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Online Payment Mechanisms in the Chinese Domestic Economy

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I hereby declare that I have read and understood the regulations governing the submission of Master of Laws dissertations, including those relating to length and plagiarism, as contained in the rules of this University, and that this dissertation conforms to those regulations.

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ONLINE PAYMENT MECHANISMS IN THE CHINESE DOMESTIC ECONOMY

Chapter 1 Introduction

The Internet or Information technology has taken its place beside the telephone and television as an important part of people's lives¹ and makes the life more convenient. As a result, electronic commerce over the Internet is expanding at an exponential rate.² It has created, and continues to create, many new possibilities for value-exchange. As e-commerce retailers, one challenge they need to face is providing payment mechanisms that consumers perceive as sufficiently secure and convenient to induce them to complete commercial transactions online.³ Payment mechanisms are the payment methods, procedures, and institutions, which enable users to meet payment obligations.⁴ With the arrival of the Internet as a

¹ [http://www.worldlawdirect.com/article/887/Guide to online payments.html](http://www.worldlawdirect.com/article/887/Guide%20to%20online%20payments.html) viewed on 2005-7-21

² *Law of Bank payments* edit by Michael Brindle and Raymond Cox P.255

³ <http://www.digitahongkong.com> viewed on 2005-7-29

⁴ *Principles of Banking Law, 2nd Edition* by Ross Cranston P256a

mass-market data network, new technologies and business models are being developed to facilitate electronic payments by ordinary consumers.⁵ Increasingly, however, new payment methods are becoming more common.⁶ Any method of purchasing, in which the paying takes place by exchanging digitally represented payment instruments - usually through a network connection, can be defined as electronic payments.⁷ In the last few years *electronic payments* have emerged as a new way to purchase goods as a consequence of the development of electronic commerce; Meanwhile, the electronic payments, in return, act as a two fold sword, on the one hand, it promotes the further development of electronic commerce, it becomes the bottleneck and to some extent, restrains the rapid development of electronic commerce. In the past 25 years, electronic messages moving through private networks have replaced paper for most of the value exchanged among banks each day.⁸ Some of these new techniques represent automation of existing methods, whereas others are novel or revolutionary.⁹ Much of this relates to the sort of consumer transactions, which would otherwise have been carried out in the High street or shopping center using Credit Cards, cheques or EFTPOS to make payment.¹⁰ Compared with payment by cash and cheques or bill of exchange, payment by electronic funds transfer(EFT) has been described as the third of the three great ages of payment.¹¹ The cashless society remains a mirage but cashless

⁵ <http://www.gsia.cmu.edu/afs> viewed on 2005-7-29, *Credits and Debits on Internet* by Marvin A. Sirbu Camegie Mellon University

⁶ [http://www.worldlawdirect.com/article/887/Guide to online payments.html](http://www.worldlawdirect.com/article/887/Guide%20to%20online%20payments.html) viewed on 2005-7-21

⁷ <http://www.tml.tkk.fi/opinnot> viewed on 2005-8-5; *Micropayments-Requirements and Solutions* by Jari Kytöjoki, Vesa Kärpijoki

⁸ <http://www.gsia.cmu.edu/afs> viewed on 2005-8-5

⁹ <http://www.anu.edu.au/people/Roger.Clarke/EC/EPMIntro.html> viewed on 2005-7-21

¹⁰ *Law of Bank payments* edit by Michael Brindle and Raymond Cox P.255

¹¹ P Rrazer, *Plastic and Electronic Money: New Payment Systems and Their Implications*(1985, Woodhead-Faulkner), p3; See also Mark Hapgood QC *Paget's Law of Banking* P285

payment is becoming more common.¹²

According to UNCITRAL, EFT defined as “a funds transfer in which one or more of the steps in the process that were previously done by paper-based techniques are now done by electronic techniques”.¹³ In 2002, around 3 percent of all credit and Debit Card payments were made on-line and this is forecast to rise to one card payment in ten by 2012.¹⁴ It relates to business transactions as businesses learn to exploit the opportunities, which the Internet offers to cut costs across their supply and demand chains.¹⁵ British businesses bought goods and services totaling £ 22.9billion over the web in 2002, an increase of 14 percent in business to business (B2B) transactions on the previous year.¹⁶ Consumers use the Internet to shop, bank and invest online. Most consumers use credit or Debit Cards to pay for online purchases, but other payment methods, like “e-wallets”,¹⁷ are becoming more common. At the moment, with the development of Internet technology, as a new concept of payment, electronic payments (such as Credit Card payments, electronic money (e-cash), electronic checks, and smart cards are the most common methods of electronic commerce payments¹⁸), can benefit your business by extending your customer base; boosting cash flow; reducing costs; enhancing customer service and improving your competitive advantage.¹⁹ Just because the

¹² *Electronic Banking and The Consumer—The European Dimension* by Jeremy Mitchell P1

¹³ UNCITRAL, *Legal Guide on Electronic Funds Transfers*(1987, United Nations, New York)

¹⁴ APACS UK payments, *Market Trends and Forecasts, In brief*, 2003 also see *Law of Bank payments* edit by Michael Brindle and Raymond Cox P.255

¹⁵ *Law of Bank payments* edit by Michael Brindle and Raymond Cox P.255

¹⁶ Office of National Statistics of British, 2003

¹⁷ Community Directive on [e money] 2000/46/EC, OF L275/39. See M.Vereecken, ‘Electronic Money: EU Legislative Framework’ [2000] EBLR 417

¹⁸ <http://www.digitalthongkong.com> viewed on 2005-7-29

¹⁹ www.electronic-payments.co.uk/epayments--index.jsp viewed on 2005-1-29

benefits that the new payment methods bring to the merchants, merchants are trying to develop and take advantage of them, this also give rise to the certain legal issues and need the relevant legislation to regulate. There is no exception to China, which with all speed to develop its economy.

As a consequence of E-commerce and also cater for the further development of E-commerce, China government, as well as the merchants, has realized the importance of electronic payment and is devoting to develop the payment methods. Electronic payment has become a new payment trends since 90's of last century and get a rapid development. By the end of June of 2005, there are 714 million bankcards since Bank of China issued the first in 1985 and there are more than 300 card issuers.²⁰ While, the majority of those cards are debit cards, of the remaining cards, most of them so called "quasi credit cards" in that whatever was spent on these cards had to be paid off in full at the end of each account period.²¹

As the convenience of Internet transaction, more and more people in China, especially consumer are going to take the advantage of it. According to the statistics of CNNIC (China Network Information Center), among the different payment methods, online payment (including banking cards and saving accounts) is 41.80%; Cash on delivery (COD), 34.70%; Postal Remittance, 43.20% and others 3.3%.²² While, the situation relates to the electronic payment is not so bright, electronic payment in China have been slow to take off with traditional payment systems and have become the bottleneck to the development of real E-commerce.

Basically, there are three components in terms of the electronic payment instruments, various payment instruments use these three components in different ways; sometimes, some components may be combined together.

²⁰ <http://www.alibaba.com> viewed on 2005-8-17

²¹ <http://www.buseco.monash.edu.au> viewed on 2005-8-20

²² Statistic of CNNIC of 2004

1. Clients, or we called cardholders. They use computer to browse and to purchase.
2. Merchant, sometimes, they also acted as card issuers. They use computer system to produce electronic catalog, containing products for over-the-net fulfillment.
3. Card issuers, usually, we refer to banks. They, issued the card, based on the agreement between its consumers and itself.

In theory, also from the experience of North America and European---developed countries in E-commerce field, the well-operated online payment system needs the cooperation of the three components: sound merchant credibility, after selling service, security of online payment etc.

However, Credit card based payment systems that succeeded in North America and Europe have proven ineffective in China, where credit card usage remains low²³ and the using of debit card still in a dominate position²⁴. Electronic transaction in China is based on debit card instead of credit card in above-mentioned areas²⁵ and it is becoming an obstacle to the real E-commerce.

Because the use of credit cards is still not common in China, business-to-consumer (B2C) e-commerce has not developed as rapidly as in other developed countries. Most B2C transactions are conducted in the form of “order online and payment offline”.²⁶ They rely heavily on such alternative payment mechanisms as cash on

²³ <http://www.alibaba.com> viewed on 2005-8-17

²⁴ <http://www.euromonitor.com> viewed on 2005-8-20

²⁵ <http://www.alibaba.com> viewed on 2005-8-17

²⁶ <http://www.bakerinfo.com> viewed on 2005-8-20, E-commerce Legal Guide in China

delivery, wire transfer and opening of accounts with the seller's house bank.²⁷ This affects the development of real e-commerce.

Lack of integration is another problem that is hindering the development of E-commerce in China.²⁸ Take debit card as example: People with a debit card of one city often can not use it to make payments to a company in another city, and people with debit card of one bank often can not make payments to a company with an account at other banks.²⁹ While, this problem is expected to be solved by the *Golden Card Project* that started by the Chinese government in 1993. The purpose of this project is to establish a national standard system for issuing financial transactions cards.³⁰ The People's Bank of China (China's central bank), is working to incorporate banks and domestic credit card companies into one network, the Golden Card network. The network does not require the use of a single, uniform bankcard, but rather links different cards under one system.³¹

Ideally, the Internet Payment Instrument should possess the following features:³²

1. Payment mechanism has to be available to all buyers and sellers
2. It has to be internationally accepted
3. Such an instrument has to be able to handle both large and small payments and has to result in immediate, unconditional settlement of payment obligation
4. The payment instrument has to have very low or zero cost
5. It also should be capable of remote utilization using nothing more than transmissions through the Internet—for example, it would not also require the making of a phone call to be carried out off-line.³³

²⁷ <http://www.bakerinfo.com> viewed on 2005-8-20, E-commerce Legal Guide in China

²⁸ <http://www.bakerinfo.com> viewed on 2005-8-20, E-commerce Legal Guide in China

²⁹ <http://www.bakerinfo.com> viewed on 2005-8-20, E-commerce Legal Guide in China

³⁰ <http://www.nyconsulate.prchina.org> viewed on 2005-8-20

³¹ <http://www.bakerinfo.com> viewed on 2005-8-20, E-commerce Legal Guide in China

³² *Electronic Payment System* by Rees 1990 International Business Lawyer 269,270

³³ *Internet Law and Regulation* by Graham J H Smith P225

The purpose of this document is, based on the different kinds of electronic payments mechanism and the above-mentioned features of Internet payment instruments, to provide a brief background to the rapid emergence of methods, which use electronic means to transfer value, or to facilitate the transfer of value.

The following sections explain the processes, costs and risks behind electronic payment systems.

Chapter 2

Credit Card

2.1 How Credit Card works

2.1.1 Concept of Credit Card

As a general concept, credit is merely a contract between the cardholder and the credit issuer.³⁴ A Credit Card is a thin plastic card, usually 3-1/8 inches by 2-1/8 inches in size that contains identification information such as a signature or picture, and authorizes the person named on it has a satisfactory credit rating³⁵ and whenever to charge purchases or services to his account -- charges for which he will be billed periodically.³⁶ Generally speaking, Credit Card can amount to nothing other than very expensive loans made by banks, gasoline companies and department stores.³⁷

2.1.2 Working Process of Credit Card

The credit card system was designed to provide immediate gratification of the wants of consumers by allowing them to purchase goods or services on credit.³⁸ At present, payment by Credit Card is the most frequently used method of over the

³⁴ <http://www.lectlaw.com/files> viewed on 2005-8-5

³⁵ <http://www.lectlaw.com/files> viewed on 2005-8-5

³⁶ <http://money.howstuffworks.com/credit-card/htm> viewed on 2005-8-5

³⁷ http://cobrands.public.findlaw.com/debtor_creditor/nolo/ency/6A15A5E8-C7D8-47A5-B981ADB8C35CACFA.html viewed on 2005-07-19

³⁸ <http://www.gsia.cmu.edu/afs> viewed on 2005-8-5

Internet,³⁹ according to Internet specialist Jupiter Communications, credit cards will remain the preferred method of payment for online purchases 99 percent of the time until 2002.⁴⁰ As one of the world's coolest inventions, Credit Cards make life very convenient.⁴¹ To purchase something you want, all you have to do is carry this small card around, hand it over to people, sign your name on a little piece of paper, and then walk away with a couple of new CDs, a leather jacket, or a stomach full of deep dish pizza, whatever.⁴² In the simplest words, Credit Card or we can call pay later or deferred payment card, works on the "buy now, pay later"⁴³ system. It is a loan, you're the borrower and the Credit Card issuer is the lender. When you buy something, the Credit Card issuer pays the store or whomever on your behalf, and then sends you a bill around the same time each month.⁴⁴ Then, you pay back the issuer at the agreed period. Remember, if you do not pay off your credit card bill in full each month, you will have to pay interest in addition to paying for the goods you bought as soon as you receive your credit card bill.⁴⁵ This system is widely used for commercial payments, but also feature in payments of employee's salaries, company dividends and social welfare benefits.⁴⁶

To be exactly, with a Credit transfer, the payor instructs its bank to pay, and the payor's bank responds in a variety of ways.⁴⁷ Transaction by credit (or funds) transfer works in the way that the payer "pushes" funds from the account of the payer (the "originator") to that of the payee (the "beneficiary"),⁴⁸ it involves

³⁹ Michael Brindle and Raymond Cox *Law of Bank payments* P265

⁴⁰ <http://www.digitalthongkong.com> viewed on 2005-8-5

⁴¹ www.discovercard.com/discover/data/account viewed on 2005-5-9

⁴² www.discovercard.com/discover/data/account viewed on 2005-5-9

⁴³ www.thebeehive.org viewed on 2005-5-24

⁴⁴ www.discovercard.com/discover/data viewed on 2005-5-10

⁴⁵ *Financial Basics :Banking* by Jackie Cameron P20

⁴⁶ *Principles of Banking Law, 2nd Edition* by Ross Cranston, P235

⁴⁷ *Principles of Banking Law, 2nd Edition* by Ross Cranston, P235

⁴⁸ *The Beneficiary's Bank and Beneficiary Described by Name and Number :Liability Chain*

business alliances with financial institution;⁴⁹ this transaction is protected by encryption, which ensures that only the bank or Credit Card service provider, not the merchant, sees the number.⁵⁰ So, technically, part of the Credit Card process is driven by Internet messaging and advanced encryption and authentication technologies.⁵¹ The process is initiated by the originator's instructions to the originator's bank.⁵² The best way to appreciate how an Internet merchant gets paid is to follow a typical Credit Card transaction process. Fully automated from end-to-end, in most cases it takes just seconds to complete:⁵³

1. A customer visits a web site, using standard web browser software, and fills her ECmerchant shopping cart.
2. The customer and ECmerchant exchange details on internet, regarding addresses, delivery and final price.
3. ECmerchant then displays the 'BUY' button to the customer, and a transaction is initiated.
4. The customer clicks the 'BUY' button, prompting ECmerchant to send an electronic invoice.
5. ECmerchant provides transaction details in a form on the shopper's browser automatically opens her online wallet, allowing her to select a payment instrument.
6. An encrypted charge payment message is sent to ECmerchant.
7. When the server software receives the payment message, it adds merchant identification information.
8. The payment request is encrypted and forwarded to gateway server hosted by an ECommerce payment service company.
9. The gateway server decrypts the message and authenticates customers'

and Standard in Wire Transfers by Benjamin Geva

⁴⁹ <http://www.digitalhongkong.com> viewed on 2005-7-29

⁵⁰ <http://www.digitalhongkong.com> viewed on 2005-7-29

⁵¹ <http://www.digitalhongkong.com> viewed on 2005-7-29

⁵² *ibid*

⁵³ www.ecware.com/resources/creditcard.asp viewed on 2005-7-29

information and merchant validation.

10. A message is sent over secure, private financial networks to the merchant's bank or authorized processor requesting charge approval.

11. Once the request is processed, a positive or negative response is sent back to ECmerchant and on to the customer.

12. If the transaction is authorized, a digital receipt is delivered, and the transaction is complete (it is provided that a credit transfer is completed when the beneficiary's bank accepts a payment order for the benefit of the beneficiary⁵⁴) and captured.

2.1.3 Different Types of Credit Card

Based on the methods how do you pay off your balance, there are two types of Credit Cards:

○ Revolving Credit Cards (also called “open-end Credit Cards”) where some part above a minimum amount has to be paid off each period.⁵⁵ This kind of card provides you with a revolving loan—or credit limit—based on your agreement to pay at least the minimum amount due on the amount of credit you use by the payment date.⁵⁶ It is typically used for higher value transactions although some cardholders also use Credit Cards for day-to-day transactions. Revolving Credit Cards are packaged for all types of cardholder.⁵⁷

○ Charge cards (also called closed-end or travel and entertainment cards,) are a little different from Credit Cards⁵⁸ where all the outstanding balance is paid off

⁵⁴ Article 19(1) of Model Law of UNCITRAL

⁵⁵ www.gtnews.com viewed on 2005-5-14

⁵⁶ http://cobrands.public.findlaw.com/debtor_creditor/nolo/ency/6A15A5E

8-C7D8-47A5-B981ADB8C35CACFA.html viewed on 2005-07-19

⁵⁷ www.gtnews.com viewed on 2005-5-14

⁵⁸ <http://finance.yahoo.com/creditcards/education/article?a=nolo1&> viewed on 2005-07-19

each period.⁵⁹ It provides you with the convenience of purchasing power based on your agreement to pay the full amount of the charges due each month, so there is no finance charge.⁶⁰ The American Express Card for Students (the green Card) and Diners Club are examples of charge cards⁶¹ and has no credit limit.⁶²

According to the parties of the Credit Cards, it can be divided into the following categories:

1. **Bilateral Credit Cards:** this kind of Credit Cards involved only retailers (also the card issuers) and the cardholders. The feature of the card is that the card issued by retailers and may only be used by the clients of the particular retailer.⁶³ The function of the card is simply to identify those persons who are entitled to credit for purchases or services up to an agreed limit.⁶⁴
2. **Tripartite Credit Cards:** the three parties involved are the issuer, the cardholder and the merchant. There are three relationships exist among the parties: namely, the relationship between the retailer or merchant and the issuer;⁶⁵ The relationship

⁵⁹ www.gtnews.com viewed on 2005-5-14

⁶⁰ http://cobrands.public.findlaw.com/debtor_creditor/nolo/ency/6A15A5E viewed on 2005-07-19

⁶¹ http://cobrands.public.findlaw.com/debtor_creditor/nolo/ency/6A15A5E viewed on 2005-07-19

⁶² <http://finance.yahoo.com/creditcards/education/article?a=nolo1&> viewed on 2005-07-19

⁶³ *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P172

⁶⁴ <http://finance.yahoo.com/creditcards/education/article?a=nolo1&> viewed on 2005-07-19

⁶⁵ A written agreement is reached in terms of which goods and services are to be provided on the basis that payment will be made by the issuer to the merchant, in return for certain benefits. See *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P172; in the case of cards with a logo, such as Visa, the terms of the agreement are based on the by-laws of the scheme, administered by the corporation, see *Modern Banking Law* by E.P. Ellinger, P534

between the issuer and the cardholder⁶⁶ and the relationship between the cardholder and the merchant.⁶⁷

Usually, a credit card consists of two components⁶⁸: namely a control account⁶⁹ and a budget account. The bank sets a limit on each of these accounts according to your income and ability to pay.⁷⁰ You can use control account for normal day-to-day purchase. With the budget account, as described in the *Credit Card Terms and Conditions of Standard Bank*, it gives you the flexibility and convenience to purchase more expensive items or services on monthly installment which interest will be add.⁷¹

2.2 Conveniences of Using Credit Card

Credit Cards payment over the Internet can be very convenient and cost-effective.⁷² The choice of a Credit Card as the method of payment over the Internet has advantages both from the point of view of vendor and consumer.⁷³

⁶⁶ This relationship is established in terms of a written agreement governing the cardholder's use of the card. The written agreement is founded on mandate. See *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P172, the agreement within the meaning of the Consumer Credit Act 1974, see *Modern Banking Law* by E.P. Ellinger, P533

⁶⁷ An agreement between cardholder and merchant remains a contract of sale or a contract for the provision of a service, although payment is expected from the issuer. See *Modern Banking Law* by E.P. Ellinger, P533

⁶⁸ *Do You Know Your Bank* by Dirk de Villiers

⁶⁹ Control account is used for normal purchase

⁷⁰ *Do You Know Your Bank* by Dirk de villiers

⁷¹ Section 8 of *Credit Cards Terms and Conditions of Standard Bank of South Africa*

⁷² *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids

⁷³ *Law of Bank payments* edit by Michael Brindle and Raymond Cox P.289

As a consumer, Credit Card:

1. Convenient for small purchase: to purchase something you want, all you have to do is carry this small card around, hand it over to people, sign your name on a little piece of paper, and then walk away with a couple of new CDs, a leather jacket, or a stomach full of deep dish pizza, whatever.⁷⁴
2. Helpful to larger purchase by offering the ability to buy goods and services now and pay for them later: when it comes to more significant purchases that you need but can't quite afford in one big payment: a sofa, a bed, a new clutch. The freedom to buy these things now, and then pay them off later, is, well, a pretty remarkable thing.⁷⁵
3. Provide a source of cash or payment in an emergency. Credit card provides you the cheapest method of borrow you money from the bank for short term purpose if you use them properly.⁷⁶
4. Further, it is one of the most potent tools around for building a strong credit history: having a Credit Card and using it wisely (making payments on time and in full each month) will help you build a good credit history.⁷⁷
5. Under the payment of a credit card, customers who have a claim against a supplier for breach of contract or misrepresentation will generally have an equal claim against the card issuer.⁷⁸ The customer can choose whether to claim against the supplier, the card issuer, or both.⁷⁹

From the stand of vendors, Credit Card:

⁷⁴ www.discovercard.com/discover/data viewed on 2005-5-10

⁷⁵ www.foreignborn.com viewed on 2005-4-19

⁷⁶ *Financial Basics :Banking* by Jackie Cameron P41

⁷⁷ www.irs.gov/efile viewed on 2005-5-10

⁷⁸ Section 75 *Consumer Credit Act 1974*

⁷⁹ Sometimes, in the case of claim arise, some credit card issuers tell customers that they must first get a court judgment against the supplier that is wrong according to the *Consumer Credit Act 1974*.

1. Offers a wide range of payment options to your customers.
2. Removes the administrative resources required by invoices, check and cash.
3. Open an additional payment channels via the phone, mail order and Internet and increase your customer base, more customers mean more revenue, and accordingly, more profit.
4. Competitive advantage: match and beat the services of your competitors and gain the edge.

Besides the above mentioned advantages, some Credit Cards offer additional benefits, such as discounts from particular stores or companies, bonuses such as free airline miles or travel discounts, and special insurances (like travel or life insurance.)⁸⁰ While most of these benefits are meant to encourage you to charge more money on your Credit Card. The benefits are real and can be helpful as long as you remember your spending limits.⁸¹

2.3 Inconveniences of Using Credit Card

Carrying a credit card is a little like driving the latest sports car, it has become a status symbol.⁸² But at the same time, having a Credit Card is a big responsibility. Credit Cards work a bit like Dr. Jekyll and Mr. Hyde: they have a hidden ugly side.⁸³ If you do not use it carefully, you may owe more than you can repay, damage your credit rating, and create credit problems for yourself that can be difficult to fix.⁸⁴

⁸⁰ www.irs.gov/efile viewed on 2005-5-10

⁸¹ <http://www.irs.gov/efile> viewed on 2005-4-20

⁸² *Financial Basics :Banking* by Jackie Cameron P41

⁸³ <http://money.cnn.com/2002/03/12/pf/banking> viewed on 2005-5-10

⁸⁴ www.foreignborn.com viewed on 2005-4-19

1. Invite impulsive buying: The biggest disadvantage of Credit Cards is that they encourage people to spend money that they don't have. Most Credit Cards do not require you to pay off your balance each month, so even if you only have \$100, you may be able to spend up to \$500 or \$1,000 on your Credit Card. While this may seem like 'free money' at the time, you will have to pay it off -- and the longer you wait, the more money you will owe since Credit Card companies charge you interest each month on the money you have borrowed.⁸⁵
2. Trap you in debt with high interest rate and high annual fees: Credit Card companies charge you an enormous amount of interest on each balance that you don't pay off at the end of each month. This is how they make their money and this is how most people using Credit Cards get into debt (and even bankruptcy.)⁸⁶
3. Not suitable for making a person-to-person payment to a private individual.⁸⁷
4. Not suitable for commercial vendor whose turnover is too low. The central processing is still required, the cost of processing can sometimes be an obstacle if it exceeds the cost of the transaction, thereby, making small-value payments not so viable.⁸⁸ For example, cartoon strips or single tracks music, the typical transaction value may be less than \$1, possibly as little as a few cents, then, the charge levied on a Credit Card transaction will be disproportionate to them.⁸⁹
5. Never spend more than you can afford to pay. Credit Card interest is a particularly expensive form of debt. So, unless you are very disciplined with your spending, it is probably best to avoid a credit card.⁹⁰

2.4 Legal Liability of the system partner

⁸⁵ www.thebeegive.org viewed on 2005-5-10

⁸⁶ www.thebeegive.org viewed on 2005-5-10

⁸⁷ *Law of Bank payments* P265 by Michael Brindle and Raymond Cox

⁸⁸ *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P177

⁸⁹ *Law of Bank payments* P265 by Michael Brindle and Raymond Cox

⁹⁰ *Financial Basics :Banking* by Jackie Cameron P20

2.4.1 Liability for Card Issuer

The liabilities of the parties are likewise, governed by agreement between the parties.⁹¹ Before issue the credit card, it is the duty of card issuer to exercise reasonable care and diligence in performing a “necessary investigation” of each credit application received and the investigation of each application must occur prior to the issuance of credit.⁹² Once the card is issued, the issuers must execute its duties honestly, diligently and in good faith.⁹³ Credit Card payments constitute absolute payment, and there is no redress if the Credit Card issuer becomes insolvent before the merchant is paid.⁹⁴

Once a merchant has had a purchase authorized by the card issuer over the private authorization network, the merchant is assured of payment and the card issuer assumes responsibility for billing the consumer and collecting the money.⁹⁵

Credit Bill Act of U.S. regulates that a card issuer who has issued a Credit Card to a cardholder pursuant to an open end consumer credit plan shall be subject to all claims (other than tort claims) and defenses arising out of any transaction in which the Credit Card is used as a method of payment or extension of credit.⁹⁶

2.4.2 Liability of Cardholder

As cardholder, it is apparent that, should be contractually liable for the debts incurred by the use of credit card.

⁹¹ <http://www.firstvirtual.com/legal/terms.shtm> viewed on 2005-2-18

⁹² <http://www.lectlaw.com/files> viewed on 2005-8-5

⁹³ *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P176

⁹⁴ *Re Charge Card Services* [1989] Ch. 497

⁹⁵ <http://www.gsia.cmu.edu/afs> viewed on 2005-7-29, *Credits and Debits on Internet* by Marvia A. Sirbu Camegie Mellon University

⁹⁶ Section 170 Credit Bill Act, U.S.

Under *the Consumer Credit Act of UK*, the Credit Card holder cannot be liable under the agreement for use made of the card by anyone until the debtor has accepted the card,⁹⁷ which he does by signing it or a receipt for it, or the card is used by him or anyone authorized by him to use it.⁹⁸

In EU, the holder is to be under a duty to use the instrument in accordance with the terms of issuance and to take all reasonable steps to keep it, and the means of using it, and is to notify the issuer promptly of its loss or theft.⁹⁹

The *Uniform Commercial Code of U.S.* provides some limitation on the liability of Credit Card holders:¹⁰⁰

A cardholder shall be liable for the unauthorized use of a Credit Card only if -

- (A) the card is an accepted Credit Card;
- (B) the liability is not in excess of \$50;
- (C) the card issuer gives adequate notice to the cardholder of the potential liability;
- (D) the card issuer has provided the cardholder with a description of a means by which the card issuer may be notified of loss or theft of the card, which description may be provided on the face or reverse side of the statement required by section 1637(b) of this title or on a separate notice accompanying such statement;
- (E) the unauthorized use occurs before the card issuer has been notified that an unauthorized use of the Credit Card has occurred or may occur as the result of loss, theft, or otherwise; and
- (F) the card issuer has provided a method whereby the user of such card can be identified as the person authorized to use it.

⁹⁷ S66(1) Consumer Credit Act 1974

⁹⁸ S66(2) Consumer Credit Act 1974

⁹⁹ Art.5(a) and (b), first indent of Recommendation on Electronic Payment Instruments of European Commission

¹⁰⁰ S1643(a) of Uniform Commercial Code of U.S.

Besides, the cardholder is not liable for fraud committed through the misuse of his account number, card or template.¹⁰¹ The cardholder, as a party to the contract with the issuer, is solely responsible for charges and users and holders of related cards are not liable for charges made on the account. Only cardholders are contractually liable for debts incurred by use of Credit Card.¹⁰²

In South Africa, we can see the similar regulation on the liability about the credit card holders:¹⁰³

1. Cardholders are responsible for the safekeeping and proper use of your card. It is cardholders responsibility to either memorise the PIN or keep any record of the PIN separate from the card and in a safe place.
2. Also, cardholders must notify the issuers once they realize their cards are lost or stolen.

2.4.3 Burden of Proof Relates to the Disputes

The convenience of Credit Cards, from another hand, just as the traditional payment, is apt to give rise to problems, consequently, this will give rise to another problem—the burden of proof, that is where should the burden of proof lie in disputed electronic payment?¹⁰⁴ In any action by a card issuer to enforce liability for the use of a Credit Card, the burden of proof is upon the card issuer to show that the use was authorized or, if the use was unauthorized, then the burden of proof is upon the card issuer to show that the conditions of liability for the unauthorized use of a Credit Card.¹⁰⁵ If a cardholder repudiates a remote card transaction for which

¹⁰¹ <http://www.lectlaw.com/files> viewed on 2005-7-30

¹⁰² <http://www.lectlaw.com/files> viewed on 2005-7-30

¹⁰³ Section 4 of *Credit Cards Terms and Conditions* of Standard Bank of South Africa

¹⁰⁴ *Electronic Banking and The Consumer---The European Dimension* by Jeremy Mitchell

P24

¹⁰⁵ *ibid*

there is no evidence of delivery of goods to the customer, or voucher signed by the customer, the bank makes a "chargeback", i.e. obtains reimbursement from the merchant of anything paid to the merchant in respect of the transaction (and may also make an administrative charge).¹⁰⁶ The merchant is in practice unable to transfer this risk to anyone else, since he is unlikely to be able to prove who initiated the relevant transaction.¹⁰⁷

2.5 Situation in China

The Bank of China introduced the first credit card into China in 1979. In 1985, the same bank launched the first "domestic credit card". Of all the credit cards, around half of them in issue in China are domestic credit cards which for use in China only, the other half being usable internationally.¹⁰⁸

As I stated in the previous chapter, presently, E-commerce in China still based on debit card system. Some problems that cause the phenomenon of widely use of debit cards have been improved to some extent, though not solved completely.

Among those problems, the crucial factor is the insufficient of credibility system; there is a lack of trust between buyers and sellers in a business environment, it is still banking creditability system that dominated in China creditability system, this is very different from those E-commerce developed countries, say, America and UK.

¹⁰⁶ <http://www.cs.ucl.ac.uk/staff> viewed on 2005-8-5

¹⁰⁷ *ibid*

¹⁰⁸ Statistic of CNNIC of 2004¹⁰⁸ <http://www.lectlaw.com/files> viewed on 2005-7-30

¹⁰⁸ Section 4 of *Credit Cards Terms and Conditions* of Standard Bank of South Africa

¹⁰⁸ Statistic of CNNIC of 2004

The second one is the uncompleted creditor's right protection. Current regulation protect more merchant's interest than customers, it is very difficult, though there is the possibility, for consumer overdraft from bank.¹⁰⁹

The third one is the security of online payment by using credit card. In order to ensure the security of online payment, enhance consumer's confidence on online transaction, *Direction on Electronic Payment* (though not take effect) issued by People's Bank of China (Central bank of China) regulates that "the amount of each transaction is not exceed RMB50, 000"¹¹⁰. Also, bank should be liable for the customer's loss, which caused by bank due to the improper use of customer's information.¹¹¹ The uncompleted regulation is another one, for example, contract law accepts e-contract, but does not accept e-signature; Good news is that this has been improved since last year the *Law of Electronic Signature* took into effect.

Besides the above-mentioned reasons, there is another factor affect the use of credit card in China: the culture of saving, which is in direct contrast to the borrowing culture, which in China is seen as a sign that a person is incapable of making ends meet. Spending according to your income is an ideology prevalent in China so many years and people tend to pay in full (in cash) even for 'big ticket' items such as cars and housing.¹¹²

As far as the legal issue concerned, there is not too much difference between China and other countries, but in some details, it is a little bit restricted than other countries. The following is the Credit Card Regulation of ICBC, Industrial and Commercial Bank of China, and we can get a brief view about the use of credit card in China:

¹⁰⁹ <http://51ppt.com.cn> viewed on 2005-8-17

¹¹⁰ Section 25 of *Direction on Electronic Payment*

¹¹¹ Section 42 of *Direction on Electronic Payment*

¹¹² <http://www.buseco.monash.edu.au> viewed on 2005-8-20

- Card issuing institution is entitled to adjust line of credit of a cardholder's account according to change of credit status of this cardholder. Monthly overdraft balance in one account for personal card should not exceed RMB 50,000, and for business card the balance should not exceed 3% of integrated line of credit given by card issuing institution for this organization.¹¹³
- Overdraft of single transaction by one cardholder shall not exceed RMB 50,000.¹¹⁴
- A cardholder needs to pay no additional fee for deposit and consumption; 1% of transaction amount should be paid as service fee for cash withdrawal or personal account transfer outside the card issuing city and the minimum is RMB 1; 5‰ of account transfer amount should be paid as service fee for account transfer settlement at non-appointed organization outside the card issuing city, the minimum is RMB 10 and the maximum is RMB 500.¹¹⁵
- Where a cardholder loses Peony Credit Card, he should make loss reporting issuing institution. Written loss reporting is the formal way of loss reporting. For loss reporting by telephone, the card issuing institution only gives its assistance in guarding but bears no responsibility. All the economic losses before written loss reporting and within 24 hours (inclusive) the next day from the time on which card issuing institution accepts written loss reporting shall be borne by cardholder.¹¹⁶

But, there is no relevant regulation about charge back, that is a gray area the moment.

¹¹³ Article VI of Peony Credit Card Regulation of ICBC

¹¹⁴ Article IX of Peony Credit Card Regulation of ICBC

¹¹⁵ Article X of Peony Credit Card Regulation of ICBC

¹¹⁶ Article XIX of Peony Credit Card Regulation of ICBC

Chapter 3

Debit Card

3.1 How Debit Card works

3.1.1 Concept of Debit Card

Most online shoppers use Credit Cards to pay for their online purchases. But Debit Cards - which the holder uses in designated retail stores to purchase goods or to obtain services¹¹⁷ - are increasing in use. Debit payment, or we called pay now payment, is the most traditional and straightforward form of payment.¹¹⁸ The use of Debit Card payments has expanded rapidly over the past few years.¹¹⁹ With a debit transfer, the sequence begins with the payor authorizing its bank to pay, but actual payment is initiated when the payee presents a debit instrument.¹²⁰ So, In some ways, Debit Cards are the modern equivalent of cheques in giving the customer direct access to his bank account.¹²¹ Then, what is a Debit Card? A Debit Card is a

¹¹⁷ Most debit cards are currently issued by networks, or schemes, shared by a number of banks and building societies. One of the most popular ones is the Seithch Card scheme, launched in 1988 by Midland, National Westminster, and the Royal Bank of Scotland. Another scheme is the Visa Delta scheme. See also *Modern Banking Law* by E.P. Ellinger, Eva Lomnicka and Richard Hooley, P530, 542

¹¹⁸ <http://www.retailsolutions2005.co.uk/2005/news/trintech.pdf> viewed on 2005-7-22, *Introduction to Pre-paid Payments* by David Guerin Trintech Group Plc July 2004

¹¹⁹ <http://www.paymenttech.com/pdf/DebitCardProcesseing.pdf> viewed on 2005-7-26

¹²⁰ *Principles of Banking Law, 2nd Edition* by Ross Cranston, P235

¹²¹ *Modern Banking Law* by E.P. Ellinger, Eva Lomnicka and Richard Hooley, P531

card that has direct access to your bank account.¹²² Increasingly, Debit Cards combine the key elements of ATM cards, Credit Cards and checks-- instant access to cash, worldwide acceptance, and the funds come directly out of your checking account.¹²³

3.1.2 Working Process of Debit Card

Debit Cards look like Credit Cards or ATM (Automated Teller Machine) cards,¹²⁴ (Some banks may be replacing their standard ATM cards with upgraded ATM cards with a debit feature¹²⁵,) so, where shops will not take a cheque as payment, they will often accept your Debit Card,¹²⁶ but, please bear in mind, they operate like cash or personal checks.¹²⁷ Because of this feature of Debit Card, they are becoming increasingly popular among people who prefer to carry bankcards rather than bank notes in their pockets.¹²⁸ In many instances, Debit Cards transactions are processed by a system known as “EFT-POS” which stands for “Electronic Funds Transfer—Point Of Sale”.¹²⁹ This system described in the Jack Report was “on-line” system, that is to say a system where the supplier’s computer is in near instantaneous communication with the bank’s central computer.¹³⁰ The account of the customer is debited and the account of the retailer credited simultaneously,¹³¹ whenever you use your Debit Card, your bank account is debited immediately; the payment is pulled directly from your bank account and there is no “pay later”

¹²² <http://www.businesslink.gov.uk> viewed on 2005-5-19

¹²³ http://www.pueblo.gsa.gov/cic_text/money/debit_card_saving viewed on 2005-7-26

¹²⁴ http://www.mymoneyskills.com/visa/hk/en_us viewed on 2005-7-26

¹²⁵ http://www.mymoneyskills.com/visa/hk/en_us viewed on 2005-7-26

¹²⁶ *Financial Basics :Banking* by Jackie Cameron P20

¹²⁷ http://www.mymoneyskills.com/visa/hk/en_us viewed on 2005-7-26

¹²⁸ *Financial Basics :Banking* by Jackie Cameron P20

¹²⁹ *Law of Bank payments* P198 by Michael Brindle and Raymond Cox

¹³⁰ *Law of Bank payments* P199 by Michael Brindle and Raymond Cox

¹³¹ *Internet Law and Regulation* by Smith P111, also, *Electronic Banking and Law* by Arora P83

option with Debit Cards, with a Debit Card, you “pay now”¹³². That is a direct exchange of value between the retailer and the consumer. There is also no risk to either the consumer or the retailer, since the consumer completes the transaction in possession of the goods, while the retailer completes the transaction in possession of the payment funds.¹³³ It does not like Credit Cards, you don't enjoy any credit period and therefore the Debit Card does not have minimum income eligibility criteria. So, it is very important to make sure the cash in your account covers your purchase, or the machine will reject your card.¹³⁴

Debit Cards depend on the bank's EFT networks for the settlement process.¹³⁵ There are three key components of an EFTPOS system: electronic equipment, magnetic strip plastic cards and associated PINs issued to customers by financial institutions¹³⁶ and an automated message transmission facility. The process of inter-linking these networks internationally is now well advanced, so that a card-holder on holiday in say, Italy, can draw cash from an ATM or make payment to merchants who are members of the scheme, provided that his card carries the appropriate logo indicating that it can be so used.¹³⁷

3.1.3 Different Types of Debit Card

Basically, there are two different types of Debit Cards are in use today:¹³⁸ On-line Debit Cards and Off-line Debit Cards. Now, we will have a brief look at these two cards separately:

1. On-line Debit Card or we can called PIN-based Debit Card, allows only

¹³² <http://www.nclnet.org/debitbro.htm> viewed on 2005-6-23

¹³³ <http://www.retailsolutions2005.co.uk/2005/news/trintech.pdf> viewed on 2005-6-25

¹³⁴ *Financial Basics :Banking* by Jackie Cameron P20

¹³⁵ *Law of Bank payments* P302 by Michael Brindle and Raymond Cox

¹³⁶ Usually for debit cards, but can be credit cards as well. See *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P198

¹³⁷ *Law of Bank payments* P302 by Michael Brindle and Raymond Cox

¹³⁸ http://en.wikipedia.org/wiki/Debit_card viewed on 2005-07-26

“on-line” transactions, it requires an authorization directly from the bank where the account resides.¹³⁹

On-line Debit Card transaction is an immediate electronic transfer of money from your bank account to the merchant's account. This requires you to enter your PIN or Personal Identification Number at the store's terminal;¹⁴⁰ The swiping of his card and the keying in of his PIN number constitute the customer's authority to the bank to effect payment, the bank acts as mandatory and therefore has to act with diligence and skill in the exercise of its mandate.¹⁴¹ The card-issuing bank will not authorize the transaction unless the PIN is entered correctly.¹⁴² The system then checks your account for sufficient funds to cover the purchase. These are typically the cards that come with the “Maestro” logo, from Mastercard.

2. Off-line Debit Card or Signature-based Debit Card looks similar to a Credit Card, but is not a Credit Card. Offline Debit Cards carry the logotypes of, and can be used in a manner nearly identical to, major Credit Cards. The use of a Debit Card in this manner may have a daily limit, with the maximum limit being the amount of money on deposit.¹⁴³ Most off-line transactions are verified immediately to see whether there is enough money in your account Off-line Debit Cards usually carry the 'Electron' logo, from Visa.¹⁴⁴

3.2 Conveniences of Using Debit Card

1. Debit cards provide consumers with fast and easy access to their accounts when

¹³⁹ <http://www.paymenttech.com/pdf/DebitCardProcessing.pdf> viewed on 2005-7-26

¹⁴⁰ <http://www.paymenttech.com/pdf/DebitCardProcessing.pdf> viewed on 2005-7-26

¹⁴¹ *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P198

¹⁴² <http://www.paymenttech.com/pdf/DebitCardProcessing.pdf> viewed on 2005-7-26

¹⁴³ http://en.wikipedia.org/wiki/Debit_card viewed on 2005-07-26

¹⁴⁴ www.timesofmoney.com viewed on 2005-1-3

they make purchases.¹⁴⁵ They are commonly regarded as safer than cash, more convenient than checks and less expensive than Credit Cards.¹⁴⁶

2. Obtaining a Debit Card is often very easy. If you qualify to open a bank account, you can usually get a Debit Card.¹⁴⁷

3. First approval, no counting change, recording identification information, or calling for check approvals from store managers. Transactions are authorized in a matter of seconds, just like Credit Cards.¹⁴⁸

4. Using a Debit Card means you no longer have to stock up on travelers checks or cash when you travel.¹⁴⁹

5. Wide acceptance: Debit Cards are more widely accepted than checks, especially when you travel. They're great for online shopping, too.¹⁵⁰

3.3 Inconveniences of Using Debit Card

1. There is no grace period for a Debit Card purchase. Since your purchase is automatically deducted from your checking account, make sure you have the money available to cover the full transaction amount at the time of purchase.¹⁵¹

2. Some Debit Cards have monthly or per-transaction fees. Carefully review your cardholder agreement. Your issuer is legally required to disclose any fees you will be charged for card use.¹⁵²

3. Using a Debit Card may mean you have less protection than you would with a Credit Card for goods that are never delivered, are defective or were

¹⁴⁵ <http://www.consumeralert.org/pubs/research> viewed on 2005-7-27, *Check Cards—Dealing with Debit Cards* by Frances. B. Smith

¹⁴⁶ <http://www.entrepreneur.com/article> viewed on 2005-7-26

¹⁴⁷ <http://www.indiainfo/ine.com/pefi/news/debi.html> viewed on 2005-7-26

¹⁴⁸ <http://www.paymenttech.com/pdf/DebitCardProcessing.pdf> viewed on 2005-7-26

¹⁴⁹ http://www.mymoneyskills.com/visa/hk/en_us viewed on 2005-7-26

¹⁵⁰ <http://www.informerchant.net/debitcardprocessing> viewed on 2005-7-26

¹⁵¹ <http://www.informerchant.net/debitcardprocessing> viewed on 2005-7-26

¹⁵² <http://www.informerchant.net/debitcardprocessing> viewed on 2005-7-26

misrepresented.¹⁵³

4. They can make balancing your account tricky if you are not fastidious about keeping receipts and recording transactions in a timely fashion.¹⁵⁴

3.4 Legal Liability of System Partner

3.4.1 Legal Liability of Card Issuers

Where there is a failure to carry out a transaction in the event of mechanical failure of equipment or where circumstances beyond the bank's control prevent the transaction,¹⁵⁵ bank, as the card issuer, should be liable if the technical failure is due to the bank's own negligence.¹⁵⁶

In U.S., the Debit Card transaction is governed by EFTA (Electronic Funds Transfer Act). The Electronic Funds Transfer Act establishes the basic rights, liabilities and responsibilities of consumers who use electronic money transfer services and of financial institutions that regulate these services.¹⁵⁷ According to Regulation E, "it is thus permissible to send a debit card that can be used without PIN protection to replace an 'online' PIN-protected debit card. When a substitution is made, if there are adverse changes in the terms and conditions that were originally disclosed to the cardholder (such as higher liability limits or higher fees), the issuer must disclose the revised terms. But adding the capability for offline use to a debit card does not,

¹⁵³ <http://www.indiainfo/ine.com/pefi/news/debi.html> viewed on 2005-7-26

¹⁵⁴ <http://www.indiainfo/ine.com/pefi/news/debi.html> viewed on 2005-7-26

¹⁵⁵ C Reed 'Consumer Electronic Banking' [1994] 11 JIBL 451, 462

¹⁵⁶ The guidelines provided by Lord Morton in *Canada Steamship Lines Ltd v R* [1952] AC 192 at 208, PC; See also *Shell Chemicals UK Ltd v P&O Roadtanks Ltd* [1995] 1 Lloyd's Rep 297 at 301.

¹⁵⁷ *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P236

by itself, require a new disclosure under Regulation E”.¹⁵⁸

In Canada, Debit Card issuers should:¹⁵⁹

1. Inform the applicant of:
 - 1) Any fees associated with holding and using the debit card;
 - 2) The purpose and functions of the card;
 - 3) The cardholder’s responsibility for card security, and the possible
 - 4) Consequences of a breach of that responsibility; and
 - 5) How to contact the card issuer in the event of a problem;
2. Ensure that the card is delivered to the intended cardholder;
3. Provide the cardholder with a copy of the cardholder agreement; and
4. Advise the cardholder:
 - 1) How to avoid unauthorized use of the card; and
 - 2) The potential extent of losses that could occur due to unauthorized use of the card.

3.4.2 Legal Liability of Cardholders

If your card is lost or stolen, report the loss immediately to your financial institution.¹⁶⁰ As a Debit Card holder, it is your responsibility to report immediately to your bank once you found your card is lost or stolen, or you suspect it is being used fraudulently. If your card is lost or stolen, close your account and ask your bank for a new account number and PIN.¹⁶¹

As to Debit Card fraud, the law limits consumer’s liability to \$50 if customer notify

¹⁵⁸ Regulation E

¹⁵⁹ Article 3, Section 2 of *Canadian Code of Practice for Consumer Debit Card Services*

¹⁶⁰ http://www.mymoneyskills.com/visa/hk/en_us viewed on 2005-7-26

¹⁶¹ <http://www.indiainfo/ine.com/pefi/news/debi.html> viewed on 2005-7-26

the bank within 2 days of learning of the fraud, and \$500 or more after two days, up to the entire amount stolen under certain circumstances.¹⁶²

In U.S, Under Federal ATM Debit Card law, Regulation E, you may be held liable for unauthorized transactions in 3 tiers:¹⁶³

1. Liability limits to \$50 if you notify the bank within 2 days of finding out your card is lost or stolen;
2. Liability up to \$500 if you notify your bank after 2 days of learning of the loss or theft;
3. Potentially, unlimited liability for all unauthorized transactions that occur after 60 days from when you receive your statement containing the unauthorized transactions if you fail to notify your bank within 60 days of receiving your bank statement.

According to the above regulation, your liability for unauthorized transactions made before your statement is sent, and up to 60 days following is based on the first two tiers of liability. If someone makes an unauthorized transaction on your account without actually obtaining your card, then the first two tiers of liability do not apply, but you would be liable for all transactions that occur after the close of 60 days of receiving your statement and before you give notice to the bank.¹⁶⁴

There is the similar regulation under EFTA(Electronic Funds Transfer Act) of United States:

If your card lost or be fraudulent transfer, your liability under federal law for unauthorized use of your ATM or debit card depends on how quickly you report the

¹⁶² <http://www.pirg.org/consumer/banks/debit/fact.htm> viewed on 2005-7-26, see also Federal Law

¹⁶³ Section 205.6 Liability of Consumer for Unauthorized Transfers

¹⁶⁴ <http://www.pirg.org/consumer/banks/debit/fact.htm> viewed on 2005-7-26, see also Federal Law

loss. If you report an ATM or debit card missing before it's used without your permission, the EFTA says the card issuer cannot hold you responsible for any unauthorized transfers. If unauthorized use occurs before you report it, your liability under federal law depends on how quickly you report the loss.¹⁶⁵

If there is a mistake or unauthorized withdrawal from your bank account through the use of a debit card (an electronic fund transfer), you must notify your financial institution of the problem or error within 60 days after the statement containing the problem or error was sent.¹⁶⁶

In Canada, cardholders should:¹⁶⁷

1. Responsible for all authorized use of valid cards.
2. Responsible if they make entry errors at point-of-service terminals, or if they make fraudulent or worthless deposits.
3. Cardholders are not liable for losses resulting from circumstances beyond their control. Such circumstances include, but are not limited to:
 - a) Technical problems, card issuer errors, and other system malfunctions;
 - b) Unauthorized use of a card and PIN where the issuer is responsible for preventing such use, for example after:
 - Card has been reported lost or stolen;
 - Card is cancelled or expired; or
 - Cardholder has reported that the PIN may be known to someone other than the cardholder; and
 - c) Unauthorized use, where the cardholder has unintentionally contributed to such use, provided the cardholder co-operates in any subsequent investigation.

3.4.3 Burden of Proof Relates to Disputes

¹⁶⁵ *Electronic Funds Transfer Act* of United States

¹⁶⁶ *Electronic Funds Transfer Act* of United States

¹⁶⁷ Section 2 of *Canadian Code of Practice for Consumer Debit Card Services*

Under Debit Card system, a bank may only debit its customer's account where it has the customer's mandate to do so.¹⁶⁸ Where the customer uses an ATM or EFTPOS card together with his personal identification number(PIN), the correct PIN entered by the customer is his mandate for debiting his account.¹⁶⁹

But what if an unauthorized person types the PIN in? The burden of proof becomes an important issue when a customer alleges that he did not use or authorize the use of his PIN (or card) to withdraw or transfer funds.¹⁷⁰ It is the burden of the customer to prove that there he definitely did not use his card and PIN and that a third party has not gained access to the card or the PIN.¹⁷¹ In the overwhelming majority of cases the customer is unable to discharge this heavy burden.¹⁷²

3.5 Situation in China

In China, amongst all the payment cards and payment methods, using of debit cards still in dominant position. Although the different card issuers, there is the similar regulation as to the use of Debit Card. All the debit cards issued by Chinese banks are accepted in China as well as foreign countries.

The following is an article of ICBC Peony International Debit Card Regulation, from the regulation, we can see the general rules of the debit cards using in China,

¹⁶⁸ *Barclays Bank Ltd v WJ Simms, Son and Cooke (Southern) Ltd* [1980] QB 677 at 699

¹⁶⁹ C Reed 'Consumer Electronic Banking' [1994] 11 JIBL 451, 452

¹⁷⁰ *Paget's Law of Banking* by Mark Hapgood QC P376

¹⁷¹ P E Morris [1992] LMCLQ 227, 243

¹⁷² Although in *Judd v Citibank* 435 NYS 2d 210 (NY City Civ Ct, 1980) the court was prepared to believe the customer in the face of computer evidence of cash withdrawals; cf *Feldman v Citibank* 443 NYS 2d 210 (NY City Civ Ct, 1981) where the customer's evidence as to the circumstances surrounding the use of the card was not accepted by the court.

- Any transaction by use of password will be deemed the cardholder's own conduct by the card issuing institution, and any of electronic information records produced by various settlement transactions by use of such electronic information as password etc. will be valid evidence for these transactions.¹⁷³
- The use of RMB account and foreign currency account should be separated.¹⁷⁴
- Any cardholder can but withdraw RMB cash for five times and accumulatively RMB 5,000 at most every day at any of domestic designated ATMs by card and password. Any cardholder can but use his/her Peony international debit card in foreign countries to withdraw cash accumulatively no more than USD 1,000 or equivalent foreign currency every day, and accumulatively no more than USD 5,000 or equivalent foreign currency every month.¹⁷⁵
- Peony international debit card can not be overdrawn.¹⁷⁶
- The card issuing institution will charge the annual fee for the first year from the cardholder's account after the cardholder deposits money for the first time.¹⁷⁷
- Any cardholder should handle written loss-reporting or telephone loss-reporting immediately getting his/her Peony international debit card lost. The cardholder assumes no responsibility for any transaction arisen after completing the loss-reporting procedures.¹⁷⁸
- Card issuing institution has right to cancel the qualification of any cardholder disobeying this regulation, and authorize a competent authority to take back his/her Peony international debit card".¹⁷⁹

¹⁷³ Article VI of Peony Debit Card Regulation of ICBC

¹⁷⁴ Article VIII of Peony Debit Card Regulation of ICBC

¹⁷⁵ Article X of Peony Debit Card Regulation of ICBC

¹⁷⁶ Article XI of Peony Debit Card Regulation of ICBC

¹⁷⁷ Article XI of Peony Debit Card Regulation of ICBC

¹⁷⁸ Article XVII of ICBC Peony International Debit Card Regulation

¹⁷⁹ Article XVIII of ICBC Peony International Debit Card Regulation

Chapter4

Electronic Direct Debit

4.1 How Electronic Direct Debit works

4.1.1 Concept of Electronic Direct Debit

A Direct Debit is a written instruction from a customer to their bank or building society authorising you (the Originator) to collect varying payment amounts.¹⁸⁰

According to Code of Banking Practice of Australia, Direct Debit means an amount debited to a specified account of a customer with the customer's financial institution, as requested and authorised in writing by that customer, to and in favour of a **debit user** (or to a third party in its capacity as agent for that named **debit user**) which is processed through the Bulk Electronic Clearing System.¹⁸¹ Direct debit is a very common payment method and almost 10% of all payments are made by direct debit and this figure is certain to increase.¹⁸²

4.1.2 Working Process of Electronic Direct Debit

Direct Debit system is originated by the supplier who supplied the goods/service through the BACS system (Banker's Automated Clearing Services) to the customer have signed the direct debit.¹⁸³ Direct Debit transfer more probably be instituted in favour of a transferee to whom large numbers of parties are indebted on a regular

¹⁸⁰ <http://www.nib.ie/> viewed on 2005-6-28

¹⁸¹ Section 40 of Code of Banking Practice of Australia

¹⁸² <http://www.cclcnsw.org.au/DFT-project-2002> viewed on 2005-8-5

¹⁸³ <http://www.bizhelp24.com/cash-flow> viewed on 2005-7-29

basis.¹⁸⁴ It facilitates the prompt payment of amounts due under commercial and consumer contracts by enabling the supplier, dealer, or other creditor to obtain payment of amounts due to him by issuing a direct demand for payment to the debtor's bank.¹⁸⁵

When you set up a direct debit you will enter into an agreement with the merchant. You agree with the organisation the amount to be collected and the date of payment. From then on the amount will be deducted from your account on a regular basis.¹⁸⁶ In the case of a direct debit linked to a bank account you will give the merchant a Direct Debit Request.¹⁸⁷ Conceptually, direct debit can be used for the settlement of any type of payment. However, in the majority of cases, it is used to arrange for the payment of varying amounts falling due at regular or irregular intervals,¹⁸⁸ for example many people use a direct debit to pay their insurance premiums on a monthly basis. A fixed amount may be more manageable than a variable amount because it allows you to budget around the direct debit payment.¹⁸⁹

The Electronic Direct Debit system is a very cost-efficient alternative to electronic cash if traders are dealing with regular customers or small amounts are to be settled with the ec card.¹⁹⁰ It is a simple, safe and speedy way to pay regular bills and subscriptions automatically from your bank account.¹⁹¹ In the direct debit system, money is debited from a payer's account automatically on their due dates and credited together to the seller's account.¹⁹² It has been defined as a "funds transfer where the account of the originating bank or its customer is to be credited and the

¹⁸⁴ *UNCITRAL Legal Guide* 14 para16

¹⁸⁵ *Modern Banking Law* by E.P. Ellinger, Eva Lomnicka and Richard Hooley, P472

¹⁸⁶ <http://www.bacs.co.uk/BPSL/directdebit> viewed on 2005-8-5

¹⁸⁷ <http://www.fido.asic.gov.au> viewed on 2005-7-30

¹⁸⁸ *Modern Banking Law* by E.P. Ellinger, Eva Lomnicka and Richard Hooley, P472

¹⁸⁹ <http://www.fido.asic.gov.au> viewed on 2005-7-30

¹⁹⁰ <http://www.bs-card-service.am> viewed on 2005-6-28

¹⁹¹ <http://www.bacs.co.uk/bpsl/directdebit> viewed on 2005-7-29

¹⁹² <http://www.bacs.co.uk/bpsl/directdebit> viewed on 2005-7-29

account of the destination bank or its customer is to be debited".¹⁹³ You agree with the organisation the amount to be collected and the date of payment. From then on the amount will be deducted from your account on a regular basis.¹⁹⁴ It automatically allows an organisation to collect fixed or variable amounts on or after a specified date,¹⁹⁵ Of course, the organisation can only take the agreed amount.¹⁹⁶ The seller receives payments made through the system in its account on the banking day following the debiting day, at the latest, however, on the third banking day following the debiting day.¹⁹⁷ The process of a typical Direct Debit transaction described as follows:

- 1 Payer (or buyer) gives authorization at own bank
- 2 Authorisation data sent to invoicer (or seller)
- 3 Invoicer transmits debit requests to its bank
- 5 banks debit payers' accounts and credit invoicers' account
- 6 Payer receives notification of debits balance statement

4.2 Conveniences of Using Electronic Direct Debit

1. Direct Debits offer businesses and organisations of all sizes a more competitive, cost effective and efficient method for collecting payments.¹⁹⁸
2. The Direct Debit or automatic payment service offers efficiency and flexibility for both seller and buyer. It cuts down on manual work of the seller, buyer, and of the bank, providing a simple and economical way to pay bills when they fall due.¹⁹⁹

¹⁹³ *UNCITRAL Legal Guide* 14 para14.

¹⁹⁴ <http://www.bacs.co.uk/bpsl/directdebit> viewed on 2005-7-29

¹⁹⁵ <http://www.accountis.com/accountis> viewed on 2005-7-29

¹⁹⁶ <http://www.bacs.co.uk/bpsl/directdebit> viewed on 2005-7-29

¹⁹⁷ <http://www.pankkiyhdistys.fi/sisavto-eng/upload> viewed on 2005-3-28

¹⁹⁸ <http://www.nib.ie/> viewed on 2005-6-28

¹⁹⁹ <http://www.pankkiyhdistys.fi/sisalto-eng/upload> viewed on 2005-3-28

3. It is cheaper and can reduce your cost. Apart from eliminating the expense and hassle of mailing cheques, it takes advantage of the many Direct Debit discounts available.²⁰⁰ More Control - Regular, recurring collections by Direct Debit afford more control over your cashflow predictions or budget.²⁰¹
4. Increased Customer Loyalty - Customers who pay by Direct Debit may be less likely to switch suppliers as payment is easily arranged and continued payment requires no further action.²⁰²

4.3 Inconveniences of Using Electronic Direct Debit

1. Using of Direct Debit system might be difficult to budget for if you are not paid monthly.²⁰³
2. If you are no careful, you can lose track of spending, mistakes have been known to happen.²⁰⁴
3. The customers have to watch the balance of your account to make sure there is enough money to cover the amount being deducted. This is particularly difficult when the amount being deducted varies (for example, your electricity or phone bill). If you have trouble doing this then you should consider other payment options.²⁰⁵
4. It can be difficult to stop direct debit payments. Most credit card Conditions of Use require the customer to cancel the direct debit directly with the merchant and state that the customer's financial institution will not accept cancellations. The financial institution should nevertheless be sent a copy of the notice of cancellation

²⁰⁰ <http://www.bacs.co.uk/bpsl/directdebit> viewed on 2005-8-5

²⁰¹ <http://www.accountis.com/accountis> viewed on 2005-7-29

²⁰² *ibid*

²⁰³ <http://www.ciao.co.uk> viewed on 2005-8-5

²⁰⁴ <http://www.ciao.co.uk> viewed on 2005-8-5

²⁰⁵ <http://www.fairtrading.qld.gov.au> viewed on 2005-8-5

sent to the merchant.²⁰⁶

4.4 Legal Liability of the system partner

The invoicer must ensure that direct debit data contain only authorised debits. The payer must ensure that the debit account contains sufficient funds on the due date.²⁰⁷

The bank is liable to refund , fully and immediately, the debtor if there is an error in the direct debiting process by the creditor or the bank itself.²⁰⁸

4.5 Situation in China

Electronic direct debit system as a newly payment method has been accepted and used in China, especially in big cities, people use them to pay the bill of telephone, electricity, but by now, again, there is no relevant regulation on this area.

²⁰⁶ <http://www.ccicnsw.org.au/DFT-project-2002> viewed on 2005-8-5

²⁰⁷ <http://www.pankkiyhdistys.fi/sisalto-eng/upload> viewed on 2005-3-28

²⁰⁸ *Modern Banking Law* by E.P. Ellinger, Eva Lomnicka and Richard Hooley, P473

Chapter5

Digital Cash

5.1 How Digital Cash works

5.1.1 Concept of Digital Cash

Digital cash, is basically an encrypted serial number (online e-currency)²⁰⁹, it is a system of purchasing cash credits in relatively small amounts, storing the credits in your computer, and then spending them when making electronic purchases over the Internet.²¹⁰ Digital Cash acts much like real cash, except that it is not on paper.²¹¹ In the simplest words, it is a digitally signed payment message that serves as a medium of exchange.²¹² Just as paper currency and coins represent value because they are backed by a trusted third party, the government and the banking industry, digital coins will also represent value because they are backed by a trusted third party- usually a bank- that is willing to convert digital cash to physical cash.²¹³ As Rees describes, the essence of true electronic cash is the fact that the purchaser buys electronic value direct from the issuer and stores it on a smart card.²¹⁴ It is a system that allows a person to pay for goods or services by transmitting a number from one

²⁰⁹ <http://www.merchantseek.com/digitalcash.htm> viewed on 2005-8-7

²¹⁰ <http://searchcio.techtarget.com> viewed on 2005-8-7

²¹¹ www.pbs.org/wgbh/nova/moolah/digitalcash.html viewed on 2005-7-20 *Nova Online Secrets of Making Money Digital Cash* by Brad Puffer

²¹² www.orlingrabbe.com/digiprin.htm viewed on 2005-7-20

²¹³ <http://www.cs-bham.ac.uk> viewed on 2005-8-7, *Digital Cash* by Amit, Hiren, Kevin, Kai

²¹⁴ See “*Electronic Payment Systems*” 1999 *International Business Lawyer*, also, *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P227

computer to another. Just like real cash, digital cash is anonymous and reusable.²¹⁵ Theoretically, digital cash could be spent in very small increments, such as tenths of a cent (U.S.) or less.²¹⁶ The customer then can spend the money at different merchants that support the digital cash provider the customer signed up with.²¹⁷

There are several commercial approaches to digital cash on the Web. Among these are eCash from DigiCash and Cybercash.²¹⁸

5.1.2 Working Process of Digital Cash

In a Digital Cash system, there are three kinds of actors, a financial network (bank), a payer or consumer (Alice) and a payee or a shop (Bob) and accordingly, they generate three types of Digital Cash transactions:²¹⁹

- a) *Withdrawal*, in which payer transfers some of the money from payer's bank account to payer's wallet (it could be a smart card or a personal computer).
- b) *Payment*, in which payer transfers money from payer's wallet to payee's.
- c) *Deposit*, in which payee transfers the money he has received to his bank account.

The following is a flow of these structures:

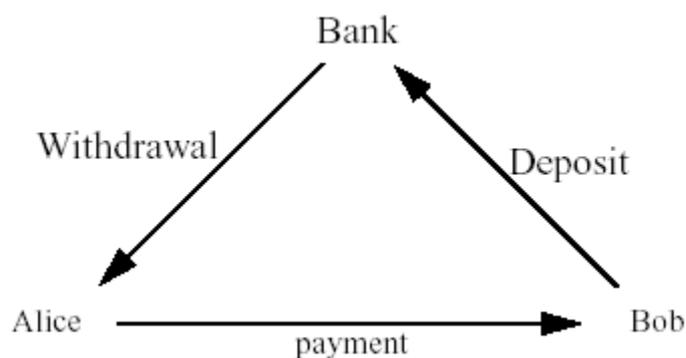
²¹⁵ <http://www.webopedia.com/Term/D/digital-cash.htm> viewed on 2005-7-20

²¹⁶ <http://searchcio.techtarget.com> viewed on 2005-8-7

²¹⁷ <http://www.merchantseek.com/digitalcash.htm> viewed on 2005-8-7

²¹⁸ http://searchcio.techtarget.com/sDefinition/0,,sid19_gci211949,00.html viewed on 2005-07-19

²¹⁹ www.simovits.com/archive.dcash.pdf viewed on 2005-7-20 written by Mandana Jahanian Farsi *Master's Thesis in Computer Science* Department of mathematics and computing science Göteborg University 1997



Digital cash is made possible by advances in cryptography, especially public-key cryptography;²²⁰ the basic gist is that banks and customers would have public-key encryption keys. Public key cryptography (asymmetric key cryptography) uses two “keys”--two sets of digital strings of 0s and 1s--to process, or scramble, data in certain ways.²²¹ Public-key encryption keys come in pairs. A private key known only to the owner, and a public key, made available to everyone.²²² Whatever the private key encrypts, the public key can decrypt, and vice versa.²²³ Banks and customers use their keys to encrypt (for security) and sign (for identification) blocks of digital data that represent money orders. A bank “signs” money order using its private key and customers and merchants verify the signed money orders using the bank's widely published public key. Customers sign deposits and withdraws using their private key and the bank uses the customer's public key to verify the signed withdraws and deposits.²²⁴

The following description is a typical working process of Digital Cash:²²⁵

²²⁰ www.orlingrabbe.com/dcfutmo.htm viewed on 2005-7-20

²²¹ www.orlingrabbe.com/digiprin.htm viewed on 2005-7-20

²²² <http://ntrg.cs.tcd.ie/mepeirce/Project/Mlists/minifaq.htm> viewed on 2005-7-20 *Digital Cash Mini-FAQ* written by Jim Miller

²²³ www.orlingrabbe.com/digiprin.htm viewed on 2005-7-20

²²⁴ *Applied Cryptography: protocols, algorithms and source code* by Bruce Schneier

²²⁵ <http://www.cs.bham.ac.uk> viewed on 2005-8-7

1. A user installs a "cyber wallet" onto computer. Money can be put in the wallet by deciding how much is needed and then sending an encrypted message to the bank asking for this amount to be deducted from the user's account.
2. The bank reads the message with private key decryption and verifies if it has been digitally signed in order to identify the user.
3. The bank then generates "serial numbers", encrypts the message, signs it with its digital signature and returns it.
4. The user is now entitled to use the message (coin or token) to spend it at merchant sites.
5. Merchants receive e-cash during a transaction and see that it has been authorized by a bank.
6. They then contact the bank to make sure the coins have not been spent somewhere else, and the amount is credited to the merchant's account.

5.1.3 Different Types of Digital Cash

According to the nature of digital cash, there are different specifications exist at the moment:

1. Anonymous or Identified. Anonymous digital cash can be defined as digital cash that--for the purpose of allowing personal financial privacy--is untraceable, and transactions made with it are unlinkable.²²⁶ It just like real paper cash.
2. Online or Offline. Online means you need to interact with a bank (via modem or network) to conduct a transaction with a third party. Offline means you can conduct a transaction without having to directly involve a bank.
3. Smart Cards or Purely Electronic. Smart cards are similar to credit cards, but store money-related information on a chip within the card. They may be used in

²²⁶ <http://www.orlingrabbe.com/dcfutmo.htm> viewed on 2005-7-19, *Digital Cash and Future of Money* by Orlin Grabbe

digital cash applications. Again, there is ambivalence as to whether smart cards represent "true" digital cash. Critics claim smart cards encumber peer-to-peer transactions and are not purely electronic as the digital cash protocols related to networks and the internet.²²⁷

5.2 Conveniences of Using Digital Cash

1. Digital cash offers a solution to the problems of paper cash and today's Credit Cards; it is secure and protects people's privacy.²²⁸ That is, digital cash represents an attempt to partially restore the anonymity features of ordinary cash in an electronic environment.²²⁹
2. The electronic nature of digital cash offers some features that make it an attractive alternative over other payment mechanisms.²³⁰ It can be implemented to preclude some features of paper cash, such as complete anonymity etc.
3. Digital cash increases efficiency of opening new opportunities, especially for small businesses, also, makes transactions more efficient.²³¹
4. Easy accessibility of digital cash payments. It potentially can be used by anyone with access to the Internet and an Internet-based bank. Thus, even very small businesses and individuals can use digital cash for all sorts of transactions.²³²

²²⁷ <http://www.cs.bham.ac.uk> viewed on 2005-8-7

²²⁸ www.simovits.com/archive.dcash.pdf viewed on 2005-7-20 written by Mandana Jahanian Farsi *Master's Thesis in Computer Science* Department of mathematics and computing science Göteborg University 1997

²²⁹ www.orlingrabbe.com/dfutmo.htm viewed on 2005-7-20

²³⁰ <http://www.law.indiana.edu/fclj/pubs/v49/sifers.html> viewed on 2004-12-3

Regulating Electronic Money by Sifers

²³¹ www.firstmonday.org/issues/issue2/digital_cash viewed on 2005-7-20 *Possible Economic Consequence of Digital Cash* by Tatsuo Tanaka

²³² www.firstmonday.org/issues/issue2/digital_cash viewed on 2005-7-20 *Possible Economic Consequence of Digital Cash* by Tatsuo Tanaka

5. Digital Cash provides low, per transaction, processing costs.²³³

5.3 Inconveniences of Using Digital Cash

1. Because digital money is anonymous, criminals could use untraceable digital money to evade taxes or launder money,²³⁴ Computer hackers could break into digital cash systems and instantly download the wealth of thousands of customers.²³⁵
2. Money could flow instantly between countries without being traced.²³⁶
3. As digital cash is a payment message bearing a digital signature which functions as a medium of exchange or store of value,²³⁷ so, the risk of interception of payment messages remains.²³⁸
4. Take extra precaution to eliminate fraud and security threats; also, the account may not be backed up with actual funds.²³⁹

5.4 Legal Liability of System Partner

As to the special feature of Digital Cash, security, especially the data security is the most concerned aspect of its transaction. Contractual liability for a failure to take

²³³ www.lex-electronica.org/articles/v2-2/waldenn.html viewed on 2005-7-20 *Keeping Digital Cash Secure* by Dr Ian Walden

²³⁴ www.pbs.org/wgbh/nova/moolah/digitalcash.html viewed on 2005-7-20 *Nova Online Secrets of Making Money Digital Cash* by Brad Puffer

²³⁵ www.pbs.org/wgbh/nova/moolah/digitalcash.html viewed on 2005-7-20 *Nova Online Secrets of Making Money Digital Cash* by Brad Puffer

²³⁶ *ibid*

²³⁷ www.orlingrabbe.com/dcrutmo.htm viewed on 2005-7-20 *Digital Cash and Future of Money* by Orlin Grabbe

²³⁸ *Electronic Payment System 1999 International Business Lawyer* 269 272

²³⁹ <http://www.digitalthongkong.com> viewed on 2005-7-29

adequate data security measures is obviously primarily an issue to be determined between the providers and their customers.²⁴⁰ The provider will obviously determine the contractual terms and conditions under which a digital cash service is offered.²⁴¹ As such, the provider will attempt to limit their liability to the greatest possible extent.²⁴²

In terms of ensuring that a digital cash payment service operates within a 'legally secure' environment, the element of negligence is of key importance: what are considered to be appropriate safeguards?

Normally, national laws may restrict the use of certain data security techniques. In terms of digital cash, such regulations may:²⁴³

“place limits on the strength of the cryptographic mechanism that may be used by the application (eg. limiting the available key length); and restrict the ability of customers to ‘legitimately’ cross-borders with digital cash products.”

Besides, the untraceable nature of digital cash maybe loosen the government's control over financial information,²⁴⁴ if the government do not like anonymous, they make things tough.²⁴⁵ This will be a potential policy barrier from the

²⁴⁰ www.lex-electronica.org/articles/v2-2/waldenn.html viewed on 2005-7-20 *Keeping Digital Cash Secure* by Dr Ian Walden

²⁴¹ www.lex-electronica.org/articles/v2-2/waldenn.html viewed on 2005-7-20 *Keeping Digital Cash Secure* by Dr Ian Walden

²⁴² www.lex-electronica.org/articles/v2-2/waldenn.html viewed on 2005-7-20 *Keeping Digital Cash Secure* by Dr Ian Walden

²⁴³ Certain data security products, such as cryptographic software and hardware, are classified as 'munitions' and therefore fall under the regulatory regime. Such laws exist in Europe at both Member State and European Union level.

²⁴⁴ <http://www.cs.bham.ac.uk> viewed on 2005-8-7

²⁴⁵ <https://www.cypherpunks.to/faq/cyphernomicron/chapter12.html#2> viewed on 2005-8-7

government to detain the rapid development of digital cash until this problem can be solved properly.

5.5 Situation in China

The development of digital cash in China, presently, is still a brand newly payment methods and has not been accepted in Chinese market. But, with the improvement of technology and the relevant regulation, it will be a good choice for Chinese consumers.

Chapter 6

Stored Value Card

6.1 How Stored Value Card works

6.1.1 Concept of Stored Value Card

Stored-value cards (SVCs) are “machine-readable medium, of paper or plastic²⁴⁶ with a magnetic stripe on the back that hold information about monies prefunded into an account for the purpose of making financial transactions.”²⁴⁷ According to the Federal Reserve, stored-value products share three attributes: "(i) [a] card or other device electronically stores or provides access to a specified amount of funds selected by the holder of the device and available for making payments to others; (ii) the device is the only means of routine access to the funds; and (iii) the issuer does not record the funds associated with the device as an account in the name of (or credited to) the holder."²⁴⁸ Basically, stored-value cards include gift cards, payroll cards, and prepaid phone cards.²⁴⁹ Stored value cards are one of the most dynamic and fastest growing products in the financial industry,²⁵⁰ and this (Stored-value

²⁴⁶ *Cards 2000* by Jerome Svigals P96

²⁴⁷ www.phil.frb.org/pcc/D2005MarchunbankedCover.pdf viewed on 2005-7-22, *The Cost Effectiveness of Stored-Value Products for Unbanked Consumer* by James C. McGrath May 2005

²⁴⁸ <http://www.law.upenn.edu/bll/ulc/moneyServ/Cyberpayments.html> viewed on 2005-7-21, *Memorandum* by Anita Ramasastry

²⁴⁹ <http://www.turner-invest.com/index.cfm/fuseaction/commentary.detail> viewed on 2005-7-21, *Stored-value Card: a Win-win Product for Consumers and Companies* by Mark Turner and Rick Wetmore

²⁵⁰ www.perkinscole.com/content viewed on 2005-7-5

cards) market has mushroomed in the last few years in terms of both the number of providers and the number of customers,²⁵¹ according to *Credit Card Management* magazine, approximately half of all consumers have used stored-value cards — a fivefold increase in the last year alone.²⁵² As such, they are becoming a new industry that will soon have a significant presence in consumers' wallets and in the world of payments.²⁵³ They are also known as *electronic purses*²⁵⁴ and mainly designed to pay for small things - usually items with low value. Phone cards are a simple example of these cards which are already commonplace.²⁵⁵ They're also used on public transportation, at colleges and universities, at gas stations, and for prepaid telephone use.²⁵⁶ Where available, the cards are used as payment in post exchanges and post offices, shops stores, and vending machines, and for morale welfare and recreation.²⁵⁷ Stored-value cards share one similarity with Credit Card and Debit Card that they all use magnetic technology.²⁵⁸ While, they operate in different way, compared with pay later of Credit Cards and pay now of Debit Cards, Stored-value cards ("SVCs") are prepaid cards that may be used to purchase goods and services.²⁵⁹ Typically, a consumer will pay a bank or other provider money in exchange for a card that is loaded with value, the consumer uses the card rather than

²⁵¹ <http://www.cfsinnovation.com/managed-documents/storedvaluecard-report.pdf> viewed on 2005-7-21; *A Scan of Current Trends and Future Opportunities* by Katy Jacob,

²⁵² <http://www.turner-invest.com/index.cfm/fuseaction/commentary.detail> viewed on 2005-7-21, *Stored-value Card: a Win-win Product for Consumers and Companies* by Mark Turner and Rick Wetmore

²⁵³ <http://www.celent.com/PressRelease/20050718/StoredValueCards.htm> viewed on 2005-7-21

²⁵⁴ See the working Group on EU Payment Systems Report to the Council of the European Monetary Institute on Prepaid Cards 2

²⁵⁵ <http://www.moneycontrol.com/cards/cardsinfo/cardstype.php> viewed on 2005-7-21

²⁵⁶ <http://www.adobe.com> viewed on 2005-3-20

²⁵⁷ <http://www.fms.treas.gov> viewed on 2005-3-16

²⁵⁸ <http://www.nafcu.org> viewed on 2005-7-21

²⁵⁹ www.perkinscole.com/content viewed on 2005-7-5

paper currency to purchase goods and services.²⁶⁰ Under Stored-value payment, there is no risk to the retailer or payment broker, since the consumer is willing and able to provide a payment to either the retailer or payment broker prior to receipt of the goods.²⁶¹

6.1.2 Working Process of Digital Cash

By inserting the SVC into an appropriate terminal, users can initiate an SVC transaction;²⁶² they let you transfer cash value to a card. Due to their versatility and enhanced features such as the ability to reload, incrementally draw down balances, they are rapidly replacing traditional gift certificates. According to industry estimates, more than 2,000 stored value programs are available, with roughly 7 million Visa- or MasterCard-branded stored value cards in the marketplace. There are approximately 20 million users and that figure is expected to more than double to 49 million users by 2008.²⁶³ In 2003, stored value cards were used to make \$42 billion in transactions. By 2006 over \$72 billion in stored value transactions are expected.²⁶⁴ Experts put this industry in the introductory or early growth stage of the product life cycle, suggesting that there is substantial growth potential in the years ahead.²⁶⁵ SVCs can work online and/or offline features: Some work offline, say, to buy a candy bar at a vending machine; others work online, for example, to

²⁶⁰ <http://www.law.upenn.edu/bll/ulc/moneyServ/Cyberpayments.html> viewed on 2005-7-21, *Memorandum* by Anita Ramasastry

²⁶¹ <http://www.retailsolutions2005.co.uk/2005/news/trintech.pdf> viewed on 2005-6-20

²⁶² <http://austlii.edu.au/~alan/svc-legal.html> viewed on 2005-7-23, *Legal Nature of Electronic Money* by Alan T Tyree

²⁶³ <http://www.iirusa.com/storedvalue> viewed on 2005-7-22

²⁶⁴ <http://www.iirusa.com/storedvalue> viewed on 2005-7-22

²⁶⁵ www.ny.frb.org/regional/stored-value-cards.html viewed on 2005-7-5, also see Ted Dargan, "A Stored Value Update" and Karen Larsen, "Closed Systems: Strategies for Capitalizing on Gift/Convenience/Loyalty Cards", *Stored Value: Challenging the Credit Card Paradigm*, Conference Proceedings, Pelorus Group, March 2004.

buy an item from a website.²⁶⁶ Some stored-value cards contain computer chips that make them "smart" cards: These cards may act like a Credit Card as well as a Debit Card, and also may contain stored value."²⁶⁷ Stored-value cards operate very much like traditional debit cards, with a magnetic stripe that includes data that permit terminal-based authorization of transactions against pre-loaded money associated with the account.²⁶⁸ The main difference between stored value cards and Debit Cards is commonly held to be that the former contain the value on the card itself,²⁶⁹ and being prepaid, it limits the risk of overdrafts while providing nearly immediate liquidity for consumers;²⁷⁰ while the latter only point to the proper remote account for immediate value deduction.²⁷¹

Some common examples of everyday pre-paid payments for goods or services are:²⁷²

1. Buying a bar of chocolate from a vending machine.²⁷³
2. Using a mobile phone on a pre-paid basis rather than a contract (pay later) basis.²⁷⁴
3. Using a pre-paid ticket to pay for rail or metro travel, or for parking.

²⁶⁶ [http://www.worldlawdirect.com/article/887/Guide to online payments.html](http://www.worldlawdirect.com/article/887/Guide%20to%20online%20payments.html)

viewed on 2005-7-21

²⁶⁷ <http://www.adobe.com> viewed on 2005-3-20

²⁶⁸ <http://www.phil.frb.org/pcc/D2005Marchunbankedcover.pdf> viewed on 2005-7-30

²⁶⁹ <http://law.richmond.edu/jolt/v5i2/oconnor.html> viewed on 2005-7-23, *The DE Minimis Exemption of SVC From Regulation E* by Sean M. O'connor

²⁷⁰ <http://www.cfsinnovation.com/managed-documents/storedvaluecard-report.pdf> viewed on 2005-7-21, *A Scan of Current Trends and Future Opportunities* by Katy Jacob

²⁷¹ <http://law.richmond.edu/jolt/v5i2/oconnor.html> viewed on 2005-7-23, *The DE Minimis Exemption of SVC From Regulation E* by Sean M. O'connor

²⁷² <http://www.retailsolutions2005.co.uk/2005/news/trintech.pdf> viewed on 2005-6-20

²⁷³ When you use the vending machine, the coins are inserted and validated prior to the machine releasing the goods.

²⁷⁴ The talktime is paid for by the consumer prior to use.

The process of SVCs transactions described as follows:²⁷⁵

1. The cardholder (customer), who has an account at the bank, loads value onto the card via e.g. a telephone.
2. The corresponding funds are deducted from the cardholder's bank (customer's bank) account and are moved to a deposit account at the bank.
3. The cardholder then purchases goods/services from a merchant.
4. Funds are deducted from the cardholder's card and the merchant's card or the POS is credited.
5. The merchant sends the transaction data to a bank/card association where the transaction is logged.
6. Settlement figures are produced which result in clearing and settlement through the normal banking channels.
7. Funds are deducted from the deposit account at the cardholder's bank and are credited to the merchant's account at the merchant's bank.

Stored-value cards are similar to a Credit Card in size but not in function.²⁷⁶ With a Credit Card, consumers pay for goods and services by drawing on a credit line. In contrast, consumers buy the stored-value card with a prepaid amount stored on it and then make their purchases by debiting the card, much like the cards that phone and transit companies issue today.²⁷⁷ The companies introducing stored-value cards intend to make them cost-effective, then they can be used in low-value transactions, such as when buying goods in a fast-food establishment or from a vending machine.”²⁷⁸

²⁷⁵ *Electronic Money: Legal and Regulatory Issues* by Dr. Vivienne A Lawack-Davids, Senior Payment System Analyst. South African Reserve Bank

²⁷⁶ <http://www.cbo.gov/showdoc.cfm> viewed on 2005/3-2

²⁷⁷ *ibid*

²⁷⁸ *ibid*

6.1.3 Different Types of Digital Cash

There are two main categories of stored value cards in the marketplace---“Open-loop” and “Close-loop”.

“Open-loop” SVC systems offer consumers the ability to utilize their cards for multiple purposes and at multiple points of sale, such as making purchases at a variety of stores or paying bills.²⁷⁹ Open-loop cards are issued by banks, but unlike bank debit cards, they are often sponsored or provided by nonfinancial entities.²⁸⁰

1. In an "open" system, the issuer is not the provider of goods and services but is perhaps part of a group of issuers whose stored-value cards are accepted as a form of payment by a host of merchants.²⁸¹ For open-system cards, it may take several days for the issuer to release funds unless the retailer calls the issuer at that time and provides information about the transaction.²⁸²

2. “Close-loop” SVC system is one where the stored-value card can be used only for goods and services provided directly by the card issuer. For example, a university may issue a stored-value card which students may use to purchase books, cafeteria food, and fares on the university's bus system.²⁸³ Closed systems present fewer challenges to potential card issuers and redeemers because there are no third

²⁷⁹ http://www.cfsinnovation.com/managed_documents/storedvaluecard-report.pdf viewed on 2005-7-22

²⁸⁰ <http://www.phil.frb.org/pcc/D2005MarchunbankedCover.pdf> viewed on 2005-7-30

²⁸¹ <http://www.law.upenn.edu/bll/ulc/moneyserv/cyberpayments.html> viewed on 2005-7-22

Memorandum by Anita Ramasastry

²⁸² <http://www.federalreserve.gov/paymentsystem/storedvalue/default.htm> viewed on 2005-7-21

²⁸³ http://www.cfsinnovation.com/managed_documents/storedvaluecard-report.pdf viewed on 2005-7-22, *Stored-Value Cards: A Scan of Current Trends and Future Opportunities* by Katy Jacob, Senior Analyst, Center for Financial Services innovation

parties involved. Since the same organization issues and redeems the card, there is little incentive for fraudulent misrepresentation of transactions between the issuing entity and the redeeming entity. Further, closed system operators can better monitor their cards for consumer fraud through direct control and familiarity.²⁸⁴

The dual existence of closed- and open-system gift cards, which use different infrastructures for processing, has created challenges for retailers, issuers, and payment networks.²⁸⁵

While, according to bill payment capacity and the multiple options of reloading, SVCs can be divided into two types: payroll cards and reloaded cards.

1. Payroll card which is "loaded" with a fixed sum and then thrown away when "empty" (like phone cards),²⁸⁶ to some degree, it functions like a Debit Card at the point of sale and may be used to pay bills and gain access to cash via ATMs.²⁸⁷
2. Re-loadable cards allow you to load funds at specially adapted machines,²⁸⁸ more often, it is viewed as alternatives to checking accounts and most closely resemble traditional deposit account Debit Cards in functionality and are thus most likely to meet the needs of the unbanked or underbanked.²⁸⁹ Telephones, for example, could be converted for this purpose. Once you've spent the amount on the card you can simply load it up again.²⁹⁰ Generally, branded reloadable spending cards offer many of the same features as payroll cards; the primary difference is that

²⁸⁴ <http://law.richmond.edu/jolt/v5i2/oconnor.html> viewed on 2005-7-23, *The DE Minimis Exemption of SVC From Regulation E* by Sean M. O'connor

²⁸⁵ <http://www.federalreserve.gov/paymentsystems/storedvalue/default.htm> viewed on 2005-7-21

²⁸⁶ <http://www.moneycontrol.com/cards/cardsinfo>. Viewed on 2005-7-

²⁸⁷ www.phil.frb.org/pcc/D2005MarchunbankedCover.pdf viewed on 2005-7-22

²⁸⁸ <http://www.moneycontrol.com/cards/cardsinfo>. Viewed on 2005-7-

²⁸⁹ http://www.ny.frb.org/regional/stored_value_cards.html viewed on 2005-07-21

²⁹⁰ <http://www.moneycontrol.com/cards/cardsinfo>. Viewed on 2005-7-4

bill payment capability and multiple options for reloading are often not available with payroll cards.²⁹¹

6.2 Conveniences of Using Stored Value Card

1. Security is one of the great advantages. The cards use multilayered integrated chip circuitry to control access to funds. It's more secure than the magnetic-stripe technology used to authenticate credit and Debit Cards. Both the card and the user can be authenticated using a combination of encrypted security "keys" and user PINs.²⁹²

2. Transactions are completed speedily.²⁹³

3. It makes routine purchases more convenient.²⁹⁴

4. Convenience offered to cardholders. Stored Value Cards provide cardholders with a prepaid payment method that can be used for purchases and cash withdrawals. This prepaid payment tool is accepted anywhere MasterCard is accepted, at over 21 million locations worldwide, including automated teller machines.²⁹⁵ Meanwhile, SVCs can be purchased and reloaded at a growing number of locations other than bank branches, such as check cashers and other retailers.²⁹⁶

5. For the unbanked²⁹⁷, stored-value cards provide an alternative means of performing many banking functions and may serve as a valuable step toward

²⁹¹ www.phil.frb.org/pcc/D2005MarchunbankedCover.pdf viewed on 2005-7-22

²⁹² <http://www.fms.treas.gov> viewed on 2005-3-20

²⁹³ *Electronic Money: Legal and Regulatory Issues* by Dr. Vivienne A Lawack-Davids

²⁹⁴ *ibid*

²⁹⁵ http://www.standardfederalbank.com/commercial/tm_card_storedvalue.html viewed on 2005-7-21

²⁹⁶ <http://www.cfsinnovation.com/managed-documents/storedvaluecard-report.pdf> viewed on 2005-7-21, *A Scan of Current Trends and Future Opportunities* by Katy Jacob

²⁹⁷ According to Rhine and Su---the person first to consider the defining characteristics of stored-value cards--- the unbanked means any person "who doesn't have a checking or savings account."

participation in the financial mainstream.²⁹⁸

6. Stored value cards can mean reduced costs and greater efficiencies.²⁹⁹

6.3 Inconveniences of Using Stored Value Card

1. Less profitable to issuers than other payment instruments such as credit or Debit Cards.³⁰⁰ This will probably be a barrier to the development of Stored-value cards.

2. The transfer of stored-value may provide an opportunity for money laundering. If one can store a large amount of value on a card that is highly portable and transferable, this will increase the likelihood of money laundering.³⁰¹

3. It is a "black box" transaction. In Stored Value Cards transactions, the user can neither directly "see" what is on the card nor what transactions have modified its contents. The consumer must rely upon either her own reader and display, or one provided by the other party, to verify what has been done to the data on the card. If there is no reader available, the consumer has no idea whether the correct amount was deducted, this makes Stored Value Cards transactions a perfect target for fraud.³⁰²

²⁹⁸ www.phil.frb.org/pcc/D2005MarchunbankedCover.pdf viewed on 2005-7-22, *The Cost Effectiveness of Stored-Value Products for Unbanked Consumer* by James C. McGrath May 2005

²⁹⁹ http://www.wib.org/wb_articles/delivery_Oct02/reload_Oct02.html viewed on 2005-7-22, *Reloadable Stored Value Cards* by Frank D'Angelo

³⁰⁰ <http://www.federalreserve.gov/paymentsystems/storedvalue/default.htm> viewed on 2005-7-22 *A Summary of the Roundtable Discussion on Stored-Value Cards and Other Prepaid Products* by Federal Reserve Board

³⁰¹ <http://www.law.upenn.edu/bll/ulc/moneyserv/cyberpayments.html> viewed on 2005-7-22 *Memorandum* by Anita Ramasastry

³⁰² <http://law.richmond.edu/jolt/v5i2/oconnor.html> viewed on 2005-7-23, *The DE Minimis*

4. If you lose it, it's gone; if it's gone, it can't be recreated.³⁰³
5. Most SVCs offer relatively limited functionality and do not provide a platform for savings, asset building, or building credit.³⁰⁴
6. Stored-value Cards may have expired dates.³⁰⁵

6.4 Legal Liability of the system partner

Legal Liability of Card Issuers:

1. Redemption. Time limits on the valid use of the SVC may be as agreed upon between the issuer and the consumer. Regardless of any time limit on the usage of the SVC as method of payment, the issuer shall redeem the remaining value on the card for ten years after the later of either the initial issuance or the reloading of new value on the SVC.³⁰⁶
2. Change in Terms. An issuer may not change the terms of the agreement between the consumer and the issuer unless the initial agreement provides for such a change in terms, and the issuer furnishes written notice of the change in terms to the consumer at least thirty days before the change takes effect.³⁰⁷
3. Liability for Loss of Funds. An issuer shall provide the consumer with complete reimbursement of funds lost as a result of:³⁰⁸
 - o An error attributed to the issuer's or a merchant's defective automated teller machine, card reader, or point of sale device;

Exemption of SVC From Regulation E by Sean M. O'connor

³⁰³ <http://www.digitalthongkong.com> viewed on 2005-7-29

³⁰⁴ <http://www.cfsinnovation.com/managed-documents/storedvaluecard-report.pdf> viewed on 2005-7-21; *A Scan of Current Trends and Future Opportunities* by Katy Jacob

³⁰⁵ <http://www.nafcu.org> viewed on 2005-7-21

³⁰⁶ D, Section III of Stored Value Card Protection Act (Draft) USA

³⁰⁷ E, Section III of Stored Value Card Protection Act (Draft) USA

³⁰⁸ F, Section III of Stored Value Card Protection Act (Draft) USA

- Fraud or mistake on the part of the issuer, a merchant, or an agent of either;
- Damage to the SVC if the amount of funds remaining on the SVC is reasonably determinable;
- Theft as the result of unauthorized use of electronic transmissions or interference between the consumer and the issuer or a merchant and
- Any other cause, when the amount remaining on the SVC can reasonably be determined and the issuer can prevent the access to these funds

6.5 Situation in China

In China, the moment, Stored-value cards are mainly issued by non-financial institution, which are similar like e-wallet and widely used on mobile phones.

In most cases, stored value cards, in China, are used to recharge the airtime of mobile phone and used on off line.

Chapter 7

Conclusion

Enormous changes are taking place in commerce, and it is important that the issues be subjected to careful analysis from the viewpoints of corporations, regulatory agencies, the economy, society and individuals.³⁰⁹ In a word, as a result of advances technology on Internet and the development of electronic commerce, significant changes are taking place in the payments system. This change is the result of changing payment habits and business opportunities, new technology and innovation, and the evolving legal and regulatory framework.³¹⁰ In most contexts, the Internet offers particularly efficient mechanism,³¹¹--Electronic Payment. The emerging of electronic payment instruments, compared with the former payment---cash payment and paper-based payment, is the third great age of payment. The immediate benefits from the rapid development of online payment instruments would be profound and fundamental. Theft of cash would become impossible. Bank robberies and cash-register robberies would simply cease to occur.³¹² On the other hand, some venerable documentary methods may quickly

³⁰⁹ www.anu.edu.au/people/Roger.clare viewed on 2005-1-29

³¹⁰ <http://www.federalreserve.gov/paymentsystems/storedvalue/default.htm> viewed on 2005-7-21

³¹¹ <http://www.garykessler.net/library> viewed on 2005-7-29, *Internet Payment System* by Peter Billam

³¹² <http://www.sfasu.edu/finance/Fincash.HTM> viewed on 2005-8-7, *Cashless Society of Digital Cash*, by Reynolds Griffith, Southwestern society of economist, March of 1994

disappear, because one or more electronic mechanisms that address the same niche appear likely to be much more efficient. It is true that Electronic payment methods may be costly and challenging, but they will give you the competitive edge.

That is true that a competitive battle is raging between conventional and electronic payment mechanisms, and among the various new schemes. Compared with the above-mentioned payment instruments, credit card is more popular to use on Internet as its convenience. The Credit Cards is currently more frequently used to effect payment over the Internet than any other payment instrument.³¹³ It is being marketed more and more, not only by banks, but also by various other traders---such as well-known clothing store groups and even general dealer;³¹⁴ In the mean time, it is more easier than other cards to put you in the debt, besides, just as we examined above, payment by Credit Card, neither the user nor the merchant as consumer is very well protected.³¹⁵ Debit card, works in much the same way as a credit card, except that you can use a credit card without having to have the correspondingly amount of money credited to your account; with a debit card, you can only spend the amount actually available as credit on your account.³¹⁶ Stored value cards are emerging as potentially powerful tools for consumers to engage in a variety of financial transactions with greater ease.³¹⁷ However, the addition of an asset or credit-building component is a vital area that the SVC market has yet to explore in great depth. New opportunities in this area would be beneficial for the consumer and the provider alike.³¹⁸ Digital Cash, with its untraceable nature, will

³¹³ *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids p252

³¹⁴ *Do You Know Your Bank?* By Dirk de Villiers

³¹⁵ *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids p252

³¹⁶ *Do You Know Your Bank?* By Dirk de Villiers

³¹⁷ <http://www.cfsinnovation.com/managed-documents/storedvaluecard-report.pdf> viewed on 2005-7-21; *A Scan of Current Trends and Future Opportunities* by Katy Jacob

³¹⁸ <http://www.cfsinnovation.com/managed-documents/storedvaluecard-report.pdf> viewed on 2005-7-21; *A Scan of Current Trends and Future Opportunities* by Katy Jacob

become easier to use and more established in the next several years;³¹⁹ While, also because of the untraceable nature, it bring with itself more problems than other payment instruments, such as taxation and money laundering, instability of the exchange rate, disturbance of the money supply, and the possibility of a Black Monday in cyberspace,³²⁰ all of these will make the government's policy more tough towards its further rapid development. With Direct Debit, it saves time, reduces the costs of collections and puts cleared funds directly into the company bank account,³²¹ but it more suitable for small amount value transaction.

Anyway, it is unlikely that cash payment will die out, because of its ease of use, flexibility, anonymity, and robustness in the face of technical difficulties, but we can say that payment systems can be expected to go on proliferating for the next several years, until the market determines the most desirable combinations of functions, price, and performance.³²² Yet new technologies uncover new ways to distribute risk, liability, and cost among the parties to a transaction, so that new financial instruments with no comparable paper analog are also to be expected.³²³ In a nutshell, Credit cards, smart card and other electronic transactions, as the online payment instruments, will replace the cash medium in our near future.³²⁴ However, from another aspect, the elimination of physical cash from our economy is already feasible from a purely technological perspective.³²⁵

³¹⁹ <http://www.uoc.edu/in3> viewed on 2005-8-7, *Untraceable Digital Cash, Information Markets and BlackNet*, by Tim May

³²⁰ <http://www.isoc.org/inet96/proceedings> viewed on 2005-8-7

³²¹ <http://www.accountis.com/accountis> viewed on 2005-7-29

³²² <http://www.gsia.cmu.edu/afs> viewed on 2005-8-5

³²³ <http://www.gsia.cmu.edu/afs> viewed on 2005-8-5

³²⁴ <http://www.lectlaw.com/files> viewed on 2005-8-5

³²⁵ <http://www.sfasu.edu/finance/Fincash.HTM> viewed on 2005-8-7, *Cashless Society of Digital Cash*, by Reynolds Griffith, Southwestern society of economist, March of 1994

Besides, the introduction of electronic payment instruments in the modern payment system raises troublesome and challenging legal issues.³²⁶ With the increasing use of electronic payment mechanism, one issue that consumer or cardholders concerned is the allocation of the loss. The law seeks to solve some of these questions in different manners.³²⁷ Sometimes legislation supplemented by common law rules apply and sometimes the problems which may arise in connection to some payment instruments are covered by the terms and conditions imposed upon consumers, usually in terms of standard agreements.³²⁸

In European countries, the cardholder should be obliged to take all reasonable steps to keep safe the card and the means which enable it to be used (such as the PIN or secret code).³²⁹ Furthermore, the cardholder is also obliged not to record his PIN or code, nor record them on anything, which he usually keeps or carries with the card.³³⁰ If the cardholder complies with the aforementioned duties and does not act grossly negligently or fraudulently in the circumstances in which he uses his payment device, the cardholder should not, after notification, be liable for any damage arising from such use.³³¹ The issuer should be obliged not to disclose the cardholder's PIN or code or similar confidential data, except to the cardholder himself.³³² The issuer should also be liable for the non-execution or defective execution of the cardholder's instructions.³³³

³²⁶ *Liability for Fraud and Mistake* by Malaguti; *Legal Implications of Electronic Storage* 1990 Stell L R 153, 154, See also *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P247

³²⁷ *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids

³²⁸ *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P231

³²⁹ European Commission Recommendation 88/590/EEC OJL317/55, Point 1

³³⁰ *ibid* Point 2

³³¹ *ibid* Point 4.1-4.2

³³² *ibid* Point 4.3

³³³ *ibid* Point 8

The United States has a very unique situation.³³⁴ Even though the parties agree to mostly standard agreements, a variety of federal statutes and regulations therefore exist which specify the rules governing these payment instruments.³³⁵ Uniform Commercial Code governs negotiable instruments and essentially permits the recovery of payments made by mistake to anyone except a holder in due course or a person in substantial reliance.³³⁶

In South Africa, unauthorized payment instrument examined are governed by agreement between card issuers and its customer. In most agreements, the banks as card issuers limit their liability in the event of malfunctioning of their electronic fund transfer unit resulting from circumstances beyond the reasonable control of the bank.³³⁷

In China, the development of electronic payment is far behind those developed countries and the regulation to system partners is uncompleted, in most cases, the position of system partners is unclear. At the same time, it is forming a new industry and promoting the development of economy.

As we know, in this modern economy society, Internet-economy has become the focus of world's economy life, and e-commerce's popularity is unprecedented.³³⁸ E-business and e-commerce are seen, as in all states, as strategically vital to the long-term development of the national economy.³³⁹ There is no exception to China. While, from practical point, real E-commerce cannot separate from the electronic

³³⁴ *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P234

³³⁵ *Aspects of Internet Payment Instruments* by Vivienne Antoinette Lawack-Davids P234

³³⁶ Article 3 of Uniform Commercial Code

³³⁷ The conditions of use of the *United Bank Card* clause 8.3& 8.4; *Standard Bank Mastercard* clause 12 annexure 2

³³⁸ <http://unpant.un.org> viewed on 2005-9-2

³³⁹ <http://www.american.edu/initeb> viewed on 2005-9-2

payment, which, beyond the convenience, also drives the economy by enhancing transactional efficiencies and expanding payment channels.³⁴⁰

China, as part of world economy, must hold this opportunity to develop its electronic payment system and to develop real E-commerce. So, as an important factor, moving from cash to electronic payments will have a profound effect on China's economy³⁴¹ because of the high positive correlation between card and electronic payments and real gross domestic product (GDP),³⁴² electronic payment can enhance GDP to some extent; also, there is a positive relationship between the growth in electronic payments and consumer spending,³⁴³ more effective the system is and more convenience consumer get, more they will spend.

Currently, the role that both debit cards and credit cards to transactions is important to Chinese economy³⁴⁴ for the strong link between payment system efficiencies and economy growth.³⁴⁵ Electronic payments, particularly credit card payments, not only provide convenience, flexibility and reliability; they also expand markets and create opportunities³⁴⁶, grow payment channels and spur economic growth.³⁴⁷ A good example on this point is in the tourism industry. As an attractive tourism country, more and more foreigners visited or will visit China. An effective electronic payment system, widely accepted card payment will provide convenience

³⁴⁰ <http://www.investors.com> viewed on 2005-9-6

³⁴¹ <http://www.iran-daily.com> viewed on 2005-9-2

³⁴² *ibid*

³⁴³ <http://www.iran-daily.com> viewed on 2005-9-2; Econometrix director and economist Tony Twine says a study by Global Insight conducted across 50 countries, including China, in 2003, In China's case, Global Insight suggested that a 10 percent increase in electronic payments' share of private consumption expenditure could translate into a 0.6 percent increase in GDP.

³⁴⁴ <http://www.investors.com> viewed on 2005-9-6

³⁴⁵ *ibid*

³⁴⁶ <http://www.visa.com> viewed on 2005-9-6

³⁴⁷ *ibid*

to those international travelers, as a consequence, Chinese economy will be the beneficiary of it. Another case is that sound electronic payment system gives an opportunity for online shoppers, especially those from other countries to purchase goods from Chinese businesses.³⁴⁸ Compared with the developed countries in North America, Europe and Japan, China started later but at high speed in developing e-commerce.³⁴⁹ It is difficult to put an exact figure on the impact, but our own research found a strong, positive correlation between the increase in electronic and card payment usage, and economic growth in China.³⁵⁰

However, China is at a very different position than many other economies in terms of its payment systems in the economy. The use of cash is extremely high in China.³⁵¹ Presently, only 3% of China's consumption occurs on credit cards though online payment accounts major part amongst all of the payment methods, most of them settled by debit cards. Ordinary and extraordinary purchases of perishable and durable consumer goods are still made on a cash basis.³⁵² Although debit cards are widespread and credit cards are beginning to be introduced, cash continues to be the payment method of choice when consumers pay their monthly bills and pay for their purchases.³⁵³

Then, what are the blocks that restrain the development of electronic payment? We can see it from following aspects:

- First is the construction of infrastructure, this is almost done;
- Another one is the good faith of society, as I mentioned earlier, at moment,

there is a lack of trust in China. Consumers do not trust businessmen, which will get

³⁴⁸ <http://www.investors.com> viewed on 2005-9-6

³⁴⁹ <http://unpant.un.org> viewed on 2005-9-2

³⁵⁰ *ibid*

³⁵¹ <http://ebusiness.mit.edu> viewed on 2005-9-2

³⁵² <http://www.kotlermarketing.com> viewed on 2005-9-2

³⁵³ <http://ebusiness.mit.edu> viewed on 2005-9-2

worse on E-commerce field and they tend to protect themselves against fraud;

- Next one is the issue of online payment security; it is an even greater obstacle to the elimination of physical cash is consumer resistance.³⁵⁴ Security about online transaction is a serious issue that consumers concerned about. They worry about that the move to electronic payments will decrease personal privacy by making it easier to log and record transactions,³⁵⁵ for example, when they order something over the phone or electronically using my Visa card, a record is kept of exactly how much they spent and where they spent it. As time goes on, more transactions may be done in this way, and the net result could be a great loss of privacy.³⁵⁶

- Last one lies in the banks, unlike banks in other countries, Chinese banks have not got use to take risks; their operation policy is based on the zero risk.

The solutions to the widely used and effective electronic payment mechanisms, further propel the development of real E-commerce in China depend on the resolve of the following issues:

- First of all: the creation of the creditability system, especially the merchant credibility. Low-level creditability system hinders the use of online payment seriously.

- The second: Security of online payment. Good news on this field is that the People's Bank of China, as the Central bank, has established China Finance Certificate Authority Center in 1998 together with 11 commercial banks to identify of all participants during the whole course of transaction. CA Center is in charge of granting and managing digital certificate needed by all entities that participated in online transaction.

- Thirdly: Attitude of banks. Unlike the banks in other countries, Chinese

³⁵⁴ <http://www.sfasu.edu/finance/Fincash.HTM> viewed on 2005-8-7, *Cashless Society of Digital Cash*, by Reynolds Griffith, Southwestern society of economist, March of 1994

³⁵⁵ <http://www.finney.org/~hal> viewed on 2005-8-7

³⁵⁶ *ibid*

banks, instead of controlling the risk, they try to avoid risks. For many years, they just seek to operate under no risks. However, there is nothing absolutely free from risk, so, Chinese banks should learn to control risk during the market operation and offer quality service to customers.

From the experience of those E-commerce developed countries, we can see that the less developed electronic payment and the lack of consumer credit card industry has become the greatest impediment to the growth of the Chinese retail industry and Chinese economy.³⁵⁷ Every currency unit that circulates as hard cash is a missed opportunity to invest, develop and grow an economy³⁵⁸ and cash-dependent countries tend to have low economic growth rates³⁵⁹.

While, from another hand, it is also a potential for China to promote its economy: “A modern society cannot plan for economy growth without considering the role that consumer credit will play”³⁶⁰. People drive change.³⁶¹ As far as market concerned, it is consumer-needs create new industry and boost the development of economy, it is consumer determines what form of money is most desirable –consumer simply substitutes cheaper and more convenient forms of money for expensive and inconvenient forms.³⁶² Presently, retail expansion is still the largest contributing factor to modern economy growth and individual consumer remains the major purchasing powers, it means that Chinese economy should be able to and must deal directly with consumers.³⁶³ The uniqueness of the Chinese consumer is

³⁵⁷ <http://www.kotlermarketing.com> viewed on 2005-9-2

³⁵⁸ <http://www.iran-daily.com> viewed on 2005-9-2

³⁵⁹ The Speech of Ann Cobb, *president of Visa International's Central and Eastern Europe, Middle East and Africa region*; See also <http://www.iran-daily.com> accessed on 2005-9-2

³⁶⁰ <http://www.kotlermarketing.com> viewed on 2005-9-2

³⁶¹ <http://www.buseco.monash.edu.au> viewed on 2005-9-7

³⁶² <http://www.corporate.visa.com> viewed on 2005-9-6

³⁶³ <http://www.kotlermarketing.com> viewed on 2005-9-4

demonstrated by the fact that despite China's development as an economy being well advanced, consumer's usage of payment cards, particularly credit cards is retarded.³⁶⁴ While, cash cannot support sufficient consumer confidence for retail expansion, so, it is imperative for China to promote the use of credit cards and to expand consumer credit extension and utilization to support Chinese economic growth.³⁶⁵

Although the positive relation between electronic payment and economy, we cannot neglect the dark side, especially at present, the lack of sound regulation system. In most cases, electronic payment, especially the use of credit cards, will bring forward a series of problems because of the lack of credit card check system and the relevant education on credit card expenditure. Credit issue has brought unhealthy effect on South Korea, if it is not regulated properly, it will also cause the credibility crisis and further affect Chinese economy development.

All in all, electronic payments are the lifeblood of strong, resilient economies and enterprises³⁶⁶ and it is vital to promote growth in today's global, digital economy.³⁶⁷ The adoption of card payments in China will provide a platform for the continued growth of e-business, which relies heavily on electronic payments.³⁶⁸ China is at the threshold of this consideration and policy decision.³⁶⁹ It is not a matter of which way China will go. The question is how to expand true credit and encourage people use it to purchase consumer goods.³⁷⁰

³⁶⁴ <http://www.buseco.monash.edu.au> viewed on 2005-9-7

³⁶⁵ <http://www.kotlermarketing.com> viewed on 2005-9-4

³⁶⁶ <http://www.visa.com> viewed on 2005-9-6

³⁶⁷ <http://www.investor.com> viewed on 2005-9-6

³⁶⁸ *ibid*

³⁶⁹ <http://www.kotlermarketing.com> viewed on 2005-9-2

³⁷⁰ <http://www.kotlermarketing.com> viewed on 2005-9-2

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