1- Introduction

This chapter proposes a model based on prepaid electronic payments systems and cellular technology (Mobile Banking) that addresses the lack of access to financial services in the vast majority of developing countries. The proposed solution assumes that the lack of access to financial services is primarily a supply problem. The business models used by financial institutions operating in developing countries are inadequate and inefficient because they cannot service low income segments profitably. In order to solve this supply-side problem and to be able to service low income segments profitably, new microfinancial service distribution models need to be developed at low costs.

The importance of solving the problem of the lack of access to financial services in developing countries is clearly illustrated by the relation between development in the finance sector and the country’s economic development. This relationship has been empirically proven in a number of studies that show a high correlation between increases in the rate of financial deepening, measured as the percentage of credit with respect to the Gross Domestic Product or the number of loans per capita (Beck, Demirgüc-Kunt, Martínez Peira, 2005) and increases in GDP per capita.

An extensive number of economic studies demonstrate that there is also a causal relation between financial deepening and economic development. This causal relation was first proposed by Schumpeter (1911), but more recent studies have corroborated it. A significant portion of these studies has concentrated on the impact of the banking sector and thus bank credits on economic growth. King & Levine (1993), Demirgüç-Kunt, and Loayza (2000) showed that bank credit is the explanatory variable in economic growth, especially in countries with underdeveloped capital markets.

In countries with higher levels of development and financial deepening, the impact of the development of capital markets is a second explanatory variable for economic growth. Nevertheless, Levine & Zervos (1998), Levine (1991), Bencivenga & Smith (1991) and especially Rojas-Suarez & Weibrod (1994) show that the impact of financial deepening on economic growth is much more limited in developing countries where capital markets are not efficient because they lack a properly developed banking sector.

A third approach explains economic growth not only in relation to the development of the banking sector, but also to its stability in the provision of financing as an explanatory variable on levels of economic development. This approach is especially relevant for the Latin American case as shown by Freixas (1997), Rochet (1997), the Interamerican Development Bank (2005) and Garrido (2005). The volatility of financial systems is particularly high in Latin America, where almost all the countries in the region have gone through major financial crises that have had severe negative impacts on the economic welfare of the population.
2- The problem of the lack of access to financial systems in developing countries

The low levels of financial deepening make economic growth difficult; according to Beck, Demirgüç-Kunt, Levine (1999), in the 24 most developed countries, the average credit to the private sector as a percentage of GDP was 84% between 1990 and 1999; while it was 33.6% in the 79 developing countries analyzed. The problem in some of the developing countries analyzed is not only that the credit markets are too small, but also that they are too small given their degree of economic development.

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of countries</th>
<th>Private sector credits (percent of GDP)</th>
<th>Credit and market capitalization (percent of GDP)</th>
<th>GDP per capita, 1995 (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed countries</td>
<td>24</td>
<td>84</td>
<td>149</td>
<td>23.815</td>
</tr>
<tr>
<td>East Asia and Pacific</td>
<td>10</td>
<td>72</td>
<td>150</td>
<td>2.867</td>
</tr>
<tr>
<td>Middle East and Northern Africa</td>
<td>12</td>
<td>43</td>
<td>80</td>
<td>4.416</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>20</td>
<td>28</td>
<td>48</td>
<td>2.632</td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td>18</td>
<td>26</td>
<td>38</td>
<td>2.430</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>13</td>
<td>21</td>
<td>44</td>
<td>791</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>6</td>
<td>20</td>
<td>34</td>
<td>407</td>
</tr>
</tbody>
</table>

Other measures apart from macroeconomic indicators also point to the lack of financial deepening. According to Beck, Demirgüç-Kunt, Martínez Peira (2005), there are an average 470 loans and 2,197 deposits for every 1000 people in 10 selected countries in Western Europe; in five selected countries in Africa, there are an average 30 loans and 146 deposits for every 1000 people.

The lack of access to financial services is principally due to an inadequate supply of financial services to low income segments and small and medium enterprises. This inadequate supply is explained by the high prices of financial services, expensive distribution networks with low capillarity, and the use of risk methodologies that have not been adapted to the realities of developing countries. Moreover, the regulatory frameworks observed in the majority of developing countries do not favor the emergence of efficient models of distribution of financial services.

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\(^1\) Interamerican Development Bank, IPES 2005.
• Expensive financial services and inefficient banking systems in developing countries:

Low levels of financial deepening are highly correlated with the financial margin that banking institutions charge to their clients. During the period of 1995 to 2002 this financial margin – calculated by dividing financial income by the average portfolio – increased as the ratio of credit to the private sector over GDP decreased.

One factor that explains the high financial margins charged by financial institutions in developing countries is the low level of operational efficiency in these institutions. This indicator, measured by the ratio of operational costs over total assets, is positively correlated with financial margins (Mathieson, Schinasi, et. al. 2001); that is, high financial margins correlate with high (negative) rates of operational efficiency.

Table 2: Interest rates differences and efficiency by region, 1995-2002

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of countries</th>
<th>Interest rate differences (percentage)</th>
<th>Operational Costs (percentage of assets)</th>
<th>Private sector credit (percentage of GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>32</td>
<td>10,6</td>
<td>5,1</td>
<td>15</td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td>23</td>
<td>8,8</td>
<td>5,0</td>
<td>26</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>26</td>
<td>8,5</td>
<td>4,8</td>
<td>37</td>
</tr>
<tr>
<td>East Asia and Pacific</td>
<td>16</td>
<td>5,1</td>
<td>2,3</td>
<td>57</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>5</td>
<td>4,6</td>
<td>2,7</td>
<td>23</td>
</tr>
<tr>
<td>Middle East and Northern Africa</td>
<td>13</td>
<td>4,0</td>
<td>1,8</td>
<td>38</td>
</tr>
<tr>
<td>Developed countries</td>
<td>30</td>
<td>2,9</td>
<td>1,8</td>
<td>89</td>
</tr>
</tbody>
</table>

The above table shows that inefficient financial systems are common in all developing countries, but more so in Sub-Saharan Africa (5.1%), Eastern Europe (5%), and Latin America (4.8%). The Middle East and Northern Africa have operational efficiency rates similar to those of developed countries, notwithstanding great variations among the countries in those regions.

The lack of competition in the local financial systems also explains the high costs of financial services. Finally, the short term value strategies followed by financial institutions in developing countries set selection criteria that discriminate against low income segments of the population (Ruiz Durán, 2004).

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2 Interamerican Development Bank, IPES 2005. Data from IMF and Bankscope.
A value-management client strategy is defined by the level of service a client receives vis-à-vis the economic profit he or she will generate for the financial institution. In developing countries, a client’s value is determined by the margins generated by the financial institution from each of its clients. By applying such a strategy, only a reduced portion of the population has enough of a positive profit potential to provide them with financial services profitably. The pervasiveness of negative profitability is fundamentally explained by the low levels of assets and liabilities of customers in developing countries; nevertheless, high operational costs also contribute negatively to the financial institution’s outlook of a client’s worth.

- **Low density of financial institutions networks:**

The low density of bank branches is another cause for low levels of banking access in developing countries; this problem is mainly due to the fact that the greater part of a financial institution’s potential clients can not generate sufficient income to cover the costs of traditional bank branches. Furthermore, operation costs are higher in developing countries than in developed countries because of added security costs and inefficient infrastructures.

<table>
<thead>
<tr>
<th>Geographic Area</th>
<th>Number of Countries</th>
<th>Bank branches per 100,000 people</th>
<th>Bank branches per 1000 km²</th>
<th>Number of loans per 1000 people</th>
<th>Number of deposits per 1000 people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Europe</td>
<td>10</td>
<td>44.66</td>
<td>61.25</td>
<td>470</td>
<td>2.197</td>
</tr>
<tr>
<td>Asia</td>
<td>10</td>
<td>8.13</td>
<td>18.57</td>
<td>110</td>
<td>715</td>
</tr>
<tr>
<td>Western Europe</td>
<td>9</td>
<td>7.39</td>
<td>6.83</td>
<td>87</td>
<td>1.040</td>
</tr>
<tr>
<td>Latam</td>
<td>17</td>
<td>7.02</td>
<td>5.20</td>
<td>120</td>
<td>490</td>
</tr>
<tr>
<td>Africa</td>
<td>5</td>
<td>2.06</td>
<td>0.57</td>
<td>30</td>
<td>146</td>
</tr>
</tbody>
</table>

The low number of bank branches per 100,000 people shown on table 3 in developing countries is explained by the low economic value of their population for the financial sector. The value segmentation strategy previously mentioned is not only applied at the customer level, but also at the branch level. Therefore, if the customers served by a branch do not generate enough revenue to cover the branch’s costs and make a profit, then the branch is closed. The number of branches per square KM in developing countries is significantly smaller than in Western European countries. The low economic value of the population living in rural areas is reflected in their lack of banking outreach. This lack of outreach reflects deficient communication infrastructures, which compounded with the security problems, dwarfs economic growth.

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3 This strategy is the base of the commercial strategies based on Customer Relationship Management (CRM).

4 In developed countries, future flows are included based on a model of client behavior based on age, personal and professional situation developed by the more advanced institutions based on their CRM.

Within developing countries, there are important differences in the density of banking networks in regions or areas with greater purchasing power and regions or areas with less purchasing power. These differentials are present in urban as well as rural areas; consequently, it can be concluded that there is a high correlation between the income level in a certain area and its density of bank branches.

- **Inappropriate credit risk analysis methodologies:**

The processes of banking credit risk analysis in developing countries are based on the analysis of the expected cash flows of the customer requesting a credit. Financial institutions also marginally consider other variables that allow them to adjust their expectations of their clients’ delinquency; these variables involve ties with the financial institution and socio-demographic indicators. The determination of the expected cash flows is based on the customer’s net income, which is compared with the expected credit payments in order to establish his or her payment capacity.

In the case of salaried customers, the analysis is based on their salaries, and in the case of non-salaried customers, it is based on their declared obligations to the tax authority. Given the importance of the informal sector, basing credit decisions just on these data presupposes a great problem to those who generate their income in the informal sector since they are not able to document their payment capacity and hence are unable to access credit.

The second type of variables included in the process of credit analysis is related to the customer’s ties to the institution. These variables measure the customer’s relationship with the financial institutions using the number of products contracted, the value of the business generated by the client, the customer’s profitability, and his or her payment and delinquency history as indicators. In societies with high levels of banking access, these variables are representative; however, in developing countries, banking access levels are low and this information only applies to a very small percentage of the population, while the rest of the population has its credit worthiness assessed with variables that prevent customers from accessing credits.

The third type of variable involved in risk analysis is socio-demographic indicators such as age, marital status, place of residence and number of children. Considering the easier accessibility to this information, assigning a higher weight to socio-demographic indicators in the analysis of risk would imply easier access to credit. The increase in credits should not translate to higher delinquency if the appropriate weights are assigned and validated by public databases\(^6\) that measure the credit history of this type of client.

The low levels of access to credit in developing countries, then, is explained by the excessive weight given to professional variables and ties with the financial institution. Since these are databases limited to a small sector of the population due to the size of the informal sector and low banking access levels, risk analysis decisions are negative for a large segment of the population. It is necessary to reevaluate the sources of information.

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\(^6\) Credit registers or credit bureaus are public access databases of public or private property.
for risk analysis in order to include the large informal economies that exist in developing countries. Another option is to assign a higher weight to socio-demographic indicators into the risk analysis decision; although this change would require the development of internal mechanisms to track delinquency by socio-demographic profile, and external mechanisms (credit bureaus) to increase the access to credit while keeping delinquency rates under control.

- **Inappropriate regulatory framework:**

The regulatory framework of the microfinance industry in developing countries is highly fragmented and convoluted, which leaves many institutions operating outside it. Additionally, this context does not allow for the emergence of networks that could benefit from positive synergies, a fundamental element in the development of the sector.

Reforms aiming at formalizing the microfinance sector in developing countries are not aged enough to analyze their impact. Nonetheless, developed countries that have implemented these types of policies successfully such as Spain, Germany and Canada showed a positive impact on economic growth from the provision of financial services to low income segments of the population.

In addition to an inappropriate framework, regulatory costs are too high in terms of provisions, reserve, security, and other requirements. These requirements elevate the costs of providing financial services to low income segments. Equally important, high regulatory costs prevent micro-financial institutions from being properly regulated (Klaehn, Helms, Deshpande- CGAP, 2005).

<table>
<thead>
<tr>
<th>Region</th>
<th>Property rights index</th>
<th>Private sector credit/GDP (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed Countries (OECD)</td>
<td>6.3</td>
<td>84</td>
</tr>
<tr>
<td>East Asia and Pacific</td>
<td>5</td>
<td>72</td>
</tr>
<tr>
<td>Middle East and Northern Africa</td>
<td>3.9</td>
<td>43</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>4.5</td>
<td>28</td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td>5.5</td>
<td>26</td>
</tr>
<tr>
<td>Subsaharan Africa</td>
<td>4.2</td>
<td>21</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>3.8</td>
<td>20</td>
</tr>
</tbody>
</table>

Another regulatory element explaining the low financial deepening in developing countries is the scarce enforcement of property rights. The table above compares the World Bank’s index of property rights enforcement by geographic region to the degree of financial deepening. The relationship between secure property rights and financial

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7 Policies promoting banking access in México (Bansefi) and Colombia (Banca de las Oportunidades) are too recent.
8 Getting Credit, www.worldbank.org
deepening is obvious, and shows that countries with greater financial deepening have a greater index of property rights.

3. Proposed model based on prepaid electronic payments systems and cellular technology (Mobile Banking) for the distribution of microfinance services to address the lack of financial services in developing countries:

The causes analyzed explaining the low levels of banking access in developing countries need solutions that address the high costs of financial services, the scarce banking density, the inappropriate risk methodologies and the inadequate regulatory framework. The small density of bank branches and the high prices of financial services have to be addressed with a strategy that generates new business models to distribute low cost financial services and thus increases competition in the sector. On the other hand, the low efficiency of the current risk analysis methodologies needs to be addressed by the creation of new institutional and methodological processes that include the informal economy.

In addition, the growing importance of migrant remittances in developing countries, particularly for low income segments, demands a distribution model of low cost services that optimizes the impact of these remittances (Prior, 2006). Finally, the banking processes proposed require large technological and organizational structures. In the microfinance sector, this scale can be easily attained through network structures with a coordinating node to provide central services (nodal network structure). As a result, the proposed distribution model of financial services is structured into five elements: low cost financial products (prepaid electronic products), low costs intermediation networks based on cellular technology, alternative risk analysis methodologies, optimization of the impact of workers remittances, and a nodal network structure. The following subsections introduce these elements as well as the best practices that can be applied.

3.1 – Low cost financial products: prepaid electronic methods of payment

Electronic payment methods are the foundation of the model proposed. First, they allow for efficiency improvements; second, they enable the use of low cost distribution channels; third, they allow the implementation of credit risk tracking systems that would decrease delinquency rates; fourth, the technological platform that supports electronic banking would generate important synergies with the business of remittances; finally, the economies of scales achieved through the use of electronic banking products would make the creation of a nodal network system possible.

The savings that financial institutions obtain from using electronic payment methods allow them to offer low cost financial services profitably. These savings are especially

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9  Scheme similar to one existing in Spain in the context of the Spanish Confederation of Savings and Loans: Gardener, Lolyneaux, Bisoni, Cosma, Carbó, López del Paso, Rodríguez Fernández, 2002.
important for financial institutions operating in developing countries where efficiency ratios are much worse there than in developed countries. Low efficiency costs constrain financial institutions to charging high prices in order to reach their equilibrium point, hence making massive bancarization difficult in developing countries.

The proceeding table shows the evolution of electronic payment methods in the eleven countries in the Euro zone and England between 1992 and 2000. During this period, the proportion of electronic payments increased by 41% with respect to total non cash payments. Additionally, the total non cash payments increased by 40% vis-à-vis total payments in these twelve economies. The increase in the importance of the number of electronic payments is accompanied by an increase in the efficiency ratio of financial institutions in these twelve countries.

During the same period, operational costs (the percentage of total costs over total assets) decreased by 20%. Nevertheless, this improvement in efficiency cannot be attributed only to the percentage increase in electronic payments, in spite of the fact that transaction costs decreased by 49% due to the greater use of electronic payment methods (Humphrey, Willesson, Lindblom. 2003). Studies done in Spain and the United States estimate that the total cost of a check payment is two to three times higher than the transaction cost of an electronic payment (Carbó, Humphrey, Lopez. 2002). Additionally, a 2000 Belgian study (De Grauve, Buyst, Rinaldi, 2000) argued that the transaction cost of a card payment was nine times lower than that of a cash transaction. Both studies analyzed the total cost of payment transactions for the whole economy taking into account banking costs, commercial costs, central bank costs, and the costs of the regulatory body in charge of payment supervision. These studies concluded that the use of electronic payment methods save an economy that migrates all of its cash payments to electronic payment methods up to 1% of GDP (Humphrey, Willesson, Lindblom. 2003).

Other factors, such as the use of low cost channels instead of bank branches, also explain the evolution in the efficiency rate. Even so, the high correlation between the increase in electronic payments and the decrease of operational costs ($R^2 = 92.98\%$) reflects the

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**Table 5: Evolution of the importance of electronic payments compared with the operational efficiency rates between 1992 and 2000 for countries in the Euro zone and the United Kingdom**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Non cash transactions per capita</td>
<td>97</td>
<td>105</td>
<td>112</td>
<td>125</td>
<td>136</td>
<td>40.21%</td>
</tr>
<tr>
<td>(%) Electronic transactions/non cash transactions</td>
<td>56.00%</td>
<td>63.00%</td>
<td>68.00%</td>
<td>75.00%</td>
<td>79.00%</td>
<td>41.07%</td>
</tr>
<tr>
<td>(%) Operational costs/Total Assets</td>
<td>2.00%</td>
<td>1.80%</td>
<td>1.70%</td>
<td>1.60%</td>
<td>1.60%</td>
<td>-20.00%</td>
</tr>
</tbody>
</table>

---

importance of electronic payments for European financial institutions in order to improve their efficiency rates.

In addition, electronic payment methods allow a more efficient segmentation of the population, especially the lower income segments. The products used in electronic banking make it possible to use commercial instruments that are more efficient than those traditionally used by commercial banks.

The electronic payment business model is the one that is traditionally followed by issuers of electronic payment methods, predominantly credit cards. Nonetheless, the products offered by these issuers are not limited to consumer credit, but include most of the financial needs of the unbanked. A review of the product catalog offered by the operators of electronic banking 11 shows us this diversity of supply.

3.2 – Low cost financial intermediation networks based on cellular technology:

The cost of the intermediation networks is, together with transaction processing, an explanatory variable in the operational cost function of retail banking institutions (Carbó, Humphrey, López del Paso, 2004). The use of low cost networks decreases operational costs, hence improving the efficiency rates of financial institutions.

The problem with the low density of bank branches in developing countries is based on the fact that the business model followed by banks does not generate enough income to cover the high costs of traditional bank branches (Caskey, 1993). Part of the solution is to generate low cost products that can be distributed in these branches profitably. Another solution is to create or use low cost financial intermediation networks that do not require high income clients in order to reach the equilibrium level in their banking business.

In Europe, the improvement in efficiency rates has gone together with a relative increase in automated bank tellers with respect to traditional bank branches. The table below shows the compared evolution of efficiency rates of European banks and the importance of ATM with respect to bank branches. Both series show a high correlation ($R^2 = 86.15\%$) in the period 1992-2000.

| Table 6: Evolution of the importance of ATMs vs bank branches compared with the operational efficiency rate of financial institutions between 1992 and 2000 for countries in the Euro zone and the United Kingdom 12 |
|-----------------|---|---|---|---|---|
| Number of ATMs/number of bank branches | 2.00% | 1.80% | 1.70% | 1.60% | 1.60% -20.00% |
| 0.62 | 0.76 | 0.93 | 1.12 | 1.3 109.68% |

Commercial banks in developing countries have already implemented low cost intermediation channels such as ATMs in the context of multichannel strategies. A multichannel strategy within a business model is defined as a strategy that besides bank branches includes low cost intermediation channels.

A World Bank study (Beck, Demirgüc-Kunt, Martínez Peira, 2005) provides data from 51 countries that show the importance of the use of low cost channels in financial deepening. The data in this study lets us correlate ATM density, per capita or by square KM, with the number of loans or deposits per capita. Moreover, we can compare this correlation level with the one obtained from comparing bank branch density with the same indicators of financial deepening. The results show the importance of developing low cost channels to increase the rates of financial deepening. While the number of bank branches per capita has an $R^2$ correlation of 46.02% with the number of deposits per capita, the number of ATMs per capita correlates by 51.39% with the number of deposits per capita.

### Table 7: Relationship between distribution networks and financial deepening

<table>
<thead>
<tr>
<th>Correlation Percentage</th>
<th>Bank branches per capita</th>
<th>Bank branches per KM²</th>
<th>Number of ATMs per capita</th>
<th>Number of ATMs per KM²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposits per capita</td>
<td>46.02%</td>
<td>15.27%</td>
<td>51.39%</td>
<td>5.53%</td>
</tr>
<tr>
<td>Credits per capita</td>
<td>26.04%</td>
<td>10.60%</td>
<td>33.97%</td>
<td>7.45%</td>
</tr>
</tbody>
</table>

This table lets us see that density per capita is more important than density per KM², when we analyze its correlation with financial deepening indicators. We also observe that the density of the distribution network correlates to a higher degree with deposits per capita than with loans per capita; this is explained by the different credit risk analysis methodologies and their impact on the granting of loans as we will see in the following paragraphs.

With regard to the first argument, the analysis by geographic area shows uneven results. The statistical correlation for the ten Western European countries analyzed, whose income levels are higher, differs from that of developing countries. Moreover, the correlation between ATM density per capita and bank branches with financial deepening levels is not significant. However, the correlation between the density of ATMs and especially bank branches per KM² with financial deepening indicators reaches $R^2$ levels close to 90%.

Despite the fact that these results contradict the results found for the total of the countries, they can be explained because the density by KM² does a better job at explaining the differences in financial deepenings in highly banked societies since these differences are mainly explained by differences in banking access in rural areas. The indicator that best measures the presence of financial institutions in rural areas is density per KM² and not density per capita.

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In contrast, for countries with lower banking access levels, the more relevant indicator is the number of branches and ATMs per capita. The following table shows the same indicators for the countries analyzed in this study by geographic zone. The results show that in areas with lower financial deepening, such as Latin America and Africa, the importance of having dense distribution networks is fundamental.

**Table 8: Relationship between distribution networks and financial deepening by geographic area**

<table>
<thead>
<tr>
<th>Geographic area</th>
<th>R²</th>
<th>Number of counties</th>
<th>Bank branches per 1000 people</th>
<th>Bank branches per 1000 KM²</th>
<th>Number of ATMs per capita</th>
<th>Number of ATMs per KM²</th>
<th>Number of loans per 1000 people</th>
<th>Number of deposits per 1000 people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Europe</td>
<td>0.84</td>
<td>10</td>
<td>44.86</td>
<td>61.25</td>
<td>66.81</td>
<td>87.70</td>
<td>470</td>
<td>2,197</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Deposits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.56%</td>
<td>5.63%</td>
<td>0.27%</td>
<td>0.97%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Credits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.80%</td>
<td>85.68%</td>
<td>0.67%</td>
<td>84.58%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asia</td>
<td>0.81</td>
<td>10</td>
<td>8.13</td>
<td>18.57</td>
<td>9.40</td>
<td>13.65</td>
<td>110</td>
<td>715</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Deposits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.11%</td>
<td>10.04%</td>
<td>0.13%</td>
<td>0.89%</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Credits</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4.83%</td>
<td>1.17%</td>
<td>38.13%</td>
<td>3.43%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>0.79</td>
<td>9</td>
<td>7.39</td>
<td>6.83</td>
<td>9.40</td>
<td>13.65</td>
<td>87</td>
<td>1,040</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Deposits</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10.17%</td>
<td>7.17%</td>
<td>35.30%</td>
<td>32.63%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Credits</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>11.01%</td>
<td>13.32%</td>
<td>6.91%</td>
<td>21.77%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latam</td>
<td>0.73</td>
<td>17</td>
<td>7.02</td>
<td>5.20</td>
<td>12.48</td>
<td>10.64</td>
<td>129</td>
<td>490</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Deposits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>26.37%</td>
<td>27.00%</td>
<td>49.77%</td>
<td>27.03%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Credits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14.34%</td>
<td>0.60%</td>
<td>27.66%</td>
<td>0.81%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Africa</td>
<td>0.50</td>
<td>5</td>
<td>2.06</td>
<td>0.57</td>
<td>3.48</td>
<td>0.59</td>
<td>30</td>
<td>146</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Deposits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>89.08%</td>
<td>10.18%</td>
<td>98.47%</td>
<td>0.77%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is especially relevant to have low cost financial service distribution networks given that in all of the geographic areas analyzed its correlation with financial deepening indicators is higher than that of traditional bank branches. It is worth mentioning that ATMs are not the lowest cost intermediation channels. There are other technical solutions such as the representative tellers used in Peru that are even more efficient in promoting banking access.

**Table 9: Cost comparison by intermediation channel**

<table>
<thead>
<tr>
<th>Point of intermediation Financial Services</th>
<th>Estimated Cost (Thousand US$)</th>
<th>Relative weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Representative teller</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>ATM</td>
<td>35</td>
<td>7</td>
</tr>
<tr>
<td>Branch</td>
<td>200</td>
<td>40</td>
</tr>
</tbody>
</table>

Commercial banks in developing countries already make use of multichannel strategies, combining channels of higher and lower costs. These strategies use bank branches to commercialize products to the wealthier people in their societies. Telemarketing is used

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15 Superintendencia de Bancos y Seguros del Perú, 2006.
to commercialize electronic banking products to customers and non customers belonging to mid income levels of the population. ATMs are used to reduce transactions in branches although not to commercialize products. Finally, networks of agents and representative tellers are used to commercialize products to the lower income segments of society. Within these networks of agents, we include the commercialization of privately branded electronic banking products from certain shopping centers.

The use of electronic payment methods is required to develop low cost intermediation channels, connected through wireless technology. It is not only that products are much more efficient in terms of cost, but also that they are required to use low cost channels such as ATMs, representative tellers or commercial agents. Those representative tellers or agents can be even more efficient channels when wireless technology is used to connect them and when cellular hardware can be used to replace traditional POS or ATM infrastructures.

3.3 – Alternative risk analysis methodologies:

In the previous section about the causes for low banking access levels, risk analysis methodologies and the overwhelming use of professional and association variables were listed as important causes for the problem. The use of sociodemographic variables positively correlates with increases to credits placed16, which is why a greater weight to these variables in the risk methodology could increase credits placed.

In order to massively apply these variables there need to be analysis methodologies that are based on delinquency rates correlated with said sociodemographic variables. To use this information, there need to be databases that consolidate all of the credit histories from the creditors to all of the different financial institutions in the country. These information systems are called central credit registers or credit bureaus; their development strongly promotes credit placements, not only in developed countries (Interamerican Development Bank, 2005), but also in other geographic areas where these institutions have appeared17.

Information centers help increase credits placed and provide greater information in the credit risk analysis, hence reducing delinquency rates (Barron and Staten, 2003). A study published by the Interamerican Development Bank estimated that financial institutions that use credit registers show decreases in their delinquency rates. The study also showed that financial institutions that have a larger concentration in the small and medium enterprise or consumer segments are the most greatly benefited from using information from information centers. Additionally, the study concluded that the utility extracted from private registers is greater than that of public ones.

16 Data gathered by the author based on the comparison of 10 credit analysis methodologies in Latin America.
17 In the US, the rating determined by a credit bureau is the fundamental determining element in the analysis of a risk operation.
Private registers help to better forecast when credits will be unpaid thanks to the use of information sources that are not just bank related. These registers also include other payment sources such as water or power utilities and other sociodemographic variables such as age or marital status. This proves that the use of diverse variables that deal with payment histories and sociodemographics allows for the estimation of risk profiles without having to use economic variables. The following table comes from a World Bank study and shows the relationship between financial deepening as a percentage of private sector credit over GDP and the coverage of private risk centers.

Table 10: Development of risk centers and financial deepening

<table>
<thead>
<tr>
<th>Region</th>
<th>Index risk information centers</th>
<th>Coverage public risk center (%)</th>
<th>Coverage private risk center (%)</th>
<th>Private sector credit (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia and Pacific</td>
<td>1.9</td>
<td>3.2</td>
<td>10.1</td>
<td>72</td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td>2.9</td>
<td>1.7</td>
<td>9.4</td>
<td>26</td>
</tr>
<tr>
<td>Latin American and the Caribbean</td>
<td>3.4</td>
<td>7</td>
<td>27.9</td>
<td>28</td>
</tr>
<tr>
<td>Middle East and Northern Africa</td>
<td>2.4</td>
<td>3.2</td>
<td>7.6</td>
<td>43</td>
</tr>
<tr>
<td>Developed Countries (OECD)</td>
<td>5</td>
<td>8.4</td>
<td>60.8</td>
<td>84</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>1.8</td>
<td>0.1</td>
<td>1.3</td>
<td>20</td>
</tr>
<tr>
<td>Subsaharan Africa</td>
<td>1.3</td>
<td>1.5</td>
<td>3.8</td>
<td>21</td>
</tr>
</tbody>
</table>

In addition, data obtained from a World Bank Study allows us to estimate how important it is to have a bank account in order to access credit in developed and developing countries. In this comparative study, we correlated the levels of financial deepening, measured in terms of deposits per capita and loans per capita. The statistical $R^2$ correlation results are greater in areas with low banking access levels like Africa (99.7%) and Latin America (45.81%), while this correlation percentage is only 0.05% in Western Europe. These differences show how credit generation in developed countries does not depend on having a bank account with the institution, but more significantly on the analysis of other economic and sociodemographic variables.

A second strategy to follow in order to decrease delinquent portfolios and foment credit generation is to improve the tracking of payments and use of credit. The idea is to use risk tracking tools that permit the collection of the greatest amount of information from their own data bases based on methodologies that analyze their clients’ behavior.

In order to do all this tracking automatically and not manually, given the higher cost of the latter, it is necessary to use information databases. This data collection process is made easier with the use of electronic payments that, by definition, have all the pertinent information stored in a database. Again, we see that electronic payment methods are fundamental in reducing transactional costs and strengthening low cost intermediation channels; moreover, they enable the use of credit risk tracking methodologies that decrease delinquency and thus stimulate credit generation.

18 “Getting Credit”. www.worldbank.org
3.4 – Optimization of the impact of workers remittances

From a cost-and-revenue structure perspective of the model proposed, including workers remittances into the model would generate important synergies between the remittance industry and the banking business. First, operational synergies would emerge from processes and infrastructures that are common to both industries, which would allow institutions to operate in both industries with lower operational costs. Second, income synergies would emerge for remittance operators with sufficient infrastructure to enable them to offer additional financial services to remittance recipients.

The first operational synergy to highlight is the one that refers to the common characteristics between the technological platforms for both the banking industry and the business of remittances. The technological infrastructure amounts to at least 30% of the operational cost for both businesses. The most important common infrastructures are databases and product applications. For product applications to be the same for both industries, financial institutions need to implement electronic payment methods. Therefore, the use of these kinds of products as the basis of the model proposed is reinforced by the operational synergies generated by the remittance industry.

The second most important synergy is the one that refers to the distribution network used by both industries. In both cases, the importance of the cost structure for both industries is very relevant, representing up to 40% of operational costs. The distribution networks for both industries are highly complementary. In fact, while the banking industry’s network is based on its own branches, remitters base their network on non financial agents in zones with scarce banking presence.

The third relevant operational synergy between the industry of money remitting and the banking industry refers to the implementation and management of telematic or alternative channels such as ATMs, telephone banking, and internet. Services through telephone channels are fundamental for both industries. Any remittance needs a telephone call to transmit a secret number, which is why operators in the remittance industry need the services of a highly developed call center.

Income synergies are those that can be generated from banking remittances received. Receiving remittances in a bank account would allow the receiving financial entity to benefit from the said flows of capital that presently are mostly distributed in cash. Nevertheless, as the following graph demonstrates, recipients of remittances are already more banked than the rest of the population. This higher level of banking access is due to their greater financial education (MIF, 2006), as well as their higher demand for financial services.

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19 It is estimated that 90% of the remittances between the US and Mexico follow this path.
If the entities that operate in the remittance business were to receive these flows with a bank account instead of disbursing cash, the financial institutions that were to do this would automatically generate financial income over the deposits received. This income can be calculated as the difference between the costs of deposits and the real rate of return of public debt. Given that in the greater part of developing countries banking deposits are not remunerated, financial institutions would obtain an annual income over the average deposits captured from remittances equal to this difference.

The second income synergy for financial institutions that decide to bank remittance recipients is the generation of a credit income over the remittances received. To generate this margin, it is necessary to allocate credit backed by the remittances captured as deposits. This credit would be backed by risk parameters that financial institutions that deal in the business of remittances would keep in their databases. These parameters of credit risk analysis such as the importance of remittance income for the receiving family unit, the profile of the remittance issuer, and the continuity of the flow of remittance are variables that, if known, should ensure low delinquency rates.

3.5 – Nodal network structure:

The banking processes and practices delineated above as elements of the proposed model require important technological and organizational infrastructures. These investment requirements make it difficult for small microfinance institutions to implement such a model because they lack the required scale. Creating scale economies in the process of financial intermediation has traditionally been based on increasing the size of the financial institution. The following graph presents a comparison of cost structures vis-à-vis the bank’s size of assets. The results of this comparison show that the higher the amount of a bank’s assets, the lower the administrative costs as a percentage of assets. Therefore, these results show the existence of scale economies in financial intermediation by increasing the size of the institution.

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Table 12: Administrative costs and bank size in Latin America and Developed countries, 2001

Notwithstanding, this graph also shows that these scale economies are less relevant for Latin America than for the developed countries analyzed. While scale economies still persist after 8 billion US$ in developed countries, in Latin America they disappear after this size is reached. This different behavior, which in the Latin American case implies that costs positively correlates with asset size after 8 billion US$, can be explained by the lack of adequate infrastructures and regulatory framework (Interamerican Development Bank, 2005).

The problem of finding the right scale for a given financial institution was also analyzed by a study done by the Spanish Foundation of Confederated Savings and Loans (Gardener, Molyneux, 2002). This study looks at the effect that different existing financial models have on credit allocated with respect to total assets in three European countries. The conclusions argue that savings institutions have a higher tendency to generate credit because of their proximity and knowledge of their clients. This proximity is negatively correlated with scale, which implies that the bigger a financial institution, the lower the percentage of credits over assets they will have.

The solution proposed is to create a network of institutions that would share a series of common elements provided by a central node, and hence generate scale economies on these common investments. The common elements would be a common technological platform with product applications and databases, a risk analysis infrastructure, and other functionalities to provide financial services to low income segments. However, each entity would be independent, with its own balance and its own distribution network, which would ensure its proximity to the client and thus greater credit generation.

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21 Interamerican Development Bank, IPES 2005.
The common services provided by the central node to the savings institutions need to be charged at competitive prices to the institutions in the network. They, on their part, need to choose whether to buy these services from the central node, provide them internally or buy them from a third party. This freedom to choose allows for the continuation of competition within the system.
1- Introduction: Review of card systems

The emergence of card systems is one of the major drivers that explain the development of electronic retail payment systems. Cards can be used for basic payments functions such as cash withdrawals at ATMs and EFTPOS (Electronic funds transfer points of sale), where cash back is offered, and purchases at retailers with EFTPOS. EFTPOS can be physically located at a store where the payment is made, or located in a remote location (virtual EFTPOS). Virtual EFTPOS allow for additional payment functions such as bill payment, internet purchases or direct debits. However, depositing cash in a card (Cash in function) is limited to stored value (prepaid) cards, and depends on the regulation of both stored value cards and e-money.

The objective of this chapter is to analyze how stored value cards could the basic element for a payments architecture that would allow not only withdrawals (at ATMs and EFTPOS with cashback function), and purchases at EFTPOS, but also cash deposits. This payments architecture, coupled with the other elements of the general framework presented in chapter I and distributed using cellular technology could form a model for the distribution of microfinance services aimed at banking the poor.

Card payment systems can be classified according to the way transactions are authorized and authenticated. First, whether the transaction is authorized using a line of credit, the actual value of deposits in the bank account (debit) or the amount of e-money in an internal account (prepaid). Second, whether the transaction is only authorized when the acceptance network in online or also when the system is offline. Third, whether the transaction is authenticated by inserting the personal identification number (PIN) or by signing the receipt (either physically or electronically).

| Types of card products based on authorization and authentication mechanisms |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Credit                      | Bank account balance | Internal account | Online | PIN based | Signature based |
| Prepaid                     |                   | Yes              | Yes    | Only if PIN based | If POS enabled, always in ATM's | If POS not enabled |
| Debit online                |                   |                  | Yes    | For very limited transaction amounts | If POS enabled, always in ATM's | If POS not enabled |
| Debit Offline               | Yes               |                  | Yes    |              | If POS enabled, always in ATM's | Yes |
| Credit                      |                   |                  | Yes    |              | If POS enabled, always in ATM's | Yes |
These three characteristics determine the types of cards currently available and their payment functions. Credit cards were the first type of cards issued in the USA. This product allows credit card holders to buy products or services at retailers with EFTPOS for an amount less or equal to its credit limit. Additionally, this type of cards can be used when the EFTPOS is offline, as long as the transaction does not exceed the value determined for this type of transactions (this maximum value or back up parameter is usually large enough to allow for the necessary expenses when the customer has no access to an EFTPOS online). The authentication mechanism for credit card transactions at EFTPOS has traditionally been signature based. However in some countries such as France and recently worldwide due to the EMV initiative, EFTPOS do or will require authentication using the PIN number. The authentication mechanism for credit card transactions at ATMs is PIN based. Cash back at EFTPOS is not currently available for credit cards in the USA.

Online debit cards were issued later by financial institutions mostly in Western Europe and other regions of the world. In the USA its deployment has been slower, due to the importance of offline debit, although this is changing progressively. Online debit cards were originally marketed as ATM cards, to allow cardholders withdraw money from their bank accounts. As a result, every debit card transaction has to be authorized verifying online the monetary value of the bank account linked to the debit card. Transactions will be accepted if the amount of the transaction is not higher than the monetary value of the bank account (in some cases including its overdraft limit). Debit cards are also currently being used to buy products or services at retailers with EFTPOS, although for those transactions to be approved, the EFTPOS has to be connected online through its switch to the core banking platform of the issuer. If it is not online, some issuers in some countries give some back up parameters to allow microtransactions while the EFTPOS is offline (less than 50 Euros\(^1\)). In the USA, the authentication mechanism used for online debit is PIN based, which allows the cash back function to be more widely developed. In other areas of the world however, online debit authentication is signature based, which does not support the development of the cash back function.

Offline debit is a product mostly developed in the USA and it is still predominant in terms of debit cards in this country\(^2\). However, due to the legal process launched by Walmart in 2003\(^3\), its importance has decreased considerably over the past years. Its main difference with online debit is that the type of EFTPOS that accept this product are not connected through its switch to the core banking system of the issuing bank, but instead they are connected to the credit payment networks of Visa and Mastercard. As a result, the authorization mechanism used verifies the credit limit that both payment networks have informed in their authorization databases. This credit limit is calculated every few days based on the information provided by the issuer in terms of the monetary value of the banking account of the cardholder linked to this debit card. However, is does not reflect the exact value online, and therefore generates overdraft risk for the issuing institution if the cardholder spends more than the monetary value of the bank account.

\(^1\) Amount defined by Porteous (2006) as the limit for microtransactions
\(^2\) The Federal Reserve Payments Study, 2004
The rest of offline debit features are similar to credit cards, since both products are marketed and accepted by the same payment networks. Summarizing, offline debit cards are credit cards (they have credit card BINS\(^4\)), but payable the following day by the cardholder (or the number of days that the system takes to settle the transactions).

Stored value cards or prepaid cards are the last type of cards having been launched to the market by card issuers. This product allows cardholders the same payment functions than online debit, but the main difference is that the transactions are not authorized verifying the monetary value of the bank account linked to the debit card, but instead the authorization process is based on the monetary value of the internal account that the prepaid card is linked to. This monetary value is gathered in a database that manages this type of internal or prepaid accounts. The legal definition of prepaid accounts is one of the most important topics that this analysis will cover as well as the additional functions that these types of accounts could have if the appropriate regulatory framework was applied. The ultimate goal of this study is to analyze how stored value cards could be used to collect deposits in a payments architecture where any EFTPOS, ATM or any other terminal connected online to the payments systems could perform this function for any given issuer. However, a previous basic understanding of how prepaid systems currently work is required in order to achieve this goal. The following description briefly presents the way prepaid systems currently operate.

When a consumer buys a product or a service using a prepaid card from a merchant, either at a physical store (physical EFTPOS) or from an online retailer (virtual EFTPOS), the customer swipes or inserts the card in a physical EFTPOS, or inserts the card number in a virtual EFTPOS online. The EFTPOS establishes a secure protected connexion (Secure Sockets Layer- SSL) with the server of the prepaid service provider (PSP). The server authenticates the customer either by using a PIN or by using his signature - physical or electronic, and checks the amount of funds available in the prepaid account (value of the prepaid account) in order to approve the transaction. The PSP sends the information to the merchant regarding whether the transaction has been approved or declined, and if it is approved the PSP credits the account of the merchant (only for accounting purposes) and debits the account of the consumer. Once the transaction is approved, the merchant confirms the purchase and provides delivery details if the transaction is online.

At the end of the day, the merchant sends the PSP the total amount of transactions approved, and the PSP settles the payments the following day (or the number of days agreed in the contract) by crediting its bank account. The settlement account of the merchant can not be its prepaid account since the regulator (when the regulator regulates e-money or prepaid accounts) establishes purse limits that are usually too small for merchants. The consumer can load its prepaid account using a variety of systems that depend on the local legislation of e-money. Usually, prepaid accounts can be loaded online or by phone, at a participating retailer, or at the branches of the PSP if it has any. Prepaid accounts allow also the consumer the withdraw cash at any ATM connected to

\(^4\) Card identification number
the system, at POS connected to the system with cash back function or at any participating retailer or branch of the PSP.

### Processing POS Payments Using the Prepaid System

Prepaid platforms have characteristics that make them especially useful for developing low cost payments systems:

1. Customers using prepaid systems do not need bank accounts, debit or credit cards
2. Users do not need to develop or invest in new technologies
3. This payment mechanism can be used in a number of platforms such as PCs, mobile phones, hand-held and set-top boxes
4. It is a payment system specially designed for micropayments, and microdeposits and even microcredits (Banco de Crédito del Perú, Tarjeta Solución Negocios)
5. Allow users control their cash flow by receiving statements (some providers offer this feature online others provide physical statements) or accessing balances through PCs, mobile phones, hand-held and set-top boxes.

### 2- Should the value of internal accounts stored in prepaid cards be considered e-money?

Electronic money or e-money is defined by the CPSS as “a stored value or prepaid product in which a record of the funds or value available to the consumer for multipurpose use is stored on an electronic device in the consumer’s possession”. This definition is based on the legal definition of electronic money included in article 1 of the European Parliament and Council Directive 2000/46/EC. This definition states that “electronic money shall mean monetary value as represented by a claim on the issuer which is: (i) stored on an electronic device; (ii) issued on receipt of funds of an amount

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5 Chepe, 2003
6 CPSS, 2004: Survey of developments in electronic money and internet and mobile payments
7 (OJL 275 of 27 October 2000, pp 39-43)
not less in value than the monetary value issued; (iii) accepted as means of payment by undertakings other than the issuer”.

According to this European Directive, E-money issuers are to be lightly regulated since the systemic risks that their operations create in the system are relatively low. E-money issuers are not allowed to allocate credit, and therefore are not affecting the money supply. In addition to this restriction, e-money issuers have to invest the funds collected in assets with no risk. As a result, e-money issuers can only issue electronic methods of payment to be used in networks where e-money is accepted.

Although the European Directive of e-money aimed at promoting innovation through the establishment of a new type of lightly regulated type of financial institution called e-money issuers, the results have not been successful. According to a 2006 evaluation study prepared for The DG Internal Market of the European Commission by The Evaluation Partnership Limited, this new legislation has not promoted the development of new issuers of e-money.

The CPSS states that e-money includes both prepaid cards (sometimes called electronic purses) and prepaid software products (sometimes called digital cash). In the case of prepaid cards, the monetary value can be stored both in a microprocessor chip embedded in a plastic card called “smartcard”, or be networkbased using specialized software installed on a standard personal computer for storing the “value”.

Early studies of stored value products in the USA focused on those using chip-based (electronic purses) rather than magnetic-stripe-based technology (networkbased cards) as potential catalysts for the emergence of e-money. Lacker (1996) modeled chip-based cards (smart cards), as a replacement for currency and coin. However, later the U.S. Congressional Budget Office (1996) revised the potential for smart cards in the U.S., and concluded that the market for such cards would be small in the near term.

Osterberg and Thomson (1998) and Chakravorti (2000) examined the question of why general-purpose smart cards had not developed a substantial market in the United States. These studies concluded smart card issuers had not met the conditions necessary for a payment product to be successful, since both consumers and merchants needed to be simultaneously convinced of the product’s advantages over other products as well as of the product’s safety and security. As a result, the type of stored value cards that would come to dominate the industry in the United States were not smart cards, which keep information stored in microchips on the cards, but magnetic-stripe cards, which link to networks when consumers conduct transactions and therefore authorize these transactions online (Allen and Barr, 1997, Bradford et al 2003).

In the United States e-money issuers are not regulated at the Federal level, but at the state level. US regulators have not been so proactive in regulating e-money issuers, and preferred to use and sometimes adapt existing Money Services Business/ Money Transmitting Regulation to allow innovation until the market matured. As a result e-

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8 europa.eu.int/comm/internal_market/bank/docs/e-money/evaluation_en.pdf
money is not specifically defined in the USA as it is in Europe. However Money Service Businesses and specifically Money Transmitting regulations are very similar to those required in Europe for e-money issuers (ELMIs).\(^9\)

The store value card market, especially “closed-loop” or gift products, has exploded in the last few years in the USA. While the overall number of cards in circulation remains relatively small, every week, new cards are introduced into the market. SVCs are joining credit cards and debit cards in the race to turn cash into plastic. This chapter will analyze the experience of e-money issuers in the USA within the context of a wider review covered in other chapters that includes Europe, and the rest of the world. Each specific study analyzes cases of success and failure, so best practices can be found for the development of e-money stored value (prepaid) platforms, the basic element of the proposed model for the distribution of microfinance services.

3- Stored value cards: How do they work?

Stored value cards (SVC) use accounts to manage funds in real time through host computer systems. The accounts are held in a single concentrator account with different subaccounts for each card. Some are “pooled” accounts and some, for accounting purposes, are actual bank accounts held by the individual consumer, depending on how the issuing financial institution treats the accounts. These cards have like regular debit or credit cards POS and ATM functionality. However, SVC cards have the additional feature of being reloadable in a variety of ways at a range of locations. That is why SVCs functionality is closely resembled with that of traditional bank accounts, and therefore why they are the basis of the model proposed.

SVC systems operate in two ways. One is the “closed-loop” system, which can only be used for the issuers’ products or for limited purposes, such as prepaid gift cards at retailers like Borders or Starbucks in a closed payment network.\(^10\) The issuer and the merchant are therefore the same entity. The second one is the “Open-loop” system that offers consumers the ability to utilize their cards for multiple purposes, such as making purchases at a variety of stores or paying bills. These cards are accepted in payment networks open to multiple issuers, where merchants and issuers are different institutions. This open payment infrastructure is the basis of bank card systems and therefore currently used for debit and credit cards.

Closed-loop SVCs were first introduced in the the early 1990s and open-loop cards became available by the middle of that decade. Closed-loop SVCs were originally used as a payment instrument in retail stores (sometimes provided as a gift card), but are also extensively being used as a payment instrument in transport systems and mobile telecommunications.\(^11\) Originally, retailers and department stores developed this kind of

\(^9\) Evaluation of the e-money directive by the Evaluation Partnership Limited.
\(^10\) These kind of closed systems are also called private networks
\(^11\) The use of prepaid systems by mobile telecom operators will be developed in chapter III
systems in order to avoid paying discount fees to merchant banks. Closed-loop SVCs do not belong to payment networks and as a result are also called “Non-branded cards”.

Open-loop cards, offer consumers the ability to use their cards for multiple purposes in multiple locations. Open loop cards are therefore the equivalent of online debit cards for unbanked customers. “Open-loop” cards are accepted in open branded networks such as Visa or Mastercard and therefore are called “branded cards”. MasterCard, Visa, American Express, or Discover branded cards use both signature- based or PIN-based authentication mechanisms. MasterCard and Visa branded SVCs currently dominate the market but, Discover and American Express branded-SVCs are becoming widely available as well in the USA. Their competitive position might also strengthen in light of recent antitrust lawsuits levied against Visa and MasterCard. Discover for example, purchased Pulse EFT Association, an Electronic Funds Transfer (EFT) network with over 4,000 financial institution members. This could have further implications on future branding for SVCs.

Open-loop SVCs can be grouped into three categories: First, payroll-only cards, which can be used only for direct deposit of paychecks or, in some cases, for receiving other automated clearinghouse (ACH) deposits, such as Social Security Payments; Second, reloadable payroll cards, which serve primarily as direct deposit cards for payroll checks but offer consumers other ways to reload the cards; and third general purpose reloadable debit cards, which consumers can reload in a variety of ways at a range of locations.

Payroll-only cards were thought to be one of the most promising SVC type of products. However, they are generally only used for direct deposit of paychecks and other automated clearinghouse (ACH) deposits, such as Social Security or disability payments. Typically, SVC providers market payroll cards directly to employers, who then distribute the cards to their employees. Most SVCs do not currently work in a way that allows a single card to contain all levels of functionality—payroll, general spending, etc. Consumers who have payroll cards, for example, may not be able to or may not be aware that they are able to load other deposits besides payroll deposits onto their cards.

Many payroll cards are only set up to accept streams of direct deposits; manual reloads might not be available. However, some providers offer reloadable payroll cards. Integrating different types of SVCs and adding functionality, such as reloadability, payroll direct deposit, bill payment, and others are important innovations for the future of SVCs that would provide more benefits to consumers.

A few recent papers have examined the role of SVCs in serving unbanked and underbanked markets in the USA. Frumkin, Reeves and Wides of the Office of the Comptroller of the Currency (2003) identified payroll cards SVCs that can be used for the direct deposit of paychecks, without a necessary link to a bank account as an innovative product for reaching unbanked and underbanked markets and conducted a survey of

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12 Discount rates are paid to banks by retailers, when customers use bank issued cards to pay for goods at a EFTPOS
13 Branded networks such as Mastercard and Visa
financial institutions in the payroll card market. However, banks have not taken an active role in the market. They are still studying and trying to understand how payroll cards can be sufficiently profitable, by exploiting cross-selling opportunities with the unbanked.

The possibility of using SVCs for asset- and credit-building purposes was first raised by Seidman and Tescher (2003) in a paper discussing the convergence of the interests of the financial services sector and low-income consumers. Seidman and Tescher pointed out the growing prevalence of SVCs in low-income markets and the need for greater consumer protections and functionality for these cards in order for them to truly mimic bank accounts.

SVCs could be a valuable financial tool for the unbanked population in the USA for several reasons. First, SVCs generally lack the identification and credit requirements that effectively bar millions of individuals from opening traditional bank accounts (Bair, 2006); Second, SVCs can be purchased and reloaded at a growing number of locations other than bank branches, such as check cashers, convenience stores, and other retailers; The ability to load cards in multiple fashions at a variety of locations is the key to success for this products and therefore retail distributions are key to SVC providers (Barr, 2004). This is why they are pursuing partnerships with money-service businesses, convenience stores, and other retail distribution channels to increase SVC users’ reloading options. Third, SVCs can provide immediate availability of funds at a cost that is, in some cases, lower than some other alternatives for unbanked consumers. Fourth, SVCs are prepaid and difficult to overdraft, reducing the likelihood of unexpected fees. Fith, many SVCs offer some sort of bill pay option, especially branded cards that enable signature-based transactions. Since many SVC users are unbanked, the functionality of paying bills without using checking accounts or money orders is important. However, most bill pay options for SVC users are online or in-person. Additional physical options are required, such as self-service bill pay at kiosks in retail locations, that could provide additional functionality for unbanked consumers (Intelecard News Online, 2004).

Six, a significant number of SVCs offer remittances. This feature allows U.S. cardholders to transfer funds to authorized family members in other countries. SVC-based remittance features are structured in at least two ways. Sometimes, dual cards are issued to customers, and one of the cards is sent to family in another country to access funds from the sender’s “account” via ATMs. Other cards allow cardholders to designate “subaccount” holders in other countries for the purposes of transferring money. In these cases, the subaccount holder has access only to the money that the primary account holder designates to share.

4- The development of the Stored Value Card Industry in the USA

It is difficult to estimate the current size of the SVC market. Closed-loop gift cards are by far the largest market segment. However, no publicly available data sources on SVCs exist. Two consulting companies have estimated both the dollar volume loaded onto prepaid instruments and the number of prepaid cards in the market. Mercator Advisory Group estimated that the dollar volume loaded onto “prepaid instruments,” including non
card prepaid instruments such as prepaid wireless telephone services was $157 billion in 2003. According to Mercator, the gift card and government program card segments were the largest segments with each accounting for 25% of the total. The second most important segment in terms of dollar volume loaded were the Payroll and other employee benefits cards, that accounted for 17% of the total, while general spending products accounted for 15%.

On the other side, The Pelorus Group measured the market size based on the number of cards issued, counting card products only. In 2003, Pelorus estimated that the US market of open-loop SVCs was 15 million “prepaid debit cards”. This study estimated that general spending cards accounted for the largest share at 35%, followed by government benefit and child support cards at 29%, payroll cards at 25%, and other cards such as flexible spending account cards at 11%.

An increasing number of companies are attempting to compete in the Store Value Card industry in the USA. Currently, the market includes hundreds of marketers, distributors, processors and issuers. The number of cards and providers in the market has grown rapidly. MasterCard claims to have more than 200 SVC programs of different types with 100 issuers, and the company has seen double-digit increases in relationships with third parties and SVC processors in the last few years (Martin, 2004).

Given the various functions involved in offering SVCs—card issuance, transaction processing, funds management, customer service, recordkeeping—sorting out roles and responsibilities can be complicated. For instance, several banks have their own SVC programs in which they use third-party transaction processors, but many of them also serve as issuers for other non-bank SVC programs, which may use different transaction processors. A few SVC providers are vertically integrated, handling nearly all of the functions internally, while others outsource everything except sales and marketing. The majority of SVC providers outsource the transaction processing to one of the many firms that have developed special software platforms for running SVCs.

The Major players in the US market today include Bank providers/issuers such as BANKFIRST, Bank of America, Citibank, and JP Morgan Chase; Providers of reloadable prepaid debit cards: Green dot, NetSpend and Next Estate; SVC processors such as Metavante, StarSystems, WildCard and Galileo; Providers of back-end services for SVCs, including ATM and POS processing, and Payroll firms such as Paychex and Comdata. The distinction between products that are distributed by financial institutions and those distributed by non-bank firms is an important one. Products distributed by banks and credit unions are more likely to have additional consumer protections, lower pricing (because fewer actors are involved), and more obvious transitions into other financial products and services.

SVCs offer interesting opportunities for banks that see low-balance savings accounts as cost-prohibitive products. If the SVC industry can figure out a way to offer savings and other benefits to previously unbanked consumers, it would be a win-win proposition for

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14 (Miezejeski, 2004)
customers and companies alike. As issuers, banks hold the funds underlying stored value cards, in a variety of ways. Some banks hold the funds off-balance-sheet, in fiduciary accounts. Others hold the funds on the balance sheet in pooled accounts, perhaps in the name of the card’s distributor, or, in the case of payroll cards, in the employer’s name; while still others provide individual deposit accounts in the name of each cardholder.

For large banks, interest in SVC products may be partly due to their greater involvement in the payroll card market than in the general spending market. SVCs are therefore sold to employers, who offer the cards to employees providing consumer protections similar to those enjoyed by traditional bank accountholders. Payroll cards, give banks data about customers that could then be used for opportunities in cross-selling other bank products.

On the other hand, certain small regional banks, such as Central Bank of Kansas City and University Bank in St. Paul, have created new SVC programs that are intended to serve as entry-level products for consumers that might access additional bank services in the future. In another recent development, New York Community Bank, the fourth largest thrift in the country, has begun to offer SVCs in its branches. The Bank is marketing the cards as entry-level products, and is also marketing to customers who are denied checking accounts or who prefer prepaid instruments.

Non-bank firms are beginning to replace bank distributors as the most active actors in figuring out how to add enhanced features to SVCs that could provide increased service to lower-income consumers as the marketplace matures. Perhaps because of regulatory uncertainty, to be discussed later, or a more conservative approach to entering new markets, banks are lagging in innovation with regard to these products.

However, the most important remaining challenge for SVC issuers is to figure out a business model that assures profitability. Issuers do not currently know what features make products successful. However some facts are clear: First, large scale is needed to be profitable. Second, in order to develop a profitable SVC business model customer relationship management strategies using data mining processes are required. These processes are already widely used in the credit card industry and therefore the synergies between credit card issuers and SVC issuers need to be exploited. SVC providers need to take into account how many cards are active in their system, how much money is loaded onto each card, how frequently the cards are used, the number of transactions occurring each month, and how much unspent money is left on unused cards.

SVC’s main income streams are fees paid by cardholders for activation, maintenance, and debit transactions, as well as through interchange fees from merchants and earnings from float on the funds held. The lack of consensus around the key profitability drivers might help explain the wide variety of pricing structures and fees levied by SVC providers. The Business case has not been clearly defined and SVC issuers are unclear on what specifically attracts consumers to stored value products.

Although, the increasing competition in the marketplace is decreasing prices for SVCs, they are still higher than regular bank accounts. The fees that consumers might pay to sign up for and use SVCs are estimated for general purpose SVC at $25,45a month.
(Center for financial services innovation, 2007). Costs of a regular bank account are smaller. Bankrate.com conducted a survey of checking accounts in spring 2003 and discovered that the average monthly fee for a non-interest-bearing checking account in the country’s 25 largest markets was about $6 (Bruce, 2003). Therefore an SVC could be a highly expensive option, perhaps even more costly than using a check casher for basic transactions. In other cases, however, an SVC with a lower pricing structure or a structure that is consistent with the holder’s usage pattern, could be cheaper for certain consumers than using a check casher.

Prices could come down if additional income revenues were exploited. One potential feature that is currently lacking in most SVCs is the ability for cardholders to save and build assets. Families with relatively low incomes have assets that could be stored in a savings vehicle (Hogarth and Anguelov, 2003). But many of these families may not have access to traditional accounts at banks or credit unions. Therefore, demand for savings features in SVC products is potentially powerful.

Research shows that lower-income consumers desire products that provide a safe, convenient and inexpensive way to pay bills, make purchases, save, and build credit. For example, a 2000 industry survey of check-cashing customers showed that 49% would use savings accounts if they were available from their regular check-cashing outlets (Eric Mower Associates, 2000). Market research in lower-income urban markets showed how an overwhelming majority of low and moderate-income consumers, given the opportunity to spend $10,000, would invest the money in some type of asset-building opportunity (MetroEdge, 2003). But in order to save, lower-income families need opportunity, or the ability to access a savings vehicle; incentive, or the ability to earn interest on funds; and motivation, such as direct deposit, which makes automatic saving much easier.

A few SVC companies have experimented with offering savings features with their cards. Directo included a savings component as part of the bundled services offered with its card program, but the company suspended it in part because few customers were using the feature. NetSpend, one of the largest SVC providers in the USA launched an strategy to link a savings vehicle with its SVC. IndiGOCARD started a program linking savings accounts to its SVCs but has marketed it as an overdraft protection program. Linkages with savings accounts, tax refunds (such as the SVC programs offered by Jackson Hewitt and H&R Block), Individual Development Accounts (IDAs), or other savings vehicles through an issuing financial institution are possibilities for SVC growth.

However, SVC companies must face important customer barriers to providing unbanked consumers with savings opportunities through SVCs. First, savings or credit-building features would require more stringent identification verification. This requirement would decrease the relative anonymity offered by SCVs, which is one of its most desired

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15 The Federal Reserve Board’s 1998 Survey of Consumer Finances estimated that 60 percent of households at or below the poverty level had positive assets, compared to 86 percent of households with incomes between 101-150 percent of poverty and 95 percent of those families with incomes between 151-200 percent of the poverty level.
features. Second, SVC users may not want transaction history data to be reported for credit-building purposes. They may wrongly perceive that such data could negatively affect their credit scores, based on their previous banking experiences. Third, “Saving” has different meanings for different people and therefore the product may need to be adapted according to the type of customer targeted. For some, a rebate or a flexible spending account may act as a savings feature. For others, “savings” vehicles must provide accessibility, tangibility, anonymity, or other concerns.

However, one of the most important perceived customer barriers to providing unbanked consumers with savings opportunities through SVCs is the lack of consumer education. The need for consumer education in appropriate use of such features may be a barrier. Consumers already face difficulties in understanding how SVCs work, how fees are structured, and how to manage their funds. To solve this problem, employees at current SVC distribution points (places of employment, check cashers, retail locations) should be more willing and able to explain products to consumers. As a result, adding new features such as savings and credit-building features may require a level of sophistication and education in consumers that does not currently exist.

A second potential revenue source for SVC issuers could include adding credit-building features to their products. Since cards are marketed primarily to unbanked customers, SVCs have the potential to be an effective personal financial management tool for some people. However, very few companies are attempting to provide credit-building features such as a payday advance or overdraft protection feature tied to an SVC.

These small extensions of credit, both formal (such as payday advances) and informal (such as paying overdrafts on a discretionary basis) could be an additional feature that would add value to the issuer’s SVC value proposition. However, even if these products were marketed they would not currently help build a consumer’s credit score. Existing credit models do not allow for the reporting of credit relationships lasting fewer than 30 days. IndiGOCARD, Eufora Credit Builder, NetSpend CredAbility program tried to utilize the credit-building component as a marketing tool for the cards, extensively advertising this feature and using a variety of strategies to try to link SVCs with the credit bureaus.

The structure of the United States’ credit reporting system presents therefore important barriers for the development of credit features tied to SVCs. First, currently the credit bureaus do not accept Individual Tax Identification numbers (ITINs), although the USA Patriot ACT allows for the acceptance of ITINs as substitutes for Social Security numbers for credit reporting purposes. Second, credit bureaus currently can only collect credit data; debit and SVC data are not considered to be “credit”. Some SVC companies have attempted to report monthly fees as “bill payments. However, laws in some states restrict the reporting of bill payment histories by utility companies, although the federal Gramm-Leach Bliley Act (GLBA) allows such reporting by financial institutions to credit bureaus.

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16 Fair Isaac Corporation recently announced the development of a new credit score for those with little or no credit histories; this credit score may use data on payday loan repayment, although it is unclear how such data would be used.
reporting agencies. As a result, current credit-scoring models in the United States do not use SVC-related data.

International experiences in credit scoring models prove that SVC usage information should be used. In many European countries, the practice of collecting deposit data for scoring purposes is widespread, but the data is usually limited to the internal system of the financial institution (banks cannot view another institution’s customer data). Some have argued that the Fair Credit Reporting Act (FCRA), has prevented financial institutions and other entities to report SVC transaction information due to privacy issues\(^\text{17}\). However, as long as institutions follow FCRA guidelines, privacy issues should not stop banks and others from reporting SVC transaction data to the bureaus. Nonetheless, this is not presently occurring in the marketplace.

Adding credit features to SVC can also generate other regulatory problems. It is unclear whether these services should be considered extensions of credit from a regulatory perspective and therefore subject to corresponding disclosures and regulations. Besides, the ultimate benefit to the consumer is disputed, since the costs of payday lending and overdraft protection are so high. Some argue that low-income consumers should be able to access small credit at reasonable costs, and that currently these costs are prohibitive (Center for responsible lending, 2007).

5- Regulatory framework for Store Value Cards in the United States

SVC issuers in the United States currently fall under the Money Services Business definition (MSB). Persons or entities (other than banks or persons regulated or examined by the Securities and Exchange Commission or the Commodity Futures Trading Commission) are required to register as Money Services Businesses if they conduct more than $1,000 in transactions with any one person on the same day in one or more of the following services: "stored value; money orders; traveler’s checks; check cashing; and currency dealing or exchange. Besides, All such businesses that provide money transfer services must register, regardless of the amount of transactions" (Center for financial services innovation, 2006).

The federal MSB registration requirement does not apply to a business that is an MSB agent (Financial Crimes Enforcement Network, 2003). However, issuers, sellers, and redeemers of SVCs are subject to certain reporting requirements, including reporting of cash transactions exceeding $10,000 (“Reports Relating,” 2004). The rationale for the exemption for SVC issuers, sellers, and redeemers was that the SVC industry was in its infancy and should not be inhibited by premature regulation. As the industry matures, SVC providers should be aware of money laundering concerns; those with well-developed back-office systems that enable them to keep track of transactions will be

\(^{17}\) For example how much money went into an account, and how much came out in addition to information on balances and length of card ownership
better prepared to handle BSA requirements, follow Office of Foreign Assets Control rules, create Customer Identification Programs and provide Suspicious Activity Reports.

Money Services Business (MSB) are mostly regulated by State Laws. State laws regulating MSBs vary widely and have different requirements regarding licensing, making it difficult for some SVC providers to use non-bank retail distribution channels at a national scale since regulations are state-based. SVC providers will not achieve real scale in reaching the unbanked unless they utilize appropriate distribution channels, such as convenience stores and check-cashing outlets.

Questions around issues such as the definition of a “branch” and the definition of an “agent” of a financial institution are also problematic. The issue of whether distribution points (i.e., retail stores that sell SVCs) should register as MSBs under state laws is also unclear. Sometimes, large retail or other firms might register for MSB licenses. In other cases, individual franchises might have exclusive or non-exclusive agency contracts with SVC providers, further complicating the question of who should register as an MSB. In addition to the regulation of agents, some states may be considering whether to regulate the issuance of general spending and payroll cards as a branch-banking activity, thus requiring that issuing institutions have branches in states in which their cards are distributed (Kountz and Gould, 2004).

MSB laws are aimed primarily at ensuring the viability of companies that engage in money transfer transactions and to protect consumers’ funds in case of failure of the MSB. However, state laws covering MSBs show that most do not explicitly cover SVCs. Only Sixteen states have expanded their MSB laws to include prepaid cards; many of these exclude single-use gift cards (Kountz and Gould 2004).

MSB laws, are evolving with the changing marketplace in order to provide protections for consumers. However, the question is if and when these various state MSB laws apply to companies that solely issue SVCs. If this regulation applies, it should be adapted to the complexities and costs related to MSB compliance. In addition, the differences between MSB laws across states should be resolved. Additionally, MSB regulation applied to SVC issuers should keep pace as products and technologies change.

The fact that SVCs are not bank accounts is often an attractive feature for consumers who for various reasons do not desire to have bank accounts. However, SVC do not have protection against loss of funds since they are not considered bank accounts. To solve this problem, the FDIC defined in 2004 the circumstances in which funds underlying stored value cards are “deposits”. The rule defines a “stored value card” as “a device that enables the cardholder to transfer the underlying funds (the funds received by the issuer of the card in exchange for the issuance or reloading of the card) to a merchant at the merchant’s point of sale terminal.”. The FDIC explicitly excludes closed-loop gift cards issued by retailers from the proposed rule’s coverage. The proposed rule distinguishes between two types of SVCs: those issued by insured depository institutions and those issued by what the proposal calls sponsoring companies.
A “sponsoring company” is an entity other than an insured depository institution that issues SVCs. Employers that issue SVCs therefore fall within the meaning of the term “sponsoring company.” The funds used to purchase SVCs issued by insured depository institutions would be considered deposits unless the depository institution keeps the funds in a pooled reserve account without subaccounts for individual cardholders or other records indicating the amounts owed to individual cardholders. Funds that qualify as deposits would be insured on a “pass-through basis” to the individual cardholder (the cardholder would be the beneficiary of the insurance in the event of a bank failure).

The treatment of funds underlying SVCs that are issued by sponsoring companies is more complicated. Any funds that a sponsoring company places at an insured depository institution for the purpose of making payments on SVCs issued by that company (i.e., funds in reserve accounts) would be considered deposits. However, once the sponsoring company has withdrawn the funds from its account at the depository institution, the funds would cease to be deposits at the depository institution.

The deposit is either insurable to the cardholder on a pass-through basis or to the sponsoring company, depending on whether the FDIC treats the sponsoring company as an agent or custodian acting on behalf of the cardholder. In making this determination, the FDIC looks at three factors: First, the fiduciary relationship between the sponsoring company and the cardholder; Second, the cardholder’s interest in the funds either from the depository institution’s account records or from records maintained by the sponsoring company or its agent; and Third whether the deposit belongs to the cardholder (i.e., whether the agency or custodial relationship is genuine). If all three factors are answered affirmatively, the deposit is insurable to the cardholder. Otherwise, the deposit is insurable to the sponsoring company.

FDIC insurance protects consumers’ funds in cases of bank failures. However, does not protect customers funds in case a non bank SVC provider fails. A precedent occurred in the Northeastern U.S. In 2004, New York State suspended the license of CashPoint, a bill-payment company that signed hundreds of retailers as agents to offer bill payment services and ultimately did not pay hundreds of billions of dollars in bills to utility companies. While the courts advised collectors against the practice, consumers who had handled their bill payment through CashPoint were ultimately responsible for the funds if collectors chose to seek repayment.

Regulation E, which implements the Electronic Fund Transfer Act (EFTA), provides protections to consumers using electronic fund transfer (EFT) systems. SVCs were originally not covered by Regulation E. However, the Board of Governors of the Federal Reserve System, which is responsible for implementing EFTA, revised Regulation E to cover payroll card accounts (“Electronic Fund Transfers”, 2004). Banks that issue SVCs may voluntarily provide disclosures that describe consumer protections (Frumkin et al.,

18 The FDIC has not clarified whether it ensures the pool account, or individual accounts for 100,000 USD. That is why, they are ensured on a “pass through basis”. How a customer can prove “fiduciary relationship”, “interest in the funds” and that therefore that the deposit belongs to the card holder is still a pending issue
The Board concluded that payroll cards were “designed, implemented, and marketed as substitutes for traditional checking accounts at a financial institution”, and that “these cards shared some of the characteristics of Electronic Benefit Transfer (EBT) cards, which are covered by Regulation E”.

The question however is whether SVCs outside of payroll cards do in fact bear these characteristics and could be included in the Regulation E definition. Some of the SVC providers including both payroll and general spending SVC providers, are already providing at least some of the protections required by Regulation E, such as limitations on consumer liability for unauthorized transfers and procedures for error resolution. Very few, however, were providing periodic mailed statements. SVC providers stated that Regulation E’s requirement that periodic paper statements be mailed to accountholders may be a negative value proposition for SVC providers. As a result, permitting alternative ways to deliver statements such as e-mail would be much less expensive and perhaps more appropriate than periodic paper statements. Indeed, paper statements may not be the most effective way of keeping underbanked cardholders informed of their balances and transactions.

Regulation E coverage of SVCs should follow the model provided for Electronic Benefits Transfer (EBT) transactions and permit the use of alternative mechanisms for providing transaction and balance information to general purpose SVC cardholders. Innovations may also become more prevalent in the near future include text messaging transaction and balance information via mobile phone and delivery of paper statements at ATMs.

After September 11, 2001, financial institutions came under more pressure to keep and report accurate records verifying their customers’ identities. Section 326 of the USA PATRIOT Act requires financial institutions to be diligent in documenting customer identification. Most SVC providers currently require that customers provide Social Security numbers, since major brands such as Visa and MasterCard require Social Security numbers for signature-based cards, following the PATRIOT Act requirements. Considering that some underbanked consumers cite privacy as a primary concern, the identification requirements may difficult encourage customer acceptance. Customer identification requirements is a problem specially relevant for illegal immigrants (Bair, 2006), that could however be resolved with pin-based solutions.

Another emerging issue around the PATRIOT Act is that some SVC products allow consumers to give second cards to family members in other countries as a way to transfer money, and it can be difficult to verify the identity of individuals living outside the U.S. The Bank Secrecy Act (BSA), administered by the Financial Crimes Enforcement Network (FinCEN), requires financial institutions, including banks and money services businesses (MSBs), to keep certain paper trails on their customers’ transactions. Currently, although they fall under the MSB definition, issuers, sellers, and redeemers of SVCs are not required to register with FinCEN or to maintain a list of their agents (“Registration of,” 2004).
Finally, many states labor laws mandate that an employer cannot demand that workers receive their pay in a specific manner; payroll cards must be offered as an option rather than a requirement (Wiley, 2004). Alternatively, employment laws in other states do permit employers to mandate worker participation in direct deposit programs as long as the worker can choose the financial institution to which the funds are electronically transmitted.

Most states also stipulate that employees must be able to access their pay without incurring any additional costs. Many payroll card products are structured to be offered nationwide and must therefore comply with varying state requirements. Apart from the state employment law issue, the OCC has also issued guidance on how national banks should deal with payroll cards. The OCC is specifically concerned with payroll cards being designed to facilitate payday lending programs or other services that the Comptroller deems predatory (Office of the Comptroller of the Currency, 2004).

As a way of conclusion, e-money is not specifically defined in the USA as it is in Europe. However, money service businesses or specifically money transmitting regulations are very similar to those required in Europe for e-money issuers (ELMIs). Whether the value of stored value cards is considered deposits in the USA depends on whether the FDIC ensures it. Currently, only payroll cards are ensured by the FDIC. However, the problem remains about general purpose open SVCs were payrolls are deposited. The FDIC has not clarified either whether it ensures the pool account, or individual accounts. That is why, they are ensured on a “pass through basis” until the regulation clarifies how a customer can prove “fiduciary relationship”, “interest in the funds” and that the deposit belongs to the card holder.

There is no need to be a regulated institution in the USA (nor an MSB) in order to issue SVCs, only to market them. However, since in order to issue open loop cards SVC issuers need to be a member of the branded card systems, SVC providers have normally regulated financial institutions that issue SVCs. MSB’s agents are in general not regulated, since no list of agents is required. However, MSBs regulations are different depending on the state, which is a major obstacle for the development of national networks of distribution of SVCs.

Consumer protection issues pose relevant problems for the development of “open looped” SVCs as a low cost alternative to current accounts. SVC funds are not protected by MSB laws in the event of an SVC issuer failure, as the Cashpoint case shows. Besides, regulation E and the FDIC only protect payroll SVCs in a not clarified manner, but does not ensure the rest of SVCs. Customer identification issues are also a regulatory obstacle for the development of the SVC industry. SVC providers require customers to provide Social security numbers (Patriot Act) for open loop cards, which difficult “bankarization”. As a result they can not operate as they were “designed, implemented and marketed as substitutes for traditional checking accounts (Federal Reserve Board, 2004).
Chapter 2.2 Review of e-money regulation and e-money issuers in Europe – PRELIMINARY DRAFT

1- Introduction:

Europe has made a very important legislative effort in order to provide electronic money and electronic money issuers with an adequate regulatory framework. E-money and e-money issuers are regulated by Directive 2000/46/EC of the European Parliament and of the Council (Directive 2000/46/EC of the European Parliament and of the Council of 18 September 2000 on the taking up, pursuit of and prudential supervision of the business of electronic money institutions). However, e-money issuers are also regulated as we will see in the following analysis by The Banking Directive (Directive 2000/12/EC of the European Parliament and of the Council of 20 March 2000 relating to the taking up and pursuit of the business of credit institutions), and the recently passed Payment Services Directive (Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market amending Directives 97/7/EC, 2002/65/EC, 2005/60/EC and 2006/48/EC and repealing Directive 97/5/EC Text with EEA relevance). This document has been produced analyzing these legal documents, but also the Evaluation of the E-Money Directive prepared by The Evaluation Partnership for The DG Internal Market of The European Commission in February 2006. Due to the amount of information available, this document tries to summarize it and highlights the most important elements of these documents for the issue at hand.

The recently passed Payments Services Directive does not however resolve the regulatory loopholes highlighted in this report, since it clearly states that “This Directive should lay down rules on the execution of payment transactions where the funds are electronic money, as defined in Article 1(3)(b) of Directive 2000/46/EC. This Directive should, however, neither regulate issuance of electronic money nor amend the prudential regulation of electronic money institutions as provided for in Directive 2000/46/EC. Therefore, payment institutions should not be allowed to issue electronic money”

In Europe the first prepaid electronic payments were launched in the early 90’s, by non banks. However, banks soon reacted (Lelieveldt, 2001) and the European Central Bank started demanding measures to regulate the issuance of e-money. The European Commission was concerned about the proliferation of national e-money regulations thorough the EU (4- Krueger, 2002). The EC presented the first draft with the EC explanatory memorandum in July 1998, regarding the prudential supervision of the business of electronic money institutions. After two years of consultative process, the commission finally adopted the directive 2000/46/EC on September 18th 2000, and Directive 2000/28/EC amending the Codified Banking Directive institutions, where electronic money institutions were added to the category of credit institutions as defined in Directive 2000/12/EC.

The long negotiation process resulted in the Commission establishing a separate regulatory framework for ELMIs (Electronic money issuers). This new legal framework aimed at being lighter than the banking supervision, where e-money issuers were being considered deposit-taking institutions and modifying the previous positions of the EMI,
and ECB although many of their proposals were also considered in the final version of the E-Money directive.

This previous strict regulation limited e-money issuance only to credit institutions (EMI, 1994), as argued by the European Monetary Institute when reporting to the Council on prepaid cards. Also the European Central Bank and other member states supported to limit the issuance of electronic money to credit institutions (ECB, 1998, Report on electronic money).

The use of e-money has remained very limited since the approval of the European Directive of e-money, although the use of cashless payment instruments has steadily increased over the past few years in the EU. The following table shows how from 2000 to 2006 the number of cashless payment transactions (by non-banks) in the EU rose by 7% per year on average, while the value of such transactions rose by 5% per year. The number of e-money transactions has grown also very rapidly (at a rate of more than 20% p.a.), but these still account for only 0.6% of the total number of cashless transactions.

However the analysis of the number of e-money transactions has to take into account that the ECB only requires data on card based products, and only on traditional e-purses. More recent card based e-money developments such as transport smart cards, prepaid debit cards or electronic equivalents of travellers’ cheques are not included.

Neither the ECB nor National Central Banks currently publish data on server-based e-money.

2- Regulation of electronic money in Europe:

The E-Money Directive (EMD) that defines and regulates electronic money (e-money) and electronic money issuers (e-money issuers) has been implemented by all 25 member states. The EMD defines electronic money as “monetary value as represented by a claim on the issuer which is”: Stored on an electronic device; Issued on receipt of funds of an amount not less in value than the monetary value issued; and Accepted as a means of payment by undertakings other than the issuer.”
National authorities have tried to differentiate e-money and deposits (or repayable funds), in terms of the “immediately” of e-money (Porteous, 2006) However as e-money deposits increase, this distinction might need to be reviewed. Some national authorities did not feel that the current distinction was clear enough, and calling for account-based e-money to be explicitly included into the scope of the Directive

The implementation of the EMD by the different national governments has created differences in the definition of e-money that might create legal uncertainty for issuers. Rule number 2 that states that e-money has to be “issued on receipt of funds of an amount not less in value than the monetary value issued” was added during the negotiation process on the initiative of the ECB “in order to prevent e-money schemes from issuing e-money at a discount and thereby potentially expanding the monetary mass in an uncontrollable way.” However, the inclusion of this criterion in the definition could create a loophole, and some states have made changes to this part of the definition which has created national differences. Schemes issuing e-money at a discount would fall outside of the definition of electronic money, and would therefore not be covered by the directive.

Some countries such as Austria, Poland, Sweden and Finland introduced changes that tried to clarify the definition and differentiate between e-money and other products. Finland, added a reference in which account-based systems also qualify as e-money. These centralised account-based systems are very similar to the ones used for Store Value Cards in the USA. The Finish legislation specifies that “funds repayable on demand received from the public and paid into an account where the funds may be used to pay for goods and services being sold by one or more companies, and withdrawn in form of cash (customer account)” also constitute e-money. The Finish finance ministry aimed at making this distinction to “ensure technological neutrality, making clear that both kinds of schemes would fall within the scope of the legislation”

Some other member states have specified a general maximum amount (or purse limit), and time limit that can be stored on each electronic device/account. The maximum amount depends on the country and goes from 300 Euros (Greece, Denmark, and Estonia) to 5.000 Euros (Ireland). On the other hand, Hungary determined a period maximum of validity of 5 years.

The difference between e-money issuance and deposit taking is clearly determined in Article 2 (3) of the EMD that states that “a receipt of funds within the meaning of article 1 (3) (b) (ii) will not constitute a deposit according to article 3 of Directive 2000/12/EC if the funds are immediately exchanged for electronic money”. This provision is very relevant because special requirements are set for deposits. However, this provision should be more clearly defined (Kohlbach (2004), and Porter (2006).

In practice all national authorities consider that e-money issuance is not deposit taking, although the distinction sometimes can be difficult. In Belgium and France, e-money issuance is not considered deposit taking but the funds received in exchange for e-money are covered within the framework of the deposit guarantee scheme, and are included in the assets used to calculate the premiums. However, e-money is assimilated to a deposit only for the purposes of the guarantee scheme….
In the UK, the FSA regards e-money as spending not as a saving product, so when customers do not hold large amounts (in the UK the basic limit is 1000 pounds, however in the case of account based schemes where there is the possibility of a stolen or lost card/access key being replaced and the issuer can block the account this limit does not apply) it is not considered deposit taking. In Denmark, e-money issuance up to the purse limit of 300 Euros is not considered deposit taking. Beyond, e-money accounts are considered deposits.

Only criterion II of the definition of e-money has been widely modified at the national level in order to prevent financial institutions from taking advantage of the loophole. However, there is no evidence that it has made any difference in practice, as apparently no e-money issuer has tried to exploit it. In some countries, national authorities have tried to clarify the definition of e-money, and in particular the differences with deposit taking (UK, Denmark), and account based products (Finland, Sweden).

3- Definition of an electronic money institution

Article 1.3 (a) defines an ELMI as “an undertaking or any legal person other than a credit institution… which issues means of payment in the form of electronic money”. Article 2.1 stipulates that references to credit institutions in Directives 91/308/EEC (1) and 2000/12/EC except Title V, Chapter 2, thereof shall apply to electronic money institutions.

When transposing the EMD directive, national authorities have taken two approaches. First, the majority of national authorities consider ELMIs a subcategory of credit institutions. However, where differences exist is in the way rules applicable to traditional credit institutions are applied to ELMIs, since the EMD does not explicitly regulate ELMIs in terms of reserve requirements; money laundering rules; administrative and organizational set up; senior management arrangements; and control systems. For example, in countries such as Austria, Germany and France ELMIS are classified as banks and have therefore the same requirements.

A second approach used by some national authorities when transposing the definition of an ELMI into national law is to consider it a separate category of organizations that issue a payment instrument in the form of e-money and have a licence to do so. For example in the UK, the FSA has developed a “specialist sourcebook” based on a risk based approach for e-money issuers that guides the rules that ELMIs have to comply on a range of issues, including their sound and prudent operation. Overall requirements are much lighter because the risks involved are limited, which has promoted the development of the industry. This “specialist sourcebook” is the result of the collaboration between national authorities and the industry. Also, in the Netherlands a new set of rules is being developed.

The EMD leaves no doubt as to the applicability of many provisions of the Banking Directive to ELMIs. However there are national differences in terms of the requirements of “sound and prudent management, administrative and accounting procedures and adequate internal control mechanisms”, being the UK the only country (with the Netherlands) that has developed an specific set of rules for ELMIs. The more customised the rules, the more proportionate to the risks involved in e-money issuance.
are going to be. A clear and specific set of rules that regulates the industry such as the British case, clearly promotes the development of e-money issuers and products.

3.1 - The EMD sets the following requirements for ELMIs:

- **Capital requirements**: As a result of the long process of negotiations, minimum capital requirement were raised to 1 EUR million. Some industry operators and specially MNOs argue that the capital requirement of 1 EUR Million set by the EMD is too high for the risk they pose. However some countries have raised minimum capital requirements: Hungary (1,2 EUR Mill.), France (2,2), and Greece (3). Besides, the requirement of own funds equal or above 2% of the higher of the current amount or the average of the preceding six months total amount of their financial liabilities related to outstanding electronic money, is another requirement that has clearly prevented the development of ELMIs.

- **Limitation of investments**: All national countries have transposed the limitation of investments set by the EMD in its article 5. This article states that the investments have to be of an amount of no less than their financial liabilities related to outstanding electronic money in highly liquid and low risk assets. However there are some national differences regarding the definition of low risk assets, which is defined by local regulators. For example the UK, defines liquid assets as investments that must have a residual maturity of no more than one year. Other countries like Germany do not have the same definition of liquid assets.

- **Redeemability**: The EMD determines that e-money has to be redeemable at par value free of charges other than those strictly necessary to carry out that operation. This obligation is also the result of the long and complex negotiation where the ECB as in the case of initial capital requirements imposed its view. Besides, the minimum fee for redemption should not exceed 10 Euros. However, in some countries this minimum fee has been lowered creating competitive disadvantages such as in Denmark (3,35), Hungary (2) or Italy (5). In Poland, national legislators have tried to facilitate the existence of e-money even when the funds are not redeemable (gift or service vouchers) like in the USA, and outside the EMD framework.

- **Restriction of activities**: The EMD limits ELMIs to activities such as only “issuing electronic money, and the storing of data on the electronic device on behalf of other undertakings or public institutions”. Some industry operators also think these rules are too strict since the final version does not allow to provide “non financial services delivered through electronic devices”. EU regulation has been transposed without changes except for national differences that vary depending on the days of settlement.

Summarizing, very few changes have been made by national authorities regarding the definition of ELMIs. The vast majority of member states have transposed the 4 requirements proposed by the EMD to ELMIs. However, higher capital requirements specially in the case of Greece difficult the development of the e-money industry. Another obstacle for the development of the industry is the lower minimum redemption values, that makes their business models not sustainable.
Article 6 of the EMD directive states that competent authorities shall verify ELMIs to comply with 2 requirements, no less than twice a year. Capital requirements and the limitation of investments. However the frequency is different depending on the country, being Poland the least strict (once a year) and Germany the most (monthly) The low number of ELMIs have made that reporting is still not an issue.

Article 8 of the EMD stipulates that member states may allow their competent authorities to waive the application of some of all of the provisions of the EMD and the application of Directive 2000/12/EC to ELMIs in cases where at least one of the three criteria is met, and where the electronic storage device has a maximum value of 150 Euros. However, the conditions for granting a waiver were tightened during the negotiation process. The maximum amount of financial liabilities related to outstanding of electronic money was lowered to 5 EUR million.

This article has been however only used by some countries, and not transposed by all. Besides, every country has set different conditions and a different process for granting waivers. There are also differences in terms of what provisions can be waived. The most widely used waiver criterion is the float size limit (EMD, article 8.1 (a)). The non implementation of this criterion is likely to significantly reduce the usefulness of the waiver regime. As for the process, the automatic granting of the waiver would seem to lead to its more widespread use.

3.2- Problems with the applicability of the EMD directive to issuers of prepaid accounts:

The applicability of the EMD to issuers whose core business is not offering electronic payment services but to complement their services such as mobile network operators (MNOs) is one of the most controversial issues not yet resolved by the EMD. These operators offer their customers the possibility to pay for third party goods and services using their prepaid mobile telephone funds.

This debate led to a formal consultation that resulted in the issuance of the Guidance Note by the EC in early 2005. The result was that most of the national authorities argued that there was a need to at least broaden the definition, even perhaps develop a new hybrid category. However, Mobile operators argued that there was no need for a new expanded ELMI definition, and that the New Legal Framework for Payments that resulted in the recently approved Payments Service Directive would be sufficient to cover the issue. However, as argued before, the Payment Service Directive does not solve the issue since it clearly states that “this directive should, however, neither regulate issuance of electronic money nor amend the prudential regulation of electronic money institutions as provided for in Directive 2000/46/EC”.

Mobile network operators (MNOs) currently offer the possibility of purchasing goods or services (especially in the form of digital content, e.g. ring tones, logos, games etc.) from third parties. While the EMD is not applied to these kinds of schemes at present, the regulations differ from one Member State to another. Several Member States (Czech Republic, Denmark, Estonia, Finland and the UK) have followed the EC Guidance Note that states that schemes where there is no direct debtor-creditor relationship between the third party merchant and the customer are not e-money. In practice, this means that
MNOs are exempt from the EMD as long as this condition is met. In the UK the main points of the Guidance Note were incorporated into the FSA rulebook.

Other member States (France, Germany, the Netherlands, Poland, and Portugal) have decided not to apply the EMD to MNOs for the time being, but are awaiting further guidance and clarification at the EU level. For a number of Member States the problem does not appear (Cyprus, Greece, Latvia, Malta, Slovakia) since MNOs are currently not issuing e-money in their respective countries. The Belgian authorities have interpreted that even in prepaid schemes where there is allegedly no direct relationship between customer and a third party merchant, such products would have to be classified as e-money.

An example of the impact of the current unclear legal situation of MNOs on new initiatives we have the case of Simpay. Simpay was a joint venture by four mobile network operators (Orange, Telefónica, T-Mobile and Vodafone) to provide a single solution for small-value digital payments. In mid 2005 the participants decided to discontinue the project, mainly due to diverging views as to the concrete design of the product. However, dealing with the unclear legal and regulatory framework was one of the issues that was left for a later stage and remained unresolved.

Simpay participants had different impressions as to whether the EMD would be applicable to the joint venture in their respective countries. Depending on the business model that would have been agreed, setting up a new entity as an ELMI would have been required. This would have created additional problems and might have made the product less attractive, especially because mobile phone customers could not have used the Simpay product directly, but would have been required to register with the new entity.

Other cases where the national interpretation of what constitutes e-money varies, and creates unclear regulatory frameworks are certain account-based schemes. PayPal is licensed as an ELMI in the UK, but the German authorities think that such schemes should operate under a full banking license.

Electronic service vouchers also pose serious problems for the applicability of the EMD. Issuers of service vouchers such as Accor that wish to provide them in electronic format, face different national regulations that difficult their development. The British and Belgian regulators have stated that they would not consider such products e-money, but the authorities in most other countries were either unsure or whether they would have to apply them the EMD rules.

Smartcards for public transport are another product where there are serious problems for the applicability of the EMD. Smartcards that are used exclusively to pay for public transport, but are accepted by several different transport providers, fall under the scope of the EMD. In Ireland and the Netherlands, such schemes need an ELMI license. In the UK, however, Transport For London is not considered to be issuing e-money at present, while a similar, smaller scheme has been granted a small e-money issuer certificate. In the Czech Republic, more than 20 public transport operators are operating under a waiver, while the Finnish authorities were approached by a transport operator, but considered no license or waiver was necessary.
As a way of conclusion, applicability of the EMD to certain issuers of prepaid accounts is one the most controversial issues of the EMD. This controversy is especially relevant with regard to MNOs, where almost all Member States have de facto exempted these from the application of the EMD for the time being. In some Member States the decision was based on the criteria outlined in the EC Guidance Note. In others the situation remains unclear from a legal point of view, and the de facto exemption is only seen as a temporary solution until further clarification is provided. A final group of Member States report that MNOs currently do not offer their customers the possibility of paying for third party goods and services, or that the situation has not yet been discussed in depth.

However, regulation needs to be clarified in order to accommodate two competing industry groups. MNOs argue that the application of the EMD to their prepaid business would be disproportionate to the risks, would fail to recognise that third party payments only account for a very small percentage of prepaid funds (and these are limited to micropayments for mostly telecom-related goods and services). Besides, they argue that the provisions of the EMD are not appropriate for the kind of service they provide, since they are very costly to implement, difficult to explain to customers, and might ultimately mean that MNOs would have to stop offering the possibility to use prepaid funds to pay for third party goods and services completely.

On the other hand, a significant number of e-money firms argue that the non-application of the EMD to MNOs creates an uneven playing field and distorts competition. They emphasize that some form of proportionate regulation applicable to MNOs (and other hybrid issuers) is vital to ensuring fair competition among schemes that often offer similar payment products.

3.3- Anti-money laundering rules and reserve requirements supervision:

Anti-money laundering rules and reserve requirements are not explicitly dealt with in the EMD, so the rules applicable in the different national markets differ and have an impact on the development of the market. The EMD refers to the rules contained in the relevant banking directives.

Regarding anti-money laundering rules, there are two general approaches. Countries (majority) that apply the same anti-money laundering rules to ELMIs and waived institutions as they do to banks, since many countries do not have ELMIs or waived institutions. The general criterion applied is Directive 2005/60/EC, Article 10 that proposes a risk based approach to money laundering. In practice it means that issuers will not be required to verify the identity of their customers until the total turnover of an e-money account exceeds 2,500 Euros. However, how these rules are applied to instruments such as anonymous cards is unclear.

Countries that do have ELMIs or waived institutions implement pragmatic approaches. Czech and Danish authorities determined that there was no need to identify the customers of e-money cards. In Germany, rules are negotiated with each ELMI applicant, which can make the process very difficult.

Other countries such as the UK have developed explicit rules that apply to e-money instruments, whether they are issued by ELMIs, waived institutions or banks. In the UK,
the FSA has elaborated a Joint Money laundering Steering Group based on a proportionate risk based approach. In practice it means that the identity of the customer does not need to be verified up front (when the e-money account is opened or the card bought). Verification is undertaken only when the amount withdrawn/redeemed or the total turnover exceeds 5,000 Pounds. However, the identity of the merchant accepting e-money must always be verified.

In Belgium and France the identity of the customer does not need to be verified if maximum storage is 150 euros and the limit or the individual transaction is 30 euros (France only). In Italy, the purse limit for anonymous e-money instruments was set at 500 Euros.

In terms of reserve requirements, some countries outside the Euro area do not impose reserve requirements (Denmark, Estonia, UK). In the Euro area the ECB considers ELMIs a subcategory of credit institutions and therefore according to article 19.1 of the statue of the ECB, it allows the ECB to require minimum reserves. However, in practice they are exempt due to the low volume of business.

Summarizing, strict anti-money laundering rules are likely to have a negative impact on the development of the industry. However, until now due to the low volume of business it has not been a problem. The UK has the most flexible approach where issuers are exempted from strict know your customer approaches as long as the turnover does not exceed 5,000 pounds or the e-money is redeemed. With the 3rd money laundering directive, this approach could be extended to all European countries. However, national differences will remain in terms of what forms of customer identification are accepted. This issue can therefore remain an issue as it currently is in the USA.

4- Development of the e-money industry in Europe

Certain markets in server based e-money have developed, but not the in way the E-Money directive was predicting. Most of the issuers are in the UK, Scandinavia, the Netherlands, Germany, Austria and the Czech Republic. The most successful experiences are among server based electronic money, where Paypal is the most relevant case. However, disposable and virtual pre-funded cards and mobile based payment solutions have not developed.

Prepaid debit cards and electronic travellers cheques are in many ways similar to more traditional payment products. Since they are prepaid, they are regulated by the e-money legislation. Prepaid cards are normally issued by traditional banking institutions, and therefore can be distributed by their networks and used for banked customers in order to pay remotely. Commercialization and adoption would not be therefore a problem, although the demand of banked customers for these kind of problems has remained very low. Besides, the new security features of traditional debit and credit cards when paying trough the Internet such as Verified by Visa, makes them even less appealing for potential customers to be used when purchasing online.

Non banked customers could however be interested in these products while they can not access regular banking accounts. However, given the high level of banking access in Europe (extremely high in Western Europe in increasing in Eastern Europe), even among immigrants demand is not expected to raise.
The take up of card based money has remained even slower. The limited acceptance network, and limited functionality are its main obstacles to growth. Besides regulation is not clear either, specially regarding transport systems and whether they should be regulated and therefore considered e-money or not.

However, there are two promising factors that can promote the future development of smart cards. First, widespread adoption of the EMV standard will resolve the acceptance problem by adapting all EFTPOS and ATMs to the new standard. Second, the development of contact less technology can help promote the use of cards not only in transport systems, but also in other environments and help define and clarify the business case for a number of providers of card based e-money.

4.1- Server based e-money:

The use of server based e-money based on cards has been the most prominent form of e-money both in Europe and in the USA. Unlike the case of the card-based e-purses (smart cards), the funds are not actually stored on these cards but on a server. These products typically imply the transfer of centrally stored anonymous claims that have been purchased in advance (ECB, 2004).

There are different types of server based e-money providers based on cards in Europe. First, disposable and virtual pre-funded cards designed for online shopping. Prepaid cards that with a PIN number or other forms or identification allow the customer to pay online. Examples include PaySafeCard (Austria/Germany), MicroMoney (Germany), Snap Card (UK), and Splash Plastic (UK). An example of these issuers is SNAP Card, British company currently on a waiver regime until it reaches the critical mass required to achieve ELMi status. It is reloadable in 5,000 resellers and allows payments in virtual POS (Internet). Its business model is based on appealing the merchants with lower discount fees, and better security features.

Mobile phone based micro-payments solutions are another solution launched in Europe for server based e-money providers based on cards in Europe. Payments are made through the prepayment system of the operator. Examples include Crandy (Germany), Luup (Norway). However, their business model is clearly jeopardized by the fact that mobile operators can offer this service without a licence of ELMI.

Prepaid debit cards have been issued by most of the members of card schemes (banks). They have developed various types of prepaid debit cards that offer the same acceptance network than branded cards, but are considered electronic money since they are prepaid. They can also be offered by ELMIs such as (Prepay Technologies Ltd. UK), as well as credit institutions (Mastercard’s Cashplus UK)

Electronic equivalents of travellers’ cheques (common in other parts of the world, new in Europe) are worth 20 Billion USD a year. Prepaid as physical travellers’ cheques, offer more security and convenience. They can be used in foreign ATM’s to purchase foreign currency and merchant POS. Leading companies in this business such as Amex and Travelex considered setting up an EMLI, but decided instead to issue travel cards through banks due to the unclear or inadequate regulatory framework discussed before.
Structural and supervisory issues and the limitation of investments reduced the business opportunity for making money on the float.

Server based electronic money was developed taking advantage of the opportunities offered by the Internet. In addition, niche markets such as person to person internet transactions, online gaming, and payment instruments for persons without access to bank accounts or credit cards have also developed. The most successful are pre-funded personalised online payment schemes, involving the transfer of funds stored on a personalised online account (not including traditional bank deposits). Access to these systems is mostly carried out through the Internet and also sometimes by SMS.

PayPal has been the most successful. Launched in the US in 1999 currently has 86 million clients. En Europe, Paypal Ltd is an ELMI licensed by the FSA (UK) in 2004 and has since passported to all EU member states. PayPal killer application is eBay, which purchased Paypal in 2002 and that accounts for 70% of all its transactions.

Another example although less successful is Moneybrokers also based in the UK and founded in 2001. Moneybrokers was the first institution to be granted an ELMI licence by the FSA in 2002. It runs a similar business model than PayPal but without the killer application that has made PayPal so successful.

4.2-Card-based e-money:

Card-based e-money are traditional electronic purses in the form of a smart card also referred to as hardware based e-money, where the purchasing power resides in a containing hardware based security, generally a chip which is embedded in a plastic card. Despite the fact that a large number of debit cards include electronic purse applications, smartcards use in Europe is very limited. The most important barrier to growth is that they need their own acceptance network. However, the upcoming EMV initiative could be the catalyst that will ultimately promote the development of this kind of products, since all EFTPOS and ATMs will accept smart cards.

Card based e-money schemes were launched in the second half of the 1990s by banks or with the involvement of banks, since they are embedded in debit cards. Usually, these schemes are operated by a subsidiary of a group of banks that include this feature into its debit card. Card based e-purses are intended for payments of limited amounts, such as vending, parking or ticketing machines. However, they do not allow any other payment functions such as Cash in, cash out or EFTPOS purchasing.

E-purses are lower cost transactions than credit or debit cards for the issuer since they do not require online authorization (authorization is embedded in the chip), except for Moneo in France. However, merchant fees are usually higher, which has prevented its development due to the network externalities of payment networks. As a result the success of these products has been very slow.

Card based e-money increased from 0,4% to 0,7 % to total cashless payments between 1999 and 2003 (Bluebook, 2005). Hardware based money e-money in circulation in the Euro Area (monthly), increased by 20% between 2002 and 2005, totalling 453 million Euros in 2005. Software based equivalents (not to be confused with server-based
systems) of card based electronic payments systems have been even less successful than
chip card based e-money (ECB, 2004).

The few success cases of some e-purses initiatives requires a “killer application”,
defined as a very specific use where e-money card offers a clear competitive advantage
or may even be necessary to make a payment in certain circumstances. As a result,
consumers only start to use e-money when they are practically forced to in certain
circumstances. Once they have become used to e-money, they use it for some other
situations. The mere availability of an e-money function on a debit card is usually not
enough to convince most customers of its usefulness.

Some functioning card based e-money schemes in Europe are Proton (Belgium),
Chipknip (Netherlands), Chipknip (Netherlands), Geldkarte (Germany) and Moneo
(France) . Proton operated by Banksys, a subsidiary of 34 Belgian Banks who include
the Proton application on their debit cards and issue the e-money. Proton has three
dominant applications: First, Canteens and vending machines in big companies; second,
public telephones (initially proton’s main application), third, general vending machines
and parking meters.

Chipknip is issued by banks and integrated into around 80% of Dutch debit cards, as
well as a disposable version called prepaid Chipknip that is reloadable. Dominant
applications are its parking application that represents 90% of the transactions (Killer
application), vending machines and catering.

Geldkarte has the e-money chips are embedded in debit cards (EC-Karten). However it
has very few active users due to its limited acceptance network. Its main uses are
vending machines and parking meters.

Moneo is a system operated by SFPMEI, the credit institution in charge of issuing e-
money on behalf of all participating French banks. Debit bankards include the
application. However the limited acceptance network has prevented its widespread use.

Smart cards for public transport, where these cards are accepted as a means of payment
by different transport companies, also potentially qualify as e-money. Whether they are
considered as such depends on the organizational set up: direct or indirect credit
relationship with between the different accepting bodies and the customers and the view
of national regulators.

As previously discussed, Transport for London smart card is not considered e-money by
the FSA, despite the fact it is accepted by different transport providers. The smart card
operated by the Helsinki transport authority needs no ELMI authorization either.
However, more than 20 transport providers operate under a waiver in the Czech
Republic, UK, Ireland and the Netherlands. They will end up applying for an ELMI
licence. Currently they only offer transport services, but once they have the licence they
might end up offering other payment services. Transport for London is also exploring
this area of expansion. Besides, the increasing use of contact less technology enables
these smart cards to enhance speed and convenience, such as Octopus in Hong Kong.
4.3-Others products that may constitute e-money:

Electronic vouchers (gift vouchers) are the most important type of store value cards (the equivalent of e-money) in the USA. In Europe issuers of paper based vouchers (gifts or meal vouchers) would like to switch their products to an electronic format. Although in principle they meet the features compatible with the E-Money Directive, the redeemability requirement poses serious problems for their business model. The European regime has prevented issuers such as Amex or the French Association of Voucher issuers (APETDS) to issue Gift vouchers or meal vouchers. Accord is already issuing electronic meal vouchers in Asia and South America, but is unable to do it without a bank in Europe.

Mobile Network operators prepaid services. As the we discussed before the applicability of the EMD to mobile operators when they allow customers using their prepaid accounts to buy third party goods and services (digital content such as ring tones, logos, games etc…)is one of the most controversial issues of the current regulation.

4.4- Assessment of the e-money industry in Europe:

The number of ELMIs in Europe is low (9 ELMIs were active in 2005 according to the Evaluation of the Directive). The highest number is in the UK, due to its adapted regulatory framework. A large number of entities are operating under a waiver (72 in 2005 according to the Evaluation of the Directive). The highest number is in the UK, although only half are active. The second country is the Czech republic, since transport public providers whose travel cards are accepted by other transport providers have to be regulated under a waiver (this is not the case in the UK).

Credit institutions issue e-money in all EU states. Their products include E-purse schemes like Proton or Chipnik, card or server based schemes offered by a single institution and prepaid cards. Specialized banks also issue the electronic equivalent of traveller cheques. ELMIs and waived institutions predominate in the market for server based e-money. Banks, or ELMIs that have close ties to banks issue the vast majority of card based e-money. The only exception is transport cards.

According to the Evaluation of the Directive, the estimated total value of e-money in 2005 was 670 EUR million. The slow take up of the e-money industry in Europe is mainly due as argued before to a lack of demand. First, the lack of consumer and merchant interest due to the availability of other methods of secure payment (verified by VISA and verified by Mastercard) for e-commerce, and the slow development of e-commerce has not created the necessary killer application in internet payments. Besides, due to the high level of banking access in most European countries, prepaid accounts are not even demanded by the recently arrived immigrants (the only segment of the European population that is not almost totally banked). As a result of the lack of demand, e-money has neither been used as a new payment method, nor as a gateway to banking the unbanked.

Regulation however has also played a role in the slow development of the e-money industry in Europe. An overly restrictive regulatory and supervisory regime for ELMIs, and lacked of legal certainty are arguments usually referred when analyzing the
regulatory impact of the EMD in the development of e-money. Besides, since the European experience is quite unique in developing a regulatory framework for e-money and e-money issuers is quite relevant analyzing whether the EMD has met its objectives.

5. Conclusions: Evaluation of the directives results

According to the preface of the EMD main objectives of the directive were: First, to create legal certainty and contribute to the development of e-commerce. Second, avoid hampering technological innovation, Third, preserve a level a playing field. Four, ensure the stability and soundness of issuers. Fifth, facilitate access by ELMIS from one member state into other member state.

5.1 Create legal certainty and contribute to the development of e-commerce:

The EMD provides a definition of “electronic money” (article 1.3) and it also specifies the regulatory and supervisory framework. It also provides harmonisation by mutual recognition of authorisation (recital 4) “The approach adopted is appropriate to achieve only the essential harmonisation necessary and sufficient to secure the mutual recognition of authorisation and prudential supervision of electronic money institutions, making possible the granting of a single licence recognised throughout the Community and designed to ensure bearer confidence and the application of the principle of home Member State prudential supervision”

However, although the EMD has successfully created a legal framework for e-money, some questions remain regarding the legal certainty required to apply the EMD to certain services such as account based schemes (there is an important degree of disparity between national authorities regarding whether or not they should be considered e-money; Finland has resolved the problem by including an explicit mention of account based systems); electronic vouchers; prepaid debit cards and electronic travellers cheques that also challenge the notion that e-money is to be used only for micropayments

The EMD has also problems of applicability regarding issuers such as Mobile network operators. The EC Note has not succeed in eliminating uncertainty regarding the applicability to mobile network operators of the Directive. The EC Guidance Note argues that the EMD does not apply to systems where there is no direct debtor/creditor relationship, but it seems to be inconsistent with other payment systems functioning.

Besides, the new European Payments Directive (2007/64/EC) does not resolve this legal uncertainty for MNOs since it clearly specifies in recital 6 that “The content of these goods or services may be produced either by a third party or by the operator, who may add intrinsic value to them in the form of access, distribution or search facilities. In the latter case, where the goods or services are distributed by one of those operators, or, for technical reasons, by a third party, and where they can be used only through digital devices, such as mobile phones or computers, that legal framework should not apply as the activity of the operator goes beyond a mere payment transaction. However, it is appropriate for that legal framework to apply to cases where the operator acts only as an intermediary who simply arranges for payment to be made to a third-party supplier.”
Transport providers also pose problems, and some national regulators argue that an exemption should be created when they are accepted by different transport providers for not being considered e-money. As a result, we can conclude that the definition of e-money is not clear enough, and that either through a revised definition, inclusion of specific exemptions, or specially adapted rules for certain issuers whose core business is not payment services (MNOs) this uncertainty should be resolved.

Legal uncertainty has therefore discouraged new market entrants and hampered innovation. Besides, the discretion given to member states to waive some of the provisions based on certain criteria is another factor that is contributing to legal uncertainty by creating national differences.

5.2-Avoid hampering technological innovation:

The Directive introduces a technology neutral approach (recital 5), since it does not enter into technical specifications. The definition of e-money clearly states that e-money only states that it is stored on an electronic device”. The directive is therefore applicable to all types of technologies, so it does not promote any in particular and therefore tries not to hamper technological innovation, avoiding the risks that strict technological rules might have on innovation and competition.

Although technological neutrality has been achieved, the lack of adaptation in the definition of electronic money might have hampered the development of account based systems. Therefore despite the fact that the EMD has remained mostly technology neutral, there are doubts over the applicability to certain business models generally that have to do not with the electronic device used but with the nature of the product and the issuer.

The beneficial treatment of MNOs has caused that technological innovation has been hampered. However, Mobile operators see the application of the EMD to their business unnecessary since the risks involved are minimal. Besides EMD requirements such as capital and funding, limitation of investments, reedemability and anti money laundering provisions will force mobile operators to create payment services that would be only developed in partnership with financial institutions.

On the other hand, the problems related with gift cards and vouchers have not allowed this market to become electronic. Besides, differing national implementations might jeopardize the technology neutral approach proposed by the EMD. This is the case of account based systems, where the value is stored on a centralised server, and where the applicability of the EMD is not clear. One possible solution to this is adding a definition of “electronic device”, including not only chip cards or computer memory, but also central servers, mobile telephones, PDAs etc… However the risk is that since it is impossible to foresee future technological developments it may jeopardize technological neutrality in the longer term.

As a way of conclusion, there are no technological restrictions in the EMD that might have hampered innovation. However too strict requirements and burdens for ELMIS are excessive in view of the risks involved in e-money issuance and may have offset the entry on new operators and therefore hampered innovation.
5.3-Preserve a level a playing field:

The Directive aimed at creating “The highest degree possible of a level playing field between different types of institutions” that can issue e-money, whether they are traditional credit institutions or the electronic money institutions (recital 12). In order to ensure fair competition and adequate supervision of ELMIs, the explanatory memorandum states that the supervisory regime to which credit institutions are subject to should also be applied in an appropriate manner to electronic money institutions (Recital 11).

This appropriate manner aims at creating a lighter and more targeted regulatory and supervisory framework for ELMIs with reduced capital requirements, capital adequacy ratios, non application of solvency ratios and large exposure risks (recital 12). On the other hand, the investment possibilities of ELMIs are also much more restricted than those of banks (recital 12).

The issue of competition and “creating a level playing field” is one of the most controversial issues of the EMD. Although, there are no serious issues in terms of competition between ELMIs and traditional banks, the most important concern in this regard is the appropriate treatment of prepaid services of mobile network operators vs ELMIS.

In order to solve these issues, MNOs propose to establish a clear distinction between issuers whose core business is not payments and issuers whose core businesses is payment services. The lack of a different regulatory framework discourages mobile operators due to the regulatory risk, imposes disproportionate obligations in terms redeemability, guarantee schemes and accounting separation.

On the other side, most ELMIs consider that their requirements are excessive. In particular the capital requirements seem to represent a significant barrier to market entry. Reducing initial capital requirements would solve the problems, and also the problem of becoming a fully licensed ELMI when operating under a waiver. Reducing capital requirements to 0,5 million is the solution proposed by the industry.

Finally, the waiver has the potential of facilitating the development of e-money issuers when implemented in a comprehensive and harmonized way, such as the Czech case shows. Raising the purse limit could be a way for strengthening this instrument without hampering competition with fully licensed ELMIs. Besides, national differences between member states should disappear in order to create a harmonized and unified regulatory framework.

5.4-Ensure the stability and soundness of issuers:

The Directive emphasizes in its explanatory memorandum that the financial stability of ELMIs has to be secured with a regulatory framework that is light enough to ensure that electronic money institutions can compete on a level playing field with traditional credit institutions, but also strong enough to ensure stability and soundness of issuers.

Recital 12 of EMD states that regulatory framework must be “This is achieved since the above mentioned less cumbersome features of the prudential supervisory regime
applying to electronic money institutions are balanced by provisions that are more stringent than those applying to other credit institutions, notably as regards restrictions on the business activities which electronic money institutions may carry on and, particularly, prudent limitations of their investments aimed at ensuring that their financial liabilities related to outstanding electronic money are backed at all times by sufficiently liquid low risk assets”. On the other side recital 13, also demands that ELMIs “have in place internal structures which should respond to the financial and non-financial risks to which are exposed”. The most important provisions contained in the Directive that ensure the stability and soundness of issuers are the one that limit their business activities, investments, and that determines that electronic money must be redeemable at par value.

The EMD has indeed been successful in ensuring the stability and soundness of e-money issuers. However, the regime might be too strict which explains partially the low take up of issuance of e-money. A less restrictive regime might have been sufficient to ensure the stability and soundness of e-money issuers. There is room for adopting a more risk based approach without endangering the stability of issuers or the adequate protection of consumers. An specialist source book (such as the UK), instead of the traditional one applied to credit institutions would solve the problem.

Investment restrictions are perceived as the most important regulatory obstacle. That is why under certain conditions, some issuers might even prefer the banking regime because it allows more flexibility on how to use and invest the float. Besides, accepting receivables as an allowed investment is of great importance for some issuers such as Paypal. When an e-money account is funded through a credit or a debit card, e-money is issued immediately and increases the float and thereby the required investments on liquid assets. However, since payments from cards are delayed one to three business days, Paypal’s parent company has had to inject very important amounts of cash in order to meet the requirements of the EMD directive. This problem would be resolved if card receivables were accepted as ELMIs allowed investments.

5.5- Facilitate access by ELMIS from one member state into other member state:

The Directive aims at facilitating ELMIS from one member state to operate in another by allowing “mutual recognition of home supervision in the framework of harmonised prudential rules as are applied to credit institutions”. To achieve this objective the Directive extends the concept of the “single license” also referred as “single passport” to e-money institutions.

The passport regime of the provisions are appreciated but not widely used since the industry has not developed. However Paypal, the only ELMI that has been able to expand extensively in Europe has found problems related to the fact that passport regimes for ELMIs are inferior to those applied by banks (2000/12/EC – article 2 (2)).
1-Review of the regulation on e-money in developing nations

Most of the mobile banking success stories we have found have been based in flexible regulatory approaches to e-money and agent regulation. Over the last few years, some regulators specially in Asia have made an effort to regulate the issuance of e-money. In the Phillipines for example where two of these success stories are based, Smart Money and GCash, the central bank, Bangko Sentral ng Pilipinas (BSP), has practiced a flexible but hands-on role in the emergence of mobile banking in the Philippines, finding ways to permit innovation within safe, sound and prudent standards.

In the past 8 years, BSP has supported the development of two different arrangements for two mobile operators: In one model, banks are permitted to outsource a substantial range of activities to the mobile operator, Smart Communications (Smart), via a system of pre-paid accounts introduced in 2000 and expanded in 2003.

In the second, a subsidiary of the mobile operator, Globe Telecom (Globe) offers virtual stored-value accounts which enable mobile phone customers to make payments and money transfers. Globe’s subsidiary, known as G-Xchange Inc (GXI), is regulated as a remittance agent, permitting a nonbank-based model also using pre-paid accounts introduced in 2004. As a condition of their permission to launch, Smart Money and GCash each agreed to furnish detailed operational data to the BSP.

This flexible but hands-on role policy was based on the Filipino government’s commitment to extending financial services to unbanked low-income populations. Indeed, with its fragmented geography and the limited reach of the formal banking infrastructure, mobile banking is a very efficient business model to expand financial access among the unbanked. Besides, the widespread familiarity and comfort with mobile phones and tendency to use mobile phones for more than voice services, made Filipinos more willing to use their mobile phones for financial transactions.

After the initial success of G-Cash and Smart Money, and following its hands on policy, BSP issued in March 2009, an E-Money Circular (following the FSA model), giving more clarity to the e-money sector. Both GXI and Banco de Oro (Smart’s bank partner) have applied and become e-money issuers.

E-Money Circular 649 regulates e-money as an activity rather than by the legal character of the e-money issuer. The circular defined e-money as: “monetary value as presented by a claim on its issuer that is (i) electronically stored in an instrument or device, (ii) issued against receipt of funds of an amount not lesser in value than the monetary value issued, (iii) accepted as a means of payment by persons or entities other than the issuer, (iv) withdrawable in cash or equivalent, and (v) issued in accordance with Circular 649.”

Circular 649 specifies that electronic instruments can be cash cards, e-wallets accessible through mobile phones or other devices, stored value cards or other products. It also specifically states that e-money issued by banks is not considered to be a deposit. This ensures
that the circular abides by the Manual of Regulations for Banks (MORB) and guarantees that agents can perform cash-in/cash-out functions.

Circular 649 classifies e-money issuers as banks, non-bank financial institutions supervised by the BSP, and non-bank institutions registered at the BSP as money transfer agents (EMI-Others). There is an aggregate monthly load limit for e-money instruments of PHP 100,000 (approximately USD 866). The circular prohibits the payment of interest on e-money. In addition, pursuant to the Circular, e-money is not insured by the Philippines Deposit Insurance Corporation.

The circular establishes other principles such as a redress mechanism for consumer complaints, provision of clear guidance for consumers’ right of redemption, as well as a requirement for tracking methods for e-money instruments and users. Circular 649 sets minimum system controls (e.g., management, administrative and accounting procedures, computer systems, security measures, and audit functions) before institutions can become e-money issuers and also requires e-money issuers to provide quarterly financial statements to the BSP.

Lastly, Circular 649 sets forth that e-money issuers that are registered as money transfer agents can only engage in e-money and related businesses such as remittances. If these institutions are dedicated to a different type of business they must issue e-money through a separate entity formed exclusively to be an e-money issuer.

In addition, customer funds are protected by requiring these non-prudentially regulated e-money issuers to keep “sufficient liquid assets equal to the amount of outstanding e-money issued”. For this purpose, liquid assets include bank deposits, government securities and other assets as the BSP may allow. The circular also requires that to be licensed as a non-bank e-money issuer, the entity must be formed as a stock corporation and have a minimum capital of US$2 million (PHP 100 million).

In Indonesia in April 2009, the Bank of Indonesia (BI) issued a regulation concerning electronic money (the E-Money Regulation) and a related circular (the E-Money Circular). Article 1.3 of the E-Money Regulation defines e-money as a payment instrument that fulfills the following criteria:

a. It is issued against equal value of the money deposited by the customer to the issuer.

b. The nominal value of the money is stored electronically in a medium, such as a server or chip.

c. It serves as a payment instrument for merchants that are not the issuer of the e-money.

d. The value of the e-money deposited by the customer and managed by the issuer is not categorized as deposits, as defined by the Banking Act.

Both banks and nonbanks can issue e-money, and both types of issuers need to obtain a license from BI. The E-Money Regulation and E-Money Circular provide that nonbanks are required to obtain a license if the amount of the float under management has reached, or is
expected to reach, IDR 1,000,000,000 (approximately US$100,000). Nonbank issuers have to place 100 percent of the float in a commercial bank where they can choose among a savings account, a current account, or a time deposit account. Float funds can be used only to fulfill the issuer’s obligations toward customers and agents. Bank issuers have to report the float under immediate liabilities or other liabilities. Given that e-money funds are, by definition, not deposits, they are not protected by the Indonesian deposit insurance. (Although there is no legal prohibition on paying interest on e-money, BI’s interpretation is that e-money should not bear interest.).

However, the ability of e-money regulation to dramatically change the landscape is questionable, in part due to the requirement that each agent has to obtain a money remittance license. Indeed, although e-money issuers are permitted, pursuant to BI’s E-Money Circular, to use agents for uploading value to e-money accounts (i.e., cash in), if an e-money issuer wants to use an agent to offer money transfers and cash-out services, the agent needs to have a money remitter license.

AML/CFT regulation, does not favour either the development of e-money issuers. An e-money issuer must, when opening a "registered" e-money account, record the customer’s identity data: name, address, date of birth and other data as listed in the customer’s identity card. (No such requirement applies to unregistered e-money accounts.) The issuer can record the customer’s data by providing an application form that must be completed by the customer accompanied with a copy of the identity card. The wording of the Emoney Circular makes it possible for agents to conduct KYC on behalf of an e-money issuer. However the requirement to send a copy of the ID card makes remote account opening difficult unless a camera or phone can be used.

Finally, article 27 of the E-Money Regulation stipulates that e-money providers are required to provide systems that are connectible to other systems of e-money. Article X of the E-Money Circular reiterates that in the framework of improving efficiency, smoothness and advantage to e-money users, there must be efforts to develop systems which can be interoperable. As a result, BI may oblige the parties to follow and adjust its systems when criteria or requirements have become an industrial consensus.

Following the regulatory efforts undertaken in the Philippines and in Indonesia, the Indian regulator (RBI) issued its Prepayment Instrument Guidelines in 2009. Until 2009, only banks and financial institutions were permitted to issue e-money and collect funds for payment to third parties. In April 2009, RBI issued its Prepayment Instrument Guidelines pursuant to the 2007 Payment and Settlement Systems Act. The Guidelines identify three categories of prepaid instruments, which term includes smart cards, magnetic stripe cards, Internet wallets, and mobile accounts and wallets, paper vouchers. The three categories are:

- “closed” system payment instruments, which may be used only for the purchase of goods and services from the issuer itself and therefore, as explicitly stated, are not classified as payment systems;
• “semi-closed” payment instruments, which may be used at a group of clearly identified merchant locations and/or establishments that have contracted to accept such instruments, but which may not be used for cash withdrawal or redemption; and
• “open” system payment instruments, which may be used at any point-of-sale (POS) enabled merchant and for cash withdrawal at automatic teller machines (ATMs).

In August 2009, RBI amended to permit “Other Persons” to issue mobile phone-based semi-closed prepaid instruments, but MNO involvement has not materialized yet. Only banks may issue all three types of instruments (and only those banks which have been permitted by RBI to provide mobile banking transactions may launch mobile accounts and wallets).

NBFCs and “other persons” may issue only semi-closed or closed instruments. There are a variety of rules regarding the issuance of these instruments, including minimum capital requirements, special AML/CFT policies, maximum value (Rs. 50,000), minimum validity period (six months), and guidelines for how they can be issued and reloaded. There are also limits on how the collected funds can be used. For example, nonbanks must keep the funds collected in a noninterest-bearing escrow account with a scheduled commercial bank, and can collect interest on only a portion of these amounts, and only if other conditions are met. This practice ensures that banks largely continue to control and benefit from the float, and encourages nonbanks to focus only on fee-based (rather than float-based) business models.

RBI’s amendment permitted “Other Persons” to issue mobile phone-based semi-closed prepaid instruments, although such instruments are restricted to a maximum of Rs. 5,000 (approximately US $110) value, cannot be purchased or recharged with mobile phone airtime, and can be used only for the purchase of goods and services (i.e., no person-to-person transfers). RBI has since suggested that these revisions were intended in part to provide MNOs a way to offer customers a “mobile wallet” through banks, thus ensuring that the float would remain with banks, a clear objective of RBI.

In Africa, where two other success stories appeared, we see different levels of development in terms of e-money legislation. Kenya, where mobile banking’s most relevant success story (M-Pesa) operates, has no laws or regulations dealing directly with e-money yet. The adoption of e-payment regulations, which would govern e-money issuers, is linked to the passage of the National Payment System Bill, which would be the basis of their authority. It appears likely that this bill, which has been under discussion for several years, will finally enter the Parliamentary process in 2010, although the speed of passage remains uncertain. The precise nature of regulation would be linked to the scope of the bill, but the expressed intent of CBK is to move to risk-appropriate regulation of the nonbank e-money issuers. (The primary regulator of e-money issuers and transferors will be CBK, according to the National Payment System Bill.)

In the absence of any legal framework, the issuing of e-money by a licensed financial institution does not appear to raise any issues with CBK. With regard to nonbanks, CBK’s current approach seems to depend on whether the activities involved in e-money issuance fall under the definition of “banking business” in the Banking Act or “deposit taking microfinance business” in the Microfinance Act. A nonbank can avoid falling under the definition of banking

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business by not lending, investing, or otherwise placing at the risk of such nonbank institution the funds mobilized (i.e., the e-money proceeds). It is likely that the same conclusion will apply to the definition of deposit-taking microfinance business, although the definition is less easy to interpret.

**In Morocco**, the Banking law does not allow non credit institutions to issue open looped cards. However, closed looped cards (cartes privatives) can be issued by non credit institutions such as department stores, petrol companies. Currently, MFIs such as Al Amana are in negotiations with the Ministry of Finance and BAM to issue closed looped cards. Also, the Moroccan government though APP is in the process of financing new initiatives that will allow closed-loop payments instruments to be used by Moroccan MFIs.

**In South Africa**, Wiizit’s home, the National Payment System Department of SARB recently issued a new Position Paper on Electronic Money that restated its position that only South African banks are permitted to issue electronic money (November 2009).

As a result, only banks registered under the Banks Act are allowed to engage in “the business of banking,” which includes taking deposits from the general public. Accordingly, retailers, mobile operators, and entrepreneurs wishing to offer branchless banking services that entail taking deposits from the public must do so alongside banks (whether in partnership, as a joint venture, or as agent).

SARB’s paper defines e-money as “monetary value represented by a claim on the issuer” that “is stored electronically and issued on receipt of funds, is generally accepted as a means of payment by persons other than the issuer and is redeemable for physical cash or a deposit into a bank account on demand.” Aside from one e-money program run by FNB (e-bucks), which was a loyalty program to encourage e-banking, there are no open network prefunded payment schemes currently operating in South Africa. The primary reason is that banks, the only institutions permitted to issue e-money or other stored-value instruments, are heavily invested in the existing payments systems and therefore have little incentive to invest in new systems.

However, payments to third parties may be made by nonbanks pursuant to the National Payment System (NPS) Act. The largest nonbank supplier of payment services is Net1/Aplitec, a private company listed on the NASDAQ stock exchange. Net1 provides two major payments products: bill payments and social welfare payments. As a result, a large proportion of payment services such as bill payments and social welfare payments are provided by nonbanks, as permitted under the National Payment Systems Act.

For years, various provincial subsidiaries of Net1 have used a smartcard system to make social welfare payments on behalf of the South African Government. Net1’s nonbank character and the size of its business (3.8 million customers using its smartcard) make it significant from a branchless banking perspective. The smartcard operates as a closed-loop system that does not interact with other bank-based payment systems but rather requires the amounts loaded on the smartcards to be redeemed at Net1 mobile cash payment points or used to transact with other smartcards in the Net1 system. Net1 has avoided the prohibition on deposit-taking by nonbanks through an arrangement with the relevant government departments pursuant to
which Net1 first makes the payments to recipients and then claims from the government. However, the government has now indicated that, for security and welfare reasons, it wishes to move away from cash-based welfare payments in favor of account-based payments.

In Latin America, only Mexico has issued specific legislation on e-money issuance. In Mexico, the banking law restricts banking business—characterized as deposit-taking—to credit institutions (i.e., licensed commercial and development banks and credit cooperatives). The Commercial Code defines a deposit as repayable funds. Deposit-taking occurs when (i) the service is offered to unknown persons or through massive communication media and (ii) the service is offered in a habitual and professional manner.

A recent regulation identifies four types of banks according to minimum initial capital and types of operation. One type is categorized under the label “traditional banks” and three are categorized under the label “niche banks.” Traditional banks require higher minimum capitals and have broader operational scope, while niche banks benefit from lighter requirements (including much less complex prudential regulation) in exchange for a limited scope. This new regulation intends to create a more attractive entry door for nonbanks to provide some financial services, such as e-money issuing, without having to apply for a full fledged bank license.

Although nonbanks are excluded from the deposit-taking business, they may issue prepaid cards that can be used for purchases in commercial establishments, that belong to the same business conglomerate as the issuer (e.g., gift cards).

Following a 2004 decree that created tax incentives for electronic financial transactions, Mexican banks formed a trust (Fideicomiso para el Impulso de la Infraestructura de Medios de Pago Electronico) aimed to expand the POS network in the country and promote the use of card payments. A good portion of the total expansion of the POS network in the country is due to Fimpe’s work. However, after the termination of the tax incentives in 2009, the number of POS terminals has already decreased slightly, according to Fimpe.

In addition to its work on POS networks, Fimpe has created a platform for mobile banking to serve any bank, named Nipper. Banxico also has created a model mobile banking platform with direct settlement at SPEI, which seems unlikely to support low value transactions in the short run. However, neither Nipper nor Banxico’s model platform have so far attracted a considerable number of providers.

The government has plans to migrate the largest cash-transfer program - Oportunidades –to electronic payments that would be ultimately channeled into bank accounts. It is currently piloting with Bansefi (the government development bank) and a network of local shops known as Diconsa that function as cash-out points. Such efforts are still in the beginning stages.

Although Brazil led regulation in banking agents, no specific regulation on e-money has been issued which is perceived as prohibiting nonbanks from issuing e-money. Although prepaid cards may not fall under the definition of deposit (because the prepaid funds may not be repayable), the requirement of the Banking Law that only CBB-licensed and supervised institutions are permitted to collect funds from third parties is generally viewed as prohibiting
nonbanks from issuing e-money or other stored-value instruments, such as electronic accounts stored in mobile phones.

CBB has not issued regulations or other guidance on nonbank prepaid schemes. There are conflicting interpretations of the Banking Law regarding (i) what constitutes collection of funds, (ii) whether prepaid schemes could involve collection only or intermediation, and (iii) how this fits with the legal requirement that only licensed financial institutions may engage in collection and intermediation of funds.

Banks with large agent networks are aware that going cashless is essential to providing a wider array of services at agents. Since cash handling is the main cost of agents in remote areas, the evolution of this branchless banking model will necessarily require CBB to push for innovation, efficiency, and interoperability of electronic payment systems to diminish the use of cash.

CBB’s Department of Banking Operations and Payments System is open to new models within the retail payment system and is currently considering regulations and/or guidelines on electronic stored-value accounts based on the experience elsewhere, such as in the Philippines, South Africa and the European Union. However, CBB has not issued any position or taken any measure regarding open-use prepaid instruments issued by nonbanks. This lack of regulatory framework and the particular dynamics of the Brazilian market (the stage of competition in the mobile phone sector and the lobby exercised by banks) have hindered the development of nonbank-based branchless banking models.

In Colombia, there is no regulation on e-money, viewed as prohibiting nonbanks from issuing e-money. Nonbanks can issue e-money provided that it does not constitute deposit-taking (i.e., repayable funds). Regulations that explicitly allow nonbanks to issue electronic money could end legal uncertainty around this issue.

The banking law defines credit institutions as those able to take demand or time deposits for financial intermediation. They are the only entities authorized to take deposits from the public. SFC is legally required to sanction others engaging in “massive and habitual collection of funds from the public.”

A deposit is defined as repayable funds (other than loans). Massive and habitual deposit taking is defined as cash or virtual money kept by the “collector” with no obligation of providing a service or good in exchange when at least one of the following conditions is met:

- There are more than 20 depositors or more than 50 obligations (deposits), or
- In a period of three consecutive months, the collector incurs more than 20 contracts to manage funds from the public or sells credit instruments with a resell obligation.

In addition, deposit taking requires one of the following conditions to be true: (a) the value of the funds collected surpasses 50 percent of the collector’s equity or (b) the operations result from offers to unknown people.

In Argentina, there is no regulation on e-money, although the industry is developing with services like Monedero / TRANSPORT CARD. Payment services not linked to a bank account,
such as reloadable prepaid cards or prepaid mobile phone-based accounts, are hindered to a certain extent by the lack of specific regulation or generic e-money regulation.

Services like Monedero (a reloadable metro card issued by a transportation company in the Buenos Aires area) are considered retail payment services and, therefore, are not subject to prudential rules, licensing, or registration, even if they offer electronic storage of funds.

It is currently unclear if nonbanks may offer electronic storage of redeemable funds given that only banks and cooperatives are allowed to take deposits from the public. This lack of legal certainty discourages potential market entrants.

2- Review of the regulation on agents marketing financial services:

The development of e-money legislation goes however in opposite directions with the development of a regulatory framework for agents. Latin America, the region of the world least active in issuance of e-money regulation has however been the most active in issuing agent regulation.

**Brazil, the first country to massively use agents for the distributions of financial services,** created the framework for retail agents in the 1970s and reformed it in 1999 to increase efficiency in the area of welfare payments.

Prior to 1999, the following services could be outsourced to agents: receiving loan applications, analyzing credit and personal information of loan applicants, collecting loan payments, and processing data. The 1999 reforms expanded this list to include receiving account opening applications, performing deposits and withdrawals, and effecting bill payments. Based on the 1999 regulation, Caixa Econômica Federal partnered with over 9,000 lottery outlets in what became the first large-scale retail agent scheme in the country.

Further regulatory changes in 2000 removed the prohibition on banks using agents in locations with bank branches. In response, Caixa rapidly covered all municipalities in the country, signing up other types of retail agents beyond lottery outlets. By year-end 2000, the total number of agents being used by banks reached 64,000. New regulations were issued in 2003 as part of the government’s financial inclusion policy, permitting any financial institution to hire any type of agent.

Until 2008, CBB authorization was required if an agent were to engage in “banking services” — namely checking and savings account transactions (e.g., account opening applications, deposits, withdrawals, investment funds, and payments). However, CBB does not need to authorize agents anymore. The process is simple, and banks are required to register their agents online.

Today, there are more than 150,000 registered agents throughout the country delivering financial services on behalf of CBB-licensed and supervised entities, including credit cooperatives. A remarkable 60 percent increase in two years, from approximately 95,000 agents at the end of 2007. There is at least one agent or branch office of a prudentially licensed and supervised bank in each of the country’s 5,564 municipalities.
Two major banks (Caixa and Banco Postal) cover every municipality in the country. Most agents are commercial establishments, such as grocery stores, post offices, notaries, and lottery outlets, but a financial institution may also act as an agent.

Agents conducted 2.3 billion transactions in 2008. This represents 5.24 percent of the 43.9 billion total bank transactions, up from 4.75 percent in 2003. Branch transactions, which used to represent around 20 percent of all bank transactions, now represent only 10 percent. (ATMs are the most used electronic channel.)

Agents offer several types of services, from bill payments to account opening procedures, but less than 30 percent of the agents handle bank accounts. Most specialize in receiving bill payments, which account for approximately 75 percent of all agent transactions (47 percent of which are utility bill payments). Withdrawals and deposits account for 12.6 percent and are nearly equally divided into savings and current accounts (including simplified accounts). Only 0.16 percent of the transactions are account opening; 7.3 percent are government transfers.

The central bank’s supportive regulation governing the use of agents, has resulted in an increase in access to financial services such as bill payments, transfers, and deposits. The CBB collects information from several of the major agent schemes (on an ad hoc basis only, as the overall risk of the agent business is deemed low) as a means to inform regulatory action. The principal is fully responsible for the services rendered by its agents. CBB requires the principal (i) to control the activities of each of its agents by setting transaction limits and implementing mechanisms to block transactions remotely when necessary and (ii) to ensure compliance with all applicable legal and regulatory provisions, such as AML/CFT, customer protection, and data privacy. An agent must post a notice in its establishment that it acts on behalf of the bank.

The agent networks can be managed directly by the bank or outsourced to a third party, which is then considered an agent by CBB (and referred to as a network manager). Network managers provide a wide range of services, including selection of agents, training related to Anti-Money Laundering/Combating Financing of Terrorism (AML/CFT), maintenance of POS, software development, cash handling, and marketing. The network managers often respond to the bank for the actions of the agents in their network.

However, there are still obstacles to the expansion of banks’ use of agents to deliver credit and savings to poor people:

- “simplified accounts,” which can be handled by agents, are subject to various transaction limitations that restrict profitability, interest rate caps and other account-related costs render microcredit unprofitable for banks, and there is poor credit information available for lower income borrowers.
- Unintended consequences of widespread outsourcing threaten the continuity of the agent model itself. There have been a variety of legal demands such as unions seeking wage equality between bank employees and agent employees and other government agencies dealing with matters such as physical security of agents. The central bank is analyzing the potential impact of these legal demands, but has not yet proposed or implemented changes addressing these or the other obstacles.
In contrast to the use of retail agents by banks (known as “bank-based branchless banking”), nonbank-based branchless banking is only in its incipient stage in Brazil. However, there is remarkable space for nonbanks to compete for customers with low-value accounts, since approximately 70 percent of the adult population still lacks access to bank accounts.

Moving and protecting cash is costly, risky and time-consuming. According to research conducted by CGAP and the Fundação Getulio Vargas business school, 41 percent of agents have been robbed in the past three years.

In Colombia the Decree 2233/2006 allowed banks and commercial finance companies to use agents. Decree 303/2007 and Decree 2965/2006 extended the permission to brokers and credit cooperatives, respectively. According to agency regulation, any type of legal entity, including savings and credit cooperatives, may with prior SFC authorization be hired by a SFC-licensed institution as an agent to deliver financial services either on its own premises or in other locations where its services/products are offered.

Agents may provide most banking services, including bill payments, transfers, deposits and withdrawals, disbursement or repayment of loans, receiving and forwarding account opening and loan applications for the bank’s approval, and national wires.

The financial institution remains fully liable for services provided through agents and for the agent’s actions. The financial institution must set up adequate internal controls to monitor their agents and may use a third party (e.g., a network manager) to manage the agent network. For purposes of SFC review, the contracting financial institution must keep all information and documentation related to agent activities. SFC may inspect agents.

The agency regulation sets forth minimum contractual clauses that every agency contract must contain, such as: reference to the financial institution’s full liability and the description of risk-mitigation measures (AML and combating the financing of terrorism [CFT], transactional limits, financial settlement, insurance).

Agent transactions must be authorized online via dedicated terminals meeting minimum requirements set forth by SFC regulation. Agents cannot (i) operate if the communication with the financial institution fails, (ii) grant loans without authorization of the financial institution, (iii) charge extra fees, (iv) offer any guarantee to bank clients, or (v) offer financial services without an agency contract with a financial institution.

The regulation requires banks to design their marketing and visual publicity around agents to inform the customer that the service is being provided on behalf of a licensed financial institution. Every transaction must produce an automatically generated receipt with the name of the bank. The bank is required to install mechanisms to receive customer complaints against agents. In addition, an agent is required to post various requirements on visible signs at its premises.

To avoid double incidence of the cuatro por mil tax in agent transactions, Banca de las Oportunidades successfully coordinated with the tax authority to exempt agent accounts (with
their banks) from this tax (i.e., the transactions between the agent and its bank are considered part of a single taxable bank transaction).

A 2009 modification of the SFC Basic Banking Circular simplified AML/CFT procedures for low-value electronic accounts and mobile accounts that are opened via agents (who receive and forward the application materials). People opening such accounts are not required to complete the application form nor have an interview with a bank employee. Instead, they must provide identification information such as their name, identification number, and place and date of birth. Accounts opened remotely are to be subject to stricter AML/CFT monitoring by the bank.

However, Colombian banks’ use of agents has not played out as expected. There was an expectation that banks would engage agents, thereby increasing considerably the number of financial service access points and the number of banked Colombians. However, for specific reasons, the model does not present an appealing business case for either side (banks or agents).

Three years after adoption of the agency regulations, there were 5,617 agents (most of them lottery agents) that handled an average of 1.1 million transactions per month, with a value of over US$107 million. A majority of the transactions are utility bill payments. Only a few banks use agents to initiate account opening procedures (e.g., receiving customer applications and forwarding them to the institution) and disburse loans.

Most agents are located in Bogota, the nation’s capital, although 763 municipalities now have at least one agent. Citibank alone accounts for over 75% of the country’s agents, uses them almost exclusively for bill payments and deposits from existing customers. It successfully renegotiated contracts with utility companies to improve profits from utility bill payments.

Bancolombia, on the other hand one of the largest Colombian banks, has been working with agents for a few years before the agency regulation was issued. Its agents, known as PACs (Puntos de Atencion Cercana), promoted services and initiated account opening. (An agent would forward a client’s application; the client would then go to a branch to open the account and transact.) When the 2006 agency regulation came into force, 61 of the 240 PACs were transformed into agents. (Most likely, all will transform; however, the technology requirements are costly to implement.) Although this network is not as large as Citibank’s network, in April 2009, 43 percent of all agent transactions were done through Bancolombia agents and approximately 64.7 percent of the aggregate amount of all agent-handled transactions were channeled through Bancolombia agents.

The expansion of the agent banking model faces challenges that are generally related to costs and profitability:

- Deposit fees: In remote areas where private banks were commonly absent, the few existing agents deposited their excess liquidity in Banagrario, a government bank that owns the largest branch network in the country. Banagrario then charged high fees for this service, adding excessive costs to the agent business in rural areas.
• Cash handling is costly in some urban areas, too, where agents often hire expensive private cash transport companies to manage security challenges in a country still struggling with high crime levels. As of April 2009, approximately 77 percent of all agent transactions were cash-in transactions (deposits and bill payments), which shows the importance of cash handling costs.

Some banks remain wary of using agents. Generally, the banking sector has limited experience with agents, particularly with respect to managing agent liquidity and mitigating the risk of agent fraud. Banks are concerned that selecting, equipping, and training agents will require significant investment of time, money, and equipment. This perception is further aggravated by “traditional” agreements between banks and utility companies to not charge for bill payments, thereby depriving banks of a potential source of revenue in the agent business.

Other obstacles include the meager marketing support offered by banks to their agents and constant failure of the systems connecting banks and agents. Aware of such difficulties and perceptions, BDO has, since mid-2008, provided subsidies for banks to cover some aspects of the agent operation in the municipalities that lack financial services.

In Mexico, banks have been using agents for many years in Mexico, although the underlying regulatory framework has changed significantly over time. Until 1993, banks could use agents—known as comisionistas—to deliver a variety of services. The outsourcing was subject to the CNBV’s supervision and the bank was held responsible for the agent’s Acts. From 1993 until early 2008 banks were prohibited from using agents.

In December 2008, the CNBV issued its agency regulation pursuant to which banks may hire legal entities and individuals to deliver a wide array of services, subject to an authorization process that includes the submission of a full business plan for the agency business and the compliance with a suite of security and technological requirements set in complementary regulation applicable to electronic payments. Agency agreements cannot be subcontracted to third parties and may not have exclusivity clauses.

CNBV has the prerogative to conduct onsite inspections of agents in case it deems it necessary. The bank’s general manager is held responsible for complying with the agency regulations. Agency regulations impose a particular limitation: agents may only receive monthly deposits up to the equivalent of 50% of the bank’s average monthly deposits in the last 12 months. This limit does not allow the emergence of a bank that primarily operates through agents, but so far has not proved a real obstacle for the current players. Permission to use agents has not been extended to the popular finance sector (cajas).

Recently, Banxico issued a regulation on mobile accounts. Mobile accounts are accounts associated with a mobile phone number that permits relaxed identification and information requirements, provided that the accounts are subject to caps on the number and value of transactions. Banks can open these accounts via agents (including MNOs), and must produce a file with the clients’ name, birth date and address. Monthly deposits are limited to MXN 8,720 (2,000 UDI).
The accounts are divided into three categories reflecting varying AML/CFT (and security) risk: low transaction accounts, low risk accounts and unlimited accounts. Mobile accounts may fall into one of the two lower-risk categories (i.e., “low transaction” and “low-risk” accounts). The new regulations on types of electronic accounts are supposed to support three main business lines that may cater to the unbanked: mobile banking (no limits on transactions, high value payments), mobile payments (low value payments, with two levels of AML/CFT and security controls), and e-money (micro-payments, up to a balance of MXN 305.2 or 70 UDIs, without security control).

However, a 2007 law, effective since June 2008, introduced a tax on cash deposits and may jeopardize the development of agents in Mexico. The IDE (Impuesto a los Depósitos en Efectivo), is a 2% withholding tax that applies to all cash deposits in the banking system that accumulate above 25,000 pesos (US$1,947.6) within a month period for a single bank customer. This tax has a significant effect on agents: each agent’s operating account is subject to the IDE. Even though this tax is creditable towards annual income tax, many agents are likely to be informal, in which case this tax would represent a cost. In any case, this tax introduces complexity to the agent business.

**In Argentina**, BCRA is drafting a regulation to allow banks to use agents to deliver financial services through third-party establishments. The banking law does not define deposit-taking, but all entities carrying out habitual intermediation between demand and supply of financial funds are subject to prudential regulation and supervision by BCRA and cannot perform any other commercial activities. (Credit-only institutions, such as microfinance institutions (MFIs), credit card companies, and consumer finance companies are not regulated, supervised, or monitored by BCRA.)

The Banking Law and a general law on security set rigorous physical safety requirements for cash handling venues of financial institutions. The rules are tiered and get more demanding as more cash is handled at individual cash points. It is not clear whether these requirements would apply to agents. Although agents and their commercial establishments are, by definition, different from bank branches, conflicting interpretations regarding the applicability of branch safety requirements to agents could seriously threaten the development of branchless banking.

The success of future regulation in encouraging the use of agents will depend on how well that regulation balances risk-mitigation provisions (AML..) with openness, as well as the regulation’s timing. In addition, BCRA and some banks anticipate the possibility that agent employees will demand treatment equal to bank employees, especially with respect to wages (as has been the case in Brazil). This is a real concern given the political power of Argentine labor unions and the power of the labor law to supersede a future agency regulation.

**In Africa the development of agent regulation has been slower than in Latin America. In South Africa**, the South African regulatory framework gives wide discretion to banks to use nonbank third parties to offer banking services beyond their traditional branch network, either as agents or through outsourcing arrangements.
The Banks Act allows a bank to contract agents “to receive on [the bank’s] behalf from its clients any deposits, money due to it or applications for loans or advances, or to make payments to such clients on its behalf.” The only restriction is that a bank may not enter into an agency agreement until it has provisioned for the bank’s organizational extensions, purchase of a business, losses (including any loss suffered from a sale of assets), and bad debts.

A 2004 SARB circular was issued in response to questions by banks regarding proposed outsourcing arrangements. It provides guidance for outsourcing arrangements that could (i) have a bearing on the risk profile of a bank, (ii) affect the systems and control of a bank, (iii) be classified as being of strategic importance, or (iv) have implications for SARB and its supervisory duties.

The circular does not specify which bank functions may be outsourced, but it does prohibit the outsourcing of a bank’s compliance function and permits the outsourcing of the internal audit function only on a case-by-case basis. Furthermore, any outsourcing arrangement covered by the circular will be subject to SARB scrutiny.

The wide discretion accorded to banks in their use of agents has enabled banks to provide banking services outside traditional bank branches. However, requiring agents to perform in accordance with the internal policies and standards of the bank may result in the exclusion of smaller establishments that are more likely to be located in low-income areas but, unlike larger retailers, do not have the resources to satisfy the bank’s internal control and audit standards.

In Kenya, legislative initiatives in banking agents and AML/CFT signal policy makers’ keen interest in creating an enabling environment for branchless banking. The Government of Kenya is keenly aware that the existing legal and regulatory framework (including banking, payment systems, and telecommunications) is not optimal for the development or long-term growth of branchless banking models.

These initiatives include: (i) a 2008 regulation permitting microfinance deposit-taking institutions to use agents; (ii) a 2009 amendment to the Banking Act that permits banks to appoint agents to take deposits and perform other activities (currently drafted to be followed by detailed regulations); (iii) passage by Parliament in late 2009 of an AML/CFT bill, which applies to both bank and nonbank institutions. Unfortunately, the new bill poses potentially burdensome requirements on small-value transactions and remote account openings. (iii) In addition, a National Payments Systems bill is expected to enter the Parliamentary process in 2010 which will include the regulation of e-money.

With respect to non-depository MFIs, the Microfinance Act leaves it to the Ministry of Finance to prescribe regulations. Given that such institutions are not subject to any restrictions under the Microfinance Act itself, the ability of a credit-only MFI to use an agent depends on the common law of agency. Regarding other nonbanks’ use of agents, there are no specific restrictions under applicable Kenyan law.
Currently, none of the Kenyan commercial banks is using agents to conduct both cash-in and cash-out services. However, agents of Postbank (fully owned by the Kenyan Government) accept cash and pay out cash on behalf of Postbank.

Equity Bank is offering cash-out services at supermarkets, hotels, restaurants, and an assortment of other consumer outlets, but only in combination with the purchase of goods and subject to limitations on how much may be withdrawn in any one transaction. There is no fee charged to customers for the purchase of goods and services. There is a fee of KSh 25 (approximately US$0.32) for cash withdrawal.

A few new branchless banking services have recently sprung up in the area of money transfers. K-Rep Bank, in partnership with mobile service provider Zain and software provider Packetstream, has launched a money transfer service facilitated by point-of-sale (POS) terminals and with mobile phones facilitating data transfers.

A few MFIs that are preparing to apply for a deposit-taking license under the new Microfinance Act see branchless banking as an integral part of their growth strategy. Jamii Bora has already equipped all of its branches and field staff with POS terminals and its 250,000 members with magstripe cards.

In Asia, the development of agent regulation has also been slower than in Latin America. India is the country that has made the biggest effort in terms of agents regulation. Until 2006, banking activities could be conducted only by licensed banks and could not be outsourced. In 2006, RBI issued a circular that—for the first time—allowed banks to use third-party business correspondents (BCs) to deliver financial services outside bank branches. However, early experiments by banks have failed to reach significant scale, and more generally, banks’ interest in using BCs has been limited due in part to restrictions imposed by the circular. A 2009 revision to the circular removed some of the key restrictions, although it is not clear that banks see BCs as offering a compelling opportunity to grow their businesses.

Pursuant to the BC Circular issued by RBI in January 2006, 12 banks were permitted to use BCs for a variety of services: (i) identification of borrowers, (ii) collection and preliminary processing of loan applications including verification of primary information/data, (iii) creating awareness about savings and other products and education and advice about managing money and debt counseling, (iv) processing and submission of applications to banks, (v) post-sanction monitoring, (vi) disbursal of small-value credit, (vii) recovery of principal and collection of interest, (viii) collection of small-value deposits, (ix) sale of microinsurance and other third-party products, and (x) receipt and delivery of small-value remittances and other payment instruments. Pursuant to the BC Circular, banks are liable to their customers for their BCs’ acts of omission and commission.

While the BC Circular was an important step in facilitating bank-based branchless banking models, it also placed restrictions on the model, including (i) limiting the institutions eligible to operate as BCs to nonprofit institutions, post offices, and cooperatives and (ii) prohibiting banks from charging customers for services rendered by BCs, thereby preventing cost recovery and limiting available funds for fees to BCs.
On 30 November 2009, RBI issued significant revisions to the 2006 Circular. First, the revisions permit banks to charge customers “reasonable fees” for using BCs under Board-approved policies, a change that improves the business case for banks and should enable better compensation for BCs, particularly as they expand the range of services offered.

Second, the revisions expand the scope of permissible BCs to include individual “kirana”, medical, and fair price shop owners; individual Public Call Office (PCO) operators; individuals who are petrol pump owners; agents of small savings/insurance schemes; retired teachers; and functionaries of well-run SHGs linked to banks. NBFCs were notably absent from the new list of permissible BCs, despite being recommended for inclusion by the working group. Many believe that MFI NBFCs would be well poised to reach underserved customers on behalf of banks, given their extensive existing physical infrastructure and customer relationships. However, RBI appears to be concerned about commercial entities making a profit based on charges imposed on the poor, and consequently opted against NBFCs as BCs.

Third, the revisions make allowances for reaching the highly underserved northeastern regions, including exemption processes for permissible BC entities and from certain accounting standards. Also, earlier in April 2009, RBI had increased the maximum distance permitted between the place of business of a BC and the bank branch, from 15 kms to 30 kms, further facilitating the expansion of BCs.

In Indonesia, the Bank of Indonesia (BI) does not permit banks to provide financial services through agents (other than limited payment services for existing customers in regions that are already serviced by a bank’s branch), notwithstanding ambiguities in the law that could be interpreted otherwise, as acknowledged by BI. Indeed, Payment points are a form of branchless banking, namely a bank providing services through a nonbank agent. However, they are subject to two major limitations. First, payment points are restricted to the same region in which the parent bank branch is located, which curtails the potential to reach very remote customers. Second, the benefit is reserved for already existing customers.

There are also restrictions on nonbanks’ use of agents, including the requirement that any agent offering money transfer or cash withdrawal services be licensed as a money transferor. These restrictions limit the ability to achieve the necessary scale to make a low-value transaction business sustainable.

Furthermore, banks are not allowed to outsource know-your-customer (KYC) account-opening procedures, thereby precluding customer acquisition beyond the reach of bank branches. In addition, the KYC rules for account opening and financial transactions by non-banks engaged in the provision of financial services are costly and, for some providers, not feasible.

In the Philippines, the most significant regulatory obstacle to the further growth of branchless banking has been the restrictions placed on both banks’ and nonbanks’ use of agents. Banks are not allowed to outsource their inherent banking functions to third parties, nor their ‘Know Your Customer’ (KYC) responsibilities, although the BSP is considering the possibility of permitting agents to perform KYC.
As a result, the commercial banking sector has been slow in taking banking beyond traditional bank branches, due primarily to these limitations on banks’ use of agents. However, the strong government emphasis on microfinance is starting to change the traditional market focus of commercial banks, creating a strategic imperative to explore branchless banking models.

One of the strongest drivers of interest in branchless banking is the large flows of international remittances into the country by overseas Filipino workers (OFWs). Nonbanks may use remittance agents only for distribution of payments and for KYC. However, certain requirements imposed on agents have inhibited the signing up of agents. With recent regulatory changes (including the permitting of mass licensing) the situation is already changing dramatically. For example, remittances agents strategy of G-Cash and Smart will change with mass registration of 15,000 new GCash agents accredited by the BSP; also new Smart agents are expected to be registered in the next couple of months.

Converting cash into electronic value, and vice versa, is a key feature for clients living in a largely cash-based economy. Yet until 2009, the network of places where GCash and Smart Money customers could do so was limited. Until 2009, there were only approximately 5,000 agents that could do cash-in/cash-out, with many servicing as agents of both companies.

Regulation was cited as a primary reason for limited growth in the number of agents. Initially, agent registration required attending a one-day training which was not widely available outside Manila. Since 2008, the Central Bank has allowed GXI and Smart Money each to conduct its own training. Both companies can also fly out some of their specialized instructors to train merchants outside of Manila. In addition to the training requirement, the documentary requirements imposed on agents (e.g., audited financial statements) is difficult for some smaller merchants to comply with.