Advancing Bottom of the Pyramid (BoP) Access to Healthcare:
A Case Study on Mobile Money Platforms
COVER PHOTOS:
Photos on the top and bottom left: Jacaranda Health
Photo on the bottom right: Changamka
In Kenya, mobile money technology has generated benefits to both inclusive businesses providing healthcare to the BoP and to the populations they serve. Businesses have experienced operational and strategic benefits including reduced revenue leakages and more efficient data collection for decision-making. The benefits afforded by mobile money to BoP populations include: increased access to quality healthcare, such as through mobile money-based e-vouchers that are only redeemable at accredited healthcare facilities; safe and convenient platforms for mobilizing funds to pay for healthcare products and services; increased opportunities to save for future healthcare needs; and increased access to affordable health insurance. Mobile money has also provided development partners with a means to directly channel funds to targeted beneficiaries.

Whereas mobile money is a versatile technology, in order to realize its full potential as a catalyst of inclusive business and access to healthcare, several challenges must be overcome. The featured case studies highlight challenges that are endemic to many inclusive businesses as well as those specific to inclusive businesses leveraging mobile money in the health sector. The general challenges include: (i) difficulties identifying partner organizations with healthy risk appetites and sustainable commitments to serve high-risk markets; (ii) low levels of literacy and knowledge of concepts such as insurance that are crucial to utilizing mobile money-based products; and

1 The BoP is defined as people living on less than US$8.4 per day (World Bank, 2015c).
2 Businesses that include the poor in their operations as employees, producers and business owners or develop affordable goods and services needed by the poor (UNDP, 2010a).
(iii) socio-cultural beliefs that hinder the use of mobile money-based products.

Foremost among the challenges unique to inclusive businesses using mobile money are:
(i) limited access to the capital required to develop user-friendly mobile money technologies;
(ii) unfavourable regulatory and legal provisions, which limit interoperability across systems; and
(iii) limited availability of agents to educate potential clients on mobile money-based products and register new clients. Limited interoperability means that inclusive businesses must either operate on one system, which limits the scope of services they offer, or use several independent systems. The use of multiple systems requires additional investments, which result in high business costs that are passed on to consumers.

Despite these challenges, mobile money technology offers opportunities to scale up inclusive business and access to healthcare at the BoP, including through creating interoperability or linkages across systems, such as between businesses offering micro-insurance products and public institutions such as the National Hospital Insurance Fund (NHIF). Other opportunities include the use of mobile money to: (i) perform faster, more transparent and targeted health payments through health e-vouchers and dedicated mobile health savings wallets; (ii) process insurance claims, allowing healthcare consumers and providers to interact more efficiently; and (iii) offer more customized products to people at the BoP.

The critical question is how inclusive businesses can reach scale by further leveraging mobile money to increase access to healthcare at the BoP. This report presents a set of recommendations to inclusive businesses, development partners, the Kenyan Government and the entire mobile-money-in-health ecosystem. If implemented, these recommendations could facilitate the growth of inclusive businesses and greater access to healthcare by people at the BoP.

Inclusive businesses leveraging mobile money to increase access to BoP population should:

- **Reduce the risk** of serving the BoP population by developing interoperable systems and increasing the risk pools of their products, especially health insurance and micro-insurance products;
- **Develop hybrid products** that increase demand for healthcare by packaging complimentary health services as consolidated products, making them attractive to consumers (for example, mobile-based health information services can be integrated into mobile money-based savings products);
- **Tap into emerging BoP market segments** such as those presented by the growing prevalence of non-communicable diseases (NCDs) by developing mobile money based products that are customized for such diseases. These products may take the form of micro-insurance products whose benefits are specifically for NCDs that may be complimented by SMS-based behavior change communications;
- **Offer the BoP a wider variety of healthcare services and a wider network of healthcare facilities from where to seek services.** For example, form a network of healthcare facilities of varied specialties (e.g. maternal health and surgical care) which clients can access and where they can pay for health care using their mobile money based products. This will give clients more options in terms of the type of health care service they can access as well as the provide them with access to facilities that are close to where they reside and work.

In addition, inclusive businesses should:

- **Forge partnerships** with organizations that share their mission of improving access to healthcare at the BoP and that have a healthy risk appetite; and
- **Engage in policy dialogue** with the Government and other stakeholders to improve the business environment within the mobile money in health ecosystem. Government has a critical role to play in...
making and enforcing policies as well as regulating the environment in which industry players operate. This report highlights the need to make systems more interoperable for the benefit of BoP consumers. Policy dialogue represents a platform where interoperability and other bottlenecks can be identified, discussed and resolved.

Considering that the opportunities presented by mobile money require significant involvement by all stakeholders, the Government of Kenya should develop policies and legislations that facilitate interoperability across technological platforms.

A summary of the key concepts, findings and recommendations of this report is included below.

### Mobile Money in Advancing Access to Health to the BoP in Kenya

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<td>1. Low and unsteady incomes</td>
<td>1. Health insurance and micro-insurance</td>
<td></td>
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<tr>
<td>2. Limited awareness of healthcare products</td>
<td>2. Health savings                </td>
<td></td>
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<td>5. An unknown risk market that is largely unbanked</td>
<td>5. Payment of salaries to community health workers (CHW)</td>
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<tr>
<td>1. Capital to develop mobile money technology</td>
<td>1. Increased access to quality healthcare services</td>
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<td></td>
</tr>
<tr>
<td>2. Unfavorable regulatory environment limiting interoperability</td>
<td>2. Increased savings for health</td>
<td></td>
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<tr>
<td>3. Limited availability of agents</td>
<td>3. Increased access to healthinsurance</td>
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<td>In general, inclusive businesses should:</td>
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<td>2. Enabling faster, transparent and targeted healthcare payments and end-to-end insurance claim processing</td>
<td>1. Forge strategic partnerships</td>
</tr>
<tr>
<td>3. Offering more customized products for the BoP needs.</td>
<td>2. Enhance policy dialogue with the Government and other stakeholders</td>
</tr>
</tbody>
</table>

### Key Success Factors of the Featured Case Companies

According to the case companies, success is attributable to the ability to:

1. Offer customized products
2. Develop partnerships that facilitate resource mobilization
3. Develop and deploy clearly defined communication strategies
4. Capitalize on second-mover advantage

### Key Recommendations

Inclusive businesses leveraging on mobile money to increase access to healthcare to the BoP population should:

1. De-risk business processes by developing interoperable systems and increasing the risk pools of their products, especially insurance products
2. Develop hybrid products that provide strong value propositions to BoP markets
3. Create or anticipate emerging and growing market segments
4. Offer the BoP a wider variety of health care services and a wider network of health care facilities from where to seek these services

In general, inclusive businesses should:

1. Forge strategic partnerships
2. Enhance policy dialogue with the Government and other stakeholders
### Acronyms and abbreviations

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<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>BCtA</td>
<td>Business Call to Action</td>
</tr>
<tr>
<td>BoP</td>
<td>bottom of the pyramid</td>
</tr>
<tr>
<td>Britam</td>
<td>British American Insurance Kenya Limited</td>
</tr>
<tr>
<td>GDP</td>
<td>gross domestic product</td>
</tr>
<tr>
<td>GSMA</td>
<td>Groupe Speciale Mobile Association</td>
</tr>
<tr>
<td>HFG</td>
<td>Health Finance and Governance</td>
</tr>
<tr>
<td>IFC</td>
<td>International Finance Corporation</td>
</tr>
<tr>
<td>KES</td>
<td>Kenyan shillings</td>
</tr>
<tr>
<td>KYC</td>
<td>Know Your Customer</td>
</tr>
<tr>
<td>NGO</td>
<td>non-governmental organization</td>
</tr>
<tr>
<td>NHIF</td>
<td>National Hospital Insurance Fund</td>
</tr>
<tr>
<td>PSP4H</td>
<td>Private Sector Innovation Programme for Health</td>
</tr>
<tr>
<td>SME</td>
<td>small and medium-sized enterprise</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>WHO</td>
<td>World Health Organization</td>
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### Recommended citation


**DISCLAIMER:** This report was produced for the Business Call to Action by an individual research consultant. The author’s views expressed in this publication do not necessarily reflect the views of the Business Call to Action.
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- Michiel Slootweg, CEO, CarePay Limited
- Peter Gross, Marketing Director, MicroEnsure
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- Faith Muigai, Director of Clinical Operations, Jacaranda Health
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3 PharmAccess, which is a not-for-profit organization, incubated CarePay Limited, which is an independent for-profit administrator of the Mobile Health Wallet product.
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1. Background

Kenya, with a population of 44.86 million and a gross domestic product (GDP) of US$60.94 billion, is considered a low middle income country (World Bank, 2015a). Despite Kenya’s economic growth, the Government’s healthcare spending as a percentage of GDP steadily decreased from 7.2 percent in 2010 to 4.3 percent in 2013 (World Health Organization [WHO], 2015a). Relative to its total revenue, the Government’s health-care expenditures fall far below the 15 percent target set in the Abuja Declaration4 as well as the global average of 10.1 percent (WHO, 2015b). This has limited Kenyans’ access to healthcare, especially among those at the bottom of the economic pyramid (BoP).

At the same time, Kenya is experiencing an unprecedented expansion in mobile platforms, including mobile money (see Annex 1 for a description of how a typical mobile money platform works). The country’s mobile phone penetration currently stands at 88 percent (Communications Authority of Kenya, 2016). Research has shown that more than half of Kenya’s population earning less than US$2.50 per day has access to a mobile phone (Groupe Speciale Mobile Association [GSMA], 2014a). This large increase in access to mobile phones has created opportunities for reaching underserved populations by increasing their access to new services and products such as healthcare and financing. However, it is still unclear to what extent mobile money can support inclusive business growth and increase access to healthcare at the BoP.

The Business Call to Action (BCtA), a global platform hosted by the United Nations Development Programme (UNDP) that challenges companies to develop inclusive business models, commissioned a study investigating the extent to which mobile money platforms provide a means to scale up inclusive business models and access to health-care for those at the BoP. This report presents the study’s findings and explores the challenges and opportunities for further scaling up access to healthcare through inclusive businesses that utilize mobile money platforms.

1.1. The healthcare landscape in Kenya

Kenya – a low middle income country with a healthcare value chain characterized by unpredictable demand and low-quality services – presents an opportunity for increased private-sector participation.

Healthcare consumers contribute 40 percent of Kenya’s total healthcare expenditures

In the 2012/2013 financial year, that ran from July 1, 2012 to June 30, 2013, the country’s total health expenditure was KES 234 billion (US$2.7 billion), accounting for 6.8 percent of Kenya’s GDP (Ministry of Health, 2013a). Healthcare in Kenya is financed by consumers and development partners as well as the Government. Healthcare consumers represent the largest revenue stream, contributing 40 percent of Kenya’s total health expenditure, while the Government and development partners contribute 34 percent and 26 percent, respectively.

The country’s healthcare revenue is mobilized through: (i) government schemes and compulsory contributions; (ii) out-of-pocket payments; (iii) financing by non-profit institutions serving households, including development partners; and (iv) voluntary payment schemes. Whereas the contributions of out-of-pocket and voluntary payment

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4 A pledge made by African Union countries in April 2001 to dedicate at least 15 percent of their annual budgets to the health sector.
schemes did not change significantly between financial years 2009/2010 and 2012/2013, the contributions of non-profit institutions declined from 30.4 percent to 20.9 percent; and those of Government and compulsory contributions increased from 30.6 percent to 41 percent during the same period (Ministry of Health, 2013a).

The private sector plays a key role in healthcare service provision in Kenya. According to The World Bank (2014), 61.8 percent of Kenya’s total health expenditure is captured by private healthcare providers. It is projected that the private sector will assume an even bigger role in healthcare provision in the future. The World Bank (2008) estimates that between US$25 billion and US$30 billion in new investments will be needed to meet healthcare demand between 2008 and 2016, of which between US$11 billion and US$20 billion will come from the private sector.

1.2. Access to healthcare at the BoP

The BoP utilizes fewer outpatient and inpatient healthcare services, has little access to health insurance and is more vulnerable than wealthier populations to the impoverishing consequences of ill health.

Defining the bottom of the economic pyramid (BoP)

The concept of the BoP and its market potential was initially put forward in 2002 by C.K. Prahalad in his book The Fortune at the Bottom of the Pyramid (Prahalad, 2006). The BoP can be defined as people at the base of the global income pyramid who lack access to markets providing essential goods and services (GIZ, 2013a). Recently, the International Finance Corporation (IFC) introduced a definition of the BoP based on the World Bank’s Global Consumption Database (World Bank, 2015c). It describes the BoP as the population segment living on less than US$8.4 per day based on 2005 purchasing power parity. This report utilizes the IFC figure of US$8.4 to define the BoP.

The BoP is also characterized by a “poverty penalty”, which means that poor people pay more than wealthier population segments for their participation in the market. This penalty manifests itself primarily as higher prices for goods and services of a lower quality, or as prices that are too high, making goods and services unaffordable. The people at the BoP are often priced out of the market, driven not to purchase goods and services, or forced to purchase the goods and services at high prices, which pushes them further into poverty.

In Kenya, the BoP includes at a minimum people in the three lowest income quintiles (1, 2 and 3) considering the threshold of US$8.4 proposed by IFC (World Bank, 2015c). This implies that at least 60 percent of Kenya’s population is living at the BoP.

There are significant differences in access to healthcare across socio-economic quintiles of the Kenyan population. The 2013 Kenya Household Health Expenditure and Utilisation Survey demonstrated that the poorest quintile has a lower utilization of outpatient health services, spending one third as much as the wealthiest quintile (Ministry of Health, 2013b). Per capita utilization of inpatient care is also significantly lower at the BoP compared to the wealthiest quintile (28 admissions per 1,000 people compared to 55 respectively). The majority of people in the poorest quintile seek healthcare from public health facilities, whereas wealthier quintiles seek healthcare from private healthcare facilities, as shown in Figure 1.

Health insurance coverage among the poorest quintile is estimated at only 2.9 percent compared to 41.5 percent among the wealthiest quintile. Within the insured fraction of the poorest quintile, Kenya’s National Hospital Insurance Fund (NHIF) covers 92.5 percent, while private health insurance providers and community-based health insurance schemes cover 3.6 percent and 3.4 percent respectively. These statistics imply that people at the BoP are more vulnerable to the

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5 On average, the poorest quintile spends KES 703 (US$7.8) compared to KES 2,263 (US$25) among wealthiest households.
impoverishing consequences of ill health than the wealthier quintiles. Households without insurance coverage are often forced to pay substantial out-of-pocket medical bills. These payments lower their living standards and may even push them into poverty.

In recent years there has been an increase in inclusive businesses offering healthcare to BoP populations in Kenya.

Inclusive business models include the poor in a company’s supply chain as employees, producers and business owners or develop affordable goods and services needed by the poor (UNDP, 2010a). In Kenya, the healthcare industry has witnessed an increase in inclusive businesses in recent years (Access Afya, 2015; BCTA, 2014a and 2014b; GIZ, 2012; UNDP, 2010a). These businesses provide a wide spectrum of services to the BoP, ranging from accessible health insurance to primary healthcare services. The case companies featured in this report as well as several others featured in earlier reports (USAID, 2013; USAID, 2015) demonstrate the emergence and growth on inclusive businesses in the healthcare industry.

1.3. Mobile money platforms and healthcare in Kenya

Kenya is leading the way in both mobile money penetration and use, with 60 percent of the BoP accessing mobile phones. This has unlocked opportunities to reach underserved populations by increasing access to healthcare products and services.

The mobile telecommunications consortium Groupe Speciale Mobile Association (GSMA) broadly defines mobile money as “a service in which the mobile phone is used to access financial services” (GSMA, 2010, 2015a). The Health Finance and Governance (HFG) Project funded by the United States Agency for International Development (USAID) offers a more specific definition of “mobile money” as services that:

Consist of financial transactions that are conducted using a mobile phone, where value is stored virtually (e-money) in an account associated with a SIM card. Individuals can deposit cash onto a mobile account, make transactions between accounts, and withdraw funds as cash. Mobile money transactions are compatible with basic phones and do not require Internet access (USAID, 2013).
Globally, the mobile phone industry is growing rapidly. At the end of 2014, there were 3.6 billion mobile subscribers (GSMA, 2015a). One in every two people has a mobile phone subscription – a 50 percent global penetration rate. GSMA predicts that this rate will increase to 60 percent by 2020. A 2011/2012 Kenyan representative household survey found that over 60 percent of people at the BoP had mobile phones (GIZ, 2013b). In that study, the BoP was defined as people living on less than US$8 per day (GIZ, 2013b).

Mobile money platforms have scaled up in line with the growth of the mobile phone industry. The number of registered mobile money accounts grew to 299 million worldwide by the end of 2014. Sub-Saharan Africa accounts for the majority of mobile money accounts and in East Africa, one in two mobile connections is linked to a mobile money account (GSMA, 2014a).

Mobile money platforms are delivering financial services to people around the world who lack access for formal banks; they are now available in over 60 percent of developing country markets. The size and reach of mobile money networks is rapidly increasing and is currently larger than traditional financial and remittance service networks. In 25 of these markets, there are ten mobile money outlets for every bank branch (GSMA, 2014a).

Kenya is witnessing an unprecedented expansion of mobile money technology in terms of the number of mobile money subscribers, number and value of transactions, and number of agents (see Figure 2). According to the Central Bank of Kenya (CBK, 2015), as of December 2015 the country had 31.6 million mobile money transfer customers. In 2015, KES 2.8 trillion (US$32.5 billion) representing approximately 53 percent of the country’s GDP was transacted through mobile money platforms.

According to Kenya’s Communications Authority (2015), there are six mobile money operators in the country: Safaricom, Airtel, Orange, Finserve (EquiTel Money), Mobikash and Tangaza. In October 2014, these companies collectively held 26 million mobile money subscriptions (see Table 1). Safaricom is the leading mobile money operator in Kenya and enjoys a 77 percent market share. Finserve is the most recent entrant into the mobile money market (Ochieng, 2015).

![Figure 2. Trends in mobile money payments in Kenya](source: Kenya Economic Update 2011, based on data from the Central Bank of Kenya)
Mobile money platforms are increasingly gaining relevance in health sectors in Kenya and globally. According to the Mobile for Development impact tracker and GSMA, the number of mobile-enabled healthcare products and services tripled between 2009 and 2014 (see Figure 3).

In Kenya, mobile money’s increasing relevance for expanding access to healthcare at the BoP has been driven by the accessibility of mobile phones and acceptance of mobile money as a payment method (GSMA, 2014a).

### Table 1. Mobile money operators in Kenya

<table>
<thead>
<tr>
<th>Mobile money operator</th>
<th>No. of mobile money agents</th>
<th>No. of mobile money subscriptions</th>
<th>Mobile money market share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safaricom</td>
<td>83 690</td>
<td>20 150 836</td>
<td>77.43</td>
</tr>
<tr>
<td>Airtel</td>
<td>10 990</td>
<td>3 236 016</td>
<td>12.43</td>
</tr>
<tr>
<td>Orange</td>
<td>13 767</td>
<td>190 129</td>
<td>0.73</td>
</tr>
<tr>
<td>Finserve</td>
<td>-</td>
<td>394 606</td>
<td>1.52</td>
</tr>
<tr>
<td>Mobikash</td>
<td>1 181</td>
<td>1 547 502</td>
<td>5.95</td>
</tr>
<tr>
<td>Tangaza</td>
<td>1 596</td>
<td>503 556</td>
<td>1.94</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>121 924</strong></td>
<td><strong>26 022 645</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Communications Authority of Kenya

### Figure 3. Mobile money-enabled services in developing countries

Mobile money technology has been used to provide healthcare for people at the BoP in Kenya through:

- remittances of insurance and micro-insurance premiums;
- saving for future healthcare needs;
- payments for healthcare products and services;
- remittances of salaries to healthcare workers;
• health research;
• improved health finance management; and
• management of health voucher systems.

Annex 2 (Table A.1.) provides details of companies using mobile money to increase access to health-care for people at the BoP.

At the BoP, the uptake and use of mobile money in general, and specifically for healthcare, is limited

While mobile phone technology and mobile money present a rich resource for advancing access to healthcare at the BoP (Better Than Cash Alliance, 2012; Excelsior Group, 2014; USAID, 2015; PharmAccess, 2014a), there has been little measurement of the extent to which people at the BoP are embracing these services in Kenya. A recent study (InterMedia, 2014) showed that despite innovations around mobile money, uptake has been slow, especially among poor rural people and women. The study revealed that BoP consumers – the market best placed to benefit from these services – are the least likely to use them. A study conducted by the USAID-funded HFG project demonstrated that while mobile money services are greatly expanding in developing markets including Kenya, their use in the health sector – especially among rural poor people – has been limited (USAID, 2013). Another assessment of 14 mobile money programmes attributed the limited use of mobile money in the health sector to low citizen awareness and literacy, and limited availability of agents (USAID, 2015). These findings call for future research to investigate how mobile money use increases uptake of health services, expands access to services for poor communities, increases provider productivity and improves health financial management.

1.4. Objectives and methodology

This report aims to investigate mobile money platforms in the healthcare sector in Kenya, with a focus on access to healthcare by people at the BoP. It specifically aims to address the following questions:

1. How and to what extent mobile money platforms provide a means to scale up inclusive businesses and access to health services by people at the BoP based on the Kenyan experience; and

2. The main challenges and opportunities for further scaling up health service delivery to low-income populations through inclusive businesses leveraging mobile money platforms.

To explore these questions, the report included in-depth case studies of four companies using mobile money to increase access to healthcare at the BoP: Changamka MicroHealth Limited; PharmAccess; Jacaranda Health; and MicroEnsure. Chapter 2 introduces the companies, their business models and how they leverage mobile money for healthcare access. Chapter 3 provides evidence of mobile money’s potential to scale up inclusive businesses and healthcare access for people at the BoP. Chapter 4 concludes with recommendations to stakeholders about how inclusive businesses can utilize mobile money to further expand access to healthcare.
2. Case descriptions of mobile money use

The case study companies featured in this report utilize mobile money in different ways, including: for making payments for healthcare products and services (Jacaranda Health); health voucher systems (Changamka MicroHealth Limited); mobile money-based insurance products (Changamka Micro-Insurance Limited, MicroEnsure); and mobile money-based savings products and services (PharmAccess, Jacaranda Health and Changamka MicroHealth Limited). More detailed descriptions of these services are provided in Annex 3.

2.1. Payments for healthcare products and services

Inclusive businesses have leveraged on mobile money to provide people at the BoP with a convenient and secure platform to mobilize funds and pay for healthcare products and services.

Mobile money platforms can be used to conveniently mobilize funds for healthcare during an emergency – for example, from friends and relatives. For service providers, mobile money platforms facilitate faster payment for health products and services as opposed to bank cheques or lengthy insurance claims. Since delayed payments can impact healthcare facilities’ cash flows, hindering them from providing quality healthcare, mobile money transfers have positive outcomes for all stakeholders. Faster access to care can prevent the deterioration of health conditions, which in turn reduces the costs of treatment while offering safe and convenient options for payment.

**Jacaranda Health: Mamakiba**

One of the featured companies, Jacaranda Health, is taking advantage of existing mobile money payment platforms to expand access to healthcare. Jacaranda is a for-profit social enterprise providing quality, low-cost, sustainable and scalable maternal health services to low-income people in Kenya’s peri-urban areas. It relies on Safaricom’s Lipa Na M-Pesa mobile phone-based payment platform to enable clients to pay for healthcare and receive other complimentary health services through their mobile phones.

Along with mobile network operators, healthcare providers have capitalized on the popularity of mobile services for mHealth interventions. Providing complimentary health services such as pre-natal care through mHealth solutions makes the most of shared resources and proven practices while presenting a compelling value proposition for end users.

2.2. Health vouchers

Health vouchers are demand-side products that drive healthcare service quality and accountability by reducing systemic revenue leakage. They also place the healthcare decision making into the hands of consumers. Mobile phone technology and mobile money have been harnessed to enable a wider distribution of health vouchers to the BoP.

In the context of healthcare, vouchers are prepaid certificates provided either by the Government or donors, or sold at a subsidized prices, which enable individuals to pay for pre-determined services (OpenIdeo, 2011). While providing BoP communities with incentives for receiving healthcare, voucher programmes also provide incentives to healthcare providers by reimbursing them for their services.

While voucher programmes require major investments in design and administration, they increase access to essential services, spur healthcare facilities to be more responsive to patients, and most importantly, improve the health of poor people (World Bank, 2011a). Moreover, health vouchers open up additional funding for healthcare providers. Since voucher holders are
free to choose where to redeem their healthcare vouchers, it is in participating facilities’ interest to invest in supplies, staff and infrastructure in order to attract patients. Vouchers therefore encourage health facilities to improve the quality of their services and achieve accreditation.

**Changamka MicroHealth Limited: e-Voucher**

Changamka MicroHealth Limited, a Nairobi-based integrated health finance company that provides financing for affordable healthcare at the BoP using innovative technologies, offers a mobile-money based e-Voucher (Changamka MicroHealth, 2015b), which is used to channel funds directly to BoP communities for healthcare payments. Piloted in January 2013 in Vihiga County, western Kenya, the product has so far benefited over 1,700 women in the county.

One of the key concerns in healthcare delivery is ensuring transparency and efficiency in the transfer of funds from governments and development partners to healthcare service providers. For years, supply-side strategies in which money was provided to government agencies for financing healthcare have been criticized for being prone to fraud and unresponsive to demand (PharmAccess, 2014c). These supply-side approaches have continuously overlooked demand-side barriers such as insufficient information about the importance of healthcare, beneficiaries’ inability to pay for travel to health clinics and opportunity costs associated with seeking care.

Demand-side financing systems, such as the e-Voucher, transfer governments’ and donors’ purchasing power directly to consumers while addressing challenges associated with seeking healthcare. For example, pregnant women in rural areas receiving vouchers on their mobile phones do not need to travel to a bank or other central locations to collect money. Expectant mothers who receive e-vouchers are also provided with subsidized or free transportation to medical facilities. Ultimately, funders are able to know exactly how their funds are distributed and spent. In addition, Changamka conducts text messaging campaigns to educate women about the benefits of hospital-based delivery and remind them about upcoming appointments.

### 2.3. Mobile money-based insurance products

**Inclusive businesses offering mobile money-based micro-insurance have increased health insurance coverage among people at the BoP.**

The cost of selling and administering low-value policies is not economically viable for traditional insurance providers, whose cost structures tend to be directed towards higher-value policies. The economics of collecting and disbursing cash-based insurance payments hurts the business case for insurance providers that aim to reach lower-income consumers. An even greater challenge is attracting a large and diverse pool of customers.

To build a solid and sustainable value proposition, insurance providers need to attract both high- and low-risk customers.

Mobile money technology is providing more viable opportunities for insurance industry players. In sub-Saharan Africa, 73 percent of insurance providers used mobile phone technology to enrol clients in 2014. Of these providers, 96 percent used mobile money to collect premiums – either through airtime deduction or direct payments (GSMA, 2014b).

While mobile phone and mobile money technologies provide new prospects for reaching the BoP, the costs are still considerable. The BoP presents a high-risk market because consumers’ low incomes and lack of credit histories provide companies with little assurance of a return on investment. Companies also have to contend with operational costs related to ensuring that clients understand the insurance products and the mobile interface. The case study companies noted that significant investments are also required to understand the market and ensure a match between the market needs, distribution, pricing and revenues. Inclusive businesses have to strike a balance between providing affordable insurance.
products and minimizing operational costs while still remaining commercially viable.

Changamka Micro-Insurance Limited and MicroEnsure offer mobile-based health insurance to the BoP through their Linda Jamii and Airtel Insurance products respectively. While Airtel does not require users to pay for premiums – it is based on how much the mobile network operator Airtel subscribers spend monthly on airtime – Linda Jamii users make small payments for the insurance.

**Changamka Micro-Insurance Limited: Linda Jamii**
Changamka Micro-Insurance Limited, a Nairobi-based company, develops and distributes micro-insurance products serving as demand-side financing initiatives to improve access to healthcare among Kenya’s underserved populations.

Incorporated in 2012, Changamka developed the family healthcare product Linda Jamii, in conjunction with British American Insurance Kenya Limited (Britam) and Safaricom. Changamka developed the technology while Britam, the risk underwriter, contracts health providers and pays out insurance claims. Safaricom provides the product’s subscriber base and carries out large-scale product marketing. Linda Jamii’s ambitious goal was to reach most of the 35 million uninsured Kenyans who cannot access traditional insurance schemes. Prior to its withdrawal from the market in 2015, Linda Jamii had 22,000 policyholders and insured over 65,000 individuals.

Individuals could make small insurance payments using their mobile phones through Safaricom’s M-Pesa platform, gaining partial benefits after paying KES 6,000 (US$67) and full benefits after reaching KES 12,000 (US$134) per family per year. The insurance scheme included outpatient, inpatient, eye care, dental and emergency care at participating facilities. Linda Jamii also provided insured members with daily cash payments of KES 500 (US$5.6) after the third day of hospitalization for lost income.

Unlike traditional schemes, this insurance did not require subscribers to undergo medical tests before coverage; it only required a passport-sized photo and birth certificate. Subscribers were required to present identification cards as proof of insurance.

Initially, the product was focused on reaching the retail insurance market, which dictated its marketing strategy. On 1st July 2015, Linda Jamii’s business strategy was changed with enrolment of new clients shifting from individuals to groups of people such as cooperatives, religious groups, and small- and medium-sized enterprises (SMEs). This shift was effected in a bid to counter the adverse selection that was evident with the enrolment of individuals. Two months later, Britam, Linda Jamii’s underwriter, gave a month’s notice of discontinuation of the product. This decision that was ratified by all the three organizations behind Linda Jamii meant that no new sales or renewal of policies would be done after 1st Oct 2015. This essentially implies that Linda Jamii is no longer available in the market save for the one year run-off period that allows pre-existing clients to enjoy the benefits of their policies for the one year they signed up for. This run-off period ends on 30 September 2016. The withdrawal of Linda Jamii from the Kenyan market was necessitated by the realization that while the product was useful to its clients, it was not financially sustainable due to sub-optimal uptake and adverse selection.

**MicroEnsure: Airtel Insurance**
MicroEnsure is a 13-year old for-profit micro-insurance company. Operating in 17 countries throughout Asia and Africa, it currently has 15 million customers. MicroEnsure partnered with Airtel and PanAfrica Life Assurance Limited to develop the Airtel Insurance micro-insurance product. Launched in July 2015, the product offers Airtel customers in Kenya access to life, accident and hospitalization insurance, with coverage based on monthly airtime usage; it covers all hospitalization for any medical reason without exception. MicroEnsure provides the technology, including back-end claims administration and text message
content, and manages a call centre providing information to customers. The mobile network operator Airtel provides the customer base while PanAfrica Life underwrites and pays out the insurance claims.

In its most basic form, the insurance product is a loyalty programme in which a predetermined amount of Airtel monthly airtime earns users insurance the following month. Airtel customers can benefit from the insurance by using as little as KES 250 (US$2.7) in airtime every month. To gain more benefits, users must increase their airtime usage. The product does not require consumers to make payments towards the insurance coverage, and no premiums are collected through airtime deductions; coverage is provided only to individual subscribers. Insurance payments are distributed through mobile money accounts: once expenses are incurred at hospitals, clients submit claims for reimbursement using their hospital admission and discharge forms.

Airtel Insurance’s marketing utilizes above-the-line marketing tools to disseminate information as well as advertising campaigns featuring flyers with information on registration, types of coverage and accompanying benefits. Two months after its launch, Airtel Insurance had more than 50,000 customers.

2.4. Mobile money-based savings products

Mobile money has made saving for healthcare more attainable for the BoP through incentives such as dedicated healthcare accounts, saving goals and bundled services.

The majority of Kenyans pay for healthcare expenses out of pocket and some resort to informal means such as seeking loans from family and friends, or self-medicating, which compromises both health and livelihoods. Mobile money savings are commonly applied through: basic mobile savings, which entails the use of a standard mobile money systems like M-Pesa to store funds with no interest earned; and bank-integrated mobile savings, which in which bank transactions such as money transfers and access to credit are accessed in real time via mobile phones. Similarly, there are two models for saving for healthcare using mobile phones. In the first model, users can directly access healthcare services by using a mobile money account linked to savings instruments offered by inclusive businesses. In the second, inclusive businesses partner with third-party organizations such as banks and mobile network operators to offer healthcare products and services.

Mobile money-based savings products are attractive to people at the BoP because they are convenient and allow for flexibility. They have emerged as an alternative to both formal and informal means of saving money. Most people at the BoP do not save for healthcare, partly because of restrictive formal saving requirements including minimum opening balances and the obligation to remit regular fixed amounts to insurance providers.

PharmAccess, Jacaranda Health and Changamka MicroHealth offer mobile money-based savings products and services to people at the BoP through the Mobile Health Wallet, Mamakiba (discontinued) and m-Kadi respectively. While PharmAccess and Changamka MicroHealth users can access services from any health facility, Mamakiba users were limited to Jacaranda Health Clinics. Also, Jacaranda Health and Changamka Health Products specifically target expectant mothers while PharmAccess accommodates a range of services, including insurance. The following sub-sections detail these companies’ unique mobile money saving products and services.

**PharmAccess: Mobile Health Wallet**

Mobile Health Wallet is a mobile money-based platform that allows users to save for healthcare costs by depositing money into designated accounts using their phones. This product, developed by PharmAccess - an NGO focused on improving access to quality healthcare by low-income people, offers users an array of health products and services, including insurance.
were tied to specific health needs and could be misappropriated once deposited.

Unfortunately, Mamakiba was discontinued because of low uptake following a decline in users during 2014 and 2015, with customers expressing preferences for alternative models such as point-of-sale mobile payments using M-Pesa. Jacaranda Health also attributes this decline to competing household financial priorities and late decision making. Other reasons behind the low uptake of the product include: the absence of a saving culture among the target market; the high cost of marketing the product externally; and the product’s complicated refund-processing procedures.

Changamka MicroHealth Limited: m-Kadi
m-Kadi, a mobile phone-based savings product, resulted from a partnership between Changamka MicroHealth and Safaricom (Changamka MicroHealth, 2015a); Changamka developed the product and the electronic platform on which it runs. m-Kadi subscribers’ savings are held in virtual accounts hosted by Safaricom, which also provides the M-Pesa money transfer service to remit savings.

Changamka MicroHealth launched two savings products – m-Kadi for Maternity and m-Kadi for Family Health: consumers access these products through community health workers or at health centres using mobile phone; registration costs KES 100 (US$1.1) per subscriber.

m-Kadi allows its clients to access healthcare at a 50 percent discount on all medical consultations and at least a 10 percent discount on pharmaceuticals at selected health facilities from savings made through M-Pesa; Changamka MicroHealth negotiates these discounted prices with selected healthcare providers. Facilities are selected based on their ability to provide quality healthcare and clients are limited to spending their savings only at selected facilities. The money saved through m-Kadi can only be used for healthcare expenses. This presents a strong value proposition for m-Kadi subscribers to continually use the product to save and pay for their healthcare needs. To date, m-Kadi has more than 9,500 clients.
3. The impact of mobile money in scaling inclusive business and increasing access to healthcare

Mobile money has made it faster, easier and safer for the BoP to mobilize funds to pay for healthcare products and services. The wide presence of mobile phones has enabled inclusive businesses to provide more convenient ways for people at the BoP to save for future healthcare needs and purchase health insurance.

Mobile money has allowed inclusive businesses to reduce their operational costs and revenue leakages, and increase opportunities for data-driven decision making. It has also improved transparency and efficiency in channeling funds for healthcare from donors and governments to beneficiaries. This chapter details these benefits as well as the challenges and success factors associated with the use of mobile money to catalyse inclusive business and increase access to healthcare at the BoP.

3.1. Benefits to people at the BoP

Through mobile money, case study companies have realized a number of positive outcomes for people at the BoP, including increased access to quality healthcare, increased savings for future health expenditures and a wider range of health insurance products.

3.1.1. Increased access to quality healthcare

Case study companies demonstrate that mobile money makes healthcare more accessible to people at the BoP.

Jacaranda Health’s Mamakiba was able to appeal to people in both the lower-middle income and middle income brackets of the socio-economic pyramid. In the first 18 months of its pilot operation in the slums of eastern Nairobi, it was used by more than 13,000 women (Multiple Choices Labs, 2014). The result was increased access to maternal and child health services, and emergency obstetric care as well as an increased number of births attended by skilled health workers. Jacaranda Health trained 16 midwives and clinical officers, and 14 patient-care assistants (Miller Centre for Social Entrepreneurship, 2015). The company was also able to increase capacity by providing ambulance services, further driving demand for maternal care at both of its maternity hospitals.

Prior to its withdrawal from the market, Mamakiba increased access to healthcare for pregnant mothers by providing more funding options. Individuals could mobilize funds from their friends and family to contribute to their healthcare needs:

“Mamakiba allows for someone, else such as a friend or family, to pay for you from anywhere. All you need is to get the feedback from them that they have paid for you. So Mamakiba is a community thing.”

– A Mamakiba client residing in Ruiru, Kenya.

More than 50 percent of the women seeking maternal and child health services visit Jacaranda Health’s facilities without the full amount of money required. With Mamakiba, people seeking healthcare could also use mobile money to crowdsource healthcare funding. In addition to using mobile money platforms to receive money, they could use Lipa Na M-Pesa to pay for care:

“My assumption is that people who use mobile money do not have a lot of liquid cash and are using crowd-funded options – by asking family to send money and so you pay through that option. A lot of women come...
by themselves, come with a deposit and not the full amount and so you see them mobilizing funds through different options. Diversifying your payment options will increase access. Customer satisfaction goes up and leads to retention of customers.”

– Faith Muigai, Director of Clinical Operations, Jacaranda Health

Mamakiba was discontinued for several reasons including: the absence of a saving culture among the target market; the high cost of marketing the product; and the product’s complicated refund-processing procedures (as discussed in Chapter 2) Jacaranda Health is now partnering with PharmAccess to offer the Mobile Health Wallet product. Unlike Mamakiba, Mobile Health Wallet is not limited to one particular healthcare need, and yet like Mamakiba, money is dedicated to specified healthcare programmes, which users determine before they start saving. Since Mobile Health Wallet is still in its trial phase, Jacaranda Health is keen to establish whether it will be more successful than Mamakiba in motivating low-income women to save for their healthcare needs. Safaricom, a well-known and familiar brand, has a role in the marketing and communication of Mobile Health Wallet, unlike for Mamakiba. In addition, PharmAccess set up an independent social enterprise, CarePay Ltd., to administer Mobile Health Wallet. However, it is still too early to determine Mobile Health Wallet’s impact on people at the BoP:

“PharmAccess has just recently completed a test of Mobile Health Wallet with 10,000 individuals. The partners are now looking to enter production and prepare for the rollout.”

– Michiel Slootweg, CEO, CarePay Ltd.

Changamka’s e-Voucher programme, which enables the direct distribution of electronic vouchers to targeted beneficiaries via their mobile phones, has increased the number of women who seek both antenatal and postnatal care. Since the launch of the programme in January 2013, it has been expanded in Vihiga County where only 1 in 4 births occur at a health facility due to lack of access and limited funds. Currently, nearly 1,700 women have been enrolled into the programme. The patient population ranges from ages 15 to 47, and includes both first-time mothers and those who have experienced complicated pregnancies in the past. Participating facilities have recorded more than 110 safe deliveries and 11 caesarean births (Changamka MicroHealth, 2015b).

Linda Jamii increased access to healthcare at the BoP by providing a micro-insurance product that runs on a mobile phone platform. Along with remitting deposits, Linda Jamii also made it convenient to receive pay-outs:

“Changamka employs mobile money to increase access to healthcare by using mobile money to reach remote populations with a health micro-insurance product. The entire ecosystem in terms of business to business, business to customer and customer to business rides on mobile money availability.”

– Samuel Agutu and Zack Oloo, Co-Founders, Changamka MicroHealth Ltd.

3.1.2. Increased savings for health

Low and unpredictable incomes make it difficult for people at the BoP to save for healthcare. Mobile-based health savings interventions have made significant progress in reducing the severity of this challenge.

In developing countries, resources are still insufficient to ensure that all people have access to basic healthcare. Reducing out-of-pocket payments is critical to accessing healthcare.

Prior to the withdrawal of Mamakiba from the market, the product provided opportunities for people at the BoP to save for future healthcare needs. According to Janet Matemu, Technology Manager at Jacaranda, prior to Mamakiba’s introduction, “a good 95 percent of payments
at Jacaranda Health came from out-of-pocket payments”. With the introduction of the product, mothers started to set aside money to pay future maternity related healthcare costs.

“In case you have money, it allows you to save for future healthcare needs and it helps you not use the money for something else. ... I paid for my delivery in March yet I delivered in July. So, Mamakiba allowed me to save money for delivery for all that time. So, you can plan for your money when you use Mamakiba. You do not have to pay the full amount for the delivery. ... you can plan and save with Mamakiba. When you have an emergency, you are so perplexed and confused and when you rush to the hospital, you may find that you did not carry any money. If you have Mamakiba you can just pay from your account.”

-- A Mamakiba client residing in Ruiru

By bundling complimentary health services with health information, Mamakiba provided incentives for users to save. Its free messaging also raised awareness of the importance of regular care:

“I receive text messages with reminders for me to go for baby check-up and gynaecological check-ups. This is important because Jacaranda Hospital has specific days for specific clients. For example, Monday is for the babies.”

-- A Mamakiba client residing in Ruiru

The inclusive businesses interviewed for this report noted that Kenya lacks a culture of saving for healthcare and many Kenyans misunderstand health insurance. Mobile money has introduced a savings mechanism that uses a familiar model: most Kenyans already use mobile money platforms such as Safaricom’s M-Pesa to send money:

“Mobile money plays the role of an income redistributor, especially at the bottom end of the market where there is limited knowledge of insurance and people are more used to fundraising. You can also use technology to make their informal risk pooling mechanism better, and also as a tool to improve the harambee concept by earmarking funds. The use of mobile money is therefore a means of using a platform that people are familiar with to save for healthcare. Mobile money platforms enable people to purchase insurance on their phones, make savings and remit money for healthcare.”

-- Michiel Slootweg, CEO CarePay Ltd.

PharmAccess’s Mobile Health Wallet allows users to receive direct healthcare entitlements on their phones, which empowers them to decide for themselves where to access health services. Mobile Health Wallet users also have access to an overview of the funds available for a diverse array of health services, unlike Mamakiba, which focused only on saving for maternal healthcare.

3.1.3. Increased access to health insurance

Mobile money is enabling access to health insurance for people at the BoP – the majority of whom are uninsured and unaware of insurance options.

The featured companies demonstrate that their mobile money based products have provided people in the BoP with opportunities to access health insurance. These opportunities have been realised in part through the provision for people at the BoP to pay for health insurance through flexible payment plans that are often not provided by the major commercial health insurance providers. For instance, prior to its withdrawal from the market, Linda Jamii had provided health insurance to over 65,000 individuals most of whom with no prior access to health insurance.

“The major benefit to the consumers of our products is access to healthcare insurance and thus healthcare services which they previously could not
access. Mobile money provides our consumers financial inclusivity. Most of our customers are definitely first-timers. With mobile money, customers are given a platform where they can pay for insurance. Mobile money is a demonstration of financial inclusion.”

— Samuel Agutu and Zack Oloo, Co-Founders, Changamka MicroHealth Ltd.

3.2. Benefits for healthcare service providers and payers

Mobile money is giving healthcare providers a faster and more transparent way to receive payments as well as to collect health data and use it to inform business decisions.

3.2.1. Sealed revenue leakages

Traditional delivery channels for healthcare funding are often lengthy and prone to loss of funds due to high operating costs and fraud. This is because the majority of the world’s poor people live in rural areas with little access to services such as finance and health, and mobility constraints and weak infrastructure make travel costly and difficult. Direct funding models using mobile money platforms such as PharmAccess’s Mobile Health Wallet and e-Voucher provide real-time data on payment transactions and make it safer for both patients and staff to handle payments and other transactions.

Through PharmAccess’s partnership with Safaricom, healthcare facilities are furnished with M-Pesa accounts for accessing key services.

“Through m-Health, PharmAccess is shifting the paradigm for funding such that, by leveraging on technology, the donor is not supplying drugs but is working through the demand side and sponsoring a patient with a specific need by giving him a benefit with which he can buy healthcare services, including drugs.”

— Michiel Slootweg, CEO, CarePay Ltd.

In addition, mobile money provides a convenient means of collecting data on healthcare-related transactions. This data provides useful insights into patient profiles, spending behaviours, common diagnoses and medications, allowing healthcare providers and payers to make data-driven decisions about their businesses.

3.2.2. Increased efficiency and data-driven decision making

Mobile money-based payments have substantially reduced the time needed for processing healthcare payments.

“In one of the tests with the Mobile Health Wallet [that] we have done, we have seen that we can reduce the time between a patient being treated and the clinic being paid from 56 to 2 days.”

— Michiel Slootweg, CEO, CarePay Ltd.

Donors are able to track payments to beneficiaries and how they are spent. According to Michiel Slootweg, CEO of CarePay Ltd, direct funding models have reduced the overhead costs of establishing distribution channels by almost half. The most crucial benefits include reduced operational costs and improved financial transparency which has reduced loss of funds through fraud.

3.3. Challenges

The featured companies highlighted several challenges in the use of mobile money as a catalyst for increasing access to healthcare at the BoP. Some of these are related to the application of mobile money technologies while others relate to inclusive business models. But these challenges do not diminish the potential for businesses to scale up using mobile money. This section highlights the general challenges related to inclusive business before focusing on mobile money-specific challenges. These challenges, including unfavourable regulatory and legal environments, and inadequate interoperability, provide important insights for the future.
Strategic partnerships – The importance of identifying partner organizations with a high risk appetite was a vital lesson for Changamka in its partnership with Safaricom and risk underwriter Britam. A year after it was launched, Linda Jamii had not performed as well as expected and Britam made the decision to stop underwriting the product. From this experience, Changamka MicroHealth learned that finding a business partner whose long-term objectives are aligned with its own objectives is crucial to sustainability. According to Peter Gross, Marketing Director of MicroEnsure, working with telecommunications companies is challenging because high employee turnover makes the companies’ partnerships unpredictable and inconsistent. Individuals who play important roles in negotiation and partnership development sometimes leave employment before the negotiations have come to fruition. The partnerships are therefore fragile and the value proposition has to be reviewed again by a fresh pair of eyes. As a result, a product that has been prioritized within a telecom’s service portfolio can rapidly lose favour with the company:

“Telecoms are really difficult to work with. They are just very difficult companies by design – they have to be tough. That’s a big challenge. They have a lot of turnover naturally, so the woman or man you’ve been working with on the deal may be gone by the time it launches, and how is the new person going to see this thing? Are they going to like it or not like it? You don’t know. It could be very up and down. So that’s the key challenge of doing mobile insurance. The toughness as well as the turnover within telecoms means that sometimes your product can be favoured and sometimes it can go out of favour overnight.”

– Peter Gross, Marketing Director, MicroEnsure

Customer education and awareness – The level of customer education determines the extent to which the value proposition of mobile literacy – One of the main challenges that companies face is a lack of consumer literacy. For example, MicroEnsure initially did not consider the full importance of its customers’ literacy, which impacted the effectiveness of text-based communications to support the product:

“We didn’t factor in literacy rates as much as we should have, so that the text-based communications are limited in places where there’s 20 percent literacy.”

– Peter Gross, Marketing Director, MicroEnsure

Socio-cultural contexts – Another valuable lesson concerns the influence of social myths surrounding a product. MicroEnsure encountered some superstitious customers who thought that once they purchased insurance, their likelihood of ill health would increase. Additionally, some potential clients declined to purchase Airtel Insurance because they believed it would mean they did not believe in God:

“We didn’t anticipate that some people would say ‘No, I definitely don’t want that product because insurance means I don’t believe in God, and if I take it, then I’ll be cursed, or something bad will happen to me because I’m no longer trusting in God’… we didn’t anticipate that.”

– Peter Gross, Marketing Director, MicroEnsure

MicroEnsure could not ignore such rigidly held beliefs or consider them silly and unimportant. Eventually, the company addressed them through strategies like testimonials and partnering with local churches and religious leaders:

“You can get past that; you can show them things like, ‘Look, we have a million customers for this product, and a million customers are not dying. So those guys don’t appear to be cursed…’ [or] ‘Let me tell you a million stories of people who got benefits’ – that can sometimes overcome those things.”

– Peter Gross, Marketing Director, MicroEnsure
money-based products can be maximized. In the insurance space particularly, where overall insurance penetration is low and most consumers are new to the concept of insurance, customers may simply not understand its value:

“People are generally uncomfortable with the idea of paying premiums and will not carry it forward into the next year if they have not incurred healthcare costs equivalent to their premiums.”

– Dr. Ambrose Nyangao, Intervention Manager, Private Sector Innovation Programme for Health (PSP4H)

Many mobile health products that use health messaging are also adding features such as health tips and direct access to doctors for diagnosis and advice. The featured companies that have attempted this have learned that people do not welcome generic health tips and would rather have tailored messaging that cater to their specific needs.

**Financing** – The featured inclusive businesses serve disenfranchised and underserved populations with low incomes, and who therefore must negotiate between purchasing basics like food and water, and non-immediate services like education and healthcare. Often, they prioritize their more immediate needs. As a result, inclusive businesses’ revenue margins may not live up to investors’ expectations. Potential partners such as mobile network operators and banks want to see huge returns in terms of customer outreach and revenue before they invest. For example, Changamka MicroHealth modified its business model to target registered investment groups and small and micro-enterprises (SMEs) as opposed to individual policyholders. This decision was informed by the need to increase the risk pool:

“Whereas the product was already popular with individuals, the uptake was not as good as we had expected in the first year... We therefore realized that, in the short term, we needed to get the numbers up by registering people in groups rather than individuals, and as we build the numbers, we can see the effect of the product and we could even go back to taking on individuals.”

– Samuel Agutu, and Zack Oloo, Co-founders, Changamka MicroHealth

In addition, inclusive businesses face challenges in raising capital, maintaining cash flow and accessing credit from financial institutions, which limits their scale and impact:

“The banking industry is still not geared towards start-ups – particularly in healthcare. We then rely on international funders in both private equity and impact funding. The banking industry is willing to fund companies that are already at scale. The first thing they ask for is cash flow, which is usually not there in a start-up. Banks generally require cash flow and collateral, which are lacking in most start-ups.”

– Samuel Agutu, Zack Oloo, Co-Founders, Changamka MicroHealth

**Regulatory frameworks** – In Kenya, the Insurance Regulatory Authority imposes a Know Your Customer (KYC) requirement on providers of insurance and micro-insurance. This requires insurance and micro-insurance businesses to verify the identity of their clients. For mobile money-based micro-insurance providers, this requirement posed a challenge since it meant that these providers had to either invest in a network of agents where their potential clients could submit their bio data or risk poor uptake of their products. For instance, when Linda Jamii was launched, the subscribers had to present their bio data to agents. This was a disadvantage to the product’s uptake since there weren’t so many agents.

“There are reasons why Linda Jamii did not perform as well as it should. One of them is the fact that a client needed to go to an agent to get the KYC done yet
MicroEnsure’s Airtel Insurance product was not as affected by the KYC requirement because by the time clients subscribe to Airtel Insurance, they are already registered on the Airtel network and have submitted their identification details to the company. These identification details fulfil the KYC requirement.

**Technology platforms** – The lack of interoperability among current mobile-based health products and services was identified as another challenge to providing services that rely on mobile money. The impacts of mobile-based products and services could be magnified if the platforms they ran on were interoperable, using a robust and secure system of mobile identity that tied each user’s information to different services. This lack of interoperability is a negative effect of competing ecosystems, which reduces the impact of inclusive businesses in the healthcare service market and delays point-of-sale system infrastructure upgrades at healthcare facilities.

Overall, lacking interoperability limits the value and scope of services that the featured companies offer and also increases transaction costs:

“Currently, there is inadequate regulation around interoperability of systems. There are no obligations for mobile network operators to have interoperable systems.”

– Dr. Soti, Head of Division, Health Informatics, Monitoring and Evaluation, Ministry of Health

The ideal situation is to have widespread access to point-of-sale terminals, which allows customers to perform a large spectrum of operations without switching networks. The featured companies have been forced to partner with mobile network operators that have large market shares because mobile money platforms are not fully interoperable with each other. For example, with the global success of M-Pesa, Safaricom has been able to stake out a 65 percent share of the Kenyan market. In this way, Safaricom would be reasonably attractive to any organization looking to distribute its products or services via mobile money.

3.4. Success factors

This report has identified success factors that are common to almost all the companies studied. These companies noted that a critical factor in enhancing access to healthcare using mobile money was the extent to which their products were customizable and adaptable to the BoP market and its needs. Other success factors include clearly defined communication strategies around mobile money products and the ability to capitalize on second-mover advantage. These factors are discussed further below.
Customized product offerings – The first element of success is offering a unique and customized solution, product or process. Customizing solutions to meet the needs of the target population has demonstrated its value in terms of customer adoption. Products such as PharmAccess’ Mobile Health Wallet were customized for their BoP target markets (Mobile Health Wallet was also co-designed and co-developed with local partners). Its potential users informed the design process by expressing their expectations and perceptions of the product. A customized product improves the success of an inclusive business approach – not only in financial terms, but through increased social impact.

This requires that the product’s design not only cater to its desired functions, but also to inclusive business processes in order to respond to the market’s particular needs. The BoP market is very heterogeneous across countries and contexts. There is always a certain amount of difficulty in starting or scaling a business, and consumption patterns differ with each country and region. Jacaranda Health’s representatives highlighted this aspect of the BoP:

“Based on where you place yourself, you cater to a certain population. Our Ruiru facility serves that population in terms of the housewife, mama mboga (vegetable vendor), and so on. So, they have a certain income or are dependent on their spouse but are not that low on the stratosphere – they are not very poor and have the ability to pay.”

– Janet Matemu, Technology Manager, Jacaranda Health

Partnering for resource mobilization – The inclusive businesses featured in this report exemplify the importance of collaboration with unconventional partners. These companies have considered partnerships with local NGOs, local entrepreneurs, development agencies and local governments. Unconventional partners can help companies to compensate for the lack of information, inadequate infrastructure and informality of BoP markets. Local partners such as NGOs are valuable for their knowledge of the market and understanding of local contexts. Jacaranda Health, for example, has developed a form of collaboration that it calls “task shifting”, which relies on partnerships with community health workers. It relies on the credibility of local health workers to discuss Jacaranda and its products, refer potential clients and handle minor medical cases in return for a commission. Task shifting allows Jacaranda Health staff to focus on serving patients at Jacaranda’s Health clinics.

UNDP’s Growing Inclusive Markets Initiative (UNDP, 2010b) emphasizes partnerships because combining resources and capabilities allows inclusive businesses to operate in uncertain conditions. For example, partnerships with telecom companies have been a central feature of inclusive businesses’ success, providing access to products and services through mobile money systems. Changamka partnered with Safaricom to roll out Linda Jamii; PharmAccess partnered with Safaricom and CarePay to introduce Mobile Health Wallet; while MicroEnsure partnered with Airtel to develop and roll out Airtel Insurance across Africa. Jacaranda Health’s Mamakiba used Safaricom’s M-Pesa for payments. Multi-stakeholder approaches are therefore a major success factor for locally adapted inclusive business approaches.

Clearly defined communication strategy – Marketing is vital for building a sustainable business because it creates product demand and allows the business to reach scale. However, not all marketing plans are created equal and the right strategy must suit the organization’s budget and target market. For lean organizations (including some of the featured companies), there is usually an equally lean marketing budget. Large-scale conventional marketing campaigns incur huge expenses, and inclusive businesses need to charge more for their services to offset these costs. Jacaranda Health cites word-of-mouth marketing as its foremost strategy – the most obvious advantage to this strategy is its low cost.
In addition, Jacaranda tries to make it easier for potential customers to learn more about its services. In some cases, interested people can use their phones to “flash” the Jacaranda Health’s customer-service line (this involves calling but hanging up before the call is answered). A Jacaranda representative calls back so that the potential customer does not have to spend mobile phone credit to learn about the company’s services. While providing this service costs money, it removes a barrier that might otherwise prevent prospective customers from becoming actual customers.

**Second-mover advantage** – The featured companies exemplify that, contrary to popular belief, being a market pioneer does not guarantee enduring success. Pioneering and late-moving companies both have distinct advantages. As the pioneer, one can have the most memorable brand and become the standard bearer. This allows pioneers to shape consumer tastes and augment brand preferences, making their products difficult to compete with. But while it seems intuitive that pioneers have the upper hand when entering a market, late entrants are sometimes more successful than their pioneering competitors.

Among the inclusive businesses featured in this report, MicroEnsure’s Airtel Insurance gained a considerable late-entrant advantage over Changamka’s Linda Jamii, a competing micro-insurance product. Linda Jamii was rolled out in January 2014 following its pilot a year before, whereas Airtel Insurance was only launched in July 2015. While Linda Jamii had, prior to its discontinuation, attracted 22,000 policyholders and covered 65,000 individuals, Airtel Insurance had 50,000 customers within a month of its launch. This is significant considering that Airtel did not employ a large-scale marketing campaign around the launch. By June 2015, Linda Jamii had opted to target registered investment groups and SMEs in order to widen its consumer base, and stopped selling its retail product to individuals. Whereas the pioneer pays a steep price for creating a product category and experiences a more pronounced learning curve, the late entrant has the opportunity to learn from the experience of the pioneer, enjoying lower costs and making fewer mistakes:

“Second-mover advantage is an important thing. We’re not worried about someone fixing it or figuring it out...I want success from all the other people trying things in this space. ... If they’re successful, it gives the rest of us some elements that we can all use for our own approaches. And so I think what’s going to be key to our growth is, frankly, other people winning.”

– Peter Gross, Marketing Director, MicroEnsure

### 3.5. Potential for scaling up

Mobile money technology offers several opportunities to scale up inclusive businesses and access to healthcare at the BoP. These include

- the potential for: using the technology to create interoperability across systems; increasing the risk pool for mobile money-based insurance products; performing health payment processing; and offering end-to-end insurance claims processing.

This section details additional ways inclusive businesses can leverage mobile money technology to increase access to healthcare at the BoP. However, several of the initiatives discussed here have been speculative pilots that have not yet scaled up into sustainable and financially viable enterprises. To achieve financial sustainability, inclusive businesses need to: (i) develop new products with end-users’ needs in mind; (ii) ensure that their products address the real-world problems of BoP markets; and (iii) develop products within a complete business model that involves a sustainable value chain.

**Use of mobile money to create interoperability and increase the risk pool**

Inclusive businesses – especially those offering insurance products – have the opportunity to scale up by leveraging on mobile money to establish partnerships, create interoperability between their systems and thus create bigger and more varied risk pools. For example, micro-insurance providers
could partner with the NHIF to increase their policyholder base in order to make their insurance products attractive and affordable to a larger pool of policyholders, including people employed in the formal sector – some of whom live at the BoP.

“We see ourselves as a gap-filler: the more gaps we fill, the more services we provide and the more our customer base grows. Then we’re going to become attractive to NHIF for various reasons. Maybe they don’t have a mobile platform that really works with people....”

– Peter Gross, Marketing Director, MicroEnsure

“...while NHIF offers basic insurance, it is feasible to add private top-up insurance to complement the NHIF coverage. So technically it is possible, but there is need to bring all the stakeholders together in one place to secure buy in and explore the benefits of doing this....”

– Michiel Slootweg, CEO CarePay Ltd.

The Mobile Health Wallet, a product that can support health care payment processing, has only been recently (December 2015) introduced to the Kenyan market. There is potential for many more mobile money enabled products to incorporate this functionality and thus offer greater value to inclusive health care businesses.

Healthcare payment processing and end-to-end insurance claim processing

While mobile money is widely used for making payments, including payments for healthcare services, the technology can be used for a lot more. There is potential to go beyond healthcare payments and improve on existing mobile money-enabled payment products so that they can enable businesses such as insurance companies to electronically receive, verify and reimburse claims for payment submitted by healthcare providers. This potential is demonstrated by the recent introduction of mobile money-enabled products that can perform healthcare payment processing and the end-to-end insurance claim processing:

“M-Pesa does not perform [health] payments processing. This has been our biggest hurdle to pushing healthcare funds through M-Pesa....

Recently, we have partnered with CarePay/PharmAccess Foundation through a service dubbed “M-Tiba” to enrich payments made via M-Pesa at healthcare facilities via a platform that processes health payments and collects data as payments are made at the Lipa Na M-Pesa tills. We currently have more than 1,800 facilities on this programme, and growing. Through this partnership, we are able to support other businesses in the health sector such as insurance companies with end-to-end insurance processing.”

– Judy Njogu, Product Manager, Social Innovation, Safaricom Ltd.

Market segmentation and customized products

Findings suggest that incorporating complimentary products and services into mobile money-based health initiatives provides incentives for consumer adoption, and business scale up. The need to enhance mobile money-based products to meet the needs of low-income populations was observed in a study on digital financial services in Côte d’Ivoire (Partnership for Financial Inclusion, 2016). Incorporating targeted text messaging into mobile health services can both add value to the health services and make the overall value proposition more meaningful. Among the case study companies, Jacaranda Health’s Mamakiba provided targeted messaging services that reminded its users to save and attend clinic appointments, with the aim of influencing health-seeking behaviour that results in more visits to health facilities. These free services were subsidized by the company’s funders.
4. Recommendations

This report advocates for unconventional partnerships among the Government of Kenya, mobile network operators and other stakeholders. Although local entrepreneurs have a unique advantage given their familiarity with the social and cultural context of mobile money use, their limited capital makes it difficult to experiment with different models or invest in the research and development needed to develop new products. Collaboration among businesses with similar visions can help them to overcome these challenges and enable them to bring products to the market faster by leveraging each other’s resources and expertise. In assessing potential partner organizations, businesses should look for a healthy risk appetite. Marketing to and serving the BoP population is a resource-consuming effort that rarely pays off as quickly as conventional markets do.

In order to strengthen the mobile-money-in-health ecosystem, stakeholders should enhance policy dialogue with Government and each other to identify constraints such as unfavourable regulations and inadequate market infrastructure, and address them. Dialogue with the Government can also identify bottlenecks and improve market conditions related to mobile money use in the healthcare sector.

Funders and inclusive businesses can partner with the Government and other stakeholders on consumer education, awareness campaigns and product demonstrations. Social marketing outreach programmes should be driven by the preferences of the target market and should consider who controls the household budget and spending.

Considering that there is a positive relationship between the level of education and investment in healthcare, it is recommended that consumers be educated about concepts such as medical insurance and savings at the elementary education level to improve future health outcomes. Better-educated people will be more proactive about taking opportunities to invest in healthcare. For the Government, development partners and inclusive businesses, this presents an opportunity to employ health education for better healthcare outcomes as well as businesses bottom lines.

In addition to providing early education of future healthcare customers, businesses can increase their competitiveness in BoP markets by investing in behaviour change communication and growing areas of healthcare such as non-communicable diseases. These strategies enable inclusive businesses to use their current resources to create a foundation for expanding future markets, especially with innovative mobile money-based products and services. Although often underestimated, communicating an aspirational image for a mobile money-based health product or service can attract a wider, more financially stable market segment outside the BoP. This could lead to a cross-subsidy strategy in which wealthier customers subsidize services for BoP clients.

The key issue is how mobile money can be better leveraged to drive inclusive businesses beyond their pilot phases in order to achieve scale and further increase access to healthcare among BoP populations. This section presents recommendations for inclusive businesses, development partners and Government. If implemented, they could lead to significant growth of inclusive healthcare businesses and greater access to care at the BoP. The section concludes with highlights of the report and suggestions for the way forward.

4.1. Recommendations to businesses

Lower the risk by making systems interoperable

Creating an interoperable customer information database on BoP populations and providing products and services that demonstrate clear value and
cost-effectiveness to consumers lower the risk of doing business at the BoP.

A major challenge of serving BoP populations is that little is known about their purchasing power, spending or saving habits; this makes doing business in BoP markets particularly risky. Inclusive businesses have to map out the demographics of their client bases, and with this information develop more informed and targeted marketing strategies, and more tailored products and services.

Businesses that use mobile money platforms collect this kind of data electronically through enrolment and transactions carried out on their electronic platforms. However, this information is stored in a fragmented manner by the many small organizations vying to serve the BoP population, making it scattered and inaccessible.

This report recommends that inclusive businesses make their information systems interoperable. Making information systems interoperable benefits all ecosystem members by reducing business operating costs, which translates into more affordable products and services for the BoP. It also allows low-cost access to data on existing customers since these data do not have to be sourced from scratch.

Interoperable systems enhance customer value by enabling consumers to access a wider selection of service providers, providing them with information on many healthcare products and services. Creating alliances with competitors to create interoperable systems such as shared customer databases should not be considered unusual. Such joint ventures reflect the commitment and capacity of all partners to utilize each partner’s comparative advantages in order to scale up within largely untapped markets.

Offer hybrid products and services

Inclusive businesses offering mobile money-based products and services should consider bundling their products into attractive packages that offer complimentary services. For example text-based health information and maternal services can be packaged as one offering, making the core products attractive to the BoP because of the value added by the complementary service. In developing this report, text-based health information and tips were identified as a crucial means to add value to mobile money-based health products. But mobile health tips have only demonstrated the ability to drive product uptake and enhance customer loyalty at the BoP if they are targeted or customized to recipients. Generic health tips have engendered apathy towards products and have even been considered a form of harassment.

Invest in emerging health segments

Mobile money has already proven the potential for increasing access to healthcare in a market that was previously considered high risk, underserved and disenfranchised. An increasing number of people at the BoP are saving for healthcare – and mothers are accessing maternal healthcare – through vouchers, mobile money accounts and micro-insurance products. But even with their successes, inclusive businesses need to continually monitor health trends in Kenya and develop new or customize existing products that address them.

A case in point is the growing burden of non-communicable diseases. By 2030, these ailments will be the most common causes of death in developing countries – exceeding those from communicable, maternal, pre-natal and nutritional diseases combined. It is estimated that the most significant rise in non-communicable disease mortality will occur in Africa, Southeast Asia and the Gulf regions (GBC Health, 2013). This presents an opportunity for inclusive businesses to develop mobile money-based products and services catering to the people most likely to be affected.

Provide access to a wider variety of health care services

Some of the products and services offered by the featured companies were only provided at dedicated facilities; for example, Mamakiba could only be used at Jacaranda Health facilities. There is a potential to expand the use of mobile money platforms by enlisting additional facilities into healthcare provider networks so that clients have
a wider geographical scope for seeking healthcare. This would widen access because clients would not have to travel to a specific facility. Mobile money technology can enable such networking because transactions are electronic and thus is easy to link systems across healthcare facilities:

“…There is potential to leverage Mobile Health Wallet to offer other services beyond maternal care through health facilities that are part of the Mobile Health Wallet platform such as Penda Health. So clients with Mobile Health Wallet can come to Jacaranda Health for maternal care and then go to other facilities for other specialized care.”

– Janet Matemu, Technology Manager, Jacaranda Health

Align marketing strategies

More broadly, inclusive business should aim to convert the BoP into a sustainable consumer market. These businesses need to align their marketing strategies to the unique BoP market context. This report recommends improving marketing strategies targeted at the BoP in the following ways:

- Consider cultural beliefs and contexts – Cultural beliefs can influence the roles of women in a society, such as whether they make financial decisions and healthcare choices; this is a crucial factor in marketing. In BoP populations, cultural beliefs may be strongly held, possibly because of low levels of formal education. Considering that the BoP market is highly heterogeneous with cross-national and context-specific differences (UNDP, 2010b), it is imperative that marketing strategies aimed at BoP markets are aligned with those markets’ specific cultural contexts.

- Consider consumers’ literacy and knowledge of available health products and services. Since literacy levels in BoP populations are generally lower than in the general population, text-based advertisements will be ineffective and businesses need to develop alternative marketing strategies. Furthermore, the lack of healthcare knowledge in some BoP populations requires the adoption of below-the-line marketing strategies.

- Marketing costs need to be calculated in the development of business plans.

4.2. Recommendations to the Government and Development Partners

Regulate the environment to enable interoperable systems

One way that the Kenyan Government can facilitate the establishment of interoperable systems is by setting up guidelines and standards guaranteeing that mobile money-based products and other m-health interventions are designed on interoperable systems. Kenya’s National Payments Systems Act of 2014 does not compel mobile network operators to make mobile money systems interoperable (Central Bank of Kenya, 2014). However, payment service providers are allowed “to enter into interoperable arrangements”. This act defines interoperability as the “commercial interconnectivity between providers of different payment systems or payment instruments including the capability of electronic systems to exchange messages, and ‘interoperable’ shall be construed accordingly”. This means that the Central Bank of Kenya leaves it to the market to determine how interoperable players’ systems should be (GSMA, 2015c). Given that mobile money systems are primarily run by mobile network operators (who are also often the first partners that inclusive business turn to for distribution and payment gateways), interoperability can bring significant benefits to all the stakeholders involved.

Promote and Support Inclusive Business

Development partners can play a supporting role in promoting socially responsible and pro-poor businesses including through: (i) helping inclusive businesses to better measure their performance against social impact targets and the Sustainable Development Goals; and (ii) making support conditional on performance.
5. Conclusion

Kenya has experienced remarkable advancements in mobile phone technology, with the poorest households more likely to have access to mobile phones than to health or sanitation facilities. Inclusive businesses have capitalized on this phenomenon to provide previously inaccessible services to people at the BoP by leveraging the unique capabilities of mobile phone technologies.

This report explored how inclusive businesses using mobile money platforms including M-Pesa can advance access to healthcare at the BoP. Four companies were selected for study based on their experiences harnessing mobile money platforms to extend healthcare products and services to BoP populations. These companies provide important insights into the challenges and opportunities associated with the use of mobile money to increase access to healthcare to people at the BoP. While some of the featured companies have recently withdrawn their mobile money-based products from the market due to various challenges, others, counting on new opportunities, have launched new products.

While mobile phone technology is viewed as a means of making it easier to do business, simply developing and deploying technology is not sufficient. Building strategic partnerships across the stakeholders is a vital but underestimated way for inclusive businesses to tap underserved markets and meet emerging healthcare challenges. As highlighted in the recommendations, partnerships have the potential to strengthen the health ecosystem. More work is needed to develop stakeholder engagement strategies that offer practical steps for forging partnerships.
References


Annex 1. How a mobile money platform works

While mobile money platforms were initially conceived as thought to be merely money transfer services, when they reach scale they work as a network of infrastructure and software. In the healthcare sector, these platforms allow the exchange of money and electronic value between actors, such as patients/clients, healthcare providers, development partners, governments and insurance companies, as well as mobile phone operating companies and their agents. To achieve scale, most mobile phone operating companies offer mobile money services through a network of agents who register new subscribers, provide first line support and information to subscribers, provide cash-in and cash-out services, and ensure liquidity in the market.

In all the mobile phone operating companies in Kenya that operate through agents, the agents typically prefund their e-money or “float” accounts, receiving one unit of mobile money for each unit of conventional currency they deposit in the trust account. Agents then trade their float with customers through cash-in and cash-out transactions. In other cases, bulk payers (e.g. businesses making salary payments or public agencies making social transfers) pre-fund the trust account to cover the remittances they want to send. Similarly, international donor agencies and remittance organizations pre-fund trust accounts that finance remittance payments directly into their subscribers’ mobile money accounts or health mobile wallets. In this regard, mobile money may be defined as conventional money converted into electronic value with an equivalent amount of cash held in a trust account. The electronic value stores in a subscriber’s mobile account can then be transferred to a healthcare provider’s mobile money account (e.g. when a subscriber/patient pays for healthcare services) or a micro-insurance company’s mobile money account (e.g. when a subscriber is paying for micro-insurance premiums), or moved from a company’s mobile money account to a healthcare worker’s mobile money account (e.g. when the company is paying salaries/incentives to health workers). The value stored as mobile money can be liquidated or quenched when a subscriber withdraws their mobile money as cash through an agent; an agent cashes out e-money or float, or the mobile phone operating company liquidates mobile money through the trust. A typical mobile money business model is presented on the next page.
Annex 1. continued

Source: www.gsma.com
# Annex 2. Examples of mobile money use

## Table A.1. Organizations leveraging mobile money to increase access to healthcare for people at the BoP

<table>
<thead>
<tr>
<th>Company or organization</th>
<th>Category of mobile money use</th>
<th>Business model</th>
<th>Entities paying for the health care service</th>
<th>Beneficiaries of health care services</th>
<th>Complimentary services</th>
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<td>For-profit</td>
<td>Individual clients/patients; development partners</td>
<td>Individual clients/patients</td>
<td>mHealth and e-Voucher programmes</td>
</tr>
<tr>
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<td>Saving for health care</td>
<td>Not-for-profit</td>
<td>Individual clients/patients</td>
<td>Individual clients/patients</td>
<td>mHealth</td>
</tr>
<tr>
<td>Pathfinder International</td>
<td>Remittance of salaries for health care workers</td>
<td>Not-for-profit</td>
<td>Development partners</td>
<td>Individual clients/patients</td>
<td>mHealth</td>
</tr>
<tr>
<td>Jawabu Investments</td>
<td>Saving for health care</td>
<td>For-profit</td>
<td>Individual clients/patients</td>
<td>Individual clients/patients</td>
<td>Payment for health care services</td>
</tr>
<tr>
<td>Jacaranda Health</td>
<td>Payment for health care services</td>
<td>For-profit</td>
<td>Individual clients/patients</td>
<td>Individual clients/patients</td>
<td>mHealth</td>
</tr>
<tr>
<td>NHIF-Safaricom Partnership</td>
<td>Remittance of insurance and micro-insurance premiums</td>
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<td>Individual clients/patients</td>
<td>Individual clients/patients</td>
<td>-</td>
</tr>
<tr>
<td>Penda Health</td>
<td>Payment for health care services</td>
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<td>Individual clients/patients</td>
<td>Individual clients/patients</td>
<td>mHealth</td>
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<tr>
<td>Totohealth</td>
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<td>For-profit</td>
<td>County governments</td>
<td>Individual clients/patients</td>
<td>mHealth</td>
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<td>Wider health care ecosystem</td>
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<td>Health research</td>
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<td>Government; the private sector; development partners</td>
<td>Wider health care ecosystem</td>
<td>-</td>
</tr>
</tbody>
</table>
Annex 3. Case study companies

A. Changamka MicroHealth Limited and Changamka Micro-Insurance Limited

Changamka MicroHealth Limited and Changamka Micro-Insurance Limited are for-profit social enterprises. Changamka MicroHealth is a Nairobi-based integrated health finance company that provides financing for affordable healthcare at the BoP using innovative technologies. The company was incorporated in Kenya as a private limited liability company on 28 July 2008 and began operating in September 2009. Changamka Micro-Insurance is a Nairobi-based micro-insurance company that develops and distributes micro-insurance products serving as demand-side financing initiatives to improve access to healthcare at the BoP in Kenya. The company was incorporated in 2012 as a medical insurance provider. Both companies are led by Zack Oloo and Sam Agutu as joint CEOs; they developed Linda Jamii, m-Kadi and e-Voucher products.

**Linda Jamii**

Linda Jamii is a healthcare micro-insurance product that was officially launched in Kenya in 2014. It offered: a hospitalization and outpatient benefit; an income-replacement benefit to compensate for lost income (in case the principal member or spouse is hospitalized); and a funeral assistance benefit at a cost of KES 12,000 (US$135) per family per year. Linda Jamii had attracted approximately 22,000 policyholders and provided coverage to over 65,000 individuals by the time it was withdrawn from the market.

Linda Jamii’s business model was underpinned by a tripartite agreement between Changamka MicroHealth, Britam and Safaricom Limited. Britam was the underwriter and contracted the hospitals that provided healthcare to Linda Jamii’s clients. Safaricom offered the M-Pesa platform for remitting payments. Safaricom played the lead role in marketing and communications, and hosted a 24-hour customer care centre. Changamka Micro-Insurance was responsible for the electronic platform on which the product ran (supported by a Safaricom-hosted server) and also managed non-M-Pesa distribution channels. The three firms shared the revenue generated from premium payments.

**m-Kadi**

m-Kadi is a health savings product that allows its clients to plan, save and pay for outpatient healthcare at selected healthcare providers (Changamka MicroHealth, 2015c). Its business model is based on a partnership between Changamka MicroHealth, Safaricom and selected healthcare providers. Changamka owns and operates the electronic platform on which m-Kadi operates while Safaricom’s M-Pesa platform allows m-Kadi’s clients to remit payments via their mobile phones. To date, m-Kadi has more than 9,500 clients.

**e-Voucher**

Changamka MicroHealth’s e-Voucher allows for the distribution of health vouchers and subsidies electronically through mobile phones. The product was piloted in Kenya in January 2013 through the Saving Lives and Birth programme. In this programme, expectant mothers receive e-vouchers through their mobile phones and use them to pay for reproductive healthcare services at selected facilities. E-Voucher has been used to enrol over 1,700 women in Vihiga County.

B. MicroEnsure

MicroEnsure is a social enterprise that focuses on helping mass-market consumers address risks. Present in 17 countries and with 15 million customers in Africa, MicroEnsure has operations in Burkina Faso, Ghana, Madagascar, Malawi, Niger, Nigeria, Tanzania, Uganda, Zambia and now Kenya, where it offers Airtel Insurance. MicroEnsure’s investors include the International Finance Corporation (IFC), Omidyar Network, Sanlam and AXA.

**Airtel Insurance**

Airtel Insurance, a micro-insurance product launched in July 2015, offers Airtel customers in Kenya access to life, accident and hospitalization insurance, with the option of greater coverage based on monthly airtime usage. The insurance
covers all hospitalization for any medical reason, making it the most usable health insurance product in Kenya. Unlike traditional insurance products, which require the payment of premiums, Airtel Insurance is a customer loyalty programme that is awarded based upon the amount of individual airtime used each month.

Airtel’s business model is underpinned by a tripartite agreement among Airtel, MicroEnsure and PanAfrica Life Assurance Limited: PanAfrica Life is the underwriter, while MicroEnsure designs and distributes the product. MicroEnsure charges Airtel service fees and PanAfrica Life charges premiums, which Airtel pays in order to provide the product free to its customers. Since its launch, Airtel Insurance has attracted more than 50,000 customers.

C. Jacaranda Health

Jacaranda Health is a social enterprise whose primary focus is to provide high quality, affordable, sustainable and scalable maternal health services in Kenya’s peri-urban areas by combining business and clinical innovations. In 2011, Jacaranda rolled out mobile clinics that provided antenatal services to underserved peri-urban women. The company has since established stand-alone health facilities in Ruiru and Kahawa West (Jacaranda Health, 2015), which provide a spectrum of reproductive, maternal and child health services including antenatal and postnatal care, ultrasound, delivery, caesarean sections, child wellness, and family planning.

Jacaranda Health’s business model reduces financial barriers to healthcare access through system improvements such as task shifting, which lower costs. Task shifting (Jacaranda Health, 2013a; Harvard School of Public Health, 2014) allows Jacaranda to utilize clinical health workers (Jacaranda Health, 2013b) and mid-level professionals such as patient care assistants for community outreach, leaving clinical providers to focus on medical care. Other strategies in Jacaranda Health’s business model include implementing clinical guidelines and improved protocols, and offering financing options such as a pre-payment scheme through mobile banking to help expectant mothers spread the cost of deliveries over time (Jacaranda Health, 2014).

Mamakiba

Mamakiba was a mobile savings and banking tool that calculated and tracked pre-payments (Centre for Health Markets Innovation, 2015). Designed to help low-income women save and pre-pay for anticipated maternal health needs such as antenatal care, clinical delivery and postnatal care, it was launched in 2008 by Multiple Choice Labs and later adopted by Jacaranda Health. Mamakiba was piloted in the slums of Eastern Nairobi and used by more than 13,000 women in its first 18 months of operation (Multiple Choices Labs, 2014).

It addressed two important aspects of users’ financial planning needs: establishing and sustaining a savings target for the costs of maternal healthcare; and prepaying towards this target in a convenient manner. For payments, it utilized M-Pesa, a service already popular with many Kenyans (Laureti and Hamp, 2011).

D. PharmAccess

PharmAccess is an NGO focused on improving access to quality healthcare by low-income people. It is funded by donations from the Dutch Ministry of Foreign Affairs and international organizations such as the World Bank/IFC, USAID, the United Kingdom’s Department for International Development (DFID), the Clinton Foundation, the Bill and Melinda Gates Foundation, the United States Centers for Disease Control and Prevention Foundation, and the Health Insurance Fund.

Operating in Kenya since 2010, PharmaAccess was initiated to provide health plans and insurance schemes for dairy farmers by deducting the premiums from their milk sales. Later, it added SafeCare through a partnership with the Joint Commission International of the United States and the Council for Health Service Accreditation of South Africa (to improve healthcare standards in resource-constrained settings. In 2011, it added the Medical Credit Fund, which involved providing affordable
loans to the private health sector, and m-health programmes. It also developed the Mobile Health Wallet and the Health Payment Infrastructure (Health PIN). In some cases, PharmAccess has worked with for-profit companies to scale up the products it has developed. For example, it collaborated with CarePay Limited to scale up the Health PIN.

**Mobile Health Wallet**

Mobile Health Wallet allows its users to save and make payments for healthcare services electronically. Its business model is underpinned by a partnership between PharmAccess and Safaricom.

**Health PIN**

Health PIN is the back end of the Mobile Health Wallet initiative, managing healthcare payments among funders, patients and healthcare providers. It is designed to intuitively direct finances from public and private funders to healthcare providers for delivering quality services. CarePay collects medical data, handles transactions between funders, beneficiaries and healthcare providers, and reports back to funders on how their contributions are spent (PharmAccess, 2015b).
This report can be downloaded from www.businesscalltoaction.org/resources/publications

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