

# Nonbank E-Money Issuers: Regulatory Approaches to Protecting Customer Funds

**M**-PESA, Kenya's mobile phone-based money transfer service, exploded onto the scene in 2007. In just three years, it has attracted over 9.5 million customers, in a country with only 8.4 million bank accounts. Every month, more than US\$320 million flows through M-PESA in person-to-person transfers, and the numbers keep rising. By nearly all accounts, M-PESA has been an admirable success and has expanded access to basic financial services to millions of underserved Kenyans.<sup>1</sup> M-PESA has captured the world's attention not only because of its success, but also because it is offered by an unlikely financial services provider—Safaricom, Kenya's largest mobile network operator.

The success of Kenya's M-PESA has raised the question of how most effectively to regulate nonbanks (See Box 1)—most notably mobile network operators (MNOs)—who contract directly with customers to issue electronic value against receipt of equal funds ("e-money").<sup>2</sup>

MNOs like Safaricom are well-placed to reach customers with affordable financial services due to their existing customer base, marketing capabilities, physical distribution infrastructure, and experience with high-volume, low-value transactions (e.g., the sale of airtime) (Ivatury and Mas 2008). Yet, despite these

advantages, regulators are often reluctant to permit MNOs to directly contract with customers for the provision of financial services. Taking money from the public, even for purposes of effecting payment rather than for saving, is uncomfortably close to accepting public deposits—an activity almost always reserved for prudentially regulated financial institutions, such as commercial banks. Funds kept with such banks<sup>3</sup> are protected by strict prudential requirements (and related supervision) to ensure systemic stability and deposit security, and these same requirements would typically apply to electronic value issued by banks in exchange for deposited funds.<sup>4</sup>

Nonbanks are rarely subject to the kind of prudential regulation that apply to banks, so when nonbanks issue e-money, regulators are understandably concerned about ensuring adequate protection for customer funds.

In recent years, however, policy makers around the world have noticed how nonbank e-money issuers could significantly promote financial services among low-income populations. Perhaps as a result, a number of policy makers around the world have issued regulations expressly permitting nonbanks to contract directly with customers for the issuance of e-money.<sup>5</sup> From Afghanistan to the Philippines, West

1 According to Vodafone, a parent company of Safaricom, at least 50% of current M-PESA users are unbanked.

2 In this Focus Note, "e-money" refers to electronically recorded value issued against the receipt of equivalent value. The electronic value, once issued, may be redeemed for cash, transferred between customers, or used by a customer to make payments to merchants, utility companies, and other parties. E-money may be issued by banks or nonbanks, but the term is used herein to refer to electronic value issued by nonbanks.

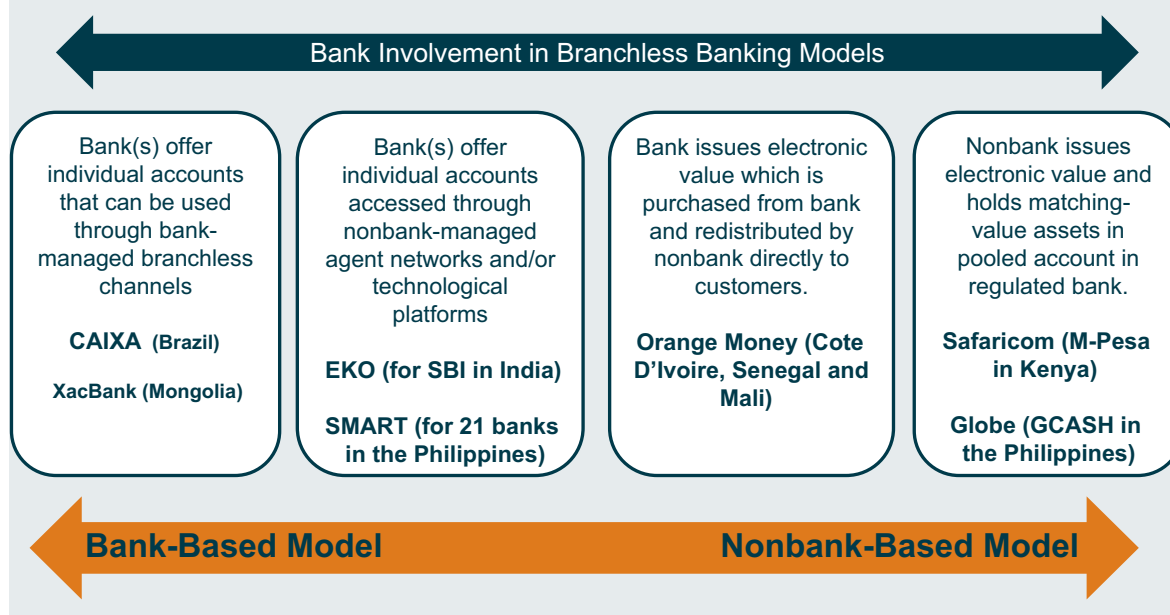
3 The term "bank" as used in this Focus Note refers to any supervised and prudentially regulated financial services institution that is commonly, but not always, a bank.

4 E-money issued by regulated financial institutions is not always subject to the same prudential protections (such as deposit insurance) afforded deposits.

5 A number of other countries, such as Kenya and Cambodia, have not issued e-money regulations but have nevertheless permitted such nonbank models on an ad hoc basis through "no objection" letters, conditional approvals, or other means.

### Box 1. Bank-based versus nonbank-based

The term “nonbank” refers to a nonprudentially regulated institution. (See Christen, Lyman, and Rosenberg 2003.) While the distinction is often made between bank-based and nonbank-based models of branchless banking, the reality is less binary: both banks and nonbanks typically play roles in any branchless banking scheme. In a bank-based model, customers have a direct contractual relationship with a licensed financial institution (even though a customer may deal exclusively with nonbank agents who conduct transactions on the bank’s behalf). In a nonbank-based model, the customer does not have a direct contractual relationship with a licensed bank, and instead exchanges cash for electronic value recorded in a virtual account on the server of a nonbank, such as an MNO or an issuer of stored-value cards. (See Lyman, Pickens, and Porteous 2008.) While this distinction is still useful in delineating two different legal models, it should be clarified that even in bank-based models, there is still typically an active role for nonbanks—and vice versa. The graphic below gives a sense of the range of ways banks may be involved in branchless banking schemes.



Africa to the European Union, jurisdictions around the world have adopted regulation that enables a leading role for nonbanks—while mitigating the risks presented by the involvement of a service provider that is not subject to full prudential regulation.

This Focus Note reviews global regulatory approaches to protecting customer funds in the context of nonbank e-money issuers. Most every regulatory approach includes provisions

for “fund safeguarding”—the requirement that nonbanks maintain unencumbered liquid assets equal to the amount of issued electronic value—and other measures to ensure availability of funds when redeemed by customers against electronic value. Some regulatory approaches also include “fund isolation”—the requirement that the funds underlying issued e-money be insulated from institutional risks of claims by issuer creditors, such as claims made in the case of issuer bankruptcy.<sup>6</sup>

<sup>6</sup> This Focus Note focuses on those regulatory measures that are intended primarily to protect customer funds in schemes involving nonbank issuers. However, other regulations not discussed here may be intended at least partly to protect customer funds. For example, minimum initial capital requirements found in some regulations may screen out unfit service providers or ensure an adequate financial cushion in event of trouble, mitigating the risk of provider failure or bankruptcy. Similarly, regulation in Afghanistan requires service providers to post bond as a condition of launching, in part to cover potential customer claims. Finally, some regulators require service providers to offer e-money services as a sole business line or from a separate legal entity to facilitate regulator supervision and to insulate the e-money business from institutional risks posed by other activities.

## Fund Safeguarding

Fund safeguarding measures are aimed at ensuring that funds are available to meet customer demand for the “cashing out” of electronic value.

### Liquidity

In countries that have permitted nonbank issuance of e-money, regulators have typically addressed fund safeguarding concerns by requiring that such issuers maintain liquid assets equivalent to the total value of the customer funds collected (i.e., the total value of electronic value issued and outstanding, also known as the “e-float”).<sup>7</sup> Liquid assets are most often required to be maintained as accounts with a prudentially regulated bank but sometimes they may be maintained as other “safe assets,” such as government securities, although such securities may not always be as liquid as bank accounts.<sup>8</sup> Liquidity requirements exist in Indonesia, Afghanistan, the Philippines, Cambodia, Malaysia, India (in connection with prepaid payment instruments), and others. (See Table 1.) In Kenya, where applicable regulation is currently being drafted, Safaricom maintains fund liquidity by placing collected cash in prudentially regulated banks pursuant to a prior agreement with the Central Bank of Kenya (CGAP 2010).

## Restrictions on Use

Liquidity requirements are sometimes reinforced by restrictions on the use of customer funds by the nonbank issuer—for example, by prohibiting issuers from using the funds to finance operating expenses. In Malaysia, for example, issuers are expressly prohibited from using such funds for any purpose other than “cashing out” against electronic value or executing funds transfers to third parties pursuant to customer request. Other limitations on the use of customer funds are more indirect. The Philippines expressly prohibits nonbank issuers from engaging in the extension of credit, effectively ensuring customer funds are not endangered through intermediation by an entity that is not fully prudentially regulated.

### Diversification of E-Float Fund Holdings

Funds held in prudentially regulated banks are not risk-free, as has been painfully proven by the recent financial crisis. When banks fail, they cannot always pay their depositors, often leaving small-value depositors to pursue recovery through deposit insurance schemes. In countries with weak banking sectors there is an even greater risk of bank failure coupled with the possibility that no deposit insurance exists. However, even where deposit insurance exists, the value of pooled accounts held

<sup>7</sup> Note that this is a more stringent requirement than imposed on deposit-taking financial institutions, which are typically subject to reserve requirements mandating only some small portion of overall deposits to be kept in liquid form (typically cash) to satisfy potential depositor claims. This difference in treatment reflects a fundamental difference among banks, nonbank service providers, and their respective business models. A bank’s business is predicated on the ability to intermediate capital, i.e., take money from those who have it and provide it (in loans or other products) to those who need it. Nonbanks, on the other hand, are expressly prevented from intermediating deposits and thus must make money in other ways, such as transaction charges, lowered airtime distribution costs, and reduced customer churn.

<sup>8</sup> In West African countries under the jurisdiction of the Banque Centrale des Etats de L’Afrique d’Ouest (BCEAO), regulation also permits funds to be invested in securities issued by registered companies. (See Table 1)

Table 1: Nonbank E-Money Issuers: Global Approaches to Protecting Customer Funds\*

	Fund Safeguarding	Restrictions on Fund Use	Isolation Measures	Other Risk Mitigants
<b>Afghanistan</b> (Amendment to the Money Service Providers Regulation to Extend Regulatory Oversight to E-Money Institutions, 25 November 2009)	At all times, an e-money issuer must maintain liquid assets to at least 100% of e-float. (Section 2.5.5.1)  Liquid assets consist of the sum of AFN-denominated banknotes and coins, held in a trust account at a banking organization (full-fledged bank licensed or permitted by Da Afghanistan Bank. (Section 2.5.5.1)		Liquid assets must be held in trust account at a banking organization (full-fledged bank licensed or permitted by Da Afghanistan Bank). (Section 2.5.5.1)	If total electronic value liabilities are greater than AFN 250 million, no more than 25% of liquid assets can be held at a single banking organization. (Section 2.5.5.2)  If total electronic value liabilities are less than AFN 250 million, the e-money issuer is expected to observe prudent diversification of its liquid assets across financial institutions. (Section 2.5.5.3)
<b>BCEAO</b> (Instruction No. 01/2006/SP (31 July 2006) Relative a l'Emission de Monnaie Electronique et aux Etablissements de Monnai Electronique)	E-money issuers shall maintain investments of an amount at least equal to their financial liabilities related to debt representing the e-money issued and only in assets listed below: a) Cash deposits in a bank b) Bonds issued by the central government or its entities or by the central bank c) Securities (i) other than those referred to in point b above and (ii) issued by companies licensed by the Regional Council of Public Saving and Capital Markets, other than companies that have qualifying equity in the e-money issuer concerned or which must be included in the consolidated accounts of those enterprises. (Article 18.1)			Commercial activities of e-money issuers are limited to the provision of services related to the issuance, the provision or management of e-money, and the storage of data on electronic devices on behalf of other corporations. (Article 9)
<b>Indonesia</b> (Bank Indonesia Regulation Concerning Electronic Money, No. 11/12/PBI/2009, 13 April 2009)  (Circular Letter Concerning E-Money, No. 11/11/DASP, 13 April 2009)	In the case the issuer is an institution other than a bank, managed float funds must be placed with a commercial bank in the form of a deposit account, consisting of savings account, current account, and/or time deposit account.	Issuer can use float funds only in the interest of liability fulfillment for e-money holders. Float funds may not be used for financing activities beyond the liabilities toward the respective holders such as financing issuer operations. (Circular Letter, Section VII.H.3)		License required only if float totals or is expected to total 1 billion IDR (approx. US\$110,000). (Circular Letter, Section VII. B.1.a)

<p><b>Malaysia</b> (Guideline on Electronic Money BNM/RH/GL -16-3, July 2008)</p>	<p>“Float funds placed at a commercial bank... must total 100% of the funds derived from sales proceeds of electronic money that represent the Issuer’s liability towards e-money holders...” (Circular Letter, Sections VII. H.1 &amp;2)</p>	<p>To avoid commingling of funds, the funds collected from users should be deposited and managed separately from the issuer’s working capital funds. (Article 10.1)</p> <p><b>Large E-money Issuer</b> (MYR 1 million or more for six consecutive months) An issuer of a large e-money scheme should deposit the funds collected in exchange of the e-money issued in a trust account with a licensed institution. Such funds can be used only to refund to uses and effect payment to merchants. (Article 10.2(b))</p> <p>Funds may be invested only in high-quality liquid ringgit assets that are limited to deposits made with licensed institutions, debt securities issued or guaranteed by the Federal Government and Bank Negara Malaysia, Cagamas debt securities, and other instruments as may be specified by Bank Negara Malaysia. (Article 10.2 (c))</p> <p><b>Small E-money Issuer</b> An issuer of a small e-money scheme shall place funds collected in exchange for the e-money issued in a deposit account with a licensed institution, separated from its other accounts, and should be managed by the issuer in a matter akin to a trust account arrangement. The funds deposited can be used only to refund users and effect payment to merchants, and the funds shall not be invested in any form of assets other than as bank deposits. (Article 10.3)</p>	<p>Issuers of large e-money schemes who are unable to restrict their activities to e-money business only shall deposit and maintain an additional 2% of their outstanding e-money liabilities in the trust account at all times. (Article 10.2(f))</p> <p>An issuer of e-money shall not use the money collected to extend loans to any other persons. (Article 13.1(iii))</p>
<p><b>Philippines</b> (Circular 649, 9 March 2009)</p>	<p>The e-money issuer should have sufficient liquid assets equal to the amount of outstanding e-money issued. The liquid assets should remain unencumbered and may take any of the following forms:</p> <ol style="list-style-type: none"> <li>1. Bank deposits separately maintained for liquidity purposes</li> <li>2. Government securities set aside for the purpose</li> <li>3. Such other liquid assets as the BSP may allow. (Section 5.D)</li> </ol>		<p>E-money issuers shall engage only in the business of e-money and other activities related or incidental to the business of e-money such as money transfer/remittances. An existing entity engaged in activities not related to the business of e-money but wishing to act as an e-money issuer must do so through a separate entity duly incorporated exclusively for such purpose. (Section 5.B)</p> <p>Nonbank e-money issuers shall not engage in the extension of credit. (Section 5.C)</p>

\*Information in this table is based in part on unofficial English translations of relevant regulation. It is not intended as legal guidance or opinion, and reference should always be made to the original text.

by nonbank e-money issuers is typically much larger than deposit insurance coverage limits, leaving the issuer and customers more exposed in the case of bank failure. Afghan regulators sought to minimize the risk of bank failure by requiring that when any e-money issuer's e-float exceeds a specified amount, no more than 25 percent of the cash funds backing such float may be held in a single financial institution. No regulations outside of Afghanistan expressly require such diversification as protection against bank failure, though the trustee of the M-PESA trust account in Kenya independently chose to minimize risk by dividing the cash backing M-PESA's e-float among more than one bank.

## Fund Isolation

Liquidity requirements, coupled with other restrictions on use, may prove to be effective mechanisms for fund safeguarding.<sup>9</sup> However, funds may still be at risk if the customer's ownership of the funds is unclear.

While funds can be safeguarded in accounts of prudentially regulated institutions, such funds are often pooled and held in the name of the issuer—not in the name of the customers. Therefore, the nonbank issuer is often the legal owner of the accounts, thereby making the underlying funds vulnerable to claims by the issuer's creditors if the issuer goes bankrupt or if accounts have been used as collateral to secure specific debts of the issuer.

In Kenya, M-PESA customers are isolated from creditor claims and other ownership threats by the use of a trust account that is administered by a third-party trustee and held for the benefit of M-PESA customers. However, other jurisdictions, particularly those jurisdictions where trust accounts do not exist, do not provide the same protections. Indonesia, for example, mandates certain fund safeguarding measures but the bank accounts holding the funds are in the name of the nonbank issuer. This is also the case in practice in Cambodia, although Cambodian regulators are reportedly considering regulation to replicate the protections afforded by the trust account structure in Kenya. Malaysia requires that customer funds be deposited and managed separately from the issuer's working capital funds but while such separate management facilitates supervision of an issuer's compliance with fund safeguarding requirements, it (like in Indonesia and Cambodia) does not isolate customer funds from claims by the issuer's creditors.

Even when nonbank issuers successfully isolate customer funds, mechanisms are needed whereby customers can retrieve funds in the event of issuer failure or other event requiring mass conversion of electronic value into cash.

## Emerging Issues

E-money models are still in their infancy. As these models gain traction and expand, other regulatory

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<sup>9</sup> Another safeguarding measure is insurance. The European Union (EU), for example, permits safeguarding of funds through insurance. EU Directive 2007/64/EC permits nonbank e-money issuers in lieu of liquidity provisions, to insure or comparably guarantee the funds backing e-float in an amount payable in the event that the nonbank issuer is unable to meet its financial obligations. EU Directive 2007/64/EC, Article 9.1(c) incorporated by reference from Article 7.1 of EU Directive 2009/110/EC (2009). Insuring deposits is not a safeguarding measure adopted so far in developing countries.

challenges will arise, including (i) whether to treat e-money as savings products (rather than as simply funds transfer) and (ii) how to level the playing field among different kinds of entities offering similar services.

## E-Money Platforms as Savings Products

E-money and other branchless banking services in developing economies have demonstrated their potential to bring millions of unbanked customers into the financial system. At present, the use of e-money is mostly limited to making payments. The hope is that e-money's reach will eventually include other financial services, chiefly savings, which may be of even more benefit to customers. Consequently, regulators may soon confront questions about whether e-money accounts should enjoy the same benefits and protections as bank accounts. These include the following questions:

- *Should e-money issuers be permitted to pay interest on e-money accounts?* Most regulatory authorities consider the payment of interest a feature of a bank deposit and consequently ban interest payments on e-money in an effort to clearly delineate between banking activity and payment services. However, this distinction between payments and banking activity is of

questionable legal merit. Because deposit taking is often an activity reserved for prudentially regulated and licensed banks, regulators and nonbank e-money issuers have embraced the argument that nonbank e-money issuance is simply a payment mechanism and not a bank deposit. However, collecting repayable funds from the general public is arguably a "deposit" regardless of whether it is collected by a bank or payment services provider (Tarazi 2009). As e-money is increasingly used as a savings vehicle, and as there is evidence that customers desire to earn interest,<sup>10</sup> regulators may be forced to re-evaluate perceived risks and reconsider permitting nonbank e-money issuers to pay interest<sup>11</sup> earned on pooled accounts.<sup>12</sup>

- *Should the funds backing the e-float be covered by deposit insurance schemes?* In most developing country frameworks, e-money is not considered a deposit and, thus, is not covered by deposit insurance. This is the case, for example, in Filipino and Afghan regulation. However, as discussed, to the extent underlying customer funds are kept in bank accounts, such funds are exposed to the risk of bank failure. Even in circumstances where deposit insurance exists, the value of pooled accounts is often much higher than the applicable deposit insurance coverage limits. As

<sup>10</sup> The additional service most desired by M-PESA users (38%) is "earning interest" (Pulver 2009).

<sup>11</sup> Some regulators have argued that it is important that any payment of interest be simply a "pass through" from the bank where pooled accounts are held to the end user. Such regulators fear that permitting an e-money issuer to pay interest or interest equivalent on its own could encourage e-money issuers to make unsound investments with its working capital (or pooled customer funds if such pooled funds are not adequately isolated) in order to pay out competitive rates of interest. However it is unclear why paying interest would encourage unsound investment any more than any other cost of the issuer. And provided the funds backing the e-money float are adequately safeguarded and isolated, the risk to end users is arguably minimal.

<sup>12</sup> As interest accrued on the trust account established for M-PESA customers, Safaricom negotiated with Kenyan regulators to be able to use the interest for charitable purposes. Kenyan authorities did not allow the interest to be passed through to the customers whose funds actually earned the interest for fear that the payment of interest would make M-PESA a banking service rather than a payments service, requiring Safaricom to obtain a bank license and be subject to full prudential regulation.

electronic value offerings grow in volume and popularity, and as evidence mounts that e-money schemes are increasingly being used as savings vehicles,<sup>13</sup> regulators may want to consider extending deposit insurance protection at the level of individual customer e-money balances or alternatively raise the ceiling for pooled accounts.<sup>14</sup> Many developed countries already provide such deposit protection. The United States, for example, expressly characterizes the funds underlying stored-value cards as “deposits” covered by deposit insurance as long as such funds are placed in an insured institution (FDIC 2008).

## Level Playing Field

As new business models emerge and nonbank actors enter the financial services market, regulators are challenged to create a regulatory scheme that, to the extent possible, levels the playing field for service providers regardless of legal form. For example, Kenya’s banking agent law holds banks legally liable for their agents, but nonbank e-money issuers like Safaricom are not similarly liable. The discrepancy arguably disadvantages banks though some argue that the higher level of bank liability is justified since bank agents can engage in a fuller array of financial services, whereas M-PESA is considered simply a funds transfer/payments mechanism.

Countries such as the Philippines, Nigeria, and Afghanistan attempt to create level playing fields by regulating e-money as a service, pursuant to a single regulation and under a single regulator (as opposed to regulating the different service providers based on legal form). Nevertheless, these countries do include separate provisions in relevant e-money regulation aimed at addressing the risks presented (such as fund safeguarding) by nonbank participation in the e-money sector.<sup>15</sup>

## Conclusion

The arrival of mobile telephony and innovative technology is forcing regulators to re-evaluate their rules for financial service provision. Nonbanks like MNOs may be well-placed to dramatically expand the reach and range of financial services for the poor and unbanked. The challenge is to craft policies and regulations that mitigate the risks to customer funds without stifling the dynamism, creativity, and potential of these new actors.

Forward-thinking regulators in several countries have crafted innovative approaches to meet this challenge. Policies related to fund safeguarding and isolation allow regulators to meet their goals of customer protection and financial inclusion.

Enabling the entry and leadership of nonbanks need not be a threat to the central role of banks in

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13 In the Philippines, an estimated 10% of unbanked users save an average of US\$31 (one-quarter of their family savings) in the form of e-money (Pickens 2009). In addition, nearly a third of banked customers in Kibera, Kenya, keep a balance in their M-PESA account, and a fifth of the unbanked interviewees in Kibera use M-PESA as a substitute for informal methods of savings, especially keeping money at home. See Morawczynski and Pickens (2009).

14 On the other hand, deposit insurance is usually funded by premiums paid by participating financial institutions, which typically pass these costs along to their customers. Thus, inclusion of e-money issuers in a deposit insurance system may make their services slightly more expensive.

15 Creating a level playing field is often complicated by regulatory overlap and the risk of coordination failure between relevant authorities or even between different departments of the same government institution. For example, the banking supervision department of a central bank may prohibit banks from engaging in an activity that is permitted to MNOs by the payments department of the same central bank.



emerging market financial systems. Indeed, we are already witnessing how nonbank-based models like M-PESA may actually liberate financial institutions to innovate over the “rails” laid down by MNO pioneers—a recent partnership between Safaricom and Kenya-based Equity Bank launched M-KESHO, a product using M-PESA’s platform and agent

network to provide an expanded set of banking services—interest-bearing accounts, loans, and even insurance. Such partnerships may very well mark the next phase of branchless banking, cementing the role of nonbanks in the delivery of a full array of financial services to those currently underserved by traditional banking models.

## References

CGAP. 2010. "Research Note on Regulating Branchless Banking in Kenya, 2010 Update." [http://www.cgap.org/gm/document-1.9.42400/Updated\\_Notes\\_On\\_Regulating\\_Branchless\\_Banking\\_Kenya.pdf](http://www.cgap.org/gm/document-1.9.42400/Updated_Notes_On_Regulating_Branchless_Banking_Kenya.pdf)

Christen, Robert, Timothy Lyman, and Richard Rosenberg. 2003. *Guiding Principles on Regulation and Supervision of Microfinance*. Consensus Guidelines. Washington, D.C.: CGAP.

FDIC Financial Institutions Letters. 2008. "Insurability of Funds Underlying Stored Value Cards and Other Nontraditional Access Mechanisms, New General Counsel's Opinion no. 8." Washington, D.C.: FDIC, 13 November.

Ivatury, Gautam, and Ignacio Mas. 2008. "The Early Experience with Branchless Banking." Focus Note 46. Washington D.C.: CGAP

Lyman, Timothy, Mark Pickens, and David Porteous. 2008. "Regulating Transformational Branchless Banking." Focus Note 43. Washington, D.C.: CGAP, January.

Morawczynski, Olga, and Mark Pickens. 2009. "Poor People Using Mobile Financial Services: Observations on Customer Usage and Impact from M-PESA." Brief. Washington, D.C.: CGAP, August. [http://www.cgap.org/gm/document-1.9.41163/BR\\_Mobile\\_Money\\_Philippines.pdf](http://www.cgap.org/gm/document-1.9.41163/BR_Mobile_Money_Philippines.pdf)

Pickens, Mark. 2009. "Window on the Unbanked: Mobile Money in the Philippines." Brief. Washington, D.C.: CGAP, December 2009. [http://www.cgap.org/gm/document-1.9.41163/BR\\_Mobile\\_Money\\_Philippines.pdf](http://www.cgap.org/gm/document-1.9.41163/BR_Mobile_Money_Philippines.pdf).

Pulver, Caroline. 2009. "The Importance and Impact of M-Pesa: Preliminary Evidence from a Household Survey." Kenya: FSD Kenya, June.

Tarazi, Michael. "E-Money Accounts Should Pay Interest, So Why Don't They?" Blog post. <http://technology.cgap.org/2009/03/17/e-money-accounts-should-pay-interest-so-why-dont-they/>



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