source: International Telecommunication Union, World Telecommunication/ICT Indicators Database 2010, 14th Ed.

Penetration rates (mobile subscriptions per 100 people) vary from under 10% in Ethiopia to nearly 100% in Gabon, with an average of about 33% for the whole continent.[10] The mobile phone revolution continues to leave large parts of the continent behind. While countries like South Africa (88%) and much of North Africa (e.g., Algeria 81%) are approaching 100% mobile penetration, in Ethiopia, Burundi, the Central African Republic, Eritrea and Rwanda it is less than 7%. Low incomes, illiteracy and 'large signal black spots' are key obstacles to the acquisition and use of mobile phones. These obstacles are further aggravated by high taxes, which in some countries such as Tanzania and Uganda can be as high as 30% of overall charges.

This brief seeks to examine how the boom in mobile phone usage in Africa can be tapped to accelerate the provision of financial services with illustration from Kenya and South Africa. It illustrates how mobile phone innovation is providing e-banking services to the ordinary people and offering a diverse range of financial services, especially to the unbanked people. It further discusses how access to this new technology may promote financial sector deepening in the continent.

"The mobile phone revolution continues to leave large parts of the continent behind"

[10] The mobile phone 'revolution' in Africa: Rhetoric or reality? Sebastiana Etzo and Guy collender, http://afraf.oxfordjournals.org/content/109/437/659.extract

Table 1: Africa - Mobile cellular telephone subscriptions (post-paid + prepaid) (Thousands)

Country	2003	2009	Annual Growth rates %(2003-2009)
Algeria	1,446.90	32,729.80	68.17
Angola	350.00	8,109.40	68.84
Benin	236.20	5,033.30	66.51
Botswana	445.00	1,874.10	27.08
Burkina Faso	238.10	3,299.00	54.98
Burundi	64.00	838.40	53.54
Cameroon	1,077.00	7,397.20	37.87
Cape Verde	53.30	392.00	39.45
Central A Rep.	40.00	168.00	27.02
Chad	65.00	2,686.00	85.94
Comoros	2.00	100.00	91.94
Congo	330.00	2,171.00	36.89
Dem. Rep. of Congo	1,246.20	10,163.40	41.88
Cote d'Ivoire	1,280.70	13,345.90	47.79
Djibouti	23.00	128.80	33.26
Egypt	5,797.50	55,352.20	45.65
Equatorial Guinea	41.50	445.00	48.50
Eritrea	...	141.10	....
Ethiopia	51.30	4,051.70	107.13
Gabon	300.00	1373.00	28.85
Gambia	149.30	1433.00	45.78
Ghana	795.50	15,108.90	63.34
Guinea	111.50	5,607.00	92.12
Guinea-Bissau	1.30	560.30	174.84
Kenya	1,590.80	19,364.60	51.67
Lesotho	126.00	661.00	31.82
Liberia	47.30	842.00	61.59
Libya	127.00	5,004.00	84.47
Madagascar	283.70	5,997.40	66.28
Malawi	135.10	2,400.00	61.53
Mali	247.20	3,742.00	57.28
Mauritania	351.00	2,182.20	35.60
Mauritius	462.40	1,086.70	15.31
Morocco	7,359.90	25,310.80	22.86
Mozambique	435.80	5,970.80	54.69
Namibia	223.70	1,217.00	32.62
Niger	82.40	2,599.00	77.75
Nigeria	3,149.50	73,099.30	68.89
Rwanda	130.70	2,429.30	62.75
Sao Tome & Principe	4.80	64.00	53.99
Senegal	782.40	6,901.50	43.74
Seychelles	49.20	92.30	11.06
Sierra Leone	113.20	1,160.00	47.38
Somalia	200.00	641.00	21.42
South Africa	16,860.00	46,436.00	18.39
Sudan	527.20	15,339.90	75.38
Swaziland	85.00	656.00	40.58
Tanzania	1,942.00	17,469.50	44.21

Country	2003	2009	Annual Growth rates %(2003-2009)
Togo	243.60	2,187.30	44.17
Tunisia	1,917.50	9,753.90	31.14
Uganda	776.20	9,383.70	51.50
Zambia	241.00	4,406.70	62.31
Zimbabwe	363.70	2,991.00	42.07
Africa	53,003.50	441,897.60	42.40

Source: International Telecommunication Union, World Telecommunication/ICT Indicators Database 2010, 14th Ed.

2 – Mobile Banking and Access to Finance in Africa

Banks are recognizing the potential of reaching millions of prospective customers, especially the rural population who account for more than 60% of Africa's total population and have no access to banking services. The rural commercial bank branch network is still underdeveloped (Table 2). However, since more than 50% of the adult population in Africa has access to mobile telephone, mobile banking could enable the rural population to have access to financial services as demonstrated by the case of Kenya and South Africa.

The cost of formal banking in Africa is high; in some countries the minimum deposit can be as high as 50% of per capita GDP. In addition, internet and broadband subscription are still low (Annex 1), making internet banking out of reach for most of the population. In this regard, mobile banking can be used to provide financial services to the unbanked.

Financial institutions and mobile phone service providers are introducing resourceful methods of bringing these unserved populations into the formal economy using mobile phones. For the banks, the main advantages of the mobile phone lie in its capabilities to reach everywhere. Its power is in transforming the economics of service delivery, especially by reducing the costs of financial transactions[11].

Mobile banking is a powerful way to deliver savings services to the billion people worldwide who have a cell phone but no bank account. It has a number of advantages over traditional banking methods as it breaks down geographical constraints; it also offers other advantages such as immediacy, security and efficiency. These advantages, some of which can be quite practical under remote field conditions are briefly highlighted below.

"For the banks, the main advantages of the mobile phone lie in its capabilities to reach everywhere"

"It also offers other advantages such as immediacy, security and efficiency"

[11] I. Mas and K. Kumar (2008), "Banking on Mobiles: Why, How, and for Whom?" QCGAP, No. 48.

Table 2: Bank Presence in Rural Areas in Africa

Number of branches in rural area*			
Country	2004	2009	Growth (2004-2009) (%)
Algeria	28	128	357.1
Angola	0	0	…
Botswana	276	350	26.8
Cameroon	20	24	20
Chad	2	2	0
Comoros	50	92	84
Equatorial Guinea	0	0	…
Ethiopia	32	2662	8218.8
Gabon	5	8	60
Kenya	1133	2056	81.5
Lesotho	0	10	…
Libya	359	389	8.4
Madagascar	860	1166	35.6
Mauritania	n.a	1	n.a
Mauritius	186	268	44.1
Mozambique	394	90	-77.2
Namibia	0	0	…
Rwanda	19	556	2826.3
Seychelles	20	22	10
Sierra Leone	12	31	158.3
Swaziland	0	45	…
Tanzania	12	46	283.3
Uganda	287	416	44.9

Source: WDI 2010, CGAP Report data 2010
*Number of Bank branches in rural area = Total Number of branches in country – Number of branches in urban area

"A POS is used to pay for goods or services at the store"

First, the mobile phone can serve as a virtual bank card where customer and institution information can be securely stored, thereby avoiding the cost of distributing cards to customers. In fact, the subscriber identity module (SIM) card inside most if not all GSM phones is in itself a smartcard (similar to the virtual bank card). Thus, the bank customer's PIN and account number can be stored on this SIM card to perform the same functions as the bank virtual card.

Second, the mobile phone may serve as a point of sale (POS) terminal. As such a mobile phone may be used to transact and communicate with the appropriate financial institution to solicit transaction authorization. This is the same functions of a POS terminal at malls, retail, or other stores. A mobile phone can duplicate this functionality with ease.

Third, the mobile phone can also be used as an ATM. A POS is used to pay for goods or services at the store. If we consider cash and access to savings as "good and services" that customers buy at the store, then that POS will also serve as cash collection and distribution point which basically is the function of an automatic teller machine (ATM).

Fourth, the mobile phone may be used as an Internet banking terminal. This providing two fundamental customer services: a) instant access to any account; and b) the ability to make payments and transfers remotely. As such, the mobile phone device and wireless connectivity bring the Internet terminal into the hands of otherwise unbanked customers.

3 – M-Banking Success Stories in Africa

3.1 The Case of Kenya

Only 19% of the adult population in Kenya has access to a formal bank account[12] and banking services in Kenya are largely restricted to urban populations. Cellular operators are providing banking services in the country with M-PESA and M-KESHO by Safaricom and ZAP by Zain.

The number mobile telephony subscribers, which stood at 4.5 million in 2005, grew by 34.2% to 17.4 million in 2009 from 12.9 million in 2008.[13] It is estimated to be more than the 20 million in 2010. The mobile telephony capacity has also increased from 6.8 million in 2005 to 29.0 million in 2009[14].

M-PESA - The M-PESA mobile money transfer service, in was launched in 2007 with 900,000 subscribers[15], now has about 12 million customers (in 2010). The number of M-PESA clients grew by 61% from 7.38 million in July 2009 to 11.89 million in July 2010, which is about 30% of Kenya's population[16]. This compares favorably to the current 4.5 million customers of the existing financial institutions in Kenya.[17] There were 19,500 M-PESA agents as at the end of July 2010 compared to 1,200 in 2007.

"This compares favorably to the current 4.5 million customers of the existing financial institutions in Kenya"

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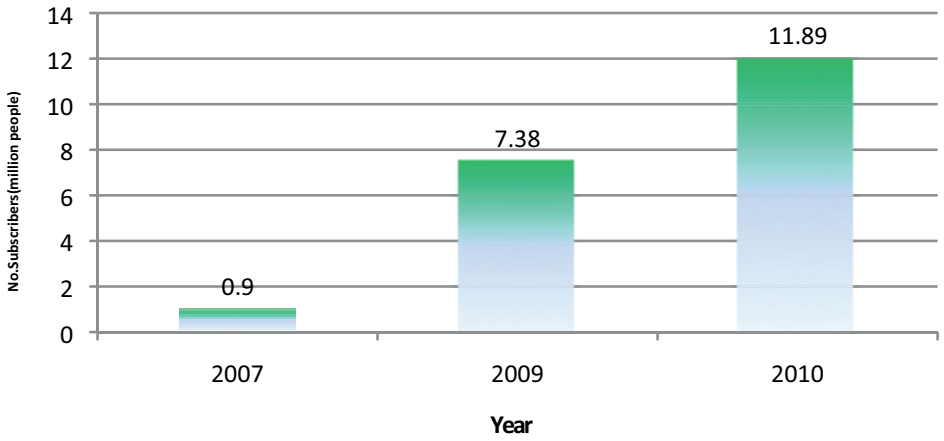
Figure 2: Increasing Trend of Mobile Banking in Africa



[12] Ignacio Mas and Dan Radcliffe, Bill and Belinda Gates Foundation, 2010 March, Mobile Payments go Viral: M-PESA in Kenya.
[13] Kenya, Economic Survey 2010.
[14] Kenya, Economic Survey 2010.
[15] T. Omwasa, 2009, M-PESA : Progress and Prospects, Innovations Case Discussions, http://www.strathmore.edu/pdf/innov-gsma-omwansa.pdf
[16] In July 2010 alone, about 1.7 million new M-Pesa subscriptions in Kenya were recorded.
[17] Melida and Gates Foundation,Global Development Program, Nov 2010, "Financial Services for the Poor: Srategic Overview", www.gatesfoundation/financialservicesfor thepoor.

"M-PESA financial services have low value and high volume, and are generating both significant returns and job opportunities"

"The M-PESA agents who bank with Barclays Bank will also be able to purchase e-float for their daily operations"

M-PESA services have evolved with time and now organizations are able to pay employee salaries using the Bulk Payment function while mobile phone users are able to transfer money and pay for their utility bills using the service. The number of M-PESA monthly transactions increased from 0.35 million in July 2007 to 16.75 million in July 2009, and the monthly value rose from USD14.2 million in July 2007 to USD536.6 million in July 2009.[18] As at the end of July 2010, the service had transferred Sh525.84 billion (about USD 6.62 billion) since its inception in 2007 and the monthly average amount of money moved through the system has increased by 30%. While the amounts of cash being transferred are often small, the sheer volume of business results in large overall movement of funds in the network. As at January 2010, cash deposits and withdrawal transactions at M-PESA outlets amounted to USD650 million per month while the average transaction was only about USD33.[19]

M-PESA financial services have low value and high volume, and are generating both significant returns and job opportunities. The services carry a minimum cost of about USD 0.46 (KES35) per transaction.[20] On average, transaction costs of bank services in Kenya are high USD1 to USD3 compared to M-PESA's USD 0.12 to USD0.15.[21] The value of M-PESA transactions was about 0.17% of commercial bank deposit in July 2007, increasing to 4.36% in 2009.[22] The growth of mobile banking in Kenya, and in particular M-PESA financial services technological innovation, has been supported by a conducive policy environment and the appropriate oversight by the Central Bank of Kenya.

In October 2010, Safaricom and Barclays Bank of Kenya signed a partnership, which allows Barclays account holders to deposit and withdraw to and from their M-PESA accounts. The M-PESA agents who bank with Barclays Bank will also be able to purchase e-float for their daily operations. This is the eighth bank, after Family Bank and Kenya Commercial Bank among others, to partner with M-PESA either as an agent or a super agent, denoting the growing co-operation between the mobile money services and mainstream banks.

In addition, Vodafone partnered with Vodacom in Tanzania and Roshan in Afghanistan in 2008 as well as with Nedbank in South Africa in 2010 targeting 13 million customers in South Africa alone to unveil an M-PESA mobile-based cash transfer services in these markets.

M-PESA International Money Transfer Product (IMT) - The M-PESA IMT service is an additional functionality to M-PESA, together with Vodafone, that provides financial services between Kenya and the UK. M-PESA has partnered with selected agents in the UK - Western Union, Provident Capital, and KenTV. The maximum amount that can be sent at any one time via M-PESA is £250, while customers in UK can send a maximum of £1000 per month. Charges for sending

[18] Mwangi Kimenyi and Njuguna Ndungu, 2009 October, Expanding rhe Financial Services Frontier: Lessons From Mobile Phone Banking in Kenya, Brookings, www.brookings.edu/media
[19] Ignacio Mas and Dan Radcliffe, Bill and Belinda Gates Foundation, 2010 March, Mobile Payments go Viral: M-PESA in Kenya.
[20] Mwangi Kimenyi and Njuguna Ndungu, 2009 October, ibid.
[21] Melida and Gates Foundation,Global Development Program, Nov 2010, ibid.
[22] Mwangi Kimenyi and Njuguna Ndungu, 2009 October, ibid.

money from UK vary between £4 and £6.90, for sending up to £250, which are only about 25% to 40% of the transfer fees charged by traditional money transfer channels such as Western Union.

In August 2009, Safaricom was authorized to transact foreign exchange business by the Central Bank of Kenya (CBK) while the UK partners were authorized by the UK Revenue & Customs (HMRC) to transact in international remittances. Following the successful pilot and launch of M-PESA IMT between UK and Kenya, Safaricom will be expanding the services to allow remittances to Kenya from other relevant markets, starting with East African countries.

M-KESHO - The latest partnership between Equity Bank and Safaricom to launch the M-KESHO account is the perfect showcase of convergence between the mobile phone and banking. This convergence has the potential of bringing over 18 million Kenyans into formal banking services.

In 2007, there were about 2.5 million bank accounts in Kenya, increasing to about 8 million accounts in July 2010 (of which 4.5 million are with Equity Bank). In addition there are 9.5 million M-PESA (representing to 40% of Kenya's adult population[23]), a third of which are held by people that are otherwise unbanked. Equity Bank is targeting these 3 million M-KESHO customers by the end of 2010.

The Central Bank of Kenya issued new agent banking regulations in April 2010, which for the first time allowed banks to engage a wide range of retail outlets for transaction handling and product promotion. This paved the way for banks to begin utilizing the M-PESA platform and associated network of M-PESA outlets as a channel.

M-KESHO accounts, like the M-PESA, have no account opening fees, minimum balances or monthly charges. M-KESHO accounts earn interest and have no limit on account balances. Other features of the account include microcredit facilities (emergency credit availed through M-PESA), micro insurance facilities as well as a personal accident cover that translates into a full cover after 1 year. M-KESHO clients can open accounts at either Equity Bank branches or at a subset of some 5000 M-PESA agents at which Equity Bank will place a bank representative and transact at any of the 17,000 M-PESA retail outlets. The technology program at the Consultative Group to Assist the Poor (CGAP), which is co-funded by the Bill & Melinda Gates Foundation, and the UK DFID is supporting Equity Bank to deliver savings accounts to the poor, unbanked people.

ZAIN ZAP - In August 2008 all Celtel operations were rebranded to Zain. The move coincided with the linking of the world's first borderless mobile service 'One Network' across two continents. Zain operates in 16 African countries serving more than 42.15 million customers (as of end December 2009).[24]

"M-KESHO accounts earn interest and have no limit on account balances"

"The move coincided with the linking of the world's first borderless mobile service 'One Network' across two continents"

[23] Ignacio Mas and Dan Radcliffe, Bill and Belinda Gates Foundation, 2010 March, Mobile Payments go Viral: M-PESA in Kenya.
[24] Burkina Faso, Chad, DRC, Republic of the Congo, Gabon, Ghana, Kenya, Madagascar, Malawi, Niger, Nigeria, Sierra Leone, Tanzania, Uganda and Zambia (and Sudan which falls under the Middle East umbrella). Zain is the market leader in 12 of the 16 African countries in which it currently operates.
[25] T. Michael Testi , Zain launches Zap Mobile Banking, targets 100Mn customers, http://www.itu.int/ITU-D/ict/newslog/Zain+Launches+Zap+Mobile+Banking+Targets+100Mn+Customers.aspx.

"It is targeting over 100 million people in Kenya, Tanzania and Uganda"

"Nearly 40% are either unemployed or work informal jobs paid in cash"

In February 2009, Zain launched ZAP M-banking service[25] in East Africa, allowing customers to send and receive money directly to their mobile handsets from banks anywhere in the world. It is targeting over 100 million people in Kenya, Tanzania and Uganda. In September 2009, ZAP expanded mobile banking service run in partnership with CitiBank and Standard Chartered Bank. ZAP allows subscribers to withdraw cash, pay for goods and services, and make money transfers to third parties. More than 10 million subscribers are already using these services within East Africa. In January 2010, Zain expanded its ZAP mobile commerce service to Niger, Sierra Leone and Malawi, as it seeks to capitalize on a growing demand for services such as mobile remittances and transfers in Africa. Zain is working with National Bank of Malawi and NBS Bank in Malawi, EcoBank in Niger, and Zenith Bank in Sierra Leone. ZAP is part of Zain's 'One Network' platform, allowing roaming customers to use the service in all six countries where it is currently available and opening up mobile commerce services to about 150 million people in Africa[26].

3.2 Mobile Banking in South Africa

South Africa is by far the country where mobile banking is most widely used on the continent. By end of March 2009, the total mobile customer base in South Africa increased by 3.8% from 2008 to over 51.9 million with the mobile penetration rate rising to 107%[27].

About half of South Africa citizens don't have bank accounts. Nearly 40% are either unemployed or work informal jobs paid in cash. Bank charges are high and banking regulations are so strict – such as proof of regular income – that they prevent many poor people form having formal bank accounts. Moreover, most South Africans live in rural or semi-urban areas where access to a bank is very limited or non-existent. Compared to other middle or high income countries in other continents, South Africa has low branch and ATM penetration (Table 3). In contrast, South Africa is the most important emerging market in terms of mobile banking potential. Some examples of major mobile banking companies in South Africa are given below.

Table 3: Bank Penetration in South Africa and other Countries

Country	Branches per 100,000 people	ATMs per 100,000 people
Belgium	53.1	67.1
Brazil	15.6	17.8
Portugal	51.6	109.1
South Africa	6	17.5
Spain	95.9	126.6

Source: Source: Financial Access 2009

[26] Roger Field, Zain targets African mobile commerce, http://www.itp.net/578761-zain-targets-african-mobile-commerce.
[27] www.companiesandmarkets.com/Summary-Market-Report/south-africa-telecommunications-report-q4-2009, South Africa Telecommunications Report Q4 2009.

First National Bank (FNB) of South Africa - The FNB has the largest mobile banking customer base in South Africa. Currently, it has over 2 million customers and attracts about 90,000 on a monthly basis. In 2009, FNB mobile banking customers made 56 million transactions worth the value of ZAR7.2 billion. The success of FNB stems from its ability to allow customers to send money to anyone in South Africa. Receivers do not need to have a bank account with FNB. They can withdraw their money from any FNB ATM at no charge. Moreover, they can withdraw all or part of their money, which they can leave in a Wallet. Money in the Wallet gives senders and receivers access to other services, such as buying airtime or transferring money to a third party.

WIZZIT Scheme - Established in 2004, Wizzit in South Africa (like M-Pesa in Kenya) has signed up 50,000 customers in the country and 250,000 at the end of 2008, and has launched pilot projects in Zambia where it intends to expand. Wizzit is expected to expand into other African countries as well and it already has been approached by potential partners from Kenya, Botswana, Namibia, Zambia, and Malawi for joint ventures. South Africans often paid couriers the equivalent of USD30–50 per transaction to deliver cash to relatives. Now they can do it for only USD0.50 through Wizzit mobile bank networks.

Flash Mobile Cash by Eezi - Known as Flash Mobile Cash, the service gives home shop owners the tools to be the bank for communities where formal banking infrastructure does not exist. "Take it Eezi" has developed a local vending solution in the rural areas in South Africa and has also expanded into co-operative banking. The company provides community service, payphones, and sells airtime and electricity through a network of over 42 000 home shops. The home shops, equipped with Shared-phone ATMs, enable communities to withdraw, deposit or borrow small amounts of cash from their local township residence. The shopkeeper, as the banker, transacts using a GSM enabled device supplied by Shared-phone. "Take it Eezi" not only provides a vending solution but also assists unbanked clients to have access to financial services. It has already created 15,000 jobs in township and rural areas in South Africa.

The MTN Banking MobileMoney Account - This Account gives clients complete access to banking flexibility. Providing access to client account from anywhere in the world, and at any time, MobileMoney puts customers in control of their finances through a secure connection using MTN cellphone.

South Africa's MTN in 2010 announced plans for a fully-fledged bank account on mobile phones, with an optional credit card. The service will be extended to the 20 countries where MTN operates, including Uganda, Nigeria, Cameroon and Ivory Coast, which combined have over 90 million mobile phone users.

Vodacom - Nedbank M-PESA - South Africa's largest mobile phone operator Vodacom has teamed up with Nedbank to unveil an M-PESA mobile-based cash transfer service, similar to the successful one operating in Kenya. It will initially allow users without access to bank accounts to transfer money using handsets and eventually pay bills and buy goods. Thanks to mobile phone giant Vodacom, and its money transfer service M-PESA, poorer South Africans may finally be able to save, pay bills, and send cash. However, in South Africa, which is a much

"Wizzit is expected to expand into other African countries as well and it already has been approached by potential partners from Kenya, Botswana, Namibia, Zambia, and Malawi for joint ventures"

more developed economy, there are many other services that currently fill that void. Thus M-PESA in South Africa, will complement existing similar services, from cash-transfer windows at grocery stores to Western Union.

4 – Challenges, Lessons and Opportunities

"Such a transformation is of interest not only for banks and MFIS"

The high growth and penetration rates of mobile telephony that is transforming cell phones into banks in pockets in Africa is providing opportunities for countries on the continent to increase affordable and cost effective means of bringing on board the large numbers of the population that has been excluded from formal financial services for decades. Such a transformation is of interest not only for banks and MFIS but also for governments and financial regulators as well as development partners who are providing support to improve the livelihood of African people through poverty reduction and sustained economic growth.

"Given the successful stories in Kenya and South Africa, m-banking services are likely to reduce by more than half the number of the unbanked African population"

Given the successful stories in Kenya and South Africa, m-banking services are likely to reduce by more than half the number of the unbanked African population, create jobs and support the growth of SMEs in the near term. If the trend were to be sustained and adopted in a number of African countries. Service providers like Vodacom, Zain and MTN which have wide continental coverage would be instrumental in pushing this agenda forward. Successful adoption of, for instance, Safaricom M-PESA and M-KESHO, and MTN MobileMoney models, by other service providers in Africa would also provide other benefits such as:

- Boosting domestic savings through expansion of financial services to the poor and rural populations.
- Increased money transfers from the diaspora at low costs – e.g., M-PESA IMT.
- Reduction in financial transactions costs, leading to lowering cost of doing business that will benefit SMEs and overall private sector development.
- Increased government revenues as a result increased corporate revenues from booming m-banking, improved corporate earnings, etc.

The mobile phone is becoming much more than a phone to the poor and the unbanked populations of Africa. It is transforming people's handsets into "banks" in their hands or pockets. Although there are challenges that a number of people are encountering in terms of high costs and low penetration of mobile phones, these can be addressed by the authorities through policy reforms and scaling up investment in the ICT sector. The lessons from the cases of Kenya and South Africa clearly demonstrate that there are colossal opportunities for private investment in the sector, which will increase access to financial services to the majority of African populations through expanded mobile phone banking services.

Partnership between banks, financial institutions, MFIs and the mobile industry players should be sought out and encouraged. In order to sustain the growth of these success stories in these countries and the rest of African countries, there is need to support a single integrated framework (between financial institutions and mobile industry) to cut costs in order to provide consumers with the convenience of banking from home, the farm or other remove areas. MFIs should upgrade their technology to be able to adopt the new mobile banking emerging technology and

should seek solutions that are user-friendly and easy to implement. The increased access to cell phones by the unbanked Africans would be the most cost-effective and economically efficient method of providing financial services to a wide segment of the African populations in the very near future.

ANNEX TABLES

Annex 1: Access to Banking Services, Mobile Phone and ICT, 2007

Country	Number of Depositors per 1,000*	Mobile phone subscribers (per 1,000 people)	Telephone mainlines (per 1,000 people)	Broadband subscribers (per 1,000 people)
Algeria				
Angola	111	283	5	1
Botswana	883	612	73	2
Cameroon	49	245	10	
Central African Republic	2	30		
Chad	6	85		
Comoros	376	64		
Djibouti	49			
Equatorial Guinea	46	343		
Ethiopia	121	15	11	0
Gabon	53	822	19	1
Ghana	522	332	16	1
Kenya	331	302	7	0
Lesotho	286	227		
Madagascar	81	119	7	0
Mauritius	2104	737	286	49
Morocco	801	649	78	15
Namibia	228	385	66	0
Rwanda	162	67	2	0
Sao Tome and Principe	234	190	48	2
Seychelles	794	909	267	41
Sierra Leone	36	143		
South Africa	1065	884	95	8
Swaziland	574	330		
Tanzania	182	202	4	
Uganda	145	137	5	0

Source: WDI 2010, CGAP Report data 2010

Annex 2: Africa - Mobile cellular telephone subscriptions per 1000 inhabitants

Country	2002	2005	2009	Annual Growth rates (2002-2009) %
Algeria	14.3	415.8	937.9	81.78
Angola	9.2	96.9	438.4	73.67
Benin	30.8	75.8	563.3	51.47
Botswana	187.5	306.6	961.2	26.30
Burkina Faso	8.9	46.1	209.4	57.01
Burundi	7.7	20.7	101	44.44
Cameroon	42.2	126.4	378.9	36.83
Cape Verde	94.4	171.2	775.3	35.10
Central AR	3.2	24.4	38	42.40
Chad	3.8	21	239.7	80.77
Comoros	...	25.2	147.9	...
Congo	69.8	163.4	589.4	35.63
Dem. Rep. of Congo	10.4	46.5	154	46.96
Cote d'Ivoire	56.8	122.1	633.3	41.13
Djibouti	19.7	54.7	149	33.52
Egypt	61.7	176.6	666.9	40.50
Equatorial Guinea	57.1	159.2	658	41.79
Eritrea	...	9	27.8	...
Ethiopia	0.7	5.5	48.9	83.43
Gabon	216.7	538	931.1	23.15
Gambia	71.9	162.2	840.4	42.08
Ghana	18.9	131.2	633.8	65.17
Guinea	10.4	20.5	556.9	76.59
Guinea-Bissau	...	67.1	347.9	...
Kenya	35.8	128.8	486.5	45.17
Lesotho	71.2	125.2	319.8	23.94
Liberia	1.6	48	213	101.12
Libya	12.6	337.7	779.4	80.27
Madagascar	10.1	29	305.6	62.76
Malawi	6.8	30.8	157.2	56.62
Mali	4.2	64.4	287.6	82.90
Mauritania	89.8	249.8	663.2	33.06
Mauritius	285.1	524.5	843.6	16.76
Morocco	210.2	406.4	791.1	20.84
Mozambique	13.2	72.2	260.8	53.15
Namibia	79	223.4	560.5	32.30
Niger	4.9	24.7	170	65.97
Nigeria	12	131.9	472.4	69.00
Rwanda	9.6	24.8	243	58.66
Sao Tome & Principe	13.6	78.3	393.2	61.71
Senegal	53	153.4	550.6	39.71
Seychelles	545.2	711.6	1095.6	10.48
Sierra Leone	14.8	...	203.6	45.43
Somalia	12.8	59.8	70.2	27.52
South Africa	296.6	706.4	926.7	17.67
Sudan	5.2	47.2	362.9	83.40
Swaziland	61.7	177.9	553.6	36.81
Tanzania	16.9	86.9	399.4	57.11
Togo	29.7	72.37	330.48	41.09

Country	2002	2005	2009	Annual Growth rates (2002-2009) %
Tunisia	59.7	575.1	949.6	48.47
Uganda	15.1	45.8	286.9	52.29
Zambia	12.7	80.9	340.7	59.99
Zimbabwe	27.1	51.9	238.8	36.46
Africa	43	150.3	438.2	39.33

Source: International Telecommunication Union, World Telecommunication/ICT Indicators Database 2010, 14th Ed.

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