



INTERNET BANKING

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Online banking, Internet banking, Mechanics of internet banking, various online services, Benefits and drawbacks of internet banking.

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ABSTRACT *This project aims at creation of a secure Internet banking system. This will be accessible to all customers who have a valid User Id and Password. This system provides the following facilities: balance enquiry, funds transfer to another account in the same bank, Request for Cheque book/change of address and viewing monthly and annual statements. Normally, all E-banking facilities inform the customer via an SMS to indicate that the transaction is being taking place on their account. However, this is not sufficient security measure, i.e. in case a malicious user is operating on the account the user will just get to know that the transaction is being taken place but has no means to stop that transaction.*

Introduction

Internet banking is an electronic payment system that enables customers of a financial institution to conduct financial transactions on a website operated by the institution, such as a retail bank, virtual bank, credit union or building society. Online banking is also referred as online banking, e-banking, virtual banking and by other terms. To access a financial institution's online banking facility, a customer with Internet access would need to register with the institution for the service, and set up some password (under various names) for customer verification. The password for online banking is normally not the same as for telephone banking. Financial institutions now routinely allocate customer numbers (also under various names), whether or not customers have indicated an intention to access their online banking facility. Customers' numbers are normally not the same as account numbers, because a number of customer accounts can be linked to the one customer number. The customer can link to the customer number any account which the customer controls, which may be cheque, savings, loan, credit card and other accounts. Customer numbers will also not be the same as any debit or credit card issued by the financial institution to the customer. To access online banking, a customer would go to the financial institution's secured website, and enter the online banking facility using the customer number and password previously setup. Some financial institutions have set up additional security steps for access to online banking, but there is no consistency to the approach adopted.

Meaning

A system allowing individuals to perform banking activities at home, via the internet. Some online banks are traditional banks which also offer online banking. Online banking through traditional banks enable customers to perform all routine transactions, such as account transfers, balance inquiries, bill payments, stop-payment requests, and some even offer online loan and credit card applications. Account information can be accessed anytime, day or night, and can be done from anywhere. A few online banks update information in real-time, while others do it daily. Once information has been entered, it doesn't need to be re-entered for similar subsequent checks, and future payments can be scheduled to occur automatically. Many banks allow for file transfer between their program and popular

accounting software packages to simplify record keeping. Some banks only offer online banking in a limited area. In addition, when an account holder pays online, he/she may have to put in a check request as much as two weeks before the payment is due, but the bank may withdraw the money from the account the day that request is received.

Features

The common features fall broadly into several categories:

- A bank customer can perform non-transactional tasks through online banking, including -
 - o Viewing account balances
 - o Viewing recent transactions
 - o Viewing images of paid cheques
 - o Ordering cheque books
 - o Download periodic account statements
 - o Downloading applications for M-banking, E-banking etc.
- Bank customers can transact banking tasks through online banking, including -
 - o Funds transfers between the customer's linked accounts
 - o Paying third parties, including bill payments and third party fund transfers
 - o Investment purchase or sale
 - o Loan applications and transactions, such as repayments of enrollments
 - o Credit card applications
 - o Register utility billers and make bill payments
- Financial institution administration
- Management of multiple users having varying levels of authority
- Transaction approval process
- the process of banking has become much faster
- Some financial institutions offer unique Internet banking services, for example:
- Personal financial management support, such as importing data into personal accounting software. Some

online banking platforms support account aggregation to allow the customers to monitor all of their accounts in one place whether they are with their main bank or with other institutions.

Mechanics of internet banking

The entire mechanics of internet banking are:

1. Enter into banks website
2. Click on the option which provides internet banking
3. Enter User-ID and password
4. Perform the transactions
5. Logout

Various online services

Online banking account is easy to open and operate. The online services offered might differ from bank to bank, and from country to country. To know about the various services, always go through the welcome kit that you get at the time of opening the account. You also get the password to access your online account, which you are supposed to keep with great care for security reasons.

The common online services offered by banks are:

1. Transactional activities

Electronic funds transfer
Loan application and repayments
Bill payments and wire transfer

2. Non transactional activities

Account balance viewing
Viewing of previous bank transactions
Bank statement downloading
Check book ordering
Viewing of images of paid cheques
M banking and E banking applications downloading
Provision of account/ bank statements

Benefits of internet banking

Convenience – Banks that offer internet banking are open for business transactions anywhere a client might be as long as there is internet connection. Apart from periods of website maintenance, services are available 24 hours a day and 365 days round the year. In a scenario where internet connection is unavailable, customer services are provided round the clock via telephone. Online banking allows for easier updating and maintaining of direct accounts. The time for changing mailing address is greatly reduced, ordering of additional checks is availed and provision of actual time interest rates.

Friendlier rates – Lack of substantial support and overhead costs results to direct banks offering higher interest rates on savings and charge lower rates on mortgages and loans. Some banks offer high yield certificate of deposits and don't penalize withdrawals on certificate of deposits, opening of accounts without minimum deposits and no minimum balance.

Transfer services – Online banking allows automatic funding of accounts from long established bank accounts via electronic funds transfers.

Ease of monitoring – A client can monitor his/her spending via a virtual wallet through certain banks and applications and enable payments.

Ease of transaction – the speed of transaction is faster relative to use of ATM's or customary banking.

Efficiency

Cost less

Transaction speed

Vast coverage

Drawbacks of internet banking

Banking relationship – Customary banking allows creation of a personal touch between a bank and its clients. A personal touch with a bank manager for example can enable the manager to change terms in your account since he/she has some discretion in case of any personal circumstantial change. It can include reversal of an undeserved service charge.

Security matters – Direct banks are governed by laws and regulations similar to those of customary banks. Accounts are protected by Federal Deposit Insurance Corporation (FDIC). Complex encryption software is used to protect account information. However, there are no perfect systems. Accounts are prone to hacking attacks, phishing, malware and illegal activities.

Learning – Banks with complicated sites can be cumbersome to navigate and may require one to read through tutorials to navigate them.

Transaction problems – face to face meeting is better in handling complex transactions and problems. Customary banks may call for meetings and seek expert advice to solve issues.

Difficult in adoption of technology

High cost of technology

Must have basic computer skills and internet knowledge

Security concern, like hackers accessing your bank account

Security

Security of a customer's financial information is very important, without online banking could not operate. Financial institutions have set up various security processes to reduce the risk of unauthorized online access to a customer's records, but there is no consistency to the various approaches adopted.

The use of a secure website has become almost universally adopted.

Though single password authentication is still in use, it by itself is not considered secure enough for online banking in some countries. Basically there are two different security methods in use for online banking.

- The PIN/TAN system where the PIN represents a password, used for the login and TANs representing one-time passwords to authenticate transactions. TANs can be distributed in different ways; the most popular one is to send a list of TANs to the online banking user by postal letter. Another way of using TANs is to generate them by need using a security token. These token generated TANs depend on the time and a unique secret, stored in the security token. More advanced TAN generators also include the transaction data into the TAN generation process after displaying it on their own screen to allow the user to discover man-in-the-middle attacks carried out by Trojans trying to secretly manipulate the transaction data in the background of the PC. Another way to provide TANs to an online banking user is to send the TAN of the current bank transaction to the user's (GSM) mobile phone via SMS.

The SMS text usually quotes the transaction amount and details, the TAN is only valid for a short period of time. Especially in Germany, Austria and the Netherlands, many banks have adopted this "SMS TAN" service. Usually online banking with PIN/TAN is done via a web browser using SSL secured connections, so that there is no additional encryption needed.

- Signature based online banking where all transactions are signed and encrypted digitally. The Keys for the signature generation and encryption can be stored on smart-cards or any memory medium, depending on the concrete implementation.

Conclusion

The strategy of the bank is to provide value added service and product to the customer, utilizing the internet extensively. For the safety measures change the password periodically, review bank accounts frequently and try to use low limit card for transaction. The main aim is to make transactions through online possess and make customer more beneficial. Internet banking is expected to grow as the customers become more familiar and more comfortable with internet transactions.

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