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Compiling Data on International Mobile Money Transfer Services

Prepared by the Bank of Uganda

I. Introduction

1. Telecommunications companies have over time become very important players in the transfer of funds in developing countries. The popularity stems from the fact that there are more people with mobile phones than bank accounts. Moreover, the requirements for opening a virtual mobile money account are less stringent compared to those for opening a bank account. Other attractive features of mobile money services include ease of access as agents are present even in the remotest parts of many developing countries. It is therefore easier to access mobile money services relative to banking services. In addition, the transactions are instant and the charges are reasonably low.

2. Mobile Money is essentially an electronic wallet service, available in many countries, that lets users store, send and receive money using their mobile phone. It is a safe and easy to use electronic payments system available to all registered users of mobile phone services. It can be used on both smartphones and basic feature phones. Instructions on how to use the service have also been translated in many local languages which makes it usable even by those who do not know English.

3. For the most part, mobile money transfers were predominantly between residents. However, owing its uptake by many users as well as its advantages, it has over time been adopted for international money transfers as well. Moreover, recent developments that allow linkages to bank accounts lend themselves well to international transactions. Subsequently, mobile money transfers now comprise a significant share of cross border transactions especially where countries are geographically close and have participating telecoms and banks operating in the respective countries.

4. The sixth edition of the *Balance of Payments and International Investment Position Manual (BPM6)* and the *BPM6 Compilation Guide* provide guidance in respect to classification of charges associated with deposits, withdrawals, money transfers and foreign exchange transactions as financial services (*BPM6*, paragraphs 10.120 and 10.121). As described in the sections that follow, transactions involving cross border money transfers may involve charges for deposits, withdrawals, money transfer and foreign exchange conversions levied either explicitly or indirectly. Further, in the course of providing services for deposit, withdrawal, money transfer and foreign exchange conversions, telecommunications companies also provide distinct telecommunications services related to transmission of short messages notifying senders and recipients of funds transferred, balances on their accounts, and charges levied.

5. The different services are however combined and provided as one service/one product (mobile money transfer) which in most cases has a consolidated charge levied to the customer by the telecommunication services provider. Consequently, it is difficult to determine what part of the charge should be classified as a financial service and which part should be a telecommunications service. The next section describes how mobile money transactions work and how cross border transfers are effected using mobile money in the case of Uganda.

II. How Domestic Mobile Money Works

6. All services of mobile money providers in Uganda have similar characteristics. They allow registered mobile phone users to open mobile money accounts on their phones which can be accessed through a menu and a user pin number. Users are allowed to load money into their accounts to get virtual / electronic money, make transfers to other users (both registered or not), pay bills, buy airtime, withdraw cash, etc. The mobile phone operators partner with banks to be able to provide the services but play a dominant role in the partnership that involves contracting a network of agents to interface with customers and operating the telecommunications infrastructure for effecting transactions and storing virtual money. The role of the bank in the partnership is to hold an account termed as a “settlement” or “escrow” account in which all agents of the network hold balances which are debited or credited when an agent sells or buys mobile money for cash.

7. Customers can purchase with cash virtual money from agents which can be stored electronically on their phones in their virtual accounts, transferred to other mobile money customers, used to pay utility bills and school fees and withdrawn by the customer in cash from an agent. To purchase virtual money, the customer pays cash to an agent who then sends virtual money to the customer’s phone number. For the transaction to be successful, the agent must have sufficient float (money) on his account held in the escrow account. The agent selects the mobile money transfer option from his phone, enters the amount to be sent and the number of the customer and receives a message indicating the amount, customer’s number and name and a prompt to confirm the transfer with their pin number. Once the pin number is entered to confirm the transfer, the money is transferred and both the agent and the customer receive messages advising of the transfer amount and source/sender.

8. Similarly, to draw cash from the virtual account, the customer approaches the agent and selects the option of drawing cash from his virtual account, indicates the amount required, and confirms with his pin. The telecommunications services provider confirms availability of the funds on the virtual account and then sends a secret code to the customer authorizing the withdrawal. The secret code is provided to the agent who uses it to credit their account with the equivalent in virtual money and then pays out cash to the customer less the withdrawal fee. A notification is sent to the customer indicating the amount drawn from the virtual account, the charges and the balance. Similarly, the agent receives a notification indicating the amount credited to their virtual account and the balance.

9. For person to person transfers that do not go across borders, the sender selects the option of sending money, enters the recipient’s number and amount and receives a message indicating the details entered (amount, customer number and name) and a prompt to confirm the transaction by entering their pin number. Once the pin number is entered and verified to be correct and the balance found to be sufficient, the transaction is executed and a message notification is received by the sender confirming that the virtual account has been debited and credited to the recipient.

The message to the sender also indicates the transaction fee deducted from the virtual account and the balance after the transaction. The recipient also receives a notification on their phone indicating the amount credited on their virtual account and details of the sender. Person to business transfers such as payments for utilities or business to person transfers such as payments for wages also occur in a similar way.

10. People who do not have registered mobile numbers can also send or receive mobile money through agents. In the case of receipts, the sender can initiate a request to withdraw cash. The system generates a secret code that should be given to an agent in exchange for cash. The sender can then give the secret code to the recipient who does not have a registered mobile number or mobile money account either through a messaging service or voice call. Once the recipient gets the secret code, they can give it to a mobile money agent who then gives them the cash equivalent. To send money, they can pay a mobile money agent in cash and provide the agent with the number of the recipient. The mobile money agent then uses their virtual money to send to the recipient number and shows the sender the confirmation message that the funds have been send as proof of the transaction.

III How International Mobile Money Transfers Are Effected

11. In Uganda, there are two ways through which international money transfers can be affected. In one, the arrangement is semi-formal in the sense that the transactions are not currently clearly regulated by any authority. In the second alternative, the provider of the service operates under a well-organized institutional framework regulated by the Uganda Communications Commission (regulator of telecommunications services providers) and the Bank of Uganda (regulator of financial institutions).

a. Semi-formal international mobile money transfers

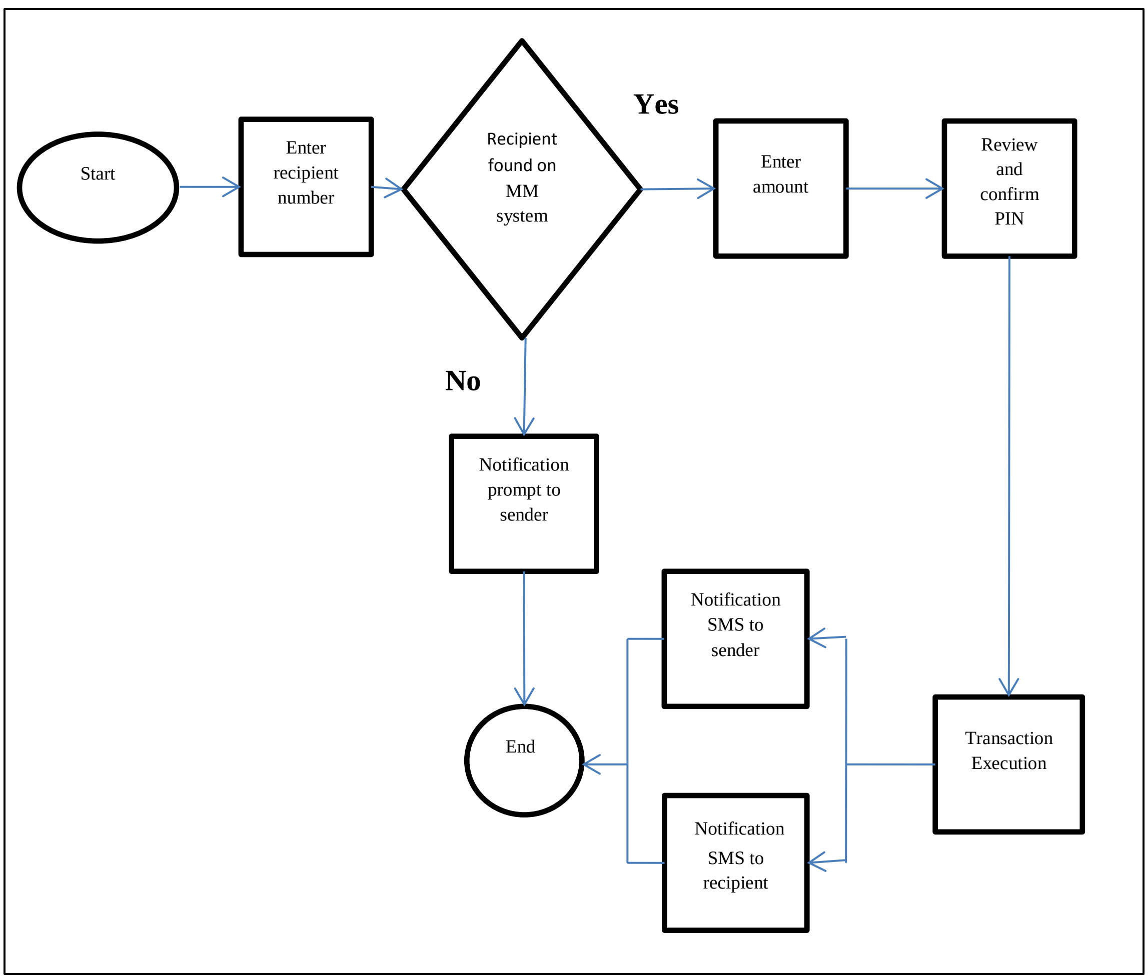
12. Under the semi-formal arrangement, international mobile money transfers are carried out as if they are domestic transfers using the roaming telephone facility. The sender outside the host country of the telecom service provider (in this case let us take Uganda as the country where the sender is located) uses a roaming telephone to credit their account with virtual money from an agent in the sender's country who is also roaming and then sends money to the recipient resident in the host country of the telecom service provider (say Kenya as an example). All transactions are carried out in the recipient's currency (Kenya shillings) and the sender pays the agent to get virtual money either in the recipient's currency (Kenya shillings) or sender's currency (Uganda shillings) for an agreed value to be received by the recipient based on an exchange rate. The exchange rate is determined by the roaming agent and may differ from rates charged by foreign exchange bureaus in the market.

13. As in the case of domestic transactions, the sender and the recipient receive a SMS notification once the transaction is executed indicating the amount sent and received in the currency of the recipient's country (Kenya shillings) and details of the recipient and sender

respectively. The sender also receives a notification of the transaction fees deducted from the virtual account by the telecom service provider for the transfer and the balance. The transfer transaction is therefore concluded as though it were a normal domestic transfer.

14. For recipients outside the host country of the telecom service provider say a recipient in Uganda, once funds are sent to their roaming phone, they receive a notification of the amount sent in the currency of the sender's country of residence. The notification also includes details of the sender and an update of the recipient's balance on their virtual account. The recipient can then draw down from an agent in the recipient's country who is roaming on the same telecommunications service by selecting the option to draw down their virtual money and providing the agent the code authorizing the account of the receiver to be debited. The agent then completes the transaction by crediting their account with the virtual money from the recipient authorized by the code received and paying the receiver the equivalent in the sender's currency or the recipient's currency less commissions. Where the agent pays the recipient in the recipient's currency, an exchange rate determined by the agent is used. Figure 1 provides an illustration of how the transfer is made.

Figure 1: Illustration of how a semi-formal international mobile money transfer is made



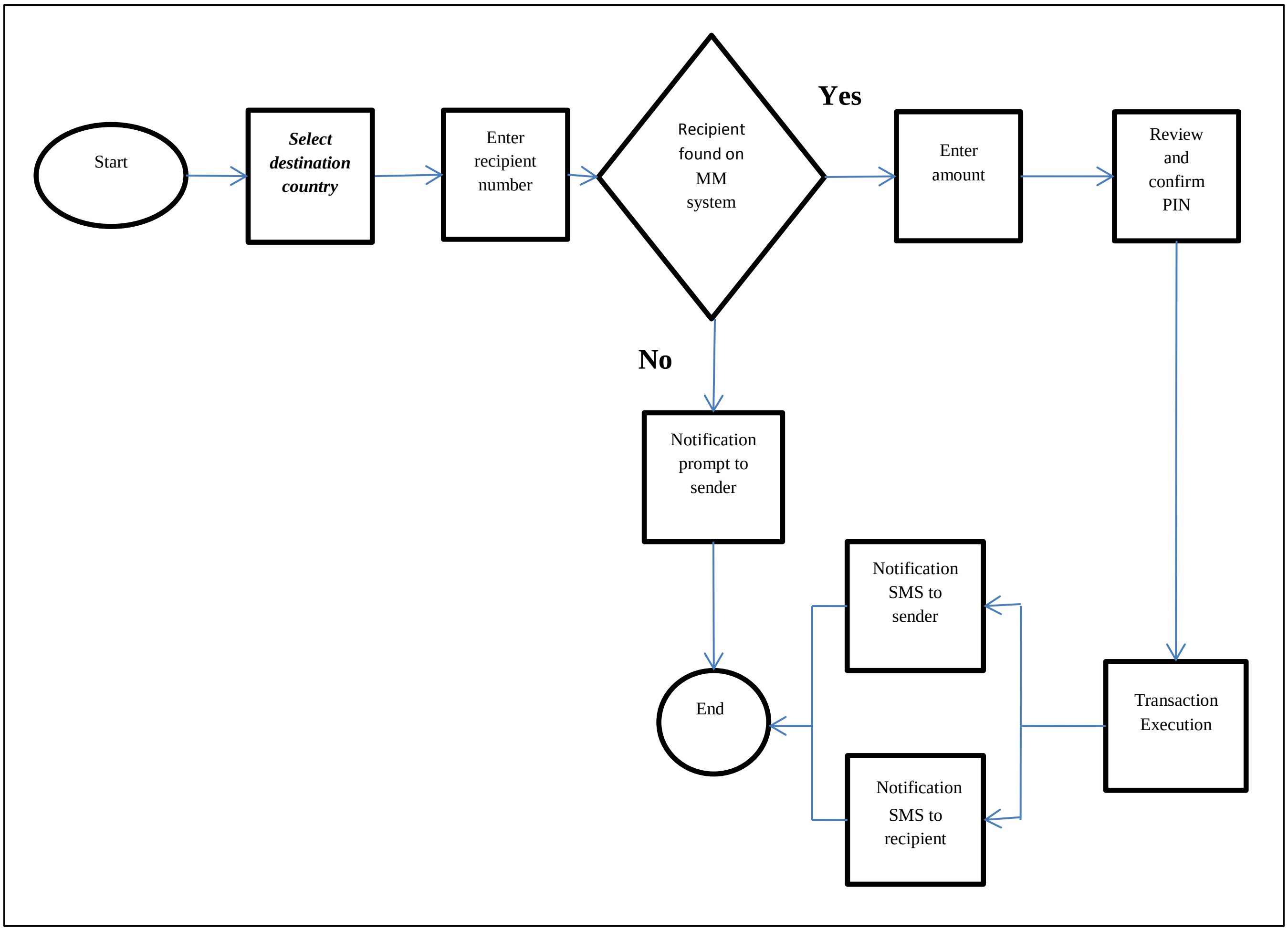
15. As shown, the transaction may not be easily recognizable as an international mobile money transfer except by the agent and the sender and recipient. In many countries, where formal arrangements for international mobile money transfer have not been made, transactions may be following a similar model and as result go unrecorded in the respective economies.

b. Formal international mobile money transfers

16. In the formal case, a resident telecommunications company partners with both resident and nonresident partners. The resident partner is a domestic bank and the nonresident partners comprise an integration technical partner, a telecommunication company and a bank all resident in the countries with which the transfers are to be done. In addition, each telecom company contracts agents in their economy to interface with the customers. To send funds, the sender (say in Uganda) selects international money transfer option, selects the country where the funds are to be sent (say Tanzania) and enters the amount to be sent in local currency (Uganda shillings).

17. The system provided by the integration technical partner validates in real time on the destination mobile money system as well as the availability of funds on the merchant online account. The customer's virtual account is only debited after confirmation has been made that there is enough balance on the merchant online account. A summary of the transaction is presented to the sender for review before execution of the transaction. The summary includes the destination country, recipient's mobile phone number, the amount sent in the sending currency, transfer fees in sending currency, the amount to be received in the destination country's currency and applied exchange rate. The customer is then prompted to authorize the transaction to proceed by entering his mobile money pin. Once approved the transfer is processed and the sender and recipient receive SMS notifications of the amounts sent and received as well as details of recipient and sender respectively. The receiver can then check their mobile money account balance and cash out the remittance at an agent or use the money to pay for services and utilities or to send to other people. Figure 2 illustrates how formal international mobile money transfers are made.

Figure 2. Illustration of how a formal international mobile money transfer is made



18. The sending country sets the applicable fees in the sending currency for outbound transactions and is also responsible for setting the sending foreign exchange spread to be applied on the midrate to determine the sending foreign exchange rates used to calculate the foreign exchange client rate. The settlements are done in the agreed settlement currency. The revenue is shared according to pre-set shares where the sending telecom receives the bulk of the transfer fees revenues and the receiving telecom and integration technical partner share the balance. The revenue from the foreign exchange margin goes to the integration technical partner where the partner prefunds the service in local currency.

c. The balance of payments transactions

19. In the case of semi-formal international mobile money transfers, there are both balance of payments credits and debits depending on the residence of the mobile money telecom company providing the international mobile money transfer services. The debit and credit transactions arise from roaming charges for the telecommunications services provider as well as charges for acquisition of virtual money, transfer and withdrawal. For the recipient in the reporting country

receiving mobile money from abroad through a platform of a non-resident telecom company, there are balance of payments debit transactions to be recorded for the roaming charges on the non-resident telecom company as well as charges for cashing in (withdrawal) of the mobile money received. There are also debit transactions in form of charges that arise when a resident acquires virtual money on a non-resident mobile money platform and when the resident sends the mobile money to a non-resident. The credit transactions for the reporting country arise when non-residents are sending mobile money to the reporting economy or receiving mobile money from the reporting economy using a mobile money platform that is resident in the reporting economy. In the case of non-residents sending mobile money using a telecom company resident in the reporting country, there would be credits for roaming charges, for acquiring virtual money and for sending the mobile money. For non-residents receiving mobile money, there would be credits for roaming charges as well as for withdrawal of the virtual money received.

20. In the case of formal international mobile money transfers being sent from the reporting country, there are balance of payments debit transactions related to revenues charged by the resident telecommunications company that are shared with the integration technical partner and the non-resident telecommunications services provider and the margin on the foreign exchange conversion received by the integration technical partner. For the receipts, balance of payments credit transactions related to revenues charged by the non-resident telecommunications company that are shared with the resident telecommunications services provider should be recorded.

d. Sharing of revenues

21. Revenue sharing applies for formal mobile international mobile money transfers as already highlighted. For each mobile money transaction, revenues are distributed between the integration technical partner, the mobile money agents handling the transactions and the mobile money companies. The commercial bank which provides the account where the actual float is maintained does not receive any share from the revenues arising out of the transaction fees. However, it benefits from the liquidity provided by the mobile money transactions and subsequently any income it may earn on this liquidity.

22. The information on the sharing of the revenues from the transaction charges between the integration technical partner, mobile money agent and the mobile companies is not readily available and varies for the different telecom companies providing cross border mobile money transfer services. However, one mobile money service provider indicated that about 60 percent of the revenues are paid out to mobile money agents, 5 percent to the integration technical partner and the remaining 35 percent is shared between the telecommunications companies.

e. Potential data sources and estimation approach of balance of payments transactions

23. One potential data source is direct reporting using a simple reporting form for mobile money telecom service providers in countries where such reporting is feasible on a regular basis.

Such a form would in the first part collect information on the gross revenue received from residents for international transfers to nonresidents and the respective payments made by the telecom company to resident mobile money agents, the nonresident integration partner and the nonresident telecom partner. In the second part, the form would collect information on revenues received from nonresident telecom companies arising out of inward mobile money transfers from nonresidents.

24. The other option is to derive estimates from the total inflows and outflows of international mobile money transfers reported by telecom companies involved in cross border mobile money transfers. Using this approach requires all individual international mobile money transactions to be reported by the resident telecom companies involved with details of the transaction dates, telecom company's name, amount received or sent, exchange rate used and source or destination country. The transfer charges for outward transfers would then be worked out using the mobile money tariffs obtained from each telecom company. Based on the estimates of the transfer charges for outward transfers received by the telecom companies, estimates for payables to the nonresident integration technical partner and the nonresident Telecom company would be derived on the basis of the revenue sharing arrangements. The same approach would be used to derive the amounts receivable from nonresident telecom companies for inward transfers.

25. For the exchange rate margins on the transactions received by the integration partner, estimates can be made using the same information submitted by telecom companies' described in paragraph 24. From the telecommunications companies, information on the daily exchange rates used for conversion of mobile money transfers to different destinations would be used together with the transaction dates, amounts sent and destination for estimation. In addition, information on the official midrate for the respective days would be required. The margin payable to the integration partner would then be computed by taking the difference between the amount received in the domestic currency from the resident sender by the telecom company for outward transfer converted into the destination country's currency using the official midrate and the actual rate used by the telecom company.

26. For the semi-informal international mobile money transfers, the only data source would be partner country data on credits received by the counterparty telecom for roaming charges and purchase of virtual money by nonresidents. In the absence of partner country data, the alternative would be to conduct a survey of resident agents of nonresident telecom companies providing mobile money services. The survey would collect information on the transaction charges paid by residents of the reporting economy for the acquisition of virtual money on a nonresidents telecom company's mobile money platform and the commission received by the resident agent from the nonresident telecom companies. The balance of payments debit would be computed as the charges less commissions received by the resident agents.

Questions to the Committee

1. *Do Committee members agree with the proposed recording of transactions, as outlined in paragraphs 19 and 20?*

2. *What are Committee members' views on how should the money transfer and exchange rate conversion charges be treated in the balance of payments? Should they be treated as part of telecommunications services or financial services?*

3. *Do Committee members consider practicable to separate the single charge levied for the international mobile money transfer services in to various components?*