

ROLE OF ICT IN BANKING SERVICES

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Abstract

In this paper it tried to explain the way of Banks make use of ICT (Information and Communication Technology) i.e., ATMs, EFT, Working of Cashline Machine, Contactless Payments these can keep their operating costs down because fewer employees are needed to work behind the counter inside branches. The bank site will usually offer additional products that you might be interested in such as loans or insurances. Because you can do virtually everything online, there are now banks that are purely internet based with no physical branches at all.

Key Words: Electronic funds transfer, Cashline machine, Smart cards, Contactless payments.

INTRODUCTION

Multiple emerging technologies, such as Wearable Devices, Social Media Analytics, Context Aware Intelligence, Predictive Analytics, Big Data, Biometrics, Internet of Things (IoT), Augmented Reality, Cloud, and Mobile, have caught financial institutions in its whirlwind. The main issue is what to and not to embrace, and will it be profitable. The world is hurtling towards adoption of these fascinating technologies and financial institutions have to keep pace.

Online and mobile banking are no longer considered to be a trending technology, they are expected to be part of mainstream delivery channels. Banking is now at the cross-roads of the next phase of digitalization, i.e., to offer innovative services to customers where mobile devices are a preferred medium of engagement. From payments to Personal Finance Management (PFM) tools, banks are churning out interesting applications to keep customers intrigued,

OBJECTIVE OF STUDY

To study the role of various technological developments emerged in banking sector to make the banking services very smoother, fasters and transparent.

AUTOMATED TELLER MACHINES (ATMs): Banks use mainframe computers to maintain their customer accounts by dealing with transactions generated as a result of withdrawals and deposits. It also operates a network of automated teller machines or ATMs.

Typically an ATM can be used to:

1. Withdraw cash.
2. Check an account balance.
3. Order a statement or print a 'mini statement'.
4. Order a cheque book.

The advantages of ATMs:

1. Banks can keep their operating costs down because fewer employees are needed to work behind the counter inside branches.
2. Customers have 24-hour access to their accounts seven days a week.
3. There's no need to carry large amounts of cash around as the large number of ATMs means that it is readily available.

WORKING OF CASHLINE MACHINE

Cashline or automated teller machines work as multi-access terminals. This allows several people to simultaneously connect to a central computer without being aware of each other.

CLEARING CHEQUES

Once a cheque has been written and paid into the bank a process called clearing begins. This describes the steps that take place in order for the correct amount of money to be transferred from one account to another. Cheques are processed using MICR

ELECTRONIC FUNDS TRANSFER (EFT)

SWITCH and DELTA are the two main types of debit card in the UK. They can be used to pay for goods and services instead of cash or cheques. This type of payment system is called EFT. Main advantages of EFT are that bank accounts are updated straight away and there is no need to use cash or wait for cheques to clear.

SMART CARDS

They look exactly like a credit or debit card except that it has a microchip built into it. Smart card can be used to store data reliably and securely. Money is stored on the card in an electronic purse.

The main advantages:

1. They can be used just like cash without the need to wait for authorization like EFT systems.
2. Smart card technology is more reliable than magnetic stripes which are easily damaged.
3. Smart cards offer better security than magnetic stripe cards because they are much more difficult to forge and generate a unique digital code each time they are used.

CALL CENTRES

Call Centres were the next major step forward for banks. Customers make a large number of telephone calls to their bank and there were not always enough staff in the branch to take calls and serve customers. So banks began to set up separate facilities where large numbers of workers spend the day answering telephone calls from customers. These staff didn't just deal with customers from one branch, they could be speaking to customers from any branch around the country. Call centres saved banks a lot of money because they could deal with a large number of calls from customers quickly and efficiently. Customers benefit by being able to contact the bank from anywhere to find out their balance, transfer money, pay bills and so on.

Now that telecommunications around the world is fairly inexpensive, many call centres are not even located in the same country as the bank. However, some customers miss the face-to-face contact and prefer to visit their local branch to conduct their business.

PAYING FOR THINGS - CHEQUE

For centuries, the most common way to pay for something was either by cash or cheque. But that is now changing. The cheque is a paper document issued by the bank that you write upon to authorise the transfer of money from your account. At the bottom of each cheque can be found the details of your bank account. The ink is actually magnetic, and a standard machine-readable font is used. This allows millions of cheques to be processed automatically by the clearing banks using Magnetic Ink Character Recognition (MICR) machines and optical scanners.

The use of cheques is in decline - in fact the banks may stop using them altogether. It was thought that electronic bank transfers (BACS) would replace cheques, but in 2011 the Payments Council reversed their decision to phase it out as cheques remain relatively popular with businesses. Cheques will be with us for the foreseeable future.

PAYING FOR THINGS - DEBIT CARDS

The reason for the decline in cheques is due to the widespread use of the modern bank 'debit card'. A debit card is a small plastic card containing a secure embedded chip. The chip contains your Personal Identity Number (PIN) and account number. You can see the gold connections to the embedded chip in the picture below. This is called a 'chip-and-pin' system. It works by inserting the card into a card reader. The reader makes a connection with the chip. Then you enter your secret PIN into the reader to confirm that the card belongs to you.

The PIN and the encrypted data from the chip is sent to the bank's computers either by phone or over the internet. If the PIN you entered matches the one stored in the chip then the bank will authorise the payment. The reason that the debit card is so much more popular than the traditional cheque is that it is fast, convenient and fairly secure (you should keep your PIN number secret at all times). You can also pay for items by phone or online by quoting the relevant card details to the shop

CONTACTLESS PAYMENTS

One of the problems with using debit cards is that they are not cost effective for making small payments. This is because the 'card merchant' (e.g. Visa or Master Card) charges a minimum amount to a business for every transaction and this becomes uneconomic for small sums. So people tend to carry some small change for these occasions. Many solutions have been proposed, such as using a mobile phone to make payments. Now a new technology is being rolled out by the major card companies. It is called 'contactless payment' and they have agreed a symbol to indicate that a card has this feature.

The symbol on the right that looks like a set of arcs means 'contactless payment'. All a customer has to do to make a payment is to wave their card across a contactless payment terminal. No need to enter a PIN number. To reduce the effect of fraud, there is a limit of £20 to £30 per transaction and every now and then you will be asked to enter your PIN number in any case. The technology behind it is called 'near field communication', unlike Wi-Fi it only works within a few centimeters, which is ideal for this application. It is similar to RFID technology. Contactless payments can now be made to commute on London Underground rather than a pre-paid Oyster card. It is expected that you will see more and more of these contactless terminals appearing in cafes and shops over the next few years.

ONLINE BANKING

For centuries, banks had remained more-or-less the same. But thirty years ago, along came the internet. Very soon after that, the banks realised that this was yet another way for customers to use their services without having to visit a physical branch. In the UK according to the Office of National Statistics, in 2014, 38 million adults or 76% of the population had access to the internet, either by personal computer, mobile phone or interactive television. Three quarters of all adults bought goods or services online. So the internet has now become a major part of our society. And online banking is one of those services. Online banking enables people to:

1. View and download their bank statements
2. Set up and view direct debits or standing orders
3. Pay bills such as gas or electricity
4. BACS transfer money to another account
5. Send a message to their bank

The bank site will usually offer additional products that you might be interested in such as loans or insurances. Because you can do virtually everything online, there are now banks that are purely internet based with no physical branches at all

ONLINE BANKING SECURITY

Security is vital on an online bank system and so a number of techniques have come along to make using this service as safe as possible and to reduce the risk of unauthorised people getting access to your account..

SECURITY CHECK 1

In order to use an online banking web site you have to log in with your user name and your password. However, because of the need for very strong security you often won't be asked to enter your whole password. You may be asked to randomly enter for example the 2nd and the 5th letter and last letter from your password.

The reason for this is so that you never actually type your whole password into the site and so that makes it very difficult for a hacker to intercept and guess your password. It also prevents malware taking an image of your screen to get the entire password.

SECURITY CHECK 2

Once you have got through this first level of security you may then be asked to answer a pre-arranged question e.g. your mother's maiden name. This is why personal details such as your mother's name or your birthday should not be revealed on social network sites.

SECURITY CHECK 3

As an additional level of security the bank may also issue you with a device such as a card reader. It is a bit like the normal card reader you find in a shop, in that you insert your debit card and enter your PIN. If it is correct, then a random number is shown that you then enter into the online bank site.

SECURITY CHECK 4

To set up a new backs payment, some banks will text or phone a pre-arranged number with a four digit code. Then to complete the new payment online, you have to enter that four digit code.

PHISHING AND TROJANS

Wherever there is money - there will be thieves trying to get it. And online banking is no different. The key to getting access to a bank account is to obtain the login details by any means possible. One very common method is called 'phishing'. It works by email or even telephone scam. First of all an alarming email message appears in your inbox such as 'your account has been accessed'. Then the message continues with a 'call to action' scary sentence such as 'You must login urgently to prevent your account being frozen'. Then comes a convenient link within the email for you to click on. This takes you to a fake login site that looks just like the real thing - same logos, trademarks, graphics and so on. So you naively enter your login details. Never, ever, click on links in emails - always go to the real site by typing in the URL directly into your browser or search engine.

Another sneaky method is to somehow install a 'trojan' on your computer. A trojan will record your key strokes and take screen shots of your screen. These are then sent stealthily over the internet. Malware such as trojans are downloaded by unwittingly by visiting a corrupted web site. These may be perfectly legitimate sites but they have been hacked and rogue code inserted on to the web server. This is why you should always have up-to-date security software running on your computer. These look out for known trojan exploits and provide anti-phishing detection. Risk versus convenience All this sounds scary, but you should not be overly worried if you take reasonable care of your personal details and be aware of common tricks. Online banking continues to rise in popularity because of the sheer convenience it offers and the banks are constantly looking for better ways to make their online services as secure as possible.

CONCLUSIONS

It can be concluded that banks use mainframe computers to maintain their customer accounts by dealing with transactions generated as a result of withdrawals and deposits. It also operates a network of automated teller machines or ATMs. Online banking continues to rise in popularity because of the sheer convenience it offers and the banks are constantly looking for better ways to make their online services as secure as possible. Security is vital on an online bank system and so a number of techniques have come along to make using this service as safe as possible and to reduce the risk of unauthorised people getting access to your account.

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