CHAPTER 6

MOBILE COMMERCE IN BANKING SECTOR

Mobile Commerce in Banking Sector

Finance-related services that are offered by employing mobile telecommunication technologies are generally referred to as Mobile Financial Services. The offered services can be divided into two categories:

- Mobile Payment
- Mobile Banking

Since Mobile Payment is not a primary object of study in this work and has already been discussed in the previous chapter, we may now turn our attention to Mobile Financial Services in the banking sector. The purpose of this chapter is to serve as a literature review on Mobile Banking. It describes, in detail, various services pertaining to Mobile Banking and explains the technical issues specific to this particular application. Even as Mobile Banking is defined and its services explained, we identify issues that potentially possess critical relevance for the future of Mobile Banking and which cannot be answered in a purely theoretic framework.

6.1 Definitions and Scope Issues

In order to understand and evaluate the prospects of the “mobile” form of banking it is imperative to first comprehend the scope of “banking” as such.

6.1.1 Scope of Banking Business
Banking has traditionally been defined as: “the accepting, for the purpose of lending or investment, of deposits of money from the public, repayable on demand or otherwise, and withdrawal by cheque, draft, and order or otherwise”.

[The Banking Regulation Act of India, 1949, I.5.b]

According to this definition the banking business comprises of

1. Deposit business: the acceptance of funds from others as deposits or of other repayable funds from the public unless the claim to repayment is securitized in the form of bearer or order debt certificates, irrespective of whether or not interest is paid.

2. Lending business: the granting of money loans and acceptance of credits.

3. Discount business: the purchase of bills and exchange of cheques.

4. Principal broking services: the purchase and sell of financial instruments in the credit institution’s own name for the account of others.

5. Safe custody business: the safe custody and administration of securities for the account of others.

6. Investment fund business: all activities that are permitted to investment companies.

7. Guarantee business: the assumption of guarantees and other warrantees on behalf of others.

8. Underwriting business: the purchase of financial instruments at credit institution’s own risk for placing in the market or the assumption of equivalent guarantees.

9. E-Money business: the issuance and administration of electronic money and the incurrence of the obligation to acquire claims in respect of loans prior to their maturity.

6.1.2 Scope of Financial Services
In addition to banks there are some other institutions that provide a limited range of similar services. Instead of offering classic banking services such as deposit- or giro business they specialize in services relating primarily to stock markets.

The scope of financial services includes:

1. **Investment broking**: the brokering of business involving the purchase and sell of financial instruments or their documentation.
2. **Contract broking**: the purchase and sell of financial instruments in the name of and for the account of others.
3. **Portfolio management**: the administration of individual portfolios of financial instruments for others on a discretionary basis.
4. **Own-account trading**: the purchase and sell of financial instruments on an own-account basis for others.
5. **Money transmission services**: the execution of payment orders.

The term “financial services institution” in accordance with this approach as following:

“Financial services institutions are enterprises which provide financial services to others commercially or on a scale which requires a commercially organized business undertaking, and which are not credit institutions.”

Having described relevant services and institutions we may now define the scope of this study:

For the purpose of simplicity, this study refers to all providers of banking business and financial services as *banks* and does not differentiate between credit institutions and financial services institutions any further.

### 6.1.3 Scope of Mobile Banking

Mobile Banking is usually defined as carrying out banking business with the help of mobile devices such as mobile phones or PDAs [Georgi/Pinkl, 2005, p.
This approach, apparently, does not differentiate between banking- and financial services. An explicit differentiation does not seem to be considered vital by many authors, even though they implicitly always take financial services into consideration.

The offered services may include transaction facilities as well as other related services that cater primarily to informational needs revolving around bank activities. Considering these factors and in keeping with the just defined scope of this study we can define Mobile Banking as follows:

Mobile Banking refers to provision and availment of banking- and financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information.

6.2 Services Offered in Mobile Banking

Mobile Banking, as defined above, includes a wide range of services. These services may be categorized as following [Georgi/Pinkl, 2005, p. 57]:

1. Mobile Accounting
2. Mobile Brokerage
3. Mobile Financial Information

These sub-applications of Mobile Banking are discussed below in detail.

6.2.1 Mobile Accounting

Georgi/Pinkl [2005, p. 57] define Mobile Accounting as transaction-based banking services that revolve around a standard bank account and are conducted and/or availed by mobile devices.

Not all Mobile Accounting services are however necessarily transaction based.
Mobile Accounting represents basically that part of Mobile Banking which deals with utilizing account-specific banking services of no informational nature via mobile telecommunication devices.

Mobile Accounting services may be divided in two categories to differentiate between services that are essential to operate an account and services that are essential to administer an account. Additionally, services are required that inform a customer of transactions and other activities involving his or her account. It is for this reason that Mobile Accounting is offered – almost invariably – in combination with services from the field of Mobile Financial Information.

<table>
<thead>
<tr>
<th>Mobile Accounting</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Account Operation</strong></td>
<td><strong>Account Administration</strong></td>
</tr>
<tr>
<td>Money remittances &amp; transfers</td>
<td>Access administration</td>
</tr>
<tr>
<td>Standing orders for bill payments</td>
<td>Changing operative accounts</td>
</tr>
<tr>
<td>Money transfer to sub-accounts</td>
<td>Blocking lost cards</td>
</tr>
<tr>
<td>Subscribing insurance policies</td>
<td>Cheque book requests</td>
</tr>
</tbody>
</table>

**Table 6.1: Services in Mobile Accounting**

6.2.1.1 Account Operation

The term Account Operation, as used in this study, refers to activities that involve monetary transactions. Such transactions may involve an external account, e.g. when paying bills, or an internal sub-account, e.g. when transferring money from own savings account to own securities account held with the same bank. Mobile services that are used to operate an account are:

1. **Money remittances**: Mobile devices may be used to instruct the bank to remit money in order to conduct one-time transactions, such as paying bills or transferring funds. This service can also include the facility to cancel an ordered remittance.
2. *Issue standing orders for bill payments:* The house bank may be entrusted with standing orders for payment of regularly recurring bills, e.g. payment of monthly rent or telephone bill.

3. *Transfer funds to and from sub-accounts:* Funds from one sub-account may be transferred to another as and when needed, for instance from savings account to securities account and vice versa.

This service could be particularly attractive in time-critical situations, for instance if a bank customer has to set out on an urgent, unplanned journey, he may still be able to subscribe to a travel insurance policy offered by his house bank.

**6.2.1.2 Account Administration**

The term Account Administration, as used in this study, refers to activities that are undertaken by an account-holder to maintain his or her account.

This may involve activities like access administration and cheque book requests.

Mobile Accounting services that are used to administer the account are:

1. *Access administration:* Mobile devices may be used to administer the access to an account, e.g. to change the individual PIN or to request new Transaction Numbers (TAN).

2. *Change operative accounts:* Through this service a customer can change his default operative account and do transactions using a different account.

This option is attractive for customers holding several subaccounts. Funds of sub-accounts may be hereby utilized in a targeted manner without first transferring the amount to the default account.
3. **Blocking lost cards**: Mobile non-voice telecommunication systems (e.g. WAP, SMS) can be used round the clock to speedily block lost credit and debit cards irrespective of the current geographic location.

4. **Cheque book request**: Customers using cheque books can order new cheque books via mobile devices, as and when required.

6.2.2 **Mobile Brokerage**

Brokerage, in the context of banking- and financial services, refers to intermediary services related to the stock exchange centre, e.g. sell and purchase of stocks, bonds, funds, derivatives and foreign exchange among others.

Mobile Brokerage, too, may be divided in two categories to differentiate between services that are essential to operate a securities account and services that are essential to administer that account. As is the case with Mobile Accounting, Mobile Brokerage requires informational services in order to facilitate brokerage activities. For this reason, Mobile Brokerage is invariably offered in combination with services related to Mobile Financial Information.

<table>
<thead>
<tr>
<th>Mobile Brokerage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Account Operation</strong></td>
</tr>
<tr>
<td>Selling &amp; Purchasing</td>
</tr>
<tr>
<td>Financial Instruments</td>
</tr>
</tbody>
</table>

Table 6.2: Services in Mobile Brokerage

6.2.2.1 **Account Operation**

Operating a securities account is primarily concerned with selling and purchasing of financial instruments. Mobile Brokerage allows placing and cancellation of orders to sell as well as purchase securities and other financial instruments.
6.2.2.2 Account Administration

The following mobile services can be utilized to administer a securities account.

1. **Access administration**: As with Mobile Accounting mobile devices may be used to administer the access to an account, e.g. to change the individual PIN or to request new TANs.

2. **Administer order book**: Orders to sell or purchase stocks, which are not yet carried out, can be modified via mobile devices that are allowed to access the customer order book. Additionally, new standing orders may be placed to sell/purchase a particular stock on reaching a predefined threshold value.

6.2.3 Mobile Financial Information

Mobile Financial Information refers to non-transaction based banking- and financial services of informational nature [Georgi/Pinkl, 2005, p. 57]. This sub-application may be divided into two categories:

1. Account information
2. Market information

Information services are an integral part of Mobile Accounting and Mobile Brokerage but can also be offered as an independent module, i.e. Mobile Financial Information can be offered without providing Mobile Accounting or Mobile Brokerage but *vice versa* is not feasible.

Mobile Financial Information services are generally provided by credit institutions and financial services institutions. However, there are other enterprises too that do not belong to either of this category but still provide market information via mobile devices.

Mobile Financial Information services include subsets from both banking and financial services and are meant to provide the customer with anytime, anywhere access to information. The information may either concern the bank and securities accounts of the customer or it may be regarding market developments.
with relevance for that individual customer. The information is customized on the basis of preferences given by the customer and sent with a frequency decided by him. The information should be provided, ideally, on both, pull and push basis.

<table>
<thead>
<tr>
<th>Account Information</th>
<th>Market Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance inquiries / Latest transactions</td>
<td>Foreign exchange rates</td>
</tr>
<tr>
<td>Statement requests</td>
<td>Market and bank-specific interest rates</td>
</tr>
<tr>
<td>Threshold alerts</td>
<td>Commodity prices</td>
</tr>
<tr>
<td>Returned cheques / cheque status</td>
<td>Stock market quotes and reports</td>
</tr>
<tr>
<td>Credit card information</td>
<td>Product information &amp; offers</td>
</tr>
<tr>
<td>Branches and ATM locations</td>
<td>--</td>
</tr>
<tr>
<td>Helpline and emergency contact</td>
<td>--</td>
</tr>
<tr>
<td>Information on the completion status</td>
<td>--</td>
</tr>
</tbody>
</table>

**Table 6.3: Services in Mobile Financial Information**

### 6.2.3.1 Account Information

The term Account Information, as used here, refers to information that is specific to a customer and his bank, even though it does not necessarily involve a monetary transaction. Mobile services that belong to this category are:

1. **Balance inquiries**: Mobile devices may be employed to check the current financial status of own bank or securities accounts.
2. **List of latest transactions:** Mobile devices may be used to request a list of latest transactions performed on an account. This service works with a standard, pre-specified number of latest transactions that are reported, as and when demanded. Most of the banks provide a list of up to five latest transactions.

3. **Statement requests:** A statement request – unlike the request for a list of latest transactions – generates a list of all transactions in a given period, for instance in a week or in a month. Statements may be requested either manually, as and when needed. Alternatively the bank may be asked to automatically send statements regularly in pre-specified intervals, e.g. weekly. In Mobile Banking the account statements can be requested via and/or delivered on mobile devices.

4. **Transaction thresholds:** The bank may be instructed to automatically alert the customer via SMS whenever transactions (credits as well as debits) exceeding a certain amount are performed on the account.

5. **Balance thresholds:** A similar threshold alert may be activated for the balance status of the account. The customer may be informed via SMS whenever the balance falls below a certain predefined level. This service may be useful to help the customer avoid unpleasant situations of not being able to honor his commitments.

6. **Threshold alerts for stock prices:** The bank may be instructed to send an alert on mobile devices, via SMS, when prices of some particular stocks fall or jump to a predefined threshold value and ask for further instructions.

7. **Returned cheques /cheque status:** The customer may be informed without time-delay if one of his deposited cheques has not been honored and corrective steps are required.
8. **Credit cards information:** The customer may check anytime and anywhere the current status of his credit cards and the amount that he may utilize at that given point of time.

9. **Branch and ATM locations:** Mobile devices may help finding the nearest branch or ATM affiliated to a bank. The current location of the customer may be determined by positioning the mobile device. This service may be particularly useful while travelling.

10. **Helpline and emergency contact:** Mobile devices may be provided with content that is required in emergency situations, for instance to block a lost credit card. The information may be either embedded in the telephone menu, e.g. in cooperation with a network carrier or the information may be provided on a WAP page analogue to a web page.

11. **Information on the completion status of an order:** The bank may use “push” services to inform the customer via his mobile device regarding whether or not his orders could be carried out. This ensures that urgent information can be provided to the customer while on the move.

12. **Product information and offers:** The bank can provide information about its products and new offers to a customer on the move. A customer can “pull” the information that he wishes to access. On the other hand the bank can “push” the information/offers that the customer has identified as interesting and is willing to receive.

6.2.3.2 **Market Information**

The term Market Information – as opposed to Account Information – refers to information with a macro-scope. This information is not directly related to the customer account. It is generated either externally, e.g. exchange rates or central
bank’s interest rates, or internally by the individual bank, e.g. bank-specific interest rates.

The individual bank-customer does not play a direct role in this process. The information may be later sorted out to cater to the individual needs and preferences of a particular customer, if so desired by him, and subsequently delivered on a mobile device of his choice, e.g. a mobile phone or a PDA.

Information in this category generally concerns:

1. Foreign exchange rates
2. Interest rates
3. Stock market news and reports
4. Commodity prices (e.g. gold and raw materials)