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Digital Currency: An Overview on Electronic Payment System

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Introduction

Today just as cell phones and video games have become important so also has online payment formed a roadmap for electronic payments for instance, new types of purchasing relationships such as auction between individuals online have resulted us the need for peer to peer payments that allow individuals to e-mail payments to the other individuals. Electronic payment system (EPS) refers to the settlement of account where prompt payment is crucial. If the payment to the company and customer are not done in time, the entire business gets interrupted. The Conventional payment methods are not suited to e-commerce. Electronic payment system talks about settling of various payment transactions electronically or online where no physical or conventional method like cheque or DD are used rather, virtual cash is transferred to various entities.

Electronic payment system phase comprises of many different kinds of electronic and online payment methods for the processing of transactions and their applications among online merchants and commercial websites.

Types of E-payment System

Eps can be classified into two types.

- Digital token-based Eps
- Retailing Payments

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There are three types of digital token based e-payment system. e-cash (online settlement of Electronic Token) Money which is exchanged electronically is referred to as e-cash e-cash represents several types of products such as debit/credit cards, smart cards or other transactions such as purchasing, money transfer, etc which is done electronically, and does not involve paper cash. ATM is the product of electronic payment system. ATM cards are also called as debit cards. These are also called electronic wallet, used to retrieve currency. Debit cards may also allow for instant withdrawal of cash, acting as the ATM card for withdrawing cash and as a cheque guarantee card. Merchants may also offer cashback facilities to customers, where a customer can withdraw cash along with their purchase.

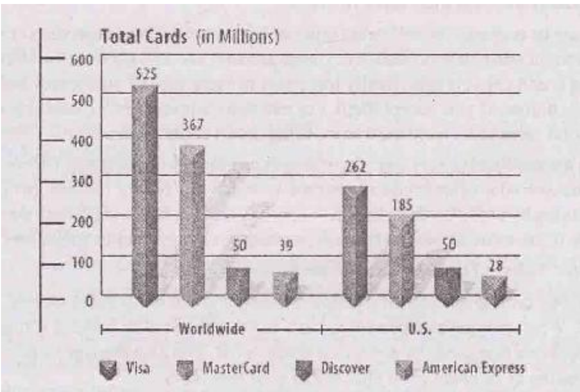
E-cheques (Post- Paid Token) Credit Card

E-cheque is an electronic cheque book these are also called "Net Cheques". They are designed for those persons who might prefers to pay on credit or not through cash for this, the buyer must register with third party before writing electronic cheques.

Smart Card (Prepaid-Token)

Smart card is the new technology to take the plastic card well into the next century; smart card is a small plastic card that has a small computer chip embedded in it with the same dimensions as the magnetic strips card. They are more intelligent because data on smart card can be manipulated through programs or commands. Smart card provides a number of benefits from, some of them are listed below:

- The Pin (Personal Identification Number) facility does not allow any unauthorized person to use the card.
- The storage capacity is much more than of a magnetic strip card.
- It can be very well used as electronic purse especially for lower value transactions like parking, tickets, etc.



Advantages of e-Cheques

- They work in the same way as traditional cheques, thus simplifying the process of e-cheques.

- e-cheque are good instrument for paying small amount on the web.
- e-cheque use cryptography and make transactions more speedy.

Advantages of using E-Payment System

Electronic payments can be benefit your business extending your customer base boosting cash flow, reducing costs, enhancing customers service and improving your competitive advantage.

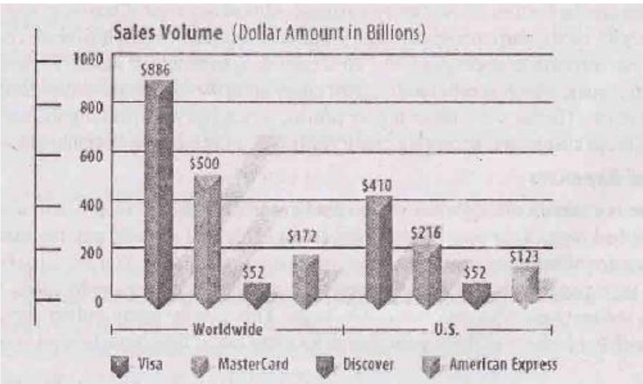
Five reasons why Electronic payments improve customer service – the five "C"

- **Choice:** Like your competitions, you can offer a wide range of payment options.
- **Convenience:** e-payments remove the need for invoices, cheques, cash and BAC.
- **Credit:** they may allow purchases that would otherwise be delayed.
- **Concessions:** Small discounts to encourage online purchases improve the perception of volume.
- **Competitive Edge:** If you do not offer the full range of payment options but your competitions do, what does this say about your business?

Five reasons why Electronic Payments increase profitability

- **Convenience:** removing administrative resources required by invoices, cheques and cash.
- **Immediacy:** Credit cards enable instant purchasing (without delay)
- **Growth:** Open additional payments channels via the phone, mail order and internet and increase your customer base. More customers means more revenue.
- **Improved Cash Flow:** payments at the time of purchases reduce the pressures caused by 30 day invoicing.
- **Competitive Advantage:** Match and beat the services of your competitors and gain the edge.

They are various benefits of accepting card based payments both from the business's and the consumer's perspective that are as follows:



Improvement in Sales

In general, if you are selling to the public, you will have higher average sales and more customers, if you accept credit cards than, if you do not. Statistics show that new credit card merchants almost immediately increase their sales 30-40%. You may have any of the following types of businesses where (1) product or service includes what people want or need on short notice (2) items are sold exclusively over the telephone, or on the Internet. Using credit cards is specifically important to these type of businesses and your sales will be substantially higher, if you accept them. For example, any mail order business can expect 85-90% of their total sales to be from customers using credit cards alone.

Increased Profits

Profits are the bottom line for every business. Almost any type of business will be benefitted from taking credit cards, particularly selling a product or service to small businesses or individuals. Your profits can increase an average of 30-80% according to accepted industry standards. Studies show that companies, which accept credit cards, enjoy up to 40% more sales than those that do not accept credit cards. Higher sales mean higher profits. Since you are spending the same amount of money to get these customers, accepting credit cards will increase your bottom line.

Reduced Expenses

There is a certain saving when you do not have to open the envelopes, endorse the cheques and cover the bad ones. Your cost of accepting credit cards will actually pay for itself, especially when the costs are offset in no time with increased revenue and profit. You will also be saving a lot by reducing your paperwork and order-processing time. By accepting credit cards, you can also substantially reduce your accounts receivable costs. This is why many online services promote paying by credit card; some of them even charge an extra fee, if they have to send you a statement.

Credibility

Your prospects will think of you as a creditable and a well-established business, when they see you accepting major credit cards in your advertisements. Everyone assumes that only established companies can accept credit cards. The credit card companies do such an excellent job of promoting the use of credit cards and you get benefit by accepting them.

Cheque/Cash Problems

Customers know that credit cards are much safer than cash. If they use a credit card to make a purchase and there is a case of fraud or the product quality is not what they expected, they can dispute the charge retroactively and have the credit card company act on their behalf. This makes them feel safe even buying from a company they are not absolutely sure of.

Security Deposits

A company, which requires security deposits for rentals or to put an order into production, can substantially increase its sales by accepting credit cards because customers feel that using their credit cards, is a safe way to make security deposits on items.

Disadvantages

- The relatively undeveloped credit card industry in many developing countries is also a harrier to e-commerce. Only a small segment of the population can buy goods and services over the Internet due to the small credit card market base.
- There is also the problem of the requirement of “explicit consent” (i.e., a signature) by a card owner before a transaction is considered valid-a requirement that does not exist in the U.S. and in other developed countries.
- Many developing countries are still cash-based economics. Cash is the preferred mode of payment not only on account of security but also because of anonymity, which is useful for tax evasion purposes or keeping secret what one’s money is being spent on.
- For other countries, security concerns have a lot to do with a lack of a legal framework for adjudicating fraud and the uncertainty of the legal limit on the liability associated with a lost or stolen credit card.
- As recently discussed by several scientists and economists a society highly dependent on electronic money could make the whole monetary system vulnerable towards massive upheaval.
- The biggest risk is systematic. Criminals and hackers have multiple points to penetrate a system, whether it is a system security breach or at human contact within these systems. It is important for those responsible for online payment security to think of the possible risks from end-to-end.
- Risks can vary by each entity based on the type of security measures individual entities have put in place. One merchant may have a very strong security system while another one a very weak security system. But there is a related responsibility between these entities. Banks are putting more pressure on payment processors to take responsibility for merchant breaches. This pressure ensures that larger numbers of banks are becoming compliant based on payment processor regulations.
- Certain entities do drive greater specific risks than others. For example, credit card issuers are pro-consumer, which means they enable fraudulent credit

card users to get away with online fraud or “friendly fraud”. While “Friendly fraud” is not considered the same threat as an organized online crime ring, it is thought to be responsible for almost half of many merchant fraud issues.

Conclusion

Electronic payments system (EPS) plays an important role in e-commerce because it closes the e-commerce loop. In developing countries, the under developed electronic payments system is a serious impediment to the growth of e-commerce. The use of electronic payment system has expanded rapidly in recent years due to technological innovation and other communication facilities. As security is questionable while using EPS techniques, a secure electronic financial transaction has to meet three requirements:

- Ensure that Communications are private.
- Verify that the Communications have not been changed during transmission.
- Ensure that the data to be transferred is generated by the signed author alone.
- E-payment systems offer huge cost savings to the organization and are accepted widely.

References

✠ Alawiye-Adams, A. A., & Afolabi, B. (2013). Analysing the Impact of Electronic Banking on the Payment Systems and Intermediation Function in Nigerian Banks. Available at SSRN 2350405

✠ Ellison, A., Williams, S., & Whyley, C. (2012). The Electronic Payment Needs of People on Low Incomes (Payments Council Report) Retrieved on 14/5/2015 from paymentscouncil.org.uk

✠ Hanzaee, K. H., & Alinejad, S. (2012). An investigation about customers’ perceptions of security and trust in e-payment systems among Iranian online consumers. Journal of Basic and Applied Scientific Research, 2(2), 1575-158

✠ Ming-Yen Teoh, W., Choy Chong, S., Lin, B., & Wei Chua, J. (2013). Factors affecting consumers’ perception of electronic payment: an empirical analysis. Internet Research, 23(4), 465-485.

✠ World Payments Report (2014). Retrieved on 26/4/2015 from http://www.worldpaymentsreport.com/download

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