DIGITAL ECONOMY

Protection of Customers' Funds in Electronic Money: a myriad of regulatory approaches

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In 2014, only 62% of adults in the world had a bank account, according to the latest "Global Findex" Survey[1] by the World Bank. This percentage falls to 54% when considering developing economies only, although there are also wide disparities among them (from 14% in the Middle East to 69% in East Asia and the Pacific region). The high percentage of unbanked population has turned the promotion of financial inclusion into a priority, recognised both by national governments and global standard setters. Special attention is being given to the use of digital financial services to advance in this crusade.

In this framework, electronic money can be a powerful tool to advance financial inclusion. Electronic money can be broadly defined as a stored value or prepaid product in which a record of funds or value available to the consumer for multipurpose use is stored on an electronic device (which might be a prepaid card, chip or mobile phone) owned by the consumer[2]. Electronic money is accepted as a means of payment by third parties other than the provider and can be transferred between users and converted back into cash.

Electronic money: opportunities and pitfalls

The possibility of leveraging technology to promote access to financial services can increase the speed, enhance safety and reduce the cost of financial transactions. However, according to the Global Findex in 2014 only 2 percent of adults in the world were using mobile money, with Sub-Saharan Africa being the clear exception to this global picture. In this region, a third of the population owning an account (12% of adults) had a mobile money account. Still, the phenomenon is expanding to other regions, and many developing countries have regulated this activity in the past years.

Like all financial services, electronic money presents risks that need to be addressed. In the aforementioned national regulatory efforts, countries have followed a myriad of approaches to ensure that customers (i) are effectively protected against loss of their funds in the event of insolvency of the issuer or other involved party (**insolvency risk**) and (ii) are able to access their funds upon demand (**liquidity risk**).

Insolvency risk arises from the possibility that customers' funds are used to meet the issuer's obligations in the event of bankruptcy. Therefore, regulation must ensure that customers' funds are effectively ring-fenced from the issuer's assets and cannot be seized by its creditors in the event of insolvency. Furthermore, in a typical electronic money model in which the issuer holds customers' funds in a bank account, those funds should also be protected from the insolvency of the custodian bank.

The remainder of this Watch analyses the variety of regulatory responses to these risks in a sample of 15 countries, covering developed and developing economies in different regions. Additional information and relevant legislation for each country can be found in the Annex.

1: Demirguc-Kunt, A. et al. (2015). *The Global Findex Database 2014. Measuring Financial Inclusion around the World.* World Bank Policy Research Working Paper.
2: Bank for International Settlements (2004). *Survey of developments in electronic money and internet and mobile payments*

Protection against loss: different regulatory approaches

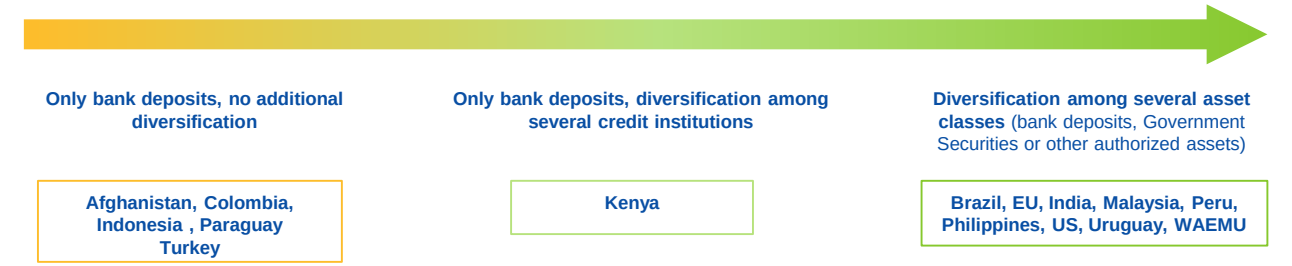
Liquidity risk

Regulators ensure that customers are protected against liquidity risk by requiring e-money providers to always maintain a strict 1:1 ratio between e-money and customers' funds. In this way the provider will always have enough funds to meet customers' cash-out demands. Regulators also impose restrictions on the use of the funds. As a result, **electronic money providers cannot intermediate the funds** received (i.e. engage in the provision of credit).

A key prudential requirement typically imposed by regulators on financial institutions is to set aside a percentage of their assets in liquid, safe instruments to ensure they are able to meet customers' demand for reimbursement. In the case of non-bank electronic money issuers, most regulators require them to **hold funds equal to 100% of the electronic money float in safe, liquid investments**. The instruments chosen vary per country, although in most cases e-money providers are required to deposit the funds in an account with one or more prudentially regulated financial institutions. However, some countries prefer more diversification and require providers to invest the funds in other safe, liquid assets such as government securities, in addition to bank accounts. This is the case for instance in India, the US and in several Latin American countries such as Peru, Brazil and Uruguay.

The European Union is an exception to the above, as it allows e-money issuers not to deposit an amount equivalent to 100% of outstanding electronic money liabilities in a separate bank account provided any unfunded liabilities are **safeguarded by private insurance**. However, this option is not likely to be feasible in many developing economies where insurance markets are not sufficiently developed.

Figure 1
Permissible investments for electronic money funds. Level of diversification set out in regulation



Source: BBVA Research based on national legislation

Risk of insolvency of the electronic money institution

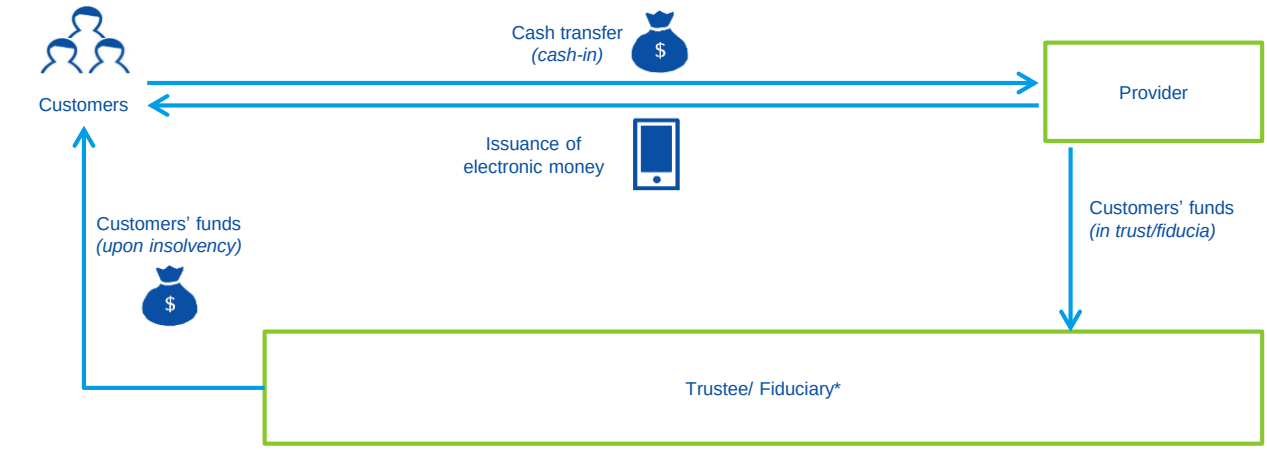
As explained above, most countries require providers to hold an amount equivalent to 100% of the e-money funds in safe, liquid assets. However, this might not be sufficient to guarantee that customers will be reimbursed for the full value of their funds in the event of the issuer's insolvency. Without additional provisions to protect the funds, customers would only have an unsecured claim on the issuer's assets. To counter this, most electronic money regulators include a requirement to **isolate and ring-fence customer funds from the issuer's assets**, so that they cannot be seized by external creditors. The legal form chosen to implement this ring-fencing will be determined by the country's legal system, and whether it follows a common law or continental civil law tradition.

Common law countries follow the legal concept of trust. A trust is a legal instrument whereby one person (the provider) transfers property to another (the trustee), who manages the property (customers' funds) for the benefit of one or more beneficiaries (the electronic money customers). In this context, the trustee could be

the electronic money provider itself or any individual or legal entity that becomes responsible for managing the customer funds. Under this scheme, the trustee holds the funds on behalf of the customers, but legally, ownership of the funds remains with the customers. **The key point is that funds held in the trust are no longer considered assets of the provider and are separated from other assets of the trustee.** Therefore, funds placed in the trust cannot be used to meet the obligations of the provider in the event of bankruptcy. This provision is included in the e-money regulations of countries such as Kenya, Afghanistan and the US. In contrast, in other countries where the trust is available in the national legal system, there is no specific requirement to use it for the purposes of electronic money. This is the case of India.

In civil law countries, the choice of mechanism for isolating and ring-fencing electronic money funds is less evident, as usually they do not incorporate the legal concept of trust. Nevertheless, several civil law countries have followed an alternative under the form of fiduciary contracts (from the Latin *fiducia*). In the context of electronic money, the relationships are quite similar to those of the trust[3]: one party (the provider) conveys property to another (the fiduciary) and the latter agrees to use that property for a specific purpose. Under this scheme, the fiduciary agrees to transfer the assets (the customers' funds) back to the beneficiaries (the customers) upon insolvency. As in the previous case, the provider of the electronic money may act as the fiduciary or a third party (such as a bank) may serve as the fiduciary institution. **The *fiducia* has largely been used in Latin American countries, where it is known as *fideicomiso*.** In the context of e-money it has been used in Paraguay, Peru and Uruguay.

Figure 2
Ring-fencing arrangements (trust and fiduciary contracts) in the context of electronic money



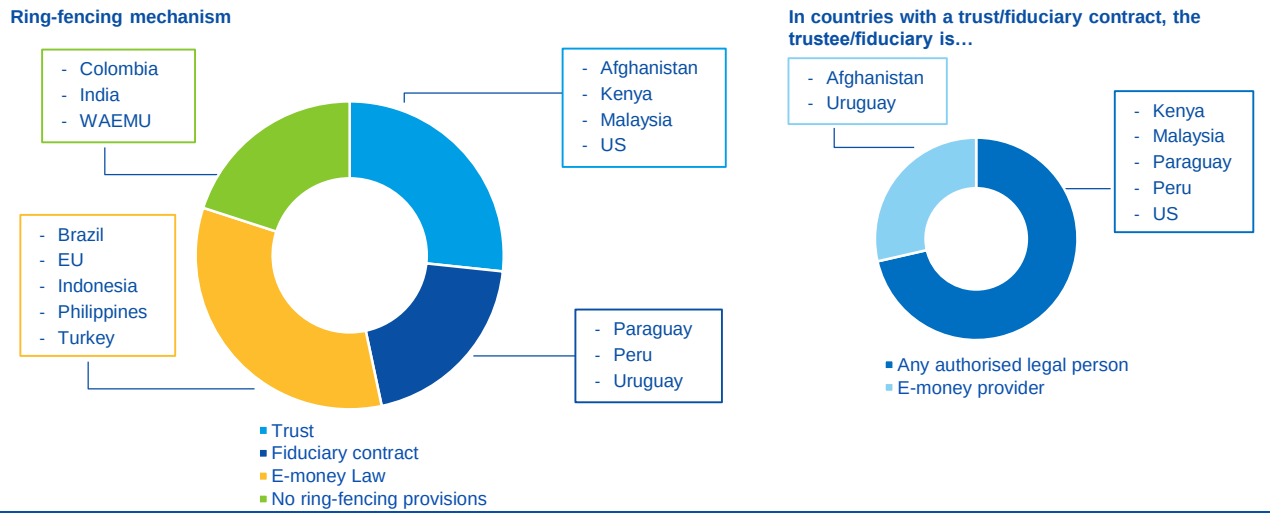
* This element of the figure would not apply to the situation in which the e-money provider itself acts as the trustee/fiduciary.
Source: BBVA Research

Finally, in countries where neither of the above legal devices exists, some regulators have included **specific provisions in the electronic money regulations to ensure that funds are isolated and ring-fenced from the assets of the provider.** The European regulation states that the electronic money funds must not be commingled at any time with any other asset and that these funds must be insulated in the interest of the customer against the claims of other creditors of the provider, in particular in case of insolvency. In Turkey, rules on e-money mandate that the electronic money funds shall be used to compensate fund holders for any losses incurred in the event of liquidation of the e-money institution. In the Philippines, the liquid assets in which customers' funds are invested must remain unencumbered. However, these provisions have not yet

3 It is generally acknowledged that the rights of the beneficiary under the *fiducia* are not fully equivalent to those of the beneficiary under a trust. For a more thorough analysis of the fiducia and the trust see Figueroa, D. (2007), *Civil Law Trusts in Latin America: Is the lack of a Trusts an impediment for expanding business opportunities in Latin America?*

been sufficiently tested and might lose effectiveness if market or technological developments leads to the emergence of unforeseen risks.

Figure 3
Ring-fencing mechanisms in selected countries



Source: BBVA Research based on national legislation

Risk of insolvency of the bank(s) with which the funds are placed

Once electronic funds are deposited in a bank, there is also a risk of customers losing their funds in the event of insolvency of the custodian bank, just as with traditional bank deposits. This risk is mitigated if the custodian bank acts also as the trustee/fiduciary of the customers' funds, with pre-defined limits on how to invest these funds.

Furthermore, regulators around the world have followed different approaches to protecting customers against this risk, which are summarised below:

i. Deposit insurance

Electronic money issuers, when required to deposit funds with (a) commercial bank(s), usually aggregate all the funds received from customers in one pooled bank account, which is usually treated as a single account for the purposes of deposit insurance. Therefore, the extent to which individual customers have their funds protected by the deposit insurance regime will depend on the coverage limit and the volume of operations of the electronic money provider. For example, an electronic money provider pools EUR 1 million from 10.000 customers (an average of EUR100 per customer). If the deposit insurance in the country only guarantees deposits up to EUR 100,000 per client and bank, the pooled account that represents the sum of the individual customer's funds would only be insured up to this level (10%). As a result, for each individual e-money customer the protection offered by the deposit insurance scheme is almost negligible.

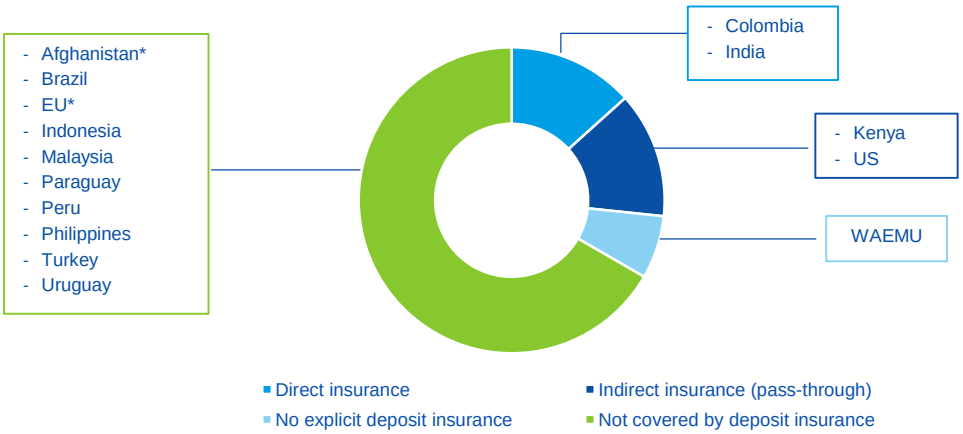
Most countries have explicitly stated that **electronic money is not individually covered by deposit insurance.** This is the case in Peru, Paraguay, Uruguay and the Philippines. However, some countries have decided to extend deposit insurance to individual electronic money accounts, either directly or indirectly.

Through the **direct approach**, funds are insured through specialised regulation schemes, which apply to supervised financial institutions and transactional platforms allowed to offer deposit-like products. Through this approach, **individual electronic money accounts are directly insured up to the coverage limit** (i.e.

EUR 100.000 in the example above), but this requires electronic money issuers to be direct members of the deposit insurance system. This kind of coverage is applied in India and Colombia. This poses a risk of stifling financial innovation for non-bank institutions.

Finally, **the indirect (or pass-through) approach** allows for deposit insurance coverage even if the electronic money provider is not part of the deposit insurance system. Funds collected by the e-money issuer are placed in a pooled custodial account with an insured depository institution. Pass-through deposit insurance is based on the recognition that, provided certain conditions are met, pooled custodian accounts are merely the aggregation of a number of smaller accounts, and are better represented in this way for deposit insurance purposes. Therefore, under this approach individual customers benefit from deposit insurance up to the coverage limit, and **there is no limit to the pooled custodial account as it is "passed through" to each individual account.** However, recognition of pass-through deposit insurance is not widespread[4]. This type of model is applied in the United States, and is in the process of being implemented in Kenya.

Figure 4
Deposit insurance of electronic money funds in selected countries



* Afghanistan and the European Union allow funds to be covered by a private insurance policy
Source: BBVA Research based on national legislation

ii. Capital requirements

Capital constitutes a first line of defence for customers' funds against potential losses. Capital requirements might be imposed at the time of authorisation and/or on an ongoing basis. In the first case, **initial capital requirements** are aimed at ensuring that the institution has sufficient funds to carry on the activities associated with electronic money issuance. In practice, there is wide disparity among countries as regards the initial capital required for licensing e-money providers. Among the countries in the sample, initial capital ranges from approximately EUR 70,000 in Colombia to over EUR 13 million in India (see Figure 5). This disparity might be explained by different reasons, which ultimately depend on a trade-off between fostering innovation and ensuring financial stability. In this regard, the supervisor's ability to conduct effective oversight of this new business might be an important part of the equation. A weaker supervisory framework might call for a higher initial capital requirement, to ensure that the number of licensed institutions can be effectively supervised.

4: A survey conducted by IADI in 2013 found that pass-through coverage is rare, and that in the limited number of cases where it does exist (only 9 out of 58 participants), it is not formally codified or is subject to narrow requirements.

Ongoing capital requirements, on the other hand, are imposed as a percentage of outstanding electronic money liabilities and seek to guarantee that capital available to address bank insolvency or any other shock remains sufficient as the provider's business grows. While most countries impose initial capital requirements, the introduction of ongoing capital requirements is not so common. However, some countries require institutions to have capital of around 2-3% of outstanding liabilities at all times.

Table 1
Capital requirements for electronic money issuers. Selected countries*

	Capital requirements	
Country	**Initial**	**Ongoing**
Afghanistan	AFN equivalent of USD 1 million (approx. EUR 890,000)	AFN equivalent of USD1 million (approx. EUR 890,000)
Brazil	BRL 2 million (approx. EUR 550,000)	2% of the monthly average of payment transactions executed by the institution during the last 12 months, or the balance of electronic currency issued by the payment institution verified daily, whichever is greater.
Colombia	COP 5,846,000 (approx. EUR 2.6 million)	2% of outstanding e-money
European Union	EUR 350,000	2% of outstanding e-money
India	INR 1 billion (approx. EUR 13.4 million)	15% of risk-weighted assets and 3% of outstanding e-money liabilities
Indonesia	IDR 1 billion (approx. EUR 70,000).	Not specified
Kenya	Large E-money Issuer KES 20 million (approx. EUR 176,000)	Large E-money Issuer(KES 20 million (approx. EUR 176,000)
Malaysia	RM 5 million (approx. EUR 1 million)	The higher of RM 5 million (approx. EUR1 million) or 8% of outstanding e-money
Peru	PEN 2,268,519 (approx. EUR 806.000)	2% of outstanding e-money
Philippines	PHP 100 million (approx. EUR 1.8 million)	PHP 100 million (approx. EUR 1.8 million)
Turkey	TRY 5 million (approx. EUR 1.5 million)	Not specified
WAEMU	XOF 300 million (approx. EUR 457,000)	3% of outstanding electronic money

* In the rest of the countries in our sample, capital requirements are not imposed. More information in the Annex.
Source: BBVA Research based on national legislation

iii. Diversification requirements

As commented above, some regulators require providers of electronic money to diversify funds among several financial institutions. This diversification requirement helps mitigate the loss in the event of insolvency of one individual bank. Furthermore, countries might also impose requirements regarding the perceived strength of the bank, measured by available ratings. For instance in Kenya providers must place the funds in at least one "strongly rated" bank if funds amount to less than KES 100 million (approx. EUR 890,000), and diversified among at least four banks, of which at least two must be "strong rated" and with no bank holding more than 25% of total customer funds, if funds exceed KES 100 million. In combination with capital requirements, diversifying the funds among several institutions can help the electronic money provider cover the losses in case one of the banks holding the funds fails. It can also enhance the effectiveness of deposit insurance to protect customer funds.

Final remarks

Regulators have followed a myriad of approaches to ensure that electronic customers are effectively safeguarded against the potential loss of their funds and to guarantee that they can access these funds upon demand. However, these regulatory provisions have not been sufficiently tested in practice to be able to identify clear-cut best practices. Therefore, regulators around the world should take note of the results obtained through the different approaches and translate this experience into future enhancements of their electronic money rules. Still, for each of the identified risks, the optimal approach will most likely be country-specific, and might involve a combination of measures. The final decision will undoubtedly be determined by the legal system of the country, the quality and reach of financial supervision and the assessment of the cost and feasibility of implementing each solution.

Annex

Table A1

Regulatory approaches to protecting customers' funds in electronic money

Country	Applicable legislation	Liquidity requirements	Ring Fencing and isolation requirements	Capital Requirements	Other safeguarding provisions
Afghanistan	Electronic Money Institution's Regulation (2016)	Electronic money funds should redeemable at face value at any point of time by the customer. 100% of these funds should be deposited in the banking system.	Electronic money funds should be deposited on a trust account at a bank. The electronic money institution acts as the trustee.	Electronic money institutions must hold capital of at least the AFN equivalent of USD1,000,000 (approx. EUR 892,796.14), at the time of authorization and at all times after it.	E-money funds are not ensured individually, The pooled Trust account should be insured according to the provisions and limitations set forth by the Afghanistan Deposit Insurance Corporation (ADIC). In the event that ADIC does not exist the electronic money issuer should ensure that electronic money funds are fully insured by a solvent, licensed insurer. Da Afghanistan Bank does not guarantee electronic money funds.
Brazil	Law no. 12.865 (2013) Circular Letter 3681, 3683 and 3705	Electronic money institutions should maintain net amounts of the electronic currency funds kept in payment accounts. Also, those funds must be deposited in an account at the Central Bank or invested in federal government bonds, according to the following percentages over the electronic money balance: 20%, from May 2014; 40%, from January 2016; 60%, from January 2017; 80%, from January 2018; 100%, from January 2019.	Electronic money funds constitute a separate and not commingled property of the issuer's assets. Those funds must not be used to pay debts or to meet any obligation of the electronic money issuer, even if the institution goes bankrupt. The fund monies should not be used as a guarantee.	Electronic money institutions should have an initial capital of R$2m (approx. EUR 552,768.68) and permanently maintain net worth corresponding to at least 2% of the monthly average of payment transactions executed by the institution during the last 12 months, or the balance of electronic currency issued by the institution verified daily, whichever is greater.	
Colombia	Law 1735 of Financial Inclusion (2014) Regulation 1491 – Specialized Societies in Deposits and Electronic Payments (SEDPEs)(2015)	Funds should be held in deposits in credit institutions or in an account at the Bank of the Republic.	There is no provision related to the ring-fencing of customers' funds.	Capital requirement: 5,846 million pesos (updateable inflation) (approx. EUR 2.594.495,62) Leverage ratio: technical net worth at least 2% of the balance of electronic deposits	Deposits are covered by the Guarantee Fund of Financial Institutions (Fogafin), up 20 million pesos per person (approx. EUR 5,994.19).

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Table A1
Regulatory approaches to protecting customers' funds in electronic money (cont.)

Country	Applicable legislation	Liquidity requirements	Ring Fencing and isolation requirements	Capital Requirements	Other safeguarding provisions
European Union	EU E-Money Directive (2009) Payment Services Directive (2007/64/EC)	All customer funds shall be deposited in a separate account in a credit institution or invested in liquid, low-risk assets like debt securities issued or guaranteed by governmental and international organizations. The EU offers another option, in which it does not require e-money issuers to deposit 100% of the e-money funds in a separate bank account or in low risk assets if they are safeguarded by a private insurance cover for an amount equivalent to that which would have been segregated in the absence of the insurance policy.	Electronic money funds must not be commingled at any time with the funds of any person, natural or legal. Those funds shall be insulated in the interest of the customers against the claims of other creditors of the provider, in particular in the event of insolvency.	Electronic money issuers must have a minimum initial capital of EUR 350,000 and ongoing net equity of 2% of average outstanding e-money.	Funds can be covered by an insurance policy for an amount equivalent to that which would have been segregated in the absence of the insurance policy, payable in the event that the payment institution is unable to meet its financial obligations.
India	Guidelines for Licensing of Payments Banks (2014)	Electronic money issuers should invest minimum 75 per cent of its demand deposit balances in Government securities and Treasury Bills with maturity up to one year that are recognized by Reserve Bank of India, and hold maximum 25 per cent in current and time fixed deposits with other scheduled commercial banks.	There are no specific requirements on ring-fencing.	Initial Requirement: INR 1 billion (approx. EUR 13.6 million) Ongoing Requirement (1) Minimum 15% of risk-weighted assets and (2) liabilities may not exceed 33.33 times net worth (i.e. 3% leverage ratio).	Deposits would be covered under the deposit insurance scheme of the Deposit Insurance and Credit Guarantee Corporation of India (DICGC). The amount covered will initially be restricted to a maximum of Rs. 100,000 per individual customer (approx. EUR 1,339.47); quantity that may be raised if the performance of the payments bank is gauged.
Indonesia	Bank of Indonesia Regulation No. 11/12/PBI/2009, Circular Letter No. 11/11/DASP (2009)	Funds should be invested on a deposit account (either in savings, current or time deposit accounts) at a commercial bank The value of these funds should be equivalent to 100% of the sum of the balances of electronic money funds.	Electronic money funds cannot be used by the issuer for financing activities other than the fulfillment of its obligations to the electronic money funds owners.	Capital requirements: 1 billion IDR (approx. EUR 69,166.9).	

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Table A1
Regulatory approaches to protecting customers' funds in electronic money (cont.)

Country	Applicable legislation	Liquidity requirements	Ring Fencing and isolation requirements	Capital Requirements	Other safeguarding provisions
Kenya	National Payment System Regulations, (2014)	Electronic money issuers must ensure that all funds received are held in a trust, and the amount held shall not at any time be less than what is owed to customers. These funds should be placed in commercial banks licensed under the Banking Act or Government of Kenya securities.	The provider shall establish a trust and must not commingle the funds with the funds of any person other than payers and payees on whose behalf the funds are held. Any person that fulfills the fit and proper criteria set out in the regulation can act as trustee.	A payment service provider shall hold a core capital a of KES 20,000,000.00 (approx. EUR 179,460) if it is a E-money Issuer, and a core capital of KES 1,000,000.00 (approx. EUR 8,793.44) if it is a Small E-money Issuer. This capital requirement applies at all times and at the time of authorization.	Kenya enacted in the year 2012 a Deposit Insurance Act which provides for pass-through deposit insurance but the Act is not yet applicable. Kenya imposes a requirement to diversify the funds among several banks. If the amount held in the trust is less than KES 100 million (approx. EUR 897,266), funds should be placed in at least one bank qualified by the Central Bank of Kenya as "strong rated". If funds exceed KES 100 million, they must be diversified among four or more banks (of which at least two must be "strong rated"), with no bank holding more than 25% of total customer funds.
Malaysia	Guideline on Electronic Money BNM/RH/GL (2008)	Large E-money Issuers[5] funds can only be used to refund the electronic money funds' owners. These funds can be invested only in high-quality liquid assets in local currency limited to deposits with licensed institutions, debt securities issued or guaranteed by governmental institutions (Federal Government, Bank Negara Malaysia) and Cagamas debt securities. Small E-money Issuers funds can only be used to refund the electronic money funds owners. Funds should be invested only in bank deposits; they cannot be invested in any other form of assets.	Funds should not be commingled with the funds of any person. For that purpose, funds are deposited and managed separately from the electronic money issuer's capital funds. Large E-money Issuers should deposit funds in a trust account with a licensed institution. Those that perform more activities besides the e-money business should deposit and maintain an additional 2% of their outstanding electronic money liabilities in the trust accounts. Small E-money Issuers should place electronic money funds in a deposit account with a licensed institution, separated from its other accounts. The issuer should manage these funds like if they were in a trust account.	Large E-money Issuers are required to maintain, at all times, minimum capital of the higher of the following amounts: RM 5 million (approx. EUR1,079,350), or 8% of their outstanding e-money liabilities.	

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5: Large E-money Issuer: portfolio equal to MYR 1 million or more for six consecutive months (approx. EUR 215,649.86). Small E-money Issuer: portfolio lower than MYR 1 million.

Table A1
Regulatory approaches to protecting customers' funds in electronic money (cont.)

Country	Applicable legislation	Liquidity requirements	Ring Fencing and isolation requirements	Capital Requirements	Other safeguarding provisions
Paraguay	Resolution No. 6 – Regulation of Electronic Payment Means (2014)	All of each owner funds should be fully guaranteed by the payment institutions by forming an autonomous patrimony. The value of collateral should be at least equivalent to 100% of the sum of the balances of electronic money funds. These funds could only be deposited in financial institutions authorized by the Central Bank of Paraguay.	Electronic money issuers are required to constitute autonomous patrimonies to store customers' funds, and these funds must be managed by one or more fiduciaries (banks, financial companies and specially authorized financial companies). Funds should be specifically separated by each owner, agent and POS that are part of the autonomous patrimony managed through the Trust. Funds are not subject to seizure by the issuers' creditors.	Regulation does not impose capital requirements	
Peru	Law No. 29985 Resolution 6283 (2013)	Electronic money issuers ensure that funds' value is higher than or equivalent to the value of outstanding electronic money, at any time or at the end of the day. Funds can only be invested in Treasury or in instruments issued by the Central Bank of Peru (up to 30%) in liquid deposits in companies classified as "A+" or in other liquid assets authorized by the Superintendence.	Electronic money issuers should constitute *fideicomisos* for 100% of the value of the electronic money issued in authorized companies that are different from the issuer.	Capital requirement: 2,268,519 soles (approx. EUR 806,149.67) (updateable trimestral inflation) and effective equity of at least 2% of the total outstanding electronic money.	
Philippines	Circular 649 (2009)	Electronic money issuers should have at all times liquid assets equal to the amount of the outstanding electronic money issued. These funds could be invested in bank deposits, government securities, and/or other authorized liquid assets.	The assets in which the funds can be invested must remain unencumbered, but there are no specific requirements on ring-fencing beyond this.	Electronic money issuers must have capital of at least PHP 100 million (approx. EUR 1.8 million) at the time of authorization and on an ongoing basis.	
Turkey	Law on Payment and Security Settlement Systems, Payment Services and Electronic Money Institutions, (2013)	Electronic money institutions must transfer the funds to a separate account to be opened in a bank and keep funds in that account during the term of use.	The Law establishes that the funds received by electronic money institutions and the accounts at which these funds are held shall be used to compensate the fundholders for any losses incurred in the event of liquidation of the electronic money institution. Electronic money institutions are responsible for reimbursing the claims of fundholders.	Electronic money institutions must have capital no less than five million Turkish Liras (approx. EUR 1,484,009.79).	

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Table A1

Regulatory approaches to protecting customers' funds in electronic money (cont.)

Country	Applicable legislation	Liquidity requirements	Ring Fencing and isolation requirements	Capital Requirements	Other safeguarding provisions
United States	Uniform Money Services Act, 2004. FDIC Notice of New General Counsel's Opinion No. 8, (2008)	Electronic money issuers shall maintain at all times permissible investments that have a market value of not less than the aggregate amount of all of its funds owed to customers. E-money rules set limits to the share of the funds to be allocated in a class of permissible investment, except for money and certificates of deposit issued by a bank.	All funds, even if commingled with other assets of the electronic money issuer, should be held in a Trust for the benefit of the customers in the event of bankruptcy or receivership of the electronic money issuer.		The Federal Deposit Insurance Corporation (FDIC) provides "pass-through" insurance coverage, which is provided indirectly to the individual accounts pooled in the account held at the bank.
Uruguay	Law 19210 of Financial Inclusion Circular Letter 2198 (2014)	Electronic money issuers ensure that the value of funds held on accounts and liquid securities is equivalent to the available value of the issued electronic money. These funds should be held in bank deposits, government securities and other liquid assets with a term not exceeding 12 months.	Funds are held in separated accounts in financial institutions. These accounts will be isolated from the assets of the issuer, which will act as the fiduciary.	Regulation does not impose capital requirements	
West African Economic and Monetary Union[6]	Instruction N°008-05-2015 Administration of the exercise terms and conditions of the activities of electronic money issuers in the member states of the West African Monetary Union	The electronic money funds held by the issuers should always be greater than or equal to the outstanding electronic money outstanding. These funds can only be invested in the following liquid assets: bank deposits (at sight or at term), deposits at the decentralized financial system (SFD),, securities issued by central governments, regional financial institutions and by companies listed on the West African Regional Securities Exchange. Investments in sight deposits should represent at least 75% of the outstanding electronic money.		Capital requirements: FCFA 300 million (approx. EUR 457,347) and an equity equal to or higher than 3% of the outstanding electronic money issued.	

Source: BBVA Research

6: Senegal, Guinea-Bissau, Ivory Coast, Mali, Togo, Benin, Niger, Burkina Faso.

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