



RANI CHANNAMMA UNIVERSITY

B.Com – 4th Semester

Internet Banking

Unit-4 Internet Banking

Introduction to Internet Banking:

Internet banking allows a user to conduct financial transactions via the Internet. Internet banking is also known as online banking or web banking. Internet banking offers customers almost every service traditionally available through a local branch including deposits, transfers, and online bill payments. Virtually every banking institution has some form of online banking, available both on desktop versions and through mobile apps. With online banking, consumers aren't required to visit a bank branch to complete most of their basic banking transactions. They can do all of this at their own convenience, wherever they want i.e at home, at work, or on the way to our work.

In order to access the service, clients need to register for their bank's online banking service. In order to register, they need to create a password. Once that's done, they can use the service to do all their banking. Banking transactions offered online vary by the institution. Most banks generally offer basic services such as transfers and bill payments. Some banks also allow customers to open up new accounts and apply for credit cards through online banking portals.

Features of Internet Banking

The customer using this facility can conduct transactional and non-transactional tasks including:

- The customer can view account statements.
- It is 24 x 7 services.
- The customer can check the history of the transactions for a given period by the concerned bank.
- Bank, statements, various types of forms, applications can be downloaded.
- The customer can transfer funds, pay any kind of bill, recharge mobiles, DTH connections, etc.
- The customer can buy and sell on e-commerce platforms.
- The customer can invest and conduct trade.
- The customer can book, transport, travel packages, and medical packages.

Advantages of Online Banking

Convenience is a major advantage of online banking: Basic banking transactions such as paying bills and transferring funds between accounts can easily be done 24 hours a day, seven days a week, wherever a consumer wishes.

Online banking is fast and efficient: Funds can be transferred between accounts almost instantly, especially if the two accounts are held at the same institution. Consumers can open and close a

number of different accounts online, from fixed deposits to recurring deposit accounts that typically offer higher rates of interest.

Consumers can also monitor their accounts regularly: By allowing them to keep their accounts safe. Around-the-clock access to banking information provides early detection of fraudulent activity, thereby acting as a guardrail against financial damage or loss.

Online Bill Payment: One of the great advantages of online banking is online bill pay. Rather than having to write checks or fill out forms to pay bills, once you set up your accounts at your online bank, all it takes is a simple click or even less, as you can usually automate your bill payments. With online bill pay, it's easy to manage your accounts from one central source and to track payments into and out of your account.

Disadvantages of Online Banking:

In spite of their many advantages, there are some drawbacks to using online banks as well. Here are some of the downsides/drawback of working with an online bank:

Technology Issues

In many ways, an online bank is only as good as your or their internet connection. If there's a power outage, or if servers go down, you might not have any access to your account whatsoever. While some banks offer a phone number for customer service, it might be overwhelmed if online access is down. With a real bank, you can always find someone to talk to in the branch.

Security Issues

While many online banks are reputable and well-established, sometimes it can be hard to feel comfortable with a bank that doesn't have a physical presence, particularly when large sums of money are involved. If a website suddenly folds up, then our money is not safe. There's also the risk to identity theft or actual theft if someone gains unauthorized access to your account via a hacked or stolen password or log-in credentials.

Inefficient at Complex Transactions

Online banks might be able to transfer money between accounts or pay bills, but you might be more comfortable with an International, bricks-and-mortar bank if you have complex transactions. Worldwide, business-oriented banks like, Chase have global transaction capabilities, such as the ability to send payments to more than 35 different currencies worldwide, that online banks might not be able to muster. Without a real-world presence, most online banks can't even offer the services of a notary public, which require an in-person visit and necessary for most important financial transactions like buying a home.

No Relationship with Personal Banker

Over time, you can develop a relationship with a personal banker if you visit a traditional bricks-and-mortar location. If you're dealing with an online bank, on the other hand, you're typically handed off to an anonymous customer service agent who is unlikely to know you from the next customer. If you're really in a bind, financially speaking, having a relationship with someone who can help and who knows you well can be a major advantage over a strictly online banking relationship.

Inconvenient to Make Deposits

It might seem counterintuitive that a bank, whose purpose is to attract assets, makes it hard for customers to make deposits, but that can be true in the case of some online banks. With an online bank, you can't simply drop off cash or a check at a local branch. In fact, some online banks, like Ally Bank, won't accept cash deposits at all. Using Ally Bank as an example, to make a deposit you'll have to mail a check, transfer money from another bank or another account, or use the bank's e-check deposit service.

Advantages and Disadvantages of Internet Banking:

Advantages	Disadvantages
An online account is simple to open and easy to operate.	Understanding the usage of internet banking might be difficult at the first., a person who is new to technology might face some difficulty.
It's convenient, because you can easily pay your bills and transfer your funds between accounts from nearly anywhere in the world.	You cannot have access to online banking if you don't have an internet connection; thus, without the availability of internet access, it may not be useful.
You do not have to stand in a queue to pay off your bills. Also you do not have to keep receipts of all of your bills, as you can now easily view your transactions.	Security of transactions is a big issue. Your account information might get hacked by unauthorized people over the internet.
It is available all the time. You can perform your tasks from anywhere and at any time, even at night or on holidays when the bank is closed. The only thing you need to have is an active internet connection.	Password security is a must. After receiving your password, change it and memorize it. Otherwise, your account may be misused.
It is fast and efficient. Funds get transferred from one account to the other very fast. You can also manage several accounts easily through internet banking.	Your banking information may be spread out on several devices, making it more at risk.
You can keep an eye on your transactions and account balance all the time.	If the bank's server is down, then you cannot access your accounts.
You can get to know about any fraudulent activity or threat to your	If the bank's server is down, due to the loss of net connectivity or a slow connection, then it might be

account before it can pose any severe damage.	hard to know if your transaction went through.
It's a excessive medium for the banks to endorse their products and services.	You might get overly marketed too and become annoyed by notifications. That said, these can easily be turned off.
More online services include loans and investment options.	You might become annoyed by constant emails and updates.

Additionally, online banking is dependent on a reliable Internet connection. Connectivity issues from time to time may make it difficult to determine if banking transactions have been successfully processed.

Electronic funds transfer (EFT)

An **electronic funds transfer (EFT)** is a transaction that takes place over a computerized network, either among accounts at the same bank or to different accounts at separate financial institutions. Electronic funds transfer (EFT) are electronic transfer of money from one bank account to another, either within a single financial institution or across multiple institutions, via computer-based systems, without the direct intervention of bank staff.

Using a credit or debit card - Using this method, money is transferred electronically from your account to the seller's account. This is one of the most widely used forms of payment.

Online bill payment - Often referred by many as online banking, this has become very popular as a quick and easy way to pay monthly bills. More than two out of every three bills are now paid in an electronic form. This has recently further evolved into the ability to pay bills directly from your mobile device or phone.

Direct debit - This is often referred to as electronic checks or monthly auto draft. Individuals can set up a recurring schedule and payment instructions for companies to automatically pull money from their bank account to pay for bills or services. Many people pay their house or car payments this way. The method simply requires sending the institution avoided check with your routing and account number.

Direct deposit -This form of employee payment is now the preferred way to get paid from your employer and is often the only way for some jobs. Your pay check enters your bank account quicker, and the employer saves hundreds or thousands of dollars in not printing and delivering checks.

Benefits of EFT

Electronic funds transfer provides an easy, cheaper and faster method of transferring money.

- It helps individuals and organizations to save on costs such as printing checks as well as the time to deliver or collect checks and deposit them in the banks for processing.
- The money moves to the recipient's account much faster since there is no manual moving of checks from one bank to the other.
- It is more efficient
- Has less administrative procedures, hence reduced labour and staff costs
- An electronic funds transfer is much safer and secure. For instance, it eliminates the need to carry huge amounts of money.

Mobile Banking

Mobile banking (M-Banking) is a latest banking service that offers banking services through a mobile communication device such as Mobile Phone or Personal Digital Assistant (PDA). In Mobile banking a customer can avail services of a bank while he/she is roaming i.e not positioned at a single location.

Cheque clearing

Cheque clearing or bank clearance is the process of moving cash (or its equivalent) from the bank on which a cheque is drawn to the bank in which it was deposited, usually accompanied by the movement of the cheque to the paying bank, either in the traditional physical paper form or digitally under a cheque truncation system. This process is called the clearing cycle and normally results in a credit to the account at the bank of deposit, and an equivalent debit to the account at the bank on which it was drawn, with a corresponding adjustment of accounts of the banks themselves. If there are not enough funds in the account when the cheque arrived at the issuing bank, the cheque would be returned as a dishonoured cheque marked as non-sufficient funds.

When a bank customer deposits a cheque, which may be drawn on any bank, the bank would credit the depositor's account with the amount of the cheque. However, the amount so credited is not available to the depositor until the cheque has been cleared by the paying bank.

For cheques drawn on a customer of the same bank, the bank would, usually on the next business day, ensure that the cheque is in order and debit the account of the drawer, and the cheque would be taken to have been cleared. A cheque is not in order if, for example, the date is invalid, the drawer's signature is not like the one held by the bank, the wrong number of signatories have signed the cheque, etc. There must also be sufficient cleared funds in the account before the drawer's account is debited.

Cheques drawn on another bank (termed the issuing bank or “paying bank”) need to be presented to the other bank before the deposit bank receives payment to cover the amount credited to the depositor's account. In the absence of the paying bank notifying the deposit bank of the special clearance of the cheque, for example, following a request from the deposit bank, the funds become available after the passing of an agreed clearance period, commonly three business days, when the depositor's account is described as comprising cleared funds.

If the cheque is not in order, or if there are not enough cleared funds in the account when the cheque arrived at the issuing bank, the cheque would be returned as a dishonoured cheque marked appropriately, such as non-sufficient funds or present again.

All banks might have clerks to take cheques drawn on other banks to those banks, and wait for payment. Clearing houses were set up to streamline the process by collecting all cheques drawn on other banks, and collecting payment from those banks for the total to be cleared.

1. **Electronic clearance or Electronic clearance system** is an electronic method of fund transfer from one bank account to another. It is general used for bulk transfers.
2. **Cheque truncation** was introduced in various countries, starting in the 1990s, to allow electronic images to be made of physical cheques, for electronic clearance. The legalisation of remote deposit made it possible for businesses and bank customers to deposit cheques without delivering them to their own banks. In the process, a depositor would make an image of the physical cheque with a smartphone or other device, and attach the image to a deposit. The

deposit bank would use the cheque image in the normal electronic clearance process, though in this case MICR data would not be available.

3. Electronic payments

As the automation of cheque processing improved, fully electronic payment systems obviated the need for paper. Two methods were developed: the Automated Clearing House (ACH) for smaller payments which complete in two business days, and Clearing House Interbank Payments System (CHIPS) for larger value same day payment

Magnetic ink character recognition code:

Magnetic ink character recognition code, known in short as **MICR** code, is a character recognition technology used mainly by the banking industry to streamline the processing and clearance of cheques and other documents. MICR encoding, called the MICR line, is at the bottom of cheques and other vouchers and typically includes the document-type indicator, bank code, bank account number, cheque number, cheque amount (usually added after a cheque is presented for payment), and a control indicator. The format for the bank code and bank account number is country-specific.

The technology allows MICR readers to scan and read the information directly into a data-collection device. Unlike barcode and similar technologies, MICR characters can be read easily by humans. MICR encoded documents can be processed much faster and more accurately than conventional OCR encoded documents.

In MICR technology the information is printed on the instrument with a special type of ink which is made up of magnetic material. On insertion of the instrument in the machine, the printed information is read by the machine. MICR system is beneficial as it minimizes chances of error, clearing of cheques becomes easy and transfer of funds becomes faster in order to facilitate operations.

Real Time Gross Settlement (RTGS)

RTGS or Real Time Gross Settlement is a fund transfer method through which money is sent in real time basis without any delays. This electronic fund transfer system allows the money sent by the remitter to immediately reach the payee/beneficiary as and when the money transfer transaction is initiated. Here, Gross Settlement refers to the processing of transactions on an individual basis and not in a batch wise system.

Money can be sent using RTGS through net banking. To initiate such a transaction, it is important to collect some details from the payee such as account number, bank name, IFSC code, and account holder name. Another interesting feature about this wire transfer method is that transactions can be scheduled in advance.

The RTGS payment system is maintained by the Reserve Bank of India (RBI) and hence is a safe and reliable method of sending and receiving money at any given point of time in the country. In fact, RTGS is one among the fastest ways to send money to anyone. It is much faster than the NEFT method of payment.

Features of RTGS Transaction

Here are the main features of an RTGS transaction that one should be aware of before using it:

1. Real-time online fund transfer
2. Used for high value transactions
3. Safe and secure
4. Reliable and backed by RBI
5. Immediate clearing
6. Funds credited on a one-on-one basis
7. Transactions executed on an individual and gross basis

The following information is required for an RTGS transaction:

- Remitting account details.
- Name of the beneficiary bank and branch.
- Name of the beneficiary customer.
- Beneficiary account number.
- Amount to be transferred.
- Remarks or notes if any.
- IFSC number of the receiving bank.

There are two modes to perform RTGS:

a. Internet banking: Many banks offer the facility to add beneficiary online using the internet banking facility. Upon successfully adding beneficiaries, you can transfer funds to the beneficiary. In addition to individuals, corporate account holders can also utilise internet banking to make RTGS transfers.

b. Branch: Visit the nearest bank branch and fill the RTGS form to initiate a fund transfer.

National Electronic Funds Transfer (NEFT):

National Electronic Funds Transfer (NEFT) is a mode of online funds transfer that is introduced by the Reserve Bank of India (RBI). It quickly transfers money between banks throughout India. A bank branch must be NEFT-enabled for a customer to be able to transfer the funds to another party.

The benefits of NEFT given to the consumers are as follows:

- **Safe and Effective:** For a flawless transfer of funds on the Internet, NEFT helps you to transfer any amount of money quickly.
- **Low Processing Charges:** NEFT is flexible payment options which are very economical. To utilise this facility, you don't have to pay a huge sum of money to your bank. The processing charges are economical, and you can transfer any amount of money without any difficulty.
- **Highly Dependable:** NEFT, an integral aspect of Internet banking, is a highly dependable method of making payments and receiving funds online. In India, most of the banks are regulated under the norms set by RBI and, hence, the Internet banking facility too is quite safe.
- **Rapid Settlement:** Unlike the regular banking methods of fund transfer, NEFT transfer is really quick, and you can enjoy rapid settlement of accounts, thereby improving the overall functionality of your business.

Detailed process of NEFT is as follows:

1. The customer fills an application form providing details of the beneficiary (like name, bank, branch name, IFSC, account type and account number) and the amount to be remitted. The remitter authorizes his/her bank branch to debit his account and remit the specified amount to the beneficiary. This facility is also available through online banking, and some banks also offer the NEFT facility through ATMs.
2. The originating bank branch prepares a message and sends the message to its pooling centre (also called the NEFT Service Centre).
3. The pooling centre forwards the message to the NEFT Clearing Centre (operated by National Clearing Cell, Reserve Bank of India, Mumbai) to be included for the next available batch.
4. The Clearing Centre sorts the funds transfer transactions destination bank-wise and prepares accounting entries to receive funds from the originating banks (debit) and give the funds to the destination banks (credit). Thereafter, bank-wise remittance messages are forwarded to the destination banks through their pooling centre (NEFT Service Centre).
5. The destination banks receive the inward remittance messages from the Clearing Centre and pass on the credit to the beneficiary customers' accounts.

- **Settlements of fund transfer in NEFT is done on half hourly basis.** There are 23 half hourly settlement batches that are operational from 8 am to 7 pm on all working days of week (Except 2nd and 4th Saturday of the month).

SWIFT (Society for Worldwide Inter-bank Financial Telecommunications)

SWIFT is a society that provides a network that enables financial institutions worldwide to send and receive information about financial transaction in a secure, standardised and reliable environment. The SWIFT messaging system uses standard SWIFT codes. It was established in 1973 in response to a growing need for an Internationally sound communications network that would facilitate business transactions across borders effectively, quickly and securely

Optical Character Recognition (OCR):

Optical character recognition (OCR), is software that identifies and extracts text from documents and images, allowing them to be understood and processed by a computer. OCR has existed for a while already, but is only recently being expanded into broader data capture technology. Accurate OCR and/or data capture technology is a key component of almost any business process automation (BPA) system, which is being used across nearly every industry, to automate all types of departments and processes.

The banking industry was one of the first, and remains one of the largest users of OCR and automation technologies.

Data capture and automation technologies have simplified banking processes and made them immeasurably faster and more efficient. ATMs, or automated teller machines, were one of the first, and are still one of the most well-known examples of automation. They also implemented the first and most rudimentary OCR technology, used to recognize the numbers at the bottom of checks. In

fact, check numbers have their own font specifically to make the numbers more easily distinguishable to a computer.

The technology has since advanced to include computer vision and computer perception capabilities, which are now used to process all types of forms, applications and other paperwork that credit card processors are responsible for. Today, advanced OCR enables credit card processors to utilize state-of-the-art merchant statement analytics, which provides a true effective rate based on accurate readings of merchant transactions.

OCR has also enabled customers to scan and deposit checks from their mobile phones with a machine reading and processing every part of the cheque. This includes items like the account number, the amount and the signature.

Accurately understanding scanned forms, cheque and other document and images, is the first critical step in any full banking automation solution.

Facsimile Transformation (FAX) Banking

Facsimile banking is another means of distant banking. It allows sending documents to the bank from the fax numbers specified in your agreement. Besides the signature of the account holder, the sent document should contain the PIN code specified in the agreement to authenticate the document. Banking is one of several industries that still rely heavily on faxing as a way to transmit documents. It's a key way for many financial institutions to send and receive documents.

The account holder may send via fax the following documents:

- Payment orders
- Foreign exchange orders
- Cash withdrawal orders
- Free format text messages

Uses of FAX in Banking Industry

- Security
- Overseas business
- Regulations

Security

Like other industries that still use fax, the banking sector needs to be vigilant about security. From individual client accounts to stock brokerage, they have a lot of sensitive data in their hands. Fax transmissions, whether via telephone line or online fax, are more secure than email. It's much, much more difficult to hack an encrypted fax transmission than email. For bankers, who relay sensitive information and must assure their clients that their financial information is safeguarded, that's a major reason to continue faxing documents.

Overseas Business

For banks that do work internationally, faxing may be a culturally and practically preferred way to transmit documents.

The government handles a lot of paperwork and people complain that processes take too long as it is. If these institutions allowed documents to be sent over email it would add an extra dimension of

uncertain validity to the paperwork. Doing so could delay processes even longer. This is obviously not an optimal solution.

Regulations

Banking is also a heavily regulated industry, and like other similar industries – legal and medical fields, for instance – banking has specific needs when it comes to documents. Signatures on faxes are considered as legally binding as something signed in person, and faxes also come with a date stamp on each transmission.

Different types of Banking Documents usually sent or received via Fax are:

- Mortgage documents
- Business loan documents
- Stock transfer documents
- Business licenses
- Articles of organization
- EIN documents
- Tax information

Online fax

Online faxing is fast becoming a preferred faxing method for many businesses. It allows you to fax from your email account, an online interface, or a mobile device, and will eliminate the need to rely on a physical fax machine.

Although it doesn't rely on telephone lines, online faxing is still considered more secure than email. Features like mobile phone apps and electronic signing make it easy for those in the financial industry to fax from anywhere. Businesses also save money on equipment and paper by switching to online faxing.

Facsimile

Facsimile commonly known as Fax is used in corporate world to send and receive official documents. It is an easy and quick way for commercial or non-commercial documents transfer having the required authenticity. Now, latest computer printers are also equipped with facsimile service.

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