

# FIELD Report No. 6

## Mobile Money Study: West Bank & Gaza

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## Mobile Money Study: West Bank & Gaza

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# EXECUTIVE SUMMARY

This report summarizes the findings of a study conducted in August 2008 to assess the feasibility of using information and communication technologies (ICTs) to expand access to financial services in Palestine. In particular, the study examined the use of mobile phones and Point of Sale (POS) devices to facilitate electronic financial transactions outside of traditional brick-and-mortar branches. The use of such technologies as delivery mechanisms for financial services is commonly referred to as “branchless banking.” The goal of the study was to determine whether branchless banking could be used to overcome restrictions on movement and increase access to finance in Palestine.

**Introduction.** The Palestinian Territories of West Bank and Gaza (hereinafter “Palestine”) are small and densely-populated. There is an average of 5.8 people per household, while the average economic establishment has only 2.6 employees. Poverty rates vary according to location (rates are much higher in Gaza than the West Bank) and method of calculation (rates are much higher if calculated according to income rather than consumption).

There are 21 commercial banks with 161 branches and offices in Palestine. In addition, there are 9 MFIs with 63 branches, and 181 registered money changers. While the financial infrastructure is fairly well-developed overall, it varies dramatically by governorate, with some governorates having much more limited access to banks and other financial service providers. Most members of the population have a bank account but lack access to electronic transaction cards, such as debit, ATM, and credit cards. The ATM and POS infrastructure is similarly imbalanced; for example, 3 of the 16 governorates account for 75% of the total POS devices. Mobile phone use is widespread, with over 1 million subscribers and 81% of households having access to a mobile phone as of 2006.

Banks are supervised by the Palestine Monetary Authority (PMA) and regulated under the *Banking Law No. 2 of 2002*, which is currently being revised. NGO MFIs are currently registered as charitable associations or community organizations, but the PMA is in the process of drafting legislation that would bring MFIs under the aegis of the PMA and require them to transform into for-profit or nonprofit shareholding companies. Cooperatives are regulated under separate laws in the West Bank and Gaza, and they report to the Ministry of the Interior. Money changers have traditionally operated with little oversight, but a decree issued in February 2008 requires all money changers to be licensed by the PMA.

**Branchless Banking (BB) Models.** The technology platforms for BB can be grouped into the following categories: *POS-based solutions*; *closed systems*; *SIM-based mobile banking platforms*; and *mobile banking platforms using other technologies*, including SMS, WAP, and Java. The business models for BB include *bank-based models* (in which the customer has a direct contractual relationship with a fully prudentially regulated financial institution); *mobile network operator-based models* (in which the customer’s contractual relationship is with a mobile network operator (MNO) and not with a fully prudentially regulated financial institution); and *independent models* (in which the customer’s contractual relationship is with a party that is neither a bank nor an MNO).

BB services in Palestine and in the Middle East and North Africa (MENA) region are still in the early stages of development. Services in Palestine are limited – customers may perform debit/credit transactions on POS devices, and they may access certain account information and receive SMS confirmation of transactions via their mobile phones. Other countries in the region are just beginning to offer BB services, mostly through the MNO-based model. Services have been launched or are being studied in Kuwait, Qatar, Egypt, Algeria, Iraq, Tunisia, and Israel.

**The Case for Branchless Banking in Palestine.** Due to the political situation, there are restrictions on movement of people, goods, services, and cash in Palestine. As a result, a system

that facilitated electronic payments and minimized cash needs would bring great benefits. BB delivery mechanisms could also reduce costs, which might help to encourage banks to offer small-value savings and other low-value services that might be unprofitable to provide in a branch. On the other hand, with its small size, fairly extensive branch infrastructure, and high population density, the need for BB services is not as great as it would be in a large, sparsely populated country with limited infrastructure. However, given the potential for significant restrictions on movement to be instituted without warning, there is still a strong case for exploring BB delivery mechanisms.

Key services demanded by microentrepreneurs and low-income Palestinians include credit, savings, insurance, and to a lesser extent, transfers. BB delivery mechanisms could help to accelerate access to these services by expanding the network of access points at a lower cost than that of setting up and operating a branch or office. However, the full potential benefits of BB delivery mechanisms will not be realized unless a national payment system is put into place and unless financial service providers develop financial products that meet the needs of low-income Palestinians.

**Appropriate Technologies.** Given the current circumstances in Palestine (large number of bank accounts, available business models, regulatory framework, and PMA's tolerance for risk), recommended technologies include a POS-based platform and a SIM-based mobile banking platform. This would provide the necessary functionality and outreach, while simultaneously addressing the PMA's security concerns. The most cost-effective means to offer these services would be through a shared services model used by all banks on a pay-per-use basis.

**Affordability.** Using comparative figures of the relative costs of mobile banking services in four other countries, we estimate the affordability of a branchless banking product in Palestine. If we use the highest-cost product as a benchmark, only 53% of the Palestinian population would be able to afford a full range of BB-enabled services. However, if South African providers are excluded and the highest-cost product in the other three countries is used as a benchmark, 90% of the population would be able to afford a full range of BB-enabled services. Given the small population in Palestine, though, it is unlikely that such services could be provided profitably by a single financial service provider in a competitive environment. Therefore, it is recommended that a BB application be integrated into the national switch, which would substantially reduce costs. It is important to note that the affordability estimates suffer from significant limitations, and that further research and analysis will be needed to refine these initial estimates.

**Factors Enabling the Adoption of Branchless Banking.** Factors that would facilitate the supply and uptake of BB services in Palestine include: very high mobile phone penetration and extensive cellular coverage; a well-educated populace; and interest from MNOs and banks.

**Challenges to the Adoption of Branchless Banking.** Numerous challenges to the adoption of BB delivery mechanisms will need to be overcome. These include: the lack of a national payment system and national switch; restrictions and gaps in the regulatory framework (particularly with respect to outsourcing financial transactions, money laundering and terrorist financing, electronic money, electronic commerce and security, consumer protection, and payment systems); PMA concerns about the risks inherent in BB delivery mechanisms; a conservative banking sector; consumer education needs; product design challenges; and the existence of a well-established brick-and-mortar infrastructure.

**Recommendations.** The report concludes with five key recommendations for facilitating electronic and branchless banking transactions in Palestine: (i) support the development of the national payment system for clearing and settlement between banks, and a national switch to create an interoperable network of ATMs and POS devices; (ii) create an enabling legal framework for the payment system and for branchless banking; (iii) ensure proper sequencing/timing; (iv) analyze product design and methodology constraints that currently limit financial access; and (v) build the institutional capacity of the MFI sector.

# INTRODUCTION

## Population

Palestine covers an area of 6,020 km<sup>2</sup> (of which Gaza is only 365 km<sup>2</sup>). With a population of 3.761 million people, this relatively small area has a population density of 635 people per km<sup>2</sup>. The population density is much higher in Gaza (3,881 people/km<sup>2</sup>) than in the West Bank (415 people/km<sup>2</sup>). In both the West Bank and Gaza, however, the per capita cost of distributing financial services is expected to be significantly lower than in larger, less densely populated countries.<sup>1</sup>

The average household size in Palestine is 5.8 people per household. As of late 2007, there were 119,547 economic establishments employing 314,506 people, an average of 2.6 employees per business. Table 1 below shows the population, household, and economic establishment distribution per Governorate.<sup>2</sup>

**Table 1**  
Population, Households and Economic Establishments.

	Population					Households		Economic Establishments		
	Population	Population % Distribution	Population 15-65	Governorate Area (km <sup>2</sup> )	Population density	Household Size	Number of Households	Currently Operational	Employment	Employees Per Business
<b>Palestinian Territory</b>	<b>3,761,646</b>	<b>100.00%</b>	<b>1,894,230</b>	<b>6,020</b>	<b>625</b>	<b>5.8</b>	<b>646,755</b>	<b>119,547</b>	<b>314,506</b>	<b>2.63</b>
<b>West Bank</b>	<b>2,345,107</b>	<b>62.34%</b>	<b>1,231,290</b>	<b>5,655</b>	<b>415</b>	<b>5.5</b>	<b>427,533</b>	<b>83,582</b>	<b>216,654</b>	<b>2.59</b>
Jenin	256,212	6.81%	138,605	583	439	5.3	48,169	11,770	23,278	1.98
Tubas	48,771	1.30%	26,136	402	121	5.3	9,135	1,787	3,192	1.79
Tulkarm	158,213	4.21%	88,405	246	643	5.3	29,874	6,609	14,459	2.19
Nablus	321,493	8.55%	177,367	605	531	5.4	59,630	14,537	38,727	2.66
Qalqilya	91,046	2.42%	48,174	166	548	5.6	16,336	4,166	8,966	2.15
Salfit	59,464	1.58%	32,079	204	291	5.4	11,102	2,374	4,444	1.87
Ramallah & Al-Bireh	278,018	7.39%	145,870	855	325	5.3	52,554	11,680	40,623	3.48
Jericho & Al Aghwar	41,724	1.11%	21,417	593	70	5.5	7,581	1,389	3,865	2.78
Jerusalem	362,521	9.64%	181,666	345	1,051	5.2	70,308	4,846	13,174	2.72
Bethlehem	176,515	4.69%	93,259	659	268	5.3	33,002	6,302	18,543	2.94
Hebron	551,130	14.65%	278,312	997	553	6.1	89,842	18,122	47,383	2.61
<b>Gaza Strip</b>	<b>1,416,539</b>	<b>37.66%</b>	<b>662,940</b>	<b>365</b>	<b>3,881</b>	<b>6.5</b>	<b>219,222</b>	<b>35,965</b>	<b>97,852</b>	<b>2.72</b>
North Gaza	270,245	7.18%	126,475	61	4,430	6.7	40,262	5,818	13,741	2.36
Gaza	496,410	13.20%	232,320	74	6,708	6.5	76,810	14,755	49,053	3.32
Deir Al Balah	205,534	5.46%	96,190	58	3,544	6.4	32,083	4,756	11,130	2.34
Khanyunis	270,979	7.20%	126,818	108	2,509	6.3	43,203	6,726	15,267	2.27
Rafah	173,371	4.61%	81,138	64	2,709	6.5	26,864	3,910	8,661	2.22

Source : PCBS Central Bureau of Statistics Population, Housing and Establishment Census-2007

Table 2 shows the extent of poverty in Palestine, calculated according to income and consumption. Two observations stand out: (i) poverty rates are much higher in Gaza than in the West Bank; and (ii) poverty rates are much higher when measuring according to income than when measured according to consumption. The relative poverty line in Palestine is pegged at NIS<sup>3</sup> 2,362 (approx. USD 658 as of Sept. 2008) and the absolute (“deep”) poverty line at 1,886 NIS (approx. USD 525).<sup>4</sup>

<sup>1</sup> For example, Mozambique has a total area of 801,590 km<sup>2</sup> and a population density of approx. 26.5 people/km<sup>2</sup>. See CIA, “The World Factbook – Mozambique” (<https://www.cia.gov/library/publications/the-world-factbook/geos/mz.html>).

<sup>2</sup> A governorate is the functional equivalent of a Canadian province or US state.

<sup>3</sup> NIS refers to New Israeli Shekels. While four currencies are used in Palestine – Israeli shekels, Jordanian dinars, US dollars, and European euros – the NIS is the most commonly used currency.

<sup>4</sup> “Relative poverty” is defined by the Palestinian Central Bureau of Statistics (PCBS) to refer to a family of six (2 adults and 4 children) that earns less than the minimum monthly expenses for food, clothing, housing, and other expenses such as health care, education, transportation, personal care, and housekeeping supplies. “Absolute poverty” refers to a family of six that earns less than the minimum monthly expenses for food, clothing, and housing alone. See PCBS, “Press Release: Poverty and Living Conditions in the Palestinian Territory, 2007” ([http://www.pcbs.gov.ps/Portals/\\_pcbs/PressRelease/poverty\\_ee.pdf](http://www.pcbs.gov.ps/Portals/_pcbs/PressRelease/poverty_ee.pdf)).

Region	Relative Poverty		Absolute Poverty	
	Consumption	Income	Consumption	Income
West Bank	19.1%	45.7%	9.7%	34.1%
Gaza Strip	51.8%	79.4%	35%	69.9%
<b>Palestinian Territory</b>	<b>30.3%</b>	<b>57.2%</b>	<b>18.3%</b>	<b>46.3%</b>

Source: PCBS, "Press Release: Poverty and Living Conditions in the Palestinian Territory, 2007."

## **Infrastructure**

### *Banks – Branches and Offices*

As of mid-2008, there are 21 commercial banks in Palestine. Of the 21 banks, 10 are local (Palestinian) banks, 10 are Arab (8 Jordanian and 2 Egyptian), and 1 is non-Arab foreign (Hong Kong). Total assets are approximately USD 7.2 billion, and total deposits are approximately USD 5.1 billion.

The banking infrastructure is fairly well-developed, with some villages having "bank offices," which are essentially mini-branches that provide most services needed by low-income customers, including deposit-taking, withdrawal of deposits, and money transfers/bill payments.<sup>5</sup> There are currently a total of 161 bank branches, offices, and cash offices (a banking outlet where a more limited number of services may be provided) across Palestine, and the Palestine Monetary Authority (PMA) is strongly encouraging banks to open more branches and offices.

Table 3 below compares the current branch infrastructure for banks, MFIs, and money changers to the population and households per governorate.

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<sup>5</sup> See PMA Circular 205 of 2007, Part II.

**Table 3:****Bank, MFI and Money Changer Outlets per Governorate**

	Number of Households	Population 15-65	Banks	MFIs	Money Changers	Total Branches	Number of Households serviced per Branch	Population serviced per Branch
<b>Palestinian Territory</b>	<b>646,755</b>	<b>1,894,230</b>	<b>161</b>	<b>84</b>	<b>188</b>	<b>433</b>	<b>1,494</b>	<b>4,375</b>
<b>West Bank</b>	<b>427,533</b>	<b>1,231,290</b>	<b>121</b>	<b>59</b>	<b>145</b>	<b>325</b>	<b>1,315</b>	<b>3,789</b>
Jenin	48,169	138,605	8	7	4	19	2,535	7,295
Tubas	9,135	26,136	2	3	0	5	1,827	5,227
Tulkarm	29,874	88,405	8	7	8	23	1,299	3,844
Nablus	59,630	177,367	22	8	39	69	864	2,571
Qalqilya	16,336	48,174	5	5	11	21	778	2,294
Salfit	11,102	32,079	2	2	1	5	2,220	6,416
Ramallah & Al-Bireh	52,554	145,870	34	8	40	82	641	1,779
Jericho & Al Aghwar	7,581	21,417	5	4	2	11	689	1,947
Jerusalem	70,308	181,666	6	1	6	13	5,408	13,974
Bethlehem	33,002	93,259	12	7	19	38	868	2,454
Hebron	89,842	278,312	17	7	15	39	2,304	7,136
<b>Gaza Strip</b>	<b>219,222</b>	<b>662,940</b>	<b>40</b>	<b>25</b>	<b>43</b>	<b>108</b>	<b>2,030</b>	<b>6,138</b>
North Gaza	40,262	126,475	5	4	0	9	4,474	14,053
Gaza	76,810	232,320	21	12	43	76	1,011	3,057
Deir Al Balah	32,083	96,190	3	4	0	7	4,583	13,741
Khanyunis	43,203	126,818	7	3	0	10	4,320	12,682
Rafah	26,864	81,138	4	2	0	6	4,477	13,523

Source: PCBS / PMA

Although the branch infrastructure is fairly extensive, it varies dramatically by governorate. As a result, while there are only 1,546 households per bank branch in Ramallah/Al-Bireh, the corresponding figure for Deir Al Balah is 10,694. In addition, given the concentration of bank branches in cities and towns, many villagers may experience difficulty in accessing services, particularly when restrictions on movement are severe. In Jenin, for example, there are approximately 100 nearby villages with only 8 branches in the governorate, so tens of thousands of people must travel to access financial services. If movement is limited due to political strife, it may be difficult and costly (in terms of both time and money) for villagers to access financial services.

According to the United Nations Relief and Work Agency (UNRWA), however, mobility is less of an issue today in the West Bank, unless the client lives or works in the “seam zone” (between the wall and the Green Line) or in Qalqilya. Nevertheless, given the history of political turmoil in Palestine, the possibility of greater restrictions on movement in the short to medium term should not be ignored.

As of mid-2007, there were a total of 1,909,681 bank accounts in Palestine.<sup>6</sup> While these numbers include the business accounts of the nearly 120,000 economic establishments, if this is compared to the adult population of 1.894 million, it is understandable that the PMA does not consider there to be an urgent need for innovative delivery mechanisms to reach the poor with banking services. The PMA believes that virtually everyone is banked in Palestine, noting that in addition to military and salaried employees, even social beneficiaries have bank accounts.

<sup>6</sup> See Association of Banks in Palestine, “Fact Sheet 2007.”

## Banks – Automated Teller Machines (ATMs) and Point of Sale (POS) Devices

As of mid-2008, there were 214 ATMs, 77% of which were in the West Bank. At least one bank indicated that the distribution of ATM infrastructure is difficult in “Areas B and C”, since Israel (not the Palestinian Authority) is responsible for security in these areas, and there have been a few robbery attempts in rural areas.<sup>7</sup>

Currently, only Bank of Palestine has developed a POS network. Its approximately 1,300 POS devices are concentrated largely in the tourist-friendly governorates of Ramallah/Al-Bireh and Bethlehem. Other banks who also wish to acquire transactions on a POS network have had this process complicated due to a lack of clarity over Palestine’s status. For example, when Arab Bank wanted to conclude an agreement with VISA and MasterCard, delays resulted due to the lack of clarity over whether Palestine was a separate country, or whether the Israeli license also applied to Palestine.

As of mid-2007, approximately 279,000 electronic transaction cards (debit, ATM, and credit cards) had been issued for an adult population (ages 15-65) of 1.89 million people with 1.9 million bank accounts. As expected, Table 4 shows a significantly higher percentage of debit and ATM cards per adult in areas where POS devices and ATMs are readily available.<sup>8</sup>

**Table 4**  
Distribution of ATM, POS Infrastructure and Banking Cards

	Population 15-65	ATMs	POS Devices	Credit Cards	ATM Cards	Debit Cards	Total Cards	Debit and ATM Cards as a % of Adult Population
<b>Palestinian Territory</b>	<b>1,894,230</b>	<b>214</b>	<b>1,287</b>	<b>14,309</b>	<b>102,683</b>	<b>161,847</b>	<b>278,839</b>	<b>14%</b>
<b>West Bank</b>	<b>1,231,290</b>	<b>164</b>	<b>1,063</b>	<b>10,687</b>	<b>79,332</b>	<b>93,837</b>	<b>183,856</b>	<b>14%</b>
Jenin	138,605	12	36	329	6,623	5,979	12,931	9%
Tubas	26,136	2	7	26	0	812	838	3%
Tulkarm	88,405	7	23	364	5,059	5,166	10,589	12%
Nablus	177,367	24	51	1,417	16,391	12,497	30,305	16%
Qalqilya	48,174	3	33	268	1,914	3,453	5,635	11%
Salfit	32,079	1	5	43	0	566	609	2%
Ramallah & Al-Bireh	145,870	64	589	5,083	26,219	35,048	66,350	42%
Jericho & Al Aghwar	21,417	4	53	372	1,176	6,082	7,630	34%
Jerusalem	181,666	6	0	415	2,495	5,611	8,521	4%
Bethlehem	93,259	20	209	705	6,090	9,579	16,374	17%
Hebron	278,312	21	57	1,665	13,365	9,044	24,074	8%
<b>Gaza Strip</b>	<b>662,940</b>	<b>50</b>	<b>224</b>	<b>3,622</b>	<b>23,351</b>	<b>68,010</b>	<b>94,983</b>	<b>14%</b>
North Gaza	126,475	5	20	581	4,042	10,789	15,412	12%
Gaza	232,320	29	183	2,178	10,669	36,807	49,654	20%
Deir Al Balah	96,190	4	8	172	724	3,534	4,430	4%
Khanyunis	126,818	7	9	405	5,514	10,148	16,067	12%
Rafah	81,138	5	4	286	2,402	6,732	9,420	11%

Source : PMA / Palestine Association of Banks

Although the infrastructure looks well-developed, the lack of interoperable ATMs – other than through the Visa and MasterCard network, which is significantly more expensive – and the absence of association-branded cards severely restrict usage, as customers can only transact on their own bank’s infrastructure. Overall, payment transactions are still conducted chiefly using

<sup>7</sup> There are three designated Areas in the West Bank: Area A (civil administration and security provided by the Palestinian National Authority (PNA)); Area B (civil administration provided by the PNA, security provided by Israel); and Area C (civil administration and security provided by Israel).

<sup>8</sup> Credit cards were excluded from the calculation of cards as a percentage of adult population, since most credit card holders likely also possess an ATM or debit card. It is also possible that one person may possess both an ATM card and a debit card, but this is expected to be uncommon, since debit cards can be used as ATM cards in addition to their use for electronic purchases using POS devices.

checks, with more than 2.7 million such transactions processed in 2007. This was more than double the volume of ATM transactions processed in the same period.<sup>9</sup>

In wealthy countries, average debit card per capita statistics exceed 100%.<sup>10</sup> This shows that the electronic banking segment of the market in Palestine is young and developing. To address this, both the distribution of the card-based products and the infrastructure on which they operate will need to be expanded.

### *MFIs*

As of mid-2008, the 9 primary NGO-MFIs operating in Palestine had 63 branches<sup>11</sup> and were present in all 16 governorates. While also establishing offices in urban areas like banks, MFIs were more likely than banks to be present in the less densely populated areas of each governorate.

### *Money Changers*

There are 181 registered money changers in Gaza and the West Bank.<sup>12</sup> Their primary function is to exchange currency, as Palestine utilizes three different currencies as accepted tender for transacting (New Israeli Shekel, Jordanian Dinar, and United States Dollar).<sup>13</sup> However, they are also used extensively for both domestic and international money transfers. As a result, the money transfer infrastructure is fairly well-developed.

In addition, Cairo Amman Bank has a relationship with Western Union and Bank of Palestine with Moneygram to send money transfers for clients internationally.<sup>14</sup>

### *Mobile Phones*

The use of mobile phones in Palestine is widespread and reaches into the lower-income deciles, with 81% of households having access to a mobile phone as of 2006.<sup>15</sup> It is estimated based upon 2006 data and discussions with state-owned provider JAWWAL that there are more than 1 million cellular subscribers. In addition, various authors estimate that 20-33% of Palestinian mobile phone users are utilizing Israeli networks.<sup>16</sup>

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<sup>9</sup> Association of Banks in Palestine, "Fact Sheet 2007."

<sup>10</sup> A survey of 13 wealthy countries in the early 2000s found a median of 1.02 and a mean of 1.11 debit cards per capita. See Amromin, Gene & Sujit Chakravorti, "Debit Card and Cash Usage: A Cross-Country Analysis." Federal Reserve Bank of Chicago (March 2007) ([http://www.chicagofed.org/publications/workingpapers/wp2007\\_04.pdf](http://www.chicagofed.org/publications/workingpapers/wp2007_04.pdf)).

<sup>11</sup> The figure of 63 branches is slightly more up-to-date than the figure of 59 branches used in Table 3. The table uses the older MFI figures for comparative purposes.

<sup>12</sup> PMA data; Association of Banks in Palestine, "Fact Sheet 2007."

<sup>13</sup> European Euros are also commonly converted at money changers, but the National Payment System will only operate using these three currencies.

<sup>14</sup> Bank of Palestine website ([www.bankofpalestine.net](http://www.bankofpalestine.net)).

<sup>15</sup> Palestinian Central Bureau of Statistics, "Households Survey on Information and Communications Technology - 2006 Main Findings," Table 4 (August 2006) ([http://www.pcbs.gov.ps/Portals/\\_pcbs/PressRelease/CommTeco6e.pdf](http://www.pcbs.gov.ps/Portals/_pcbs/PressRelease/CommTeco6e.pdf)).

<sup>16</sup> See World Bank, "West Bank and Gaza Telecommunications Sector Note – Introducing Competition in the Palestinian Telecommunications Sector." (Jan. 2008) ([http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2008/03/20/000333037\\_20080320052257/Rendered/PDF/429870WPoGZoTe1oBox327342Bo1PUBLIC1.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2008/03/20/000333037_20080320052257/Rendered/PDF/429870WPoGZoTe1oBox327342Bo1PUBLIC1.pdf)); Hadfield, Will, "Survey Reveals Extent of Israeli Mobile Use in West Bank" (March 7, 2008) ([http://www.meed.com/power/alternativepower/news/2008/03/survey\\_reveals\\_extent\\_of\\_israeli\\_mobile\\_use\\_in\\_west\\_bank.html](http://www.meed.com/power/alternativepower/news/2008/03/survey_reveals_extent_of_israeli_mobile_use_in_west_bank.html)).

## Regulation of Financial Services

The legal and regulatory framework governing the provision of financial services in Palestine is still in its early stages of development. Formal financial service providers (banks and other licensed financial institutions) are still nascent, and the Palestine Monetary Authority (PMA) – which is responsible for regulation and supervision of financial services – only commenced operations in December 1995. As discussed in Box 1, banks from other Arab countries shut down following the Israeli occupation in 1967 and only began to return in the 1980s.

Key financial service providers used by lower-income Palestinians include:

### *Banks*

Banks are regulated under the *Banking Law No. 2 of 2002*. Banks are fully prudentially regulated and supervised by the PMA. The Banking Law is under review, and a revised Banking Law is being developed but was not shared with the authors at this early stage.

### *NGO Microfinance Institutions (NGO-MFIs)*

NGO-MFIs are registered as charitable associations or community organizations under the *Law of Charitable Associations and Community Organizations No. 1 of 2000*. Under this law, NGO-MFIs are registered and subjected to limited supervision by the Ministry of the Interior.

A draft *Act on Licensing and Regulation of Lending and Finance Companies* is being developed that would permit the PMA to regulate and supervise non-deposit-taking MFIs engaged in lending or financing<sup>17</sup> transactions. The current draft would require NGO-MFIs to transform into shareholding companies, though they could maintain their nonprofit status. If passed, this Act would subject nonprofit MFIs to greater supervision and oversight, which the PMA hopes will lead to the professionalization of the microfinance sector.

### *Cooperatives*<sup>18</sup>

Cooperatives are regulated under separate laws in the West Bank and Gaza. Cooperatives are required to register and report to the Ministry of the Interior.<sup>19</sup>

### *Money Changers*

For decades, money changers have played a key role in Palestinian society, particularly given the limited availability of banking services until recently. While they play an important role in providing financial services, the PMA has expressed some concerns over the fact that some money changers are performing international and domestic wire transfers without conducting full Customer Due Diligence (CDD) procedures. To address these concerns, *Decree No. 1 of 2008 with regard to Licensing and Monitoring the Profession of Money Changing in Palestine* was issued in February 2008. This Decree requires all money changers to be licensed by the PMA, prohibits money changers from engaging in any deposit-taking or lending activities, and permits money changers to process international transfers only if they are executed through a bank that is licensed in Palestine.

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<sup>17</sup> The Act distinguishes lending from financing in order to cover both traditional lending and *shari'ah*-compliant asset-based financing, which does not permit creditors to charge traditional interest, but requires instead that the creditor purchase an asset and then resell it to the buyer at a markup.

<sup>18</sup> Cooperatives were not studied in depth for this report.

<sup>19</sup> Khaled et al., "Meeting the Demand for Microfinance in the West Bank and Gaza." CGAP (Jan. 2006) ([http://www.microfinancegateway.org/files/34172\\_file\\_MF\\_in\\_WestBankGaza.pdf](http://www.microfinancegateway.org/files/34172_file_MF_in_WestBankGaza.pdf)).

## **Box 1: A Brief Modern History of the Banking Sector in Palestine**

Following the 1967 war and subsequent Israeli occupation of the West Bank and Gaza Strip, the Palestinian banking sector shut down. This void was partially filled by Israeli banks that operated in major Palestinian cities. However, their outreach was limited, and they concentrated mostly on deposit-taking rather than lending. Money changers also played a key role, effecting money transfers and offering some deposit-taking and lending services, in addition to currency exchange.

In 1981, Bank of Palestine reopened, followed by Cairo Amman Bank. In 1987, the first *intifada* (uprising) began. Israeli banks were attacked, leading them to cease operations. Reliance upon money changers increased during this period.

The improvement in Palestinian-Israeli relations in the early 1990s led to an expansion of banking services within the country. In 1993, Arab Bank reopened its old branches with the approval of the Central Banks of Jordan and Israel. As a result of the Oslo Accords, the Palestinian National Authority was permitted to establish its own Central Bank. Subsequently, the Palestine Monetary Authority (PMA) was established in December 1994 and began full operations in Gaza in December 1995. The first PMA branch in the West Bank was opened in Ramallah in August 1996.

Over the next decade, other banks returned to Palestine or established new operations in the country. After over a decade of growth, however, banks in Palestine experienced major financial difficulties following Hamas' victory in the 2006 elections and the subsequent funding freeze imposed by many donor countries and Israel. These challenges continue, particularly in Gaza, which remains isolated following the Hamas takeover in June 2007.

As of mid-2008, there are 21 commercial banks in Palestine, with approximately 180 branches and offices (approximately  $\frac{1}{4}$  of which are in Gaza). Of the 21 banks, 10 are local (Palestinian) banks, 10 are Arab (8 Jordanian and 2 Egyptian), and 1 is non-Arab foreign (Hong Kong). Total assets are approximately USD 7.2 billion, and total deposits are approximately USD 5.1 billion.

*Source: PMA.*

# BRANCHLESS BANKING (BB) MODELS

## Branchless Banking Models around the World

When considering the different branchless banking (BB) models, two key variables need to be considered: the technology platform and the business model.

### *Technology Platforms*

A wide range of technology platforms are available to enable mobile banking and branchless banking delivery mechanisms. The security and usability of the systems are similarly diverse, but can be grouped into the following categories:

POS-Based Solutions: The use of POS-based technology has the advantages of (i) having bank-level security; and (ii) allowing for a wide range of transactions to be conducted. The added advantage of being able to use either GPRS or USSD as a communication method allows for portability into remote locations.

There are a number of POS device-based solutions that allow for a range of transactions in addition to the traditional credit and debit card acquiring. These include:

- Sale and printing of vouchers for services such as airtime and electricity. This seems to be the dominant transaction type after debit/credit card acquiring, with some devices in South Africa being specifically purchased for this purpose.
- Cash-to-Cash money transfers, with the generation of a receipt for the customer who is sending the cash.
- “Cash-In” for real-time deposits into an account.
- “Cash-out” for cash withdrawals and cash back.
- Card issuance to beneficiaries, as well as customer PIN selection.
- Bill Payments
- Balance inquiries

Although the cost of the POS is more than that of a mobile phone, it provides the customer with the added benefit of receiving a paper receipt for all transactions.

The POS device is usually linked to an independent switching system that is then integrated into the banking back-end.

Closed Systems: This type of system is usually smart card-based and has been deployed mainly for the provision of services in closed payment environments, such as pension payments or small-value payments within a university community. Although these types of systems can be used for switching, the ATM and POS devices are usually proprietary and therefore more expensive. As a result, integration into other payment systems is difficult, as they are designed for standalone operations.

The deployment of this system type is costly and limits interoperability. This reduces the potential for a collaborative rollout of infrastructure to extend the reach of financial services significantly.

The addition of a mobile banking platform to this platform would similarly not have the levels of interoperability needed to process transactions with other financial institutions.

Mobile Banking Platforms – SIM-Based: This solution offers a rich product set with security integrated into the SIM card of the phone. The solution is developed to integrate into other

banking platforms and switches, and it has well-developed interfaces. As a result of having access to the security keys on the SIM card, it is more secure than other platforms. In addition, with the correct levels of keys being loaded, it is able to utilize the same PIN for mobile transactions that the customer utilizes on the ATM.

The drawback of this system type is the requirement to have a specific SIM card, and the focus of the solution is only on the mobile functionality and not in achieving an integrated banking infrastructure.

This solution can be appropriate if the company rolling out the mobile-based solution wants to have some form of control over the SIM card, as well as in countries where the ATM and POS infrastructure is already well-developed and can be used by customers to deposit and receive cash. It is not surprising that the majority of rollouts of this solution type are mobile network operators (MNOs) or joint ventures with MNOs.

The benefit of this type of rollout is that although it does not offer a full infrastructure to enable banking and payments, it can easily integrate into systems that do, and so can contribute to the payments footprint.

Mobile Banking Platforms – Other: Other forms of mobile banking options include:

- **Structured SMS applications**, where the user sends an SMS message in a predetermined format to the bank in order to perform a transaction. In countries where SMS service is inexpensive and used extensively, such as in the Philippines, this technology has taken off and mobile payments have grown rapidly.
- **WAP-based systems**, which offer a higher level of security than the structured SMS, but less than the SIM-based technology, and as a result are still able to offer functionality such as bill payments and inter-account transfers. The difference between the WAP-based and the SIM-based technology is that the WAP-based security requirements do not allow for the use of the card PIN for transactions. Instead, it relies on a customer-selected PIN that is chosen when registering for the service.
- **Java-based applications**. These are usually offered to the banked population as another channel to their accounts, since they require a relatively expensive and sophisticated handset. Some solutions use USSD as the carrier as well as a Java application on the phone to increase security and usability. However, this is only appropriate for use on an individual's device for his account. Since this solution is only available for already-banked customers with expensive mobile phones, it is unlikely to be very effective for increasing access to finance among the unbanked and under-banked.

### *Business models*

There are a number of business models being utilized for branchless banking services. They can be grouped into the following categories: Bank-based models; MNO-based models; and independent models that link MNOs and banks.

Bank-Based Models: The bank-based models are often an extension of the banking channels allowing customers access to transactions and information relevant to their bank account. In addition, however, bank-based models include models where the mobile network operator is involved in both the provision of technology and the marketing of the mobile payments service,

provided that the customer has a direct contractual relationship with a fully prudentially regulated financial institution (usually a bank).<sup>20</sup>

One successful example of a bank-based BB model is Brazil, where banks have installed POS devices in grocery stores, lottery agents, pharmacies, and other small businesses (collectively known as *banking correspondents*) to provide access to financial services in municipalities where it is too costly to set up and operate a full bank branch. Customers can use their bank-issued debit cards at these retailers to access many of the same services available in a branch, including deposits, withdrawals, bill payments, transfers, and receipt of social benefits.

Bank-based models also include models where the MNO takes an active role in marketing the product, such as MTN Banking in South Africa. MTN Banking customers can perform a number of payment transactions via their mobile phone, and they can also deposit funds to their bank accounts at supermarkets and other retailers, rather than having to visit a bank branch. While mobile network operator MTN plays a key role in marketing MTN Banking, customers still have a direct contractual relationship with a fully prudentially regulated financial institution, Standard Bank.

In some cases, services such as access to account balance information and SMS notification of transactions are included in the category of bank-based BB. For the purposes of this study, we have excluded any system that does not permit the user to conduct deposit, withdrawal, or payment transactions.

Mobile Network Operator-Based Models: In the MNO-based model, customers have no direct contractual relationship with a fully prudentially regulated financial institution, such as a commercial bank. In this model, the customer uses a network of *retail agents* (the functional equivalent of the Brazilian network of *banking correspondents*) to add or withdraw cash from a virtual account whose value is stored on the server of an MNO.<sup>21</sup> Once value has been added to the virtual account, the customer can use the mobile phone to transfer funds for a variety of purposes, including sending remittances to family members, repaying loans, and paying bills. Two well-known examples of MNO-based models are the M-PESA service provided by Safaricom in Kenya and the GCash service provided by Globe Telecom in the Philippines.

Independent Models: These applications allow for the provision of an intermediary service and usually use wallet-based applications. An example of this is Paym8 in Botswana, which allows the customer to link her credit card and signature-based debit card, in order to make payments utilizing her mobile phone.

### **Branchless Banking Models in the Middle East and North Africa (MENA)**

Branchless banking services in Palestine and in other countries in the region are in the early stages of development.

In Palestine, some banks – including Arab Bank, Cairo Amman Bank, and Bank of Palestine – offer customers the ability to perform certain actions via the mobile phone, such as ordering checks and accessing certain information, including account balances and SMS notification of completed transactions. While this provides an electronic service to customers, it does not allow the customer to transfer funds to another individual or pay bills on the phone, and therefore it does not increase the reach of the payment system.

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<sup>20</sup> In defining the *bank-based* and *nonbank-based* models, we follow the definitions using by CGAP. See, e.g. CGAP, “Notes on Regulation of Branchless Banking in India” (Jan. 2008) (<http://www.cgap.org/gm/document-1.9.2322/India-Notes-On-Regulation-Branchless-Banking-2008.pdf>).

<sup>21</sup> See CGAP, “Notes on Regulation of Branchless Banking in India” (Jan. 2008) (<http://www.cgap.org/gm/document-1.9.2322/India-Notes-On-Regulation-Branchless-Banking-2008.pdf>).

POS applications using Bank of Palestine's infrastructure are currently limited to debit and credit card transactions, and are not being used for deposits, withdrawals ("cash back"), bill payments, or money transfer transactions.

Israeli banks are in the process of examining mobile banking solutions, but they also seem to be in the early stages of development. Israeli Discount Bank has only just partnered with a technology provider to start offering mobile banking.<sup>22</sup>

In Kuwait, Gulf Bank has begun to offer its Mobile Plus service. Mobile Plus is a menu-driven application that offers banking features to customers through their mobile phone. Using the service, customers can get instant replies to their banking requests, including details of their available balance and last five transactions. It also allows them to make checkbook requests, fund transfers, and credit card payments.<sup>23</sup>

Qatar National Bank's EAZYmobile application requires a GPRS-enabled handset to function. This application enables the user to pay bills and transfer funds among his own accounts, but it does not yet offer the ability to do inter-person transfers.

Orascom has announced the launching of an MNO-based model similar to M-PESA in Egypt.<sup>24</sup> This service may have a significant impact on the market; it will be interesting to see if the market uptake is similar to the results in Kenya. This may prove the business case to banks and operators alike and encourage them to overcome some of the barriers to implementation. Orascom is in the process of rolling out the MNO-based model in all seven countries in which it operates, including four in the MENA region: Algeria, Egypt, Iraq, and Tunisia.<sup>25</sup>

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<sup>22</sup> CBR, "Israel Discount Bank Selects Infoys Finacle E-Banking Solution" (Sept. 3, 2008) ([http://cbronline.com/article\\_news.asp?guid=44A35F5D-5C34-409E-8A25-808241B09E12](http://cbronline.com/article_news.asp?guid=44A35F5D-5C34-409E-8A25-808241B09E12)).

<sup>23</sup> Arabian Business.com, "Gulf Bank to Offer Mobile Banking Service" (July 23, 2008) (<http://www.arabianbusiness.com/525601-gulf-bank-to-offer-mobile-banking-service>).

<sup>24</sup> Financial Times, "Orascom Sets its Sights on Mobile Banking" (April 11, 2008) ([http://www.ft.com/cms/s/ead4fdac-075f-11dd-b41e-0000779fd2ac.Authorised=false.html?\\_i\\_location=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2Fo%2Fea4fdac-075f-11dd-b41e-0000779fd2ac.html%3Fnclick\\_check%3D1&\\_i\\_referer=&nclick\\_check=1](http://www.ft.com/cms/s/ead4fdac-075f-11dd-b41e-0000779fd2ac.Authorised=false.html?_i_location=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2Fo%2Fea4fdac-075f-11dd-b41e-0000779fd2ac.html%3Fnclick_check%3D1&_i_referer=&nclick_check=1)).

<sup>25</sup> Arabian Business.com, "Orascom to Launch Mobile Banking" (April 15, 2008) (<http://www.arabianbusiness.com/properties/article/516596-orascom-to-launch-mobile-banking>).

# IS THERE A CASE FOR BRANCHLESS BANKING IN PALESTINE?

## Introduction

To evaluate whether there is a case for BB in Palestine, we first need to understand the benefits of BB delivery mechanisms (as demonstrated in other countries) and consider the use of such mechanisms in the Palestinian country context. Then, we need to focus specifically on the financial services demanded by low-income Palestinians and consider whether BB delivery mechanisms are likely to play an important role in the provision of these services.

## How Branchless Banking Facilitates Access to Financial Services

### *Reduction of Costs for Providing and Accessing Services*

One of the arguments for BB is that it can dramatically reduce the costs of providing financial services. For example, setting up a retail agent to provide financial services at a local grocery store can cost less than 1% of the cost of setting up a full bank branch.<sup>26</sup> Costs per transaction are also lower, with estimates of cost savings ranging from 50-80%.<sup>27</sup> Such a reduction in costs could, for example, encourage banks to reconsider providing savings services to lower-income clients whose small-value transactions would be unprofitable to process in a bank branch.

Another argument for BB centers on the reduction of costs from the perspective of the client. In some countries, BB delivery mechanisms may be the only way for clients in remote, low-income areas to be able to afford to save, borrow, or transfer funds. In Malawi, for example, some clients have been known to travel as far as 600 km to deposit or withdraw funds.<sup>28</sup> For clients who live far from banks, the cost of accessing financial services must incorporate not only the direct cost of the financial service but also their transportation cost and the opportunity cost of the lost time spent in transit.

### *Application to Palestinian Country Context*

At first glance, the strongest arguments for BB delivery mechanisms would not seem to be relevant in Palestine. In sharp contrast to Malawi, the entire circumference of the West Bank is only 404 km.<sup>29</sup> In addition, as noted above, the infrastructure of bank branches and offices is already fairly extensive, and the PMA is encouraging banks to expand their presence in cities and rural areas. As a result, there are no truly remote areas in Palestine, and it often takes less time to get to a bank than it takes to perform a transaction in a bank. In such an environment, the costs for both providing and accessing services would be lower than they would be in a large, sparsely-populated country.

What makes the Palestinian context unique, however, is the existence of restrictions on the movement of people, goods, services, and cash due to the political conflict with Israel. In the West Bank, checkpoints sometimes restrict movement between cities or from surrounding

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<sup>26</sup> Kumar et al., "Expanding Bank Outreach through Retail Partnerships: Correspondent Banking in Brazil" World Bank Working Paper No. 85 (2006) (<http://siteresources.worldbank.org/INTTOPCONF3/Resources/363980Retailop101OFFICIALoUSEoONLY1.pdf>).

<sup>27</sup> Nagarajan, G., "Innovations in Financial Service Delivery: Scope and Challenges" (Sept. 2008).

<sup>28</sup> Nagarajan, G., "Innovations in Financial Service Delivery: Scope and Challenges" (Sept. 2008).

<sup>29</sup> CIA, "The World Factbook – West Bank" (<https://www.cia.gov/library/publications/the-world-factbook/geos/we.html>).

villages to the nearest city or major town.<sup>30</sup> In addition, since the Palestinian National Authority (PNA) and Israel share responsibility for security throughout the West Bank, it can be difficult and risky to transport cash between cities. In the case of Gaza, movement is less restricted *within* Gaza since the Israeli army withdrew in 2005. However, movement of cash, goods, services, and people *between* Gaza and the West Bank (and between Gaza and Egypt, Israel, and other countries) remains severely restricted. As Gaza is controlled by Hamas – and has consequently been subject to sanctions by Israel, the United States, and the European Union – the PMA is currently unable to move cash into Gaza to pay for salaries.

For these reasons, Palestine is a small, densely-populated country that to varying degrees – depending upon the particular location and the extent of political turmoil at a given time – presents some of the same challenges as a larger, sparsely-populated country. Under these circumstances, a system that facilitated electronic payments would minimize cash needs and bring great benefits. It is for this reason that moving from a cash-based society to one less reliant on cash (if not quite cashless, at least “cash less”) is an important goal in the eyes of the PMA.

### **The Likelihood that Branchless Banking would Accelerate Access to Appropriate Financial Services by Low-Income Palestinians**

#### *Which Financial Services do Low-Income Customers Demand?*

To understand whether BB would be likely to improve access to appropriate financial services for low-income Palestinians, it is first important to understand which services are in highest demand. A survey of 1,202 microentrepreneurs in Palestine conducted by Planet Finance concluded that the following financial services were in greatest demand: credit (both conventional and *shari’ah*-compliant); insurance (health, loan, property, and pension); and savings. Demand for transfer services was fairly low in the West Bank, though higher in Gaza.<sup>31</sup>

Demand for Credit: Demand for credit was noted as a key bottleneck by virtually all stakeholders. Approximately 92% of Palestinian businesses are micro, small, or medium enterprises, and the average economic enterprise has only 2.6 employees,<sup>32</sup> including the owner.<sup>33</sup> However, this sector is credit-starved, with some estimates suggesting that only about 10-15% of the demand for credit services is being met.<sup>34</sup> While some believe that credit demand is overestimated, there is near-universal agreement that lack of access to affordable credit on appropriate terms is limiting economic growth in Palestine.

Demand for Savings: Approximately 1/3 of microentrepreneurs surveyed by Planet Finance expressed a need for access to formal savings products. This survey also indicated that over 1/5 of microentrepreneurs are saving informally at home.<sup>35</sup> One of the reasons for this may be that

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<sup>30</sup> As of the writing of this report, restrictions on movement had eased somewhat within the West Bank. However, many Palestinians provided us with anecdotal evidence of severe restrictions in recent years that had turned a two-hour drive in the West Bank into an all-day (or even multiple day) trip.

<sup>31</sup> Planet Finance, “Microfinance Market Survey in the West Bank and the Gaza Strip,” pp9-10 (June 2007) ([http://www.microfinancegateway.org/files/44378\\_file\\_Microfinance\\_Market\\_Survey\\_Final.pdf](http://www.microfinancegateway.org/files/44378_file_Microfinance_Market_Survey_Final.pdf)).

<sup>32</sup> Based upon census data indicating that 314,506 people were employed in 119,547 economic enterprises that were active as of October-November 2007. See Palestinian Central Bureau of Statistics, “Population, Housing and Establishment Census – 2007: Press Conference on the Preliminary Findings,” Section 4.4 (Feb. 2008).

<sup>33</sup> The surprisingly small size of the average economic enterprise is largely due to the long-term effects of the Israeli occupation since 1967, which led to the collapse of the Palestinian banks and caused most Palestinian entrepreneurs to focus on survival rather than business growth.

<sup>34</sup> Planet Finance, “Microfinance Market Survey in the West Bank and the Gaza Strip,” p9 (June 2007) ([http://www.microfinancegateway.org/files/44378\\_file\\_Microfinance\\_Market\\_Survey\\_Final.pdf](http://www.microfinancegateway.org/files/44378_file_Microfinance_Market_Survey_Final.pdf)).

<sup>35</sup> Planet Finance, “Microfinance Market Survey in the West Bank and the Gaza Strip,” pp9-10 (June 2007) ([http://www.microfinancegateway.org/files/44378\\_file\\_Microfinance\\_Market\\_Survey\\_Final.pdf](http://www.microfinancegateway.org/files/44378_file_Microfinance_Market_Survey_Final.pdf)).

some banks have minimum deposit requirements to open a savings account or current account.<sup>36</sup> The PMA recognizes that there is a great deal of undeposited savings in villages, and while they have not prohibited banks from setting minimum deposit balances, they would like to see banks remove such restrictions.

Demand for Insurance: Demand among microentrepreneurs for a variety of insurance services is high. Approximately  $\frac{3}{4}$  of surveyed microentrepreneurs expressed a desire for health insurance, and there was interest as well in loan insurance (approx.  $\frac{1}{3}$ ), property insurance (approx.  $\frac{1}{4}$ ), and old-age pensions (approx.  $\frac{1}{4}$ ).<sup>37</sup> The Palestinian Network for Small and Micro Finance (Sharakeh) has also indicated that there is strong demand among MFI clients for health and life insurance. In practice, however, few microinsurance services other than loan insurance – which benefits the provider as much as the client – are offered.<sup>38</sup>

Demand for Transfers: Demand among microentrepreneurs for money transfers was fairly low, particularly in the West Bank, where only 14% of surveyed microentrepreneurs expressed a desire for money transfer services (the figure was higher in Gaza: 35%).<sup>39</sup> The low demand in the West Bank may be largely due to a combination of the proximity to bank branches and the existence of an extensive network of money changers. Demand may be higher in Gaza because of sanctions that limit the ability to transfer funds into or out of the Gaza Strip.

#### *Would Branchless Banking Accelerate Access to Such Services?*

If branchless banking were to be introduced, there is little doubt that it would increase the capacity to deliver the aforementioned services. There are, however, a number of barriers to overcome to ensure that this can occur. These barriers are addressed below in the section entitled “Challenges.”

By providing an additional platform – at substantially lower cost than that of setting up and operating a branch or office – for the deposit, withdrawal, transfer, and receipt of funds outside of bank branches and ATMs, mobile and branchless delivery mechanisms could help to accelerate access to services demanded by low-income Palestinians in the following manner:

**Access to credit** can be facilitated by enabling both (i) the direct transfer of funds to an account or e-wallet on a mobile phone-based banking system; and (ii) the withdrawal of funds from a merchant who has a POS device or mobile phone and a contractual agreement to disburse the loan on behalf of the lending institution. BB services can also facilitate loan repayment by eliminating the need for the customer to go to a bank or MFI branch every time a payment is due.<sup>40</sup>

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<sup>36</sup> For example, Arab Bank (the bank with the largest market share in Palestine) requires a minimum balance of JOD 200 (approx. USD 285 as of September 3, 2008) to open a savings account and JOD 300 (approx. USD 425) to open a current account. Each branch manager has the authority to open an account with a lower minimum balance.

<sup>37</sup> Planet Finance, “Microfinance Market Survey in the West Bank and the Gaza Strip,” p10 (June 2007) ([http://www.microfinancegateway.org/files/44378\\_file\\_Microfinance\\_Market\\_Survey\\_Final.pdf](http://www.microfinancegateway.org/files/44378_file_Microfinance_Market_Survey_Final.pdf)).

<sup>38</sup> Al Rafah Microfinance Bank provides loan insurance. Sharakeh was unaware of any health or life insurance products offered by MFIs. The authors do not know whether any other microfinance providers offer loan insurance or other insurance products.

<sup>39</sup> Planet Finance, “Microfinance Market Survey in the West Bank and the Gaza Strip,” p10 (June 2007) ([http://www.microfinancegateway.org/files/44378\\_file\\_Microfinance\\_Market\\_Survey\\_Final.pdf](http://www.microfinancegateway.org/files/44378_file_Microfinance_Market_Survey_Final.pdf)). Sharakeh confirmed that MFIs did not consider access to transfers to be a key service demanded by their clients.

<sup>40</sup> In the case of MFIs and banks using certain microfinance methodologies, this could also reduce costs by reducing the number of loan officers who have to travel to remote locations to collect loan payments, which may occur as frequently as weekly.

**Access to savings** can be facilitated by using the branchless infrastructure to provide low-income Palestinians with a larger, more convenient network of locations at which they can deposit funds to their bank accounts. Similarly, the MNO-based model can offer customers the equivalent of a small-value savings account by permitting customers to deposit funds at local retailers and then store these funds on virtual accounts on their mobile phones.

**Access to transfers** is the area in which branchless banking infrastructure using POS devices and mobile phones would be expected to have the biggest impact, as it would enable customers to transfer funds and pay bills on a broader infrastructure.

However, while BB delivery mechanisms have the potential to expand access to financial services, two important prerequisites need to be met if BB is to significantly expand access to key services valued by low-income Palestinians:

1. In order to maximize the benefits of using BB delivery mechanisms, a banking and payments infrastructure that connects all banks (and hopefully all MFIs as well) needs to be operational. This requires the development of a fully integrated national payment system with a central switch that will connect all participating financial institutions and give them the capability to perform all transactions online and in real time.
2. A good delivery mechanism is useless for expanding access to appropriate financial services for low-income Palestinians if service providers do not develop financial products that meet the needs of this group. In numerous conversations with sector stakeholders, many emphasized that product development was a much greater barrier to access to finance in Palestine than geographic accessibility. Any efforts to introduce new delivery mechanisms should be coupled with a strong focus on developing products that will meet the expressed needs of microentrepreneurs and low-income Palestinians.

# APPROPRIATE TECHNOLOGIES FOR THE PROVISION OF BRANCHLESS SERVICES

Given the large number of bank accounts in Palestine, the business models available today, the current regulatory framework, and the Palestine Monetary Authority's (PMA) tolerance for risk,<sup>41</sup> the most appropriate technology would require a security level that would permit direct integration into the National Payment System (NPS). This would enable access to the existing bank (and possibly MFI) accounts from the mobile phone or POS device.

Under these circumstances, the only mobile phone-based solution currently available that would have the level of security required would be a **SIM-based solution**. This would use the encryption keys that are stored on the SIM card at the time of manufacture to ensure a high level of transaction security and limit the opportunities for hacking, copying, or fraud.

The use of the GSM network to deliver communication on a **POS network** to enable debit card-based transactions would also significantly extend the branchless banking environment and enable the use of electronic banking. As the security is contained in the POS hardware, the method of communication would not have an impact on security. Use of the POS devices could then be extended beyond merely providing debit and credit card processing and could include money transfers, bill payments, and deposits to and withdrawals from accounts.

At a minimum, if cash-based transactions are not approved by the PMA, this would enable additional debit cards to be issued by the banks and provide them with greater functionality. The ability to transfer funds and pay bills at the POS utilizing the card would be more likely to meet with PMA approval, as no cash would be handled by the merchant. The anti-money laundering system would then be used to ensure that all transactions were monitored electronically.

The most cost-effective way to employ a POS- and mobile phone-based branchless banking solution would be on a shared services model; this would enable the service to be used by all banks on a pay-per-use basis. The use of a centrally hosted service would reduce costs substantially if this service were located within the national switching infrastructure.

A mobile phone banking solution could also be implemented without using a POS network. As noted earlier, some Palestinian banks are already enabling customers to use their mobile phones to perform *information-based transactions* – such as balance inquiries – and to move funds between their own accounts (but not from one customer to another customer).

A standalone mobile phone banking solution could also enable *value-based transactions*, including transfers, payments, cash-in, and cash-out. However, given current regulatory constraints and the PMA's tolerance threshold for money laundering risk, cash-based transactions at agents are unlikely to be approved by the PMA in the foreseeable future. Therefore, an MNO-based model similar to M-PESA or GCash would not be permitted; the mobile phone banking service would likely have to be bank-based, and customers would still have to access a bank branch, office, or ATM to perform the cash-in and cash-out functions. As a result, such a solution would provide more limited functionality if not linked to a POS network.

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<sup>41</sup> The regulatory framework and the PMA's perspective on BB delivery mechanisms will be discussed in detail below.

# COSTS AND BENEFITS TO PROVIDERS AND CUSTOMERS

## Affordability

The cost of mobile-based banking products varies tremendously among providers and countries. A recent study conducted by CGAP calculated the following monthly costs for mobile and electronic banking services offered by six providers in four countries (see Table 5). The figures below assume that the customer uses all of the following services on a monthly basis: cash-in, cash-out, person-to-person transfer, airtime top-up, balance inquiry, purchase, and bill payment:

	SmartMoney	GCash	M-Pesa	Wizzit	MTN Banking	Tameer
<b>Total:</b> Local Currency	27.71	48.83	157.00	32.73	47.62	110.00
<b>Total:</b> USD (Price Adjusted) <sup>43</sup>	\$1.27	\$2.24	\$5.32	\$8.46	\$12.30	\$5.76
<b>Total:</b> NIS (Price Adjusted) <sup>44</sup>	<b>NIS 4.74</b>	<b>NIS 8.35</b>	<b>NIS 19.78</b>	<b>NIS 31.46</b>	<b>NIS 45.77</b>	<b>NIS 21.43</b>

To determine affordability, we examine two scenarios: first, under the most conservative scenario, we can assume that the BB product in Palestine will cost as much as the product determined by CGAP to be the most costly (in this case, MTN Banking). Then, we can compare the cost of these services to income in Palestine in order to assess affordability.

Table 6 plots monthly household income of the population per decile per governorate. This information is vital for determining the amount per household that can be expended on financial services.

Table 6

Deciles	10	20	30	40	50	60	70	80	90	100	Average
Jenin/Tubas/Vericho	628	950	1,393	1,726	2,216	2,607	3,516	3,885	5,077	5,088	2,328
Tulkarm	730	1,073	1,153	1,698	1,794	2,049	2,885	3,448	3,763	5,212	2,312
Nablus	582	952	1,474	1,804	2,245	2,588	3,122	4,010	5,848	8,638	3,649
Qalqilya/Salfit	573	1,424	1,451	1,391	1,984	2,285	3,040	3,390	5,088	7,702	3,193
Ramallah/Albireh	508	1,130	1,592	1,702	2,456	2,843	2,934	4,290	4,166	11,466	4,504
Jerusalem	429	1,216	1,568	2,281	2,429	2,650	3,494	4,260	5,369	8,201	5,026
Bethlehem	613	1,151	1,420	2,066	2,341	2,559	3,267	4,832	5,297	8,773	3,659
Hebron	703	1,345	1,879	2,095	2,580	2,896	3,084	4,395	5,224	7,805	3,150
<b>West Bank</b>	<b>615</b>	<b>1,126</b>	<b>1,546</b>	<b>1,918</b>	<b>2,352</b>	<b>2,550</b>	<b>3,192</b>	<b>4,163</b>	<b>5,141</b>	<b>8,573</b>	<b>3,582</b>
Gaza north	691	1,306	1,825	1,982	2,601	3,394	3,291	4,392	5,306	4,228	2,426
Gaza city	761	1,260	1,868	2,143	2,812	3,246	3,217	5,054	4,843	3,244	2,405
Deirelbalah	865	1,291	1,472	1,835	1,859	2,029	2,245	3,025	3,917	4,974	1,855
Khanyounes	683	1,238	1,653	1,776	2,192	2,421	3,012	2,943	5,610	3,669	1,902
Rafah	828	1,119	1,370	1,427	2,803	2,620	2,837	5,404	3,640	3,931	1,910
<b>Gaza Strip</b>	<b>747</b>	<b>1,254</b>	<b>1,693</b>	<b>1,930</b>	<b>2,559</b>	<b>3,003</b>	<b>3,151</b>	<b>4,065</b>	<b>4,783</b>	<b>4,098</b>	<b>2,174</b>
<b>Palestine</b>	<b>690</b>	<b>1,193</b>	<b>1,617</b>	<b>1,924</b>	<b>2,421</b>	<b>2,682</b>	<b>3,183</b>	<b>4,147</b>	<b>5,066</b>	<b>8,136</b>	<b>3,104</b>

Source : PCBS

Relative Poverty (Yellow)      Deep Poverty (Orange)

<sup>42</sup> Rotman, Sarah and Mark Pickens, "Mobile Banking Pricing Table." CGAP Technology Program (August 25, 2008) (<http://collab2.cgap.org/gm/document-1.9.5168/Pricing%20-%20blog%20version%20-%20CGAP.xls>).

<sup>43</sup> To account for differences in purchasing power due to inflation, local currency costs are divided by an inflation-adjusted exchange rate, rather than using the nominal exchange rate.

<sup>44</sup> The Israeli Shekel exchange rate used was adjusted for purchasing power parity. The PPP Shekel exchange rate used was NIS 3.72 = USD 1. See World Bank, "2005 International Comparison Program: Tables of Final Results" (Feb. 2008) ([http://siteresources.worldbank.org/ICPINT/Resources/ICP\\_final\\_results.pdf](http://siteresources.worldbank.org/ICPINT/Resources/ICP_final_results.pdf)).

Finmark Trust estimates that banking services are affordable if they cost no more than 2% of income.<sup>45</sup> By calculating 2% of income for each decile of the Palestinian population, we can estimate the percentage of the population for whom a mobile phone banking product would be affordable.

Under this most conservative scenario, assuming a cost of NIS 45.77 per household per month, only 53% of Palestinian households would be able to afford to use an electronic banking product. This is shown in Table 7a.

**Table 7a**

<b>% of Households who can Afford Banking at NIS 45.77 per Month</b>												
Area	Number of households	Deciles										% Households who can afford Financial Services
		10	20	30	40	50	60	70	80	90	100	
Jenin/Tubas/Jericho	64885	0%	0%	0%	0%	0%	10%	10%	10%	10%	10%	50%
Tulkarm	29874	0%	0%	0%	0%	0%	0%	10%	10%	10%	10%	40%
Nablus	59630	0%	0%	0%	0%	0%	10%	10%	10%	10%	10%	50%
Qalqilya/Salfit	27438	0%	0%	0%	0%	0%	0%	10%	10%	10%	10%	40%
Ramallah/Albireh	52554	0%	0%	0%	0%	10%	10%	10%	10%	10%	10%	60%
Jerusalem	70308	0%	0%	0%	0%	10%	10%	10%	10%	10%	10%	60%
Bethlehem	33002	0%	0%	0%	0%	10%	10%	10%	10%	10%	10%	60%
Hebron	89842	0%	0%	0%	0%	10%	10%	10%	10%	10%	10%	60%
<b>West Bank</b>	<b>427533</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>5%</b>	<b>8%</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>53%</b>
Gaza north	40262	0%	0%	0%	0%	10%	10%	10%	10%	10%	10%	60%
Gaza city	76810	0%	0%	0%	0%	10%	10%	10%	10%	10%	10%	60%
Deirelbalah	32083	0%	0%	0%	0%	0%	0%	10%	10%	10%	10%	30%
Khanyounes	43203	0%	0%	0%	0%	0%	10%	10%	10%	10%	10%	50%
Rafah	26864	0%	0%	0%	0%	10%	10%	10%	10%	10%	10%	60%
<b>Gaza Strip</b>	<b>219222</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>7%</b>	<b>8%</b>	<b>9%</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>54%</b>
<b>Palestine</b>	<b>646755</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>6%</b>	<b>8%</b>	<b>9%</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>53%</b>

Calculated at 2% from the PCBS income distribution data

     Cannot afford banking at this level

     Can afford banking at this level

Under such a scenario, the total potential market for such a product would be 344,852 people. A rough estimate of the cost of implementing a standalone mobile POS and branchless banking system follows:

<sup>45</sup> Quoted in Genesis Analytics, “An Inter-Country Survey of the Relative Costs of Bank Accounts” (March 2005) (<http://www.finmarktrust.org.za/documents/2006/MARCH/interCountrySurvey.pdf>).

## Most Conservative Estimate for Implementation of Mobile Banking/POS Application

<u>Development and configuration of system:</u> Software licences; mobile software applications; operating system; cost of licensing of POS switch and AML system (including all licenses for first year of operation).	\$1,200,000
<u>Project management and business process analysis:</u> Management of project implementation; specification and mapping of processes for reconciliation; back office processes for management of customer queries; training materials for customers.	\$1,200,000
<u>Switch development and testing:</u> Integration of POS switch into financial institutions, as well as certification.	\$600,000
<u>Application testing:</u> Testing of system as well as processes.	\$53,000
<u>Hardware costs:</u> Cost of servers and switches; cost of integration into communications network.	\$420,000
<b>Total Cost of implementation</b>	<b><u><u>\$3,473,000</u></u></b>

### **Service Provider income**

Income per month per household:	\$12.30
If it is assumed that operational costs are 75% of income . . .	<u>\$9.23</u>
Then the contribution to infrastructure would be:	<u>\$3.08</u>
Number of customer months required to pay for the infrastructure:	<u><u>1,129,010</u></u>
Households who are able to afford the Service (53%):	<u><u>344,852</u></u>
% Household take-up per annum to achieve 3 year break-even:	<u><u>6.00%</u></u>

This shows that the take-up of the product in the middle/upper-income market segment would need to be 6% of this population per annum. While this might be possible, it is clear that this product would be a niche product that would be unaffordable for the unbanked and under-banked markets.

There are, however, reasons to believe that a BB product would be less costly in Palestine than in South Africa. Banking services are relatively expensive in South Africa; as a result, the mean real cost of the two South African mobile banking services is nearly six times as high as the cost of comparable services in the Philippines, and nearly twice as high as the cost of the Kenyan and Pakistani products. Given this wide disparity, we also consider a slightly less conservative scenario, in which the cost of the hypothetical Palestinian product was as high as the highest non-South African product. This would be the product offered by Tameer Microfinance Bank in Pakistan. Using Tameer's price-adjusted USD 5.76 as our benchmark, we perform the analysis again using a PPP-adjusted cost of NIS 21.43 and obtain the following results:

Table 7b

% of Households who can Afford Banking at NIS 21.43 per Month												
Area	Number of households	Deciles										% Households who can afford Financial Services
		10	20	30	40	50	60	70	80	90	100	
Jenin/Tubas/Jericho	64885	0%	0%	10%	10%	10%	10%	10%	10%	10%	10%	80%
Tulkarm	29874	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	90%
Nablus	59630	0%	0%	10%	10%	10%	10%	10%	10%	10%	10%	80%
Qalqilya/Salfit	27438	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	90%
Ramallah/Albireh	52554	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	90%
Jerusalem	70308	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	90%
Bethlehem	33002	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	90%
Hebron	89842	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	90%
<b>West Bank</b>	<b>427533</b>	<b>0%</b>	<b>8%</b>	<b>10%</b>	<b>88%</b>							
Gaza north	40262	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	90%
Gaza city	76810	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	90%
Deirelbalah	32083	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	90%
Khanyounes	43203	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	90%
Rafah	26864	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	90%
<b>Gaza Strip</b>	<b>219222</b>	<b>0%</b>	<b>10%</b>	<b>90%</b>								
<b>Palestine</b>	<b>646755</b>	<b>0%</b>	<b>10%</b>	<b>90%</b>								

Calculated at a 2% from the PCBS income distribution data

Cannot afford banking at this level

Can afford banking at this level

Under this scenario, fully 90% of the population would be able to afford full banking services offered through a mobile delivery channel. The total potential market for such a product would increase from 344,852 people to 579,806, and the rough estimate of the cost of implementing such a system would be as follows:

### Moderately Conservative Estimate for Implementation of Mobile Banking/POS Application

<u>Development and configuration of system:</u> Software licences; mobile software applications; operating system; cost of licensing of POS switch and AML system (including all licenses for first year of operation).	\$1,200,000
<u>Project management and business process analysis:</u> Management of project implementation; specification and mapping of processes for reconciliation; back office processes for management of customer queries; training materials for customers.	\$1,200,000
<u>Switch development and testing:</u> Integration of POS switch into financial institutions, as well as certification.	\$600,000
<u>Application testing:</u> Testing of system as well as processes.	\$53,000
<u>Hardware costs:</u> Cost of servers and switches; cost of integration into communications network.	\$420,000
<b>Total Cost of implementation</b>	<b>\$3,473,000</b>

### Service Provider income

Income per month per household:	\$5.76
If it is assumed that operational costs are 75% of income . . .	\$4.32
Then the contribution to infrastructure would be:	\$1.44
Number of customer months required to pay for the infrastructure:	2,412,156
Households who are able to afford the Service (90%):	579,806
% Household take-up per annum to achieve 3 year break-even:	7.50%

This cost is a highly conservative estimate, but it is achievable with correct project management and cooperation from the banking sector. This cost does not include the creation of a national switch, which needs to be implemented in order to perform inter-bank transactions.

In order to recover the cost of this application, it is estimated that 7.5% of the total customer base would need to take up the service each year. At the end of 3 years, 22.5% of households would need to be using the service. This would be almost impossible to achieve if a number of banks are deploying this service and competing for market share.

It is for this reason that it is suggested that a branchless banking application be integrated into the national switch. This would have the benefit of integrating testing and managing the project at the same time as the deployment of the national switch. This would substantially lower costs and allow for a higher volume of transactions through the system, as all banks would be processing through a single environment.

### **Limitations of the Affordability Study**

It is critical to emphasize that this affordability study suffers from significant limitations, and therefore it should not be relied upon as a basis for determining with any certainty whether BB delivery mechanisms would be affordable. There are two key reasons for this:

First, early data indicate that the real costs of mobile banking services vary by a factor of ten across four different countries.<sup>46</sup> Since no comparable product has been rolled out in Palestine, it is difficult to estimate the costs with any level of certainty without an in-depth analysis that is beyond the scope of this initial feasibility study. Such an analysis would require a longer stay in-country and unfettered access to bank/MNO costing and pricing data. As such, it would best be conducted by a bank, MNO, other financial service provider, or providers' association.

Second, mobile banking service costs are adjusted for purchasing power using an overall PPP figure that is based upon GDP. However, PPP figures for each country also vary significantly depending upon the product or service in question (i.e. some products or services are relatively more or less expensive than others). In South Africa, for example, the PPP rate based on GDP is 3.87, which is the rate used to calculate the real cost of the MTN Banking and WIZZIT services. However, this rate is composed of a number of products and services with different PPP rates, such as food, clothing, and communications.<sup>47</sup> The PPP rates for specific products and services in South Africa range from 1.52 (for individual consumption expenditure by the government) to 7.09 (for restaurants and hotels).<sup>48</sup> If the PPP rate for branchless banking-enabled financial services differs considerably from the overall PPP rate for GDP, this would affect the accuracy of the real cost estimates. Again, further analysis would need to be conducted to refine the affordability estimate.

### **Accessibility**

As discussed earlier, the financial services infrastructure in Palestine is fairly extensive. Table 8 shows the density of infrastructure per governorate and per territory.

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<sup>46</sup> Rotman, Sarah and Mark Pickens, "Mobile Banking Pricing Table." CGAP Technology Program (August 25, 2008) (<http://collab2.cgap.org/gm/document-1.9.5168/Pricing%20-%20blog%20version%20-%20CGAP.xls>).

<sup>47</sup> Unfortunately, financial services are not one of the 20 products and services analyzed. See World Bank, "2005 International Comparison Program: Tables of Final Results" (Feb. 2008) ([http://siteresources.worldbank.org/ICPINT/Resources/ICP\\_final-results.pdf](http://siteresources.worldbank.org/ICPINT/Resources/ICP_final-results.pdf)).

<sup>48</sup> See World Bank, "2005 International Comparison Program: Tables of Final Results" (Feb. 2008) ([http://siteresources.worldbank.org/ICPINT/Resources/ICP\\_final-results.pdf](http://siteresources.worldbank.org/ICPINT/Resources/ICP_final-results.pdf)).

**Table 8**

Area Serviced by the Current ATM, POS and Branch Network

	Banks	MFIs	Money Changers	Total	Area per Branch (km <sup>2</sup> )	ATMs	Area per ATM (km <sup>2</sup> )	POS Devices	Area per POS (km <sup>2</sup> )
<b>Palestinian Territory</b>	<b>161</b>	<b>84</b>	<b>188</b>	<b>433</b>	<b>14</b>	<b>214</b>	<b>28</b>	<b>1,287</b>	<b>5</b>
<b>West Bank</b>	<b>121</b>	<b>59</b>	<b>145</b>	<b>325</b>	<b>17</b>	<b>164</b>	<b>34</b>	<b>1,063</b>	<b>5</b>
Jenin	8	7	4	19	31	12	49	36	16
Tubas	2	3	0	5	80	2	201	7	57
Tulkarm	8	7	8	23	11	7	35	23	11
Nablus	22	8	39	69	9	24	25	51	12
Qalqiyah	5	5	11	21	8	3	55	33	5
Salfit	2	2	1	5	41	1	204	5	41
Ramallah & Al-Bireh	34	8	40	82	10	64	13	589	1
Jericho & Al Aghwar	5	4	2	11	54	4	148	53	11
Jerusalem	6	1	6	13	27	6	58	0	0
Bethlehem	12	7	19	38	17	20	33	209	3
Hebron	17	7	15	39	26	21	47	57	17
<b>Gaza Strip</b>	<b>40</b>	<b>25</b>	<b>43</b>	<b>108</b>	<b>3</b>	<b>50</b>	<b>7</b>	<b>224</b>	<b>2</b>
North Gaza	5	4	0	9	7	5	12	20	3
Gaza	21	12	43	76	1	29	3	183	0
Deir Al Balah	3	4	0	7	8	4	15	8	7
Khanyunis	7	3	0	10	11	7	15	9	12
Rafah	4	2	0	6	11	5	13	4	16

Source : PCBS/PMA

Governorates with a low ratio of area per POS already have some of the necessary infrastructure to facilitate branchless banking. More POS deployment will be particularly necessary in areas such as Tubas and Salfit, where POS devices are virtually nonexistent. In addition, while coverage may be excellent in some governorates, it is possible that some individuals will be unable to access such financial infrastructure due to the political situation (as discussed earlier).

Currently, however, this infrastructure is dependent upon the expenditures of individual banks, and it is not linked by a national switch to facilitate the delivery of products and services demanded by the customer base. In order for this infrastructure to be optimized, the ATMs and POS devices would need to be linked through the implementation of a national switch in the national payment system. Once this has been completed, the use of mobile and POS-based banking can be encouraged to further extend this infrastructure. Additional functionality will also need to be added to the POS devices and ATMs to ensure that the existing infrastructure can offer a variety of branchless services.

# FACTORS MOTIVATING AND DISCOURAGING ADOPTION OF BRANCHLESS BANKING

## Introduction

The pace and scale of adoption of branchless banking delivery mechanisms in Palestine – both in terms of supply of such services by providers and uptake by customers – will depend upon a number of factors that are specific to the country context in the West Bank and Gaza Strip. Enabling factors that will support the development of BB delivery mechanisms include the following:

1. Very high mobile phone penetration and extensive cellular coverage.
2. Well-educated populace.
3. Interest from mobile network operators and banks.

However, challenges to the development of BB abound. If BB is to succeed as a delivery mechanism in Palestine, it will have to overcome the following obstacles:

4. Lack of a National Payment System.
5. Gaps in the regulatory framework.
6. PMA reservations (at the present time).
7. Conservative banking sector.
8. Consumer education/financial literacy needs.
9. Lack of appropriately designed products for low-income/microenterprise market.
10. Well-established branch-based infrastructure.

## Enabling Factors

### *Very high mobile phone penetration and extensive cellular coverage*

As noted in the Introduction, mobile phone penetration is very high in the West Bank and Gaza, with 81% of households owning mobile phones.

Another enabling factor that could facilitate mobile phone-based financial services is the extensive geographic coverage of the cellular network in Palestine. As discussed earlier, Palestine looks very different from Malawi. Since Palestine is such a small and densely-populated country, virtually the entire country currently has access to cellular service through the state-owned service provider, JAWWAL. In addition, a new provider, Al Wataniya, has just received a license and will begin offering services in the near future. This should further expand the coverage of cellular networks throughout the West Bank and Gaza.<sup>49</sup>

### *Well-educated populace*

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<sup>49</sup> It should be noted as well that there is a significant level of unauthorized competition by Israeli providers, particularly in areas bordering Israel. JAWWAL estimates that Israeli providers cover 80% of the territory of Palestine and capture at least 20% of the total market. Coverage spillage from Egyptian and Jordanian providers in Rafah and Jericho, respectively, also results in some unauthorized competition, though to a lesser extent. See World Bank, “West Bank and Gaza Telecommunications Sector Note – Introducing Competition in the Palestinian Telecommunications Sector.” (Jan. 2008) ([http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2008/03/20/000333037\\_20080320052257/Rendered/PDF/429870WPoGZoTe10Box327342Bo1PUBLIC1.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2008/03/20/000333037_20080320052257/Rendered/PDF/429870WPoGZoTe10Box327342Bo1PUBLIC1.pdf)).

Using POS devices, mobile phones, and retail agents to provide financial services to the poor is particularly challenging when the target population is illiterate or has low levels of secondary education. In this area, Palestine stands out as a particularly well-educated and literate low-income country. While most Palestinians are still unfamiliar with electronic banking, the average citizen has an impressive 14 years of schooling, resulting in a literacy rate of 92.4%.<sup>50</sup> Early evidence suggests that uptake of mobile phone-based financial services is particularly successful in poor countries with high literacy rates and educational attainment. This holds true for the Philippines (12 years of school, literacy rate of 92.6%), Kenya (10, 85.1%), and South Africa (13, 86.4%).<sup>51</sup>

### *Interest from mobile network operators and banks*

There is also significant interest among potential providers in using branchless banking as a delivery mechanism. While generally taking a cautious approach and waiting to see if the business model makes sense, every bank with which we spoke expressed an interest in using BB to expand outreach and deliver more convenient financial services at a lower cost. In addition, one bank, Bank of Palestine, already has over 1,200 Point of Sale (POS) devices in place<sup>52</sup> and plans to more than double its POS network within the next year, making it well-positioned to offer BB services.

Both mobile network operators (JAWWAL and Al Wataniya) are also interested in offering financial services, particularly through the nonbank-based BB model of providing services directly through electronic money accounts. So far, they have been less interested in working directly with banks. However, both providers declined to elaborate, citing confidentiality concerns.

The MFIs that we interviewed expressed less interest in using BB delivery mechanisms than the banks and mobile network operators. In general, they questioned whether the benefits would actually exceed the costs in practice, and they emphasized other priorities for expanding access to finance and improving loan repayment (such as increasing MFIs' access to capital, providing alternatives to and effective enforcement of collateral, receiving permission to mobilize savings, and resolving the Israeli-Palestinian conflict).

One major MFI did express enthusiasm for using the Palestine Post Office (PPO) as an agent to provide access to MFI services in smaller villages.<sup>53</sup> While promising in theory – the PPO already offers some bill payment services and is looking to eventually provide full banking services<sup>54</sup> – the postal infrastructure is not yet fully developed.<sup>55</sup> In addition, political challenges<sup>56</sup> and the PPO's status as a state-run institution make it unlikely that the PMA would approve the use of the PPO as a retail agent for financial services.

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<sup>50</sup> CIA, "The World Factbook – West Bank" and "The World Factbook – Gaza Strip" (literacy figures as of 2004, education figures as of 2006). See <https://www.cia.gov/library/publications/the-world-factbook/geos/we.html> and <https://www.cia.gov/library/publications/the-world-factbook/geos/gz.html>.

<sup>51</sup> See the CIA Factbook profiles for the Philippines (<https://www.cia.gov/library/publications/the-world-factbook/geos/rp.html>), Kenya (<https://www.cia.gov/library/publications/the-world-factbook/geos/ke.html>), and South Africa (<https://www.cia.gov/library/publications/the-world-factbook/geos/sf.html>).

<sup>52</sup> Statistics from the Palestine Monetary Authority on "ATMs and Payment Cards at the end of June 2008."

<sup>53</sup> This MFI indicated that the PPO had branches even in small villages with approx. 4,000 residents.

<sup>54</sup> See Ministry of Telecommunications and Information Technology website at <http://www.mtit.gov.ps/>.

<sup>55</sup> The Ministry responsible for the PPO, the Ministry of Telecommunications and Information Technology (MTIT), did not respond to multiple requests for interviews. In addition, the MTIT fax machine was not receiving faxes.

<sup>56</sup> In Gaza, Hamas has used the PPO to disburse salaries after commercial banks refused to do so. See Deseret News, "Palestinian Workers Get Hamas Cash," (June 20, 2006) ([http://findarticles.com/p/articles/mi\\_qn4188/is\\_20060620/ai\\_n16491492](http://findarticles.com/p/articles/mi_qn4188/is_20060620/ai_n16491492)).

## Challenges

### *Lack of a National Payment System*

Although the branch, ATM, and POS infrastructure is fairly extensive, these figures paint a somewhat misleading picture, as there is significant duplication of infrastructure. In order to ensure that its benefits are fully realized, the infrastructure must become interoperable.

The current lack of interoperability will prevent the mobile and branchless banking payment transactions from being cleared and settled between the banks. The PMA expects to have an Automated Clearing House (ACH) in operation by 2010. However, an ACH does not provide the functionality of a national switch; this will need to be integrated into all the banks to allow for the connection of all ATM and POS devices.

Therefore, it will be necessary to create a well-functioning central processing system. This requires not only the development of a national switch but also the capability to perform the centralized processing – including trained personnel to fill the clerical roles. It will also be important to provide direct or indirect system access to other financial service providers who provide services to low-income Palestinians, such as MFIs.

### *Restrictions and gaps in the regulatory framework*<sup>57</sup>

A significant number of restrictions and gaps in the regulatory framework will need to be addressed to ensure that agent-assisted branchless banking is legal and that it addresses all significant risks to providers, consumers, the payment system, and the financial system as a whole. Key issues to be addressed include:

Outsourcing financial transactions to retail agents: The PMA issued a circular in 2007 addressing the outsourcing of important activities that could expose a bank to operational, legal, or other risks.<sup>58</sup> The circular does not specify which services are included within this broad category, so outsourcing financial transactions (deposits, withdrawals, transfers, account opening) to retail agents does not appear to be expressly prohibited.

However, all outsourcing arrangements must be approved by the PMA,<sup>59</sup> and the PMA has clearly stated that it is not prepared to permit agent-assisted branchless banking in the near future. The PMA clarified that the circular was intended to address *non-core* banking services. This could include mobile phone or Internet banking schemes that do not require the use of agents (such as accessing bank information over the mobile phone), but it does not include the use of agents for deposit-taking, withdrawals, or money transfers.

Given that the Banking Law and current outsourcing circular do not appear to prohibit agent-assisted BB, a circular expressly permitting agent-assisted BB is probably unnecessary. However, if the PMA decides in the future to permit financial service providers to outsource core banking services to agents, it should establish conditions for the use of agents, including the following:<sup>60</sup>

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<sup>57</sup> In conducting the regulatory analysis, the authors made extensive use of a Branchless Banking Diagnostic Template designed by CGAP in cooperation with DFID. The authors are grateful to CGAP and DFID for developing and sharing this valuable template.

<sup>58</sup> See Circular 2007/52, *Organization of Outsourcing Activities*.

<sup>59</sup> See Circular 2007/52, Part II.

<sup>60</sup> See Lyman et al., “Regulating Transformational Branchless Banking: Mobile Phones and Other Technology to Increase Access to Finance.” CGAP Focus Note No. 43 (Jan. 2008) ([http://www.microfinancegateway.com/files/46734\\_file\\_FocusNote\\_43.pdf](http://www.microfinancegateway.com/files/46734_file_FocusNote_43.pdf)); Lyman et al., “Use of Agents in Branchless Banking for the Poor: Rewards, Risks, and Regulation.” CGAP Focus Note No. 38 (Oct. 2006). ([http://www.cgap.org/gm/document-1.9.2585/FocusNote\\_38.pdf](http://www.cgap.org/gm/document-1.9.2585/FocusNote_38.pdf)).

- Holding the principal (bank or other service provider) liable for the actions of its retail agents.
- Guaranteeing that the PMA has access to data related to the agents' operations, which the PMA can obtain either through the bank or directly from the agent.
- Requiring PMA approval of agents who will provide core services such as deposit-taking, withdrawals, and account opening.
- Ensuring that consumers have a right of redress to the principal if they experience problems with a transaction at a retail agent.

Anti-Money Laundering and Combating the Financing of Terrorism (AML/CFT): In some countries, strict AML/CFT requirements can limit access to finance. In order to comply with international AML/CFT standards, most countries require banks and other financial service providers to perform extensive Customer Due Diligence (CDD) on potential customers, particularly when they are opening an account or effecting a money transfer. CDD requirements vary somewhat by country, but most countries require at a minimum the production of an official identity document, along with proof of residence. This can create a barrier to access in countries where a large percentage of the low-income population lacks official identity documents, utility bills, or even a formal address.

In October 2007, the Palestinian National Authority passed the *Anti-Money Laundering Decree Law*. This law requires banks, MFIs, money changers, and many other actors involved in financial transactions to identify and verify clients who open new accounts or execute a wire transfer.<sup>61</sup> In practice,<sup>62</sup> the verification of clients opening new accounts requires the financial service provider to review the client's identity document, call the Ministry of the Interior to verify the number on the identity document,<sup>63</sup> and conduct an independent investigation to confirm that the customer is who she says she is.<sup>64</sup>

On the positive side, lack of access to identity documents is not a problem in Palestine. Virtually everyone receives an official document at the age of 16, and children younger than 16 are listed on their parents' identity documents. Therefore, one of the key barriers to access to financial services in many low-income countries is not an issue.

However, the Financial Follow-up Unit (FFU – the administrative body responsible for ensuring that banks comply with money laundering requirements) has limited capacity to monitor BB transactions at the present time. The FFU is currently focused on reining in the money changers, many of whom facilitate both domestic and international transfers without following CDD requirements, and who lack an electronic system for record-keeping and reporting. Introducing a new electronic delivery channel into such an environment could increase the risks of money laundering or terrorist financing, which is why both AML/CFT experts and key PMA staff would recommend waiting until the FFU has the necessary time and resources to ensure proper oversight.

Electronic Money (E-Money): Currently, there are no regulations defining e-money or providing guidelines on the types of providers who could issue e-money, and under what conditions. While some banks feel that they could issue e-money without PMA approval, the PMA has stated that it would have to approve any proposed e-money scheme. In addition, the PMA does not intend to

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<sup>61</sup> *Anti-Money Laundering Decree Law No () of 2007*, Art. 6, 8.

<sup>62</sup> While there is not a specific circular instructing banks on how to perform CDD, banks are trained by the Financial Follow-up Unit, the administrative body responsible for ensuring that banks comply with money laundering requirements.

<sup>63</sup> By next year, banks will be able to connect online to the Ministry of the Interior to verify identity documents.

<sup>64</sup> Independent verification generally requires that the provider call or visit the municipality where the client claims residence. As a result, opening an account outside of one's home town is particularly difficult.

permit nonbanks (including MNOs) to issue e-money in the foreseeable future, as they do not perceive a significant need for such services, and they consider the risks to be quite high.

Electronic Commerce/Electronic Security: The regulatory framework for e-commerce and e-security is not fully developed. The PMA recognizes the need for clarity with respect to the certification and legal effect of electronic signatures, and it has stated that this issue will be addressed in the law and regulations on payment systems. Initial drafts of the law and regulations have been created, and the new Payment Systems Law is scheduled to be enacted by March 2009.<sup>65</sup> In the interim, banks are following their own internal policies, although they recognize the need for an appropriate regulatory framework, particularly as the volume of electronic transactions continues to increase.

Consumer Protection: BB delivery mechanisms raise specific consumer protection concerns resulting from conducting transactions through retail agents. Key issues include the lack of clarity over whether the principal or the retail agent is legally responsible to the customer, the risk that a retail agent could defraud a customer, and the greater difficulty of ensuring price transparency when services are provided through a retail agent, rather than directly through a bank.<sup>66</sup>

Since agent-assisted banking is currently not permitted in Palestine, corresponding consumer protections for services provided by agents are not yet in place. In addition, the general consumer protection framework for banking services is still developing. Currently, one circular requires banks to have compliance officers to review customer complaints, and it provides that any unresolved customer complaints may be submitted to the PMA. Another circular requires banks to have a screen in each branch that provides information on interest rates and fees.

The consumer protection framework will be improved considerably following the passage of the Fair Credit Act that is currently being drafted. This act will clearly explain to the customer her rights and responsibilities; describe the means of calculating interest; require the disclosure of total interest, fees, and other costs on the front page of the contract, in large print; specify what happens in case of default; ensure that all fees that are charged are related to actual services provided; and assess a fine on any bank that asks a customer to sign a blank loan agreement.

Payment Systems: Currently, there is no National Payment System in Palestine, and no law on payment systems has been enacted. As discussed earlier, the PMA is developing a law and regulations on payment systems, and they hope to have the law enacted no later than March 2009.

The current law is still in an early draft stage, and the PMA is seeking feedback from payment system experts. One key issue that the law and regulations should address is the need to prevent anti-competitive behavior and to ensure competition in the market for payment services. The draft regulations would appear to give the PMA broad latitude in this regard, permitting the PMA to establish and vary rules on access to designated payment systems.<sup>67</sup> In addition, the draft regulations permit an organization that has been denied access to a designated payment system to petition the PMA, which can then direct the designated payment system to allow access.<sup>68</sup>

*PMA reservations (at the present time)*

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<sup>65</sup> PMA, "Vision and Action Plan for the Palestine Payment System" (Sept. 19, 2007).

<sup>66</sup> CGAP, "Branchless Banking Diagnostic Template" (public comment draft of February 2008).

<sup>67</sup> PMA, "Payment and Securities Settlement Systems Oversight Regulation" (draft as of Sept. 2007), Art. 6, 8.

<sup>68</sup> PMA, "Payment and Securities Settlement Systems Oversight Regulation" (draft as of Sept. 2007), Art. 10.

Restrictions and gaps in the regulatory framework can be addressed if the relevant regulators and policymakers support efforts to introduce branchless banking delivery mechanisms and have the capacity and influence to enact and implement the necessary changes. At the present time, however, it is clear that the PMA is not prepared to embrace agent-assisted BB, whether bank-based or nonbank-based.

Currently, the PMA views the use of agents to provide deposit-taking, withdrawals, or money transfers as a risky proposition whose benefits are far outweighed by the potential risks. This perspective is unchanged regardless of who the principal provider is (bank, mobile network operator (MNO), or MFI) and whether the agent is a for-profit entity (e.g. grocery store), a state-owned entity (such as the PPO), or an MFI.

The PMA's opposition to agent-assisted BB in the near future is largely due to money laundering concerns, given the youth of the formal financial sector, the lack of a well-developed legal framework, and the absence of a national payment system (NPS). These concerns are magnified in Palestine, where even the perception of banks' involvement in money laundering or terrorist financing can lead to lawsuits,<sup>69</sup> and where the PMA has gone to great lengths to isolate itself from politics in the West Bank and Gaza. Stories of the use of prepaid cards to launder money in wealthy countries – combined with warnings that “prepaid cards are . . . a potentially attractive vehicle for enabling money laundering”<sup>70</sup> – are sufficient evidence of the risk posed by electronic money schemes to convince the PMA that opening up the financial sector to new payment methods before a fully-functional NPS and regulatory framework are in place would be unwise.

In the meantime, the PMA's efforts to expand access to formal financial services are focused on encouraging banks to open more branches and offices in cities and rural areas; regulating and professionalizing the MFIs and money changers; encouraging banks to remove minimum deposit requirements on savings accounts; and reducing banks' and MFIs' reliance on formal collateral for microloans (through the use of donor guarantee funds and the development of a zero-balance public credit registry).<sup>71</sup>

### *Conservative banking sector*

As a consequence of political instability, most commercial banks – particularly the non-Palestinian banks – invest largely outside of Palestine. While the PMA stipulates that banks should lend out at least 40% of deposits in Palestine, in practice only 22% of deposits are lent out, and the 40% requirement is not enforced.

Of the lending services that banks do provide within Palestine, little is directed at micro and small enterprises, leaving most microenterprises starved for capital (as noted earlier). Most commercial banks do not understand microfinance, and they do not know how to work with small and micro enterprises. As a result, they view this market as high-risk and generally lend only to enterprises that can fully collateralize the loan using traditional forms of collateral. In fact, lack of traditional collateral is by far the most common reason for denial of credit to the microfinance sector; 58% of surveyed microentrepreneurs whose loan applications were denied were rejected for this reason.<sup>72</sup>

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<sup>69</sup> See, e.g., CBS News, “Arab Bank Sued over Israel Terror” (<http://www.cbsnews.com/stories/2004/07/06/terror/main627703.shtml?CMP=ILC-SearchStories>).

<sup>70</sup> Sienkiewicz, S. “Prepaid Cards: Vulnerable to Money Laundering?”, p10 (Feb. 2007) (<http://www.philadelphiafed.org/pcc/papers/2007/D2007FebPrepaidCardsandMoneyLaundering.pdf>).

<sup>71</sup> A zero-balance credit registry captures information on all loans, no matter how small. The credit registry went online in April 2008. Currently, it is only collecting information from banks, but the PMA's goal is to have all MFIs online as well by the end of 2008.

<sup>72</sup> Planet Finance, “Microfinance Market Survey in the West Bank and the Gaza Strip,” p33 (June 2007) ([http://www.microfinancegateway.org/files/44378\\_file\\_Microfinance\\_Market\\_Survey\\_Final.pdf](http://www.microfinancegateway.org/files/44378_file_Microfinance_Market_Survey_Final.pdf)).

When asked what collateral they could offer to guarantee repayment of a loan, most microentrepreneurs provided one of two answers: personal guarantors (50%); or no collateral (29%).<sup>73</sup> MFIs that are serving the lower-income segments of the population are using personal guarantees (sometimes coupled with post-dated checks) for individual lending, and to a lesser extent, group guarantees for solidarity lending.

Some banks have started to adjust their collateral requirements to tap into the high demand for small loans. In particular, Al-Rafah Microfinance Bank – a for-profit commercial bank that directs approximately half of its total loans to the micro sector – uses solidarity lending (roughly half of its microfinance loans use group guarantees), accepts nontraditional collateral, offers incentives for on-time repayment, and has established partnerships with value-chain participants and donors who provide first-loss guarantees. Through such creative approaches, Al-Rafah has managed to maintain a Portfolio at Risk (PAR) 1-90 days of approximately 2% and a PAR > 90 days of 0%. If maintained, this early success could eventually pique the interest of other commercial banks and encourage them to enter this market as well. Many have expressed interest, although most lack staff who truly understand microlending and how it differs from traditional bank lending.

#### *Consumer education/financial literacy needs*

High rates of mobile phone penetration, a well-educated populace, and an expanding network of ATMs and POS devices would suggest that Palestine is well-suited to rapidly adapt to using mobile phones and POS devices to access financial services. In practice, however, it is likely to be much more challenging. Due to the collapse of the banking sector following the 1967 war and subsequent Israeli occupation, many consumers did not grow up using banks and lacked exposure to a variety of formal financial services. As a result, overall financial literacy is relatively low, and there is a real need for consumer education.

Beyond overall financial literacy, specific consumer education with respect to electronic payments will be critical to overcoming resistance to using BB services. Most low-income customers are used to transacting in cash, and many MFI customers are intimidated by new technologies. The PMA already receives complaints from customers alleging that ATMs stole their money, and they are concerned that the number of complaints would skyrocket if BB delivery mechanisms were implemented in the near future.

The PMA recognizes the need for greater financial literacy, and it has begun to address this issue by supporting education efforts and mandating greater transparency from banks. Regarding the former, they are working on adding lessons on financial literacy to the school curriculum. As for the latter, the PMA is developing a Fair Credit Act that will require banks to provide customers with detailed information on interest rates, fees, and their rights and responsibilities.

#### *Lack of appropriately designed products for low-income/microenterprise market*

As discussed earlier, the most important barrier to access to financial services in Palestine is the lack of appropriate financial products for the low-income market, not the lack of innovative mechanisms to deliver such products to clients. While an in-depth analysis of product design is outside of the scope of this study, it is important to note that lower-cost delivery mechanisms will fail to measurably increase access to finance unless banks and MFIs are able to develop financial products that truly meet the needs of microentrepreneurs and low-income citizens. Therefore, the lack of appropriate financial products for the low-income market constitutes a real challenge to the success of BB as a delivery mechanism.

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<sup>73</sup> Planet Finance, “Microfinance Market Survey in the West Bank and the Gaza Strip,” p41 (June 2007) ([http://www.microfinancegateway.org/files/44378\\_file\\_Microfinance\\_Market\\_Survey\\_Final.pdf](http://www.microfinancegateway.org/files/44378_file_Microfinance_Market_Survey_Final.pdf)).

*Well-established bank and money changer infrastructure*

Bank-based BB models have generally been used to expand banks' outreach into areas where a branch would not be cost-effective.<sup>74</sup> Nonbank-based BB models that target the poor have seen the most success in countries where access to money transfer services is limited.<sup>75</sup>

Palestine fits neither scenario described above. Palestine is a small, densely-populated country. The infrastructure of bank branches and offices is already quite extensive, and the PMA is exhorting banks to continue to open branches and offices in underserved areas. Money changers – which historically have played such an important role in the provision of financial services – are also available throughout the country.

This is not to suggest that 100% of Palestinians have easy access to financial services. However, the existence of a well-developed network of “brick-and-mortar” bank branches and money changer outlets could dampen enthusiasm for BB services, both from the perspective of the providers and their customers.

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<sup>74</sup> For example, remote municipalities with low population density in Brazil.

<sup>75</sup> For example, M-PESA in Kenya.

# RECOMMENDATIONS

## Support the Development of the National Payment System

As we have noted earlier, in order to expand access to finance through electronic transactions today in Palestine, it is critical to facilitate transactions and payments between banks. The PMA is in the process of developing the systems required to automate the settlement process. This will allow banks to process and exchange checks, as well as settle the outstanding amounts using an automated settlement system.

However, in order to also integrate ATMs, POS devices, and mobile phone-based banking into the national payment system, a national switch needs to be developed and implemented. In order to ensure the seamless integration of the switch into the financial sector, the following must be taken into consideration during the design phase:

- The switch should be designed to enable its integration into the planned clearing and settlement system.
- The switch will need to be integrated into the banks to allow for real-time authorization of all transactions.
- The security of the system must be ensured, and the management of security keys and encryption standards must be addressed.
- The switch must be able to integrate into the card associations (*e.g.* VISA, MasterCard).
- Fraud management systems must be integrated into the national switch.
- The standards for mobile-based applications must be integrated into the system's architecture.

Once this has been achieved, the operational processes need to be mapped to address the following:

- The reconciliation and mark-off process between the banks.
- Settlement timing and processes.
- Inter-bank dispute resolution process.
- Customer query resolution.
- Fraud management.

A pilot usability application should be built before finalizing designs, and customer usability tests should be conducted.

Once this is done, the building and implementation of the switch can commence:

- Connectivity between the banks needs to be established.
- The switch needs to be implemented with the correct parameter settings.
- A full disaster recovery site must be established.
- Full systems testing and card association certification should also be addressed.

Finally, training of the staff who will be operating the systems – as well as the individuals who will be making use of the services – is vital:

- Training materials need to be designed in line with the business processes.
- Expert consultants are needed to “train the trainers.”
- Ongoing training and refresher training should continue to be conducted regularly.
- Customer training/education strategies need to be designed and implemented.

It is necessary to have a well-documented process and project plan to ensure that this proceeds efficiently.

### **Create an Enabling Legal Framework for the Payment System and for Branchless Banking**

Given the critical role of a National Payment System (NPS) in lowering costs, increasing electronic activity, reducing AML/CFT risks, and expanding access to finance, creating an enabling legal framework for the payment system should be an important priority of any organization aiming to help low-income Palestinians access appropriate financial services through electronic means. The PMA's payments division is energetic but understaffed, and they would welcome legal and payment system expertise as they proceed with their plan to enact a Payment Systems Law by March 2009 and have a fully-functional National Payment System in place by 2015.<sup>76</sup>

Once the legal framework for the NPS is in place, attention should be turned to the legal framework for BB as a delivery mechanism. As noted in the "Challenges" section, major gaps and limitations exist in the current regulatory framework, which need to be addressed before rolling out BB in Palestine. Rules on outsourcing financial transactions to retail agents, AML/CFT, e-money, e-commerce and e-security, and consumer protection must be addressed to establish an enabling legal and regulatory framework for BB in Palestine.

### **Ensure Proper Sequencing/Timing**

Stories of dramatic increases in outreach through branchless banking have generated a great deal of interest from a variety of stakeholders, including donors, who are rushing to conduct BB assessments throughout the developing world. However, BB delivery mechanisms create new risks related to the use of retail agents to process transactions and the issuance of electronic money by mobile network operators and other non-banks. Banks, non-bank providers, retail agents, and customers must address the operational risk, reputational risk, credit risk, liquidity risk, consumer protection risk, and AML/CFT risk that BB delivery mechanisms can create.<sup>77</sup>

These risks are real, and some problems have already surfaced in other countries. In Brazil, anecdotal evidence suggests that retail agent fraud and robbery are serious concerns when agents begin handling large amounts of cash.<sup>78</sup> In Kenya, the very popular M-PESA scheme is operating in an unregulated environment, and consumer protection advocates are warning that customers have no effective recourse in case of loss of funds due to fraud or error.<sup>79</sup> And as noted earlier, criminals in wealthy countries are already taking advantage of new payment mechanisms such as prepaid cards to launder funds.

Given the weak legal framework, the limited capacity to monitor transactions to detect money laundering, the absence of a national payment system (NPS), and the pressing need to avoid even the impression that the formal financial sector is being used to launder funds or finance terrorism, rollout of an additional electronic transaction channel in the short term would be inadvisable. Proper sequencing is important: prior to approving the use of BB as a transactional technology, the AML/CFT framework and the NPS should be fully operational, the legal

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<sup>76</sup> PMA, "Vision and Action Plan for the Palestine Payment System" (Sept. 19, 2007).

<sup>77</sup> See CGAP, "Use of Agents in Branchless Banking for the Poor: Rewards, Risks, and Regulation." Focus Note No. 38 (Oct. 2006) ([http://www.cgap.org/gm/document-1.9.2585/FocusNote\\_38.pdf](http://www.cgap.org/gm/document-1.9.2585/FocusNote_38.pdf)).

<sup>78</sup> See CGAP, "Use of Agents in Branchless Banking for the Poor: Rewards, Risks, and Regulation." Focus Note No. 38 (Oct. 2006) ([http://www.cgap.org/gm/document-1.9.2585/FocusNote\\_38.pdf](http://www.cgap.org/gm/document-1.9.2585/FocusNote_38.pdf)).

<sup>79</sup> Business Daily Africa, "Regulators Pass the Buck on Risks Posed by M-Pesa" (Aug. 4, 2008) ([http://www.bdafrica.com/index.php?option=com\\_content&task=view&id=9118&Itemid=5822](http://www.bdafrica.com/index.php?option=com_content&task=view&id=9118&Itemid=5822)).

framework governing electronic transactions should be well-developed, and the PMA should have sufficient capacity to monitor BB activity and ensure that BB providers are properly addressing the relevant risks.

### **Analyze Product Design and Methodology Constraints that Currently Limit Financial Access**

While the issues of product design and methodology are ostensibly outside of the scope of this study, the success of BB as a delivery mechanism will invariably depend in large part upon the ability of banks, MFIs, MNOs, and other stakeholders to design appropriate products, establish key partnerships, and provide clients with incentives to repay microloans. Some banks are beginning to explore risk-sharing mechanisms, including partnerships with other value chain actors and donor-supported first-loss loan guarantees. Expanding banks' and MFIs' views of what is acceptable collateral – including greater use of group guarantees, moveable assets, gold, livestock, and inventory – will help,<sup>80</sup> as will the development of customer credit histories through the submission of bill payment and microloan repayment information to the nascent credit registry. By addressing product design/methodology issues now, providers and customers will be able to take full advantage of BB delivery channels once the necessary macro- and meso-level infrastructure for BB is put in place.

### **Build the Institutional Capacity of the MFI Sector**

Building the institutional capacity of MFIs who target low-income customers will also help to ensure that branchless banking achieves its full potential once operational. Currently, the PMA is concerned about the institutional capacity of MFIs, which they believe have weak Management Information Systems (MIS) and are not financially self-sufficient after accounting for all donor support. Unless MFI capacity is improved, the PMA is unlikely to permit MFIs to either use retail agents to expand access to finance or to act as retail agents on behalf of banks or MNOs.

However, if sufficient institutional capacity is proven, the PMA is receptive to the possibility of permitting select MFIs to accept voluntary savings from clients and deposit these funds in a pooled bank account in the MFI's name. This would be an important first step towards full mobilization and intermediation of voluntary savings, which MFIs view as critical to meeting the needs of low-income Palestinians. BB delivery mechanisms could help to facilitate savings mobilization, particularly in areas that are relatively far from MFI or bank branches. By developing their institutional capacity today, MFIs hopefully will be able to join banks and other providers in using branchless delivery mechanisms in the not-too-distant future.

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<sup>80</sup> USAID, "Study on Options, Management and Enforcement of Collateral for Microfinance Loans in the West Bank and Gaza Strip." FIELD Report No. 4 (Nov. 2007)  
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