

Moving Towards a Cashless Society, "the near future"

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ABSTRACT

Electronic cash is a term becoming more acceptable as the world makes a shift towards a cashless society. The purpose of making this paper is to make the present generation people aware of the issues surrounding the topic of electronic cash and its tendencies towards the cashless society. Also the few issues that include security, privacy; crime and computerization about this cashless society are highlighted upon. In this paper, the idea of a new "MODEL CASHLESS SOCIETY" is included through which a new finance and transaction system is tried that will be relatively more convenient for the present generations. This new model for cashless society is based on the present day researches on this topic and also some futuristic ideas regarding the system of cashless transactions its probable benefits.

A few points of interest of the social aspects of electronic cash have been discussed, such as time solution and convenience making this new shift comfortable for the society. A darker side of this cashless society has also been briefly dealt which mainly includes the privacy issues and the resistance it could face from the elder generation, etc. Finally the most important and presently talked about question in this topic- "Are we ready for a Cashless Society?" and its future scope has been provided. The implementation of this Cashless Society is based on "e-credits" as its main engine and provides the solution for global economic activity determines the future shape of our society.

1. INTRODUCTION

During the past decade or so we saw some of the most profound changes that the world has ever known which enabled us to move out from the shadows of secrecy. The world of finance led the way in such changes. The most basic area of finance presently undergoing massive change is the very means by which transactions take place-the use of "cash" itself.

Since the 1960's the governments and financial institutions have made slow, but steady steps towards the goal of a society without cash. Electronic cash, or other such methods of conducting business transactions without cash, have been around since the 1970's, and have become more predominant in today's society. In this paper discussions are about some of the main points of concern like talking about a world without visible cash, a world that seems to some as "make-believe", a world that is our "near future." The technology involved in delivering cash-free payment systems has advanced significantly in the last few years, thus bringing the prospect of a cashless society several steps closer.

It has been observed there is an undeniable trend towards the use of electronic cash, especially during the last two decades. Despite some small percentage of the society rebelling against this movement, it has grown dramatically, especially in the use of internet banking and bank card facilities (like credit, debit & smart cards).

As we see the world is run by computers in today's society, it was only a matter of time for this to be transferred into the economic market. We can very well see that waiting in line at a bank is now a thing of the past; after ATM's and internet banking have entered the market share and this has made life more convenient. The age of electronic cash is slowly ushering into a cashless society, where no buying or selling will be done with cash; rather it will be computer based or electronic and hence there will be a need for electronic cash and electronic transaction systems.

"Money - in the traditional sense no longer exists at present times"

2. THE ELECTRONIC CASH--- IMAGINARY MONEY

CASH---Exactly what it is!

Looking far back into history, "cash" was just coins with an intrinsic value which is equal to their stated worth. A Greek drachma coin contained a drachma's worth of gold.

Paper money, originated and first used by the Chinese, is a promissory note that must be backed up by a nation's central bank. The transactions are based on the trust that the central bank can "replace" the paper with something worth of its stated value. In the 1970's, dollar was separated from the gold standard by the U.S.A government. Thus, today's it can be said that paper "cash" has no real value to back it up – it depends on the strength of the economy of the particular nation and this is why its value is so volatile in the present day.[1]

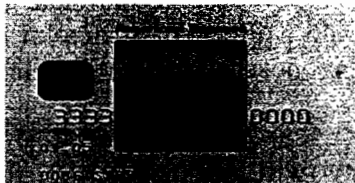
Just overlooking the tech side of it, what ever we say about money or cash, there is certainly something about being able to feel that money, rather than a piece of plastic card.

Let us imagine what if we were told that we would no longer be able to use that paper-cash and would be forced to rely upon electronic technology for every single transaction we are to make? Will we be pleased to no longer carry the paper cash or coins?

These are the few questions that come to our mind when we think of the "ELECTRONIC CASH" which a less percentage of people are using presently and which will surely be the state of affairs in our near future.

Some of the financial transaction tools we use today which represent the "electronic cash" in nature are given below:

- Credit Cards
- Debit Cards
- Smart Cards



Smart Card- Fig 1.1 [2] shows a modern smart card

Basic Story: Cards Up, Cash Down

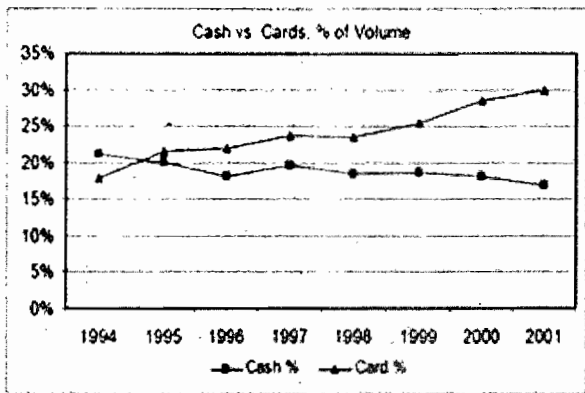


Fig 1.2[3-a] shows the gradual replacement of paper cash by the electronic cash in the last decade

Electronic Cash can be of many forms like; credit cards, debit cards, bank cards, mobile phones, electronic banking, ATM's, etc, the list is almost unending. In order to purchase off particular things from websites an individual must use electronic cash in one or the other from.

How the Credit cards evolved!!!!

It was not until 1958 that the credit card revolution occurred with the immortal 'Fresno Drop'. The Fresno Drop was conceived by a middle manager at the Bank of America named Joe Williams. Mr. Williams mailed out 60,000 credit cards to nearly every household in Fresno in 1958. The result was that the BankAmerica became a success and the credit card became a routine part of our daily lives. [3-a]

Let us take a look at the fastest growing movement in the financial world i.e. "smart cards". Smart cards, which resemble ordinary credit cards, contain tiny computer chips, capable of storing data, such as bank accounts, medical information, etc. Already it is widely used in Japan and Europe. Newsweek magazine, July 31, 1989, [Ref 4] said smart cards "may make the old science-fiction notion of a CASHLESS SOCIETY REAL."

The Start of the End

The world of electronic cash is slowly squeezing out the coins and paper cash (rupee, dollar) that we know. The jingling coin, a piece of paper, what is the difference it can make, one might ask? That is taking it a step further, you can't even touch the "electronic cash" and let alone count it!

Thus we have seen that it took about three decades for the credit card and smart cards to become accepted and another two for it to become the major retail transaction mechanism in most countries. But how long for it to disappear? May be a decade? Or may be even less.

3. CASH TO CASHLESS--- MOVING TOWARDS A "CASHLESS SOCIETY"

We all have used paper-cash to obtain our goods and services that we need and desire but have we ever thought about why the use of paper in the form of bank notes entitles us to cars and entertainment and food and shelter and all sort of comforts? The only way that "paper with writing on it" can entitle us to goods and services is through our faith in the ability of the Reserve Bank, the government, or private individual to redeem that paper with something of value.

During the last two decades we have seen several technology revolutions. The 1980's introduced the personal computer, the in the 1990's we saw the internet (I feel this is one of the most useful revolutions of the tech-world) and the 2000's the i-Pod. [2]

It is obvious that the speed at which revolutions take place is collapsing. The television took three decades to become accessible whilst the i-Pod took only about three months. Today the digital generation is rapidly re-landscaping markets from music to travel to fashion to entertainment to banking, in short everything. The result is that we are living in a state of flux which is leading to a "cashless society".

We can very well see that many financial institutions across the world have adapted to the change towards the cashless society by implementing electronic funds transfer via automated teller machines (ATM's) and of late, the internet. The transfer from cash-based to a cashless society is taking place at a very rapid rate which is of course beneficial to the modern world.

An Example for an already running "model cashless society"----- [1]

A pilot program is already being tested at the Marine Corp's Parris Island training base in South Carolina. According to Newsweek, "On payday, recruits receive

smart cards rather than cash. When a marine makes a purchase on base, he plugs the card into a small terminal and the sum is automatically deducted from his pay." Newsweek says, "THE BASE IS, IN FACT, and A CASHLESS ECONOMY -- even the telephones take smart cards".

If we agree with the hypothesis presented so far, then we have agreed that we could move to a cashless society, with most cash payments being replaced by cards and mobile. So becoming cardless will only be a decade or so before cards disappear due to convenience and our lifestyle. The whole society is moving towards a cashless system in which we won't be dealing with the paper-cash instead develop new method of the electronic transaction system.

That is the vision of the future of retail transactions and we are almost there today. Already contact less payment terminals, fingerprint recognition payments, micro and mobile payments are developed. A society based upon micro and macro contact less payments with biometric secure authentication through mobile and wearable devices will also be possible in future.

Everyone is talking about the idea of a "cashless society" but, in reality, there's nothing at present. But the entire world is slowly moving towards a cashless society. This can be considered good by some percentage, or it could be considered bad by others. The end seems to be the inevitable cashless society; it is just a matter of time.

4. THE MODEL CASHLESS SOCIETY

After compiling this paper on "Cashless Society", a new model for a theoretical Cashless Society has been penned down. The entire theory is still a hypothetical one, but I believe that it may become the state of things in our near future and will benefit us in a lot of ways. Here goes the proposed "Model cashless Society".

The Cashless Society will run parallel to the ongoing Cash-based Society, since we cannot buy the smallest item with e-cash or credit cards. In this model cashless society few ideas will be followed:

- Electronic Cash will exist in form of "E-CREDITS" and "E-DEBITS". Basically these

Credits & Debits will be points which will function as the Currency or Cash like present times.

- 1/3rd of a person's income should be converted into electronic cash or "Credit" so that a part of the world becomes a Cashless Society.
- There will be a separate "Cashless E-Account for every individual which will contain 1/3rd of his income as CREDITS and will properly maintain Debits and his E-savings and record his transactions made.
- This cashless e-credit policy will be followed in these areas of transactions:
 - Purchase of any types of electronic goods. (via internet)
 - Purchase of Machines/ Hardware components
 - Transactions in Education and Health Care systems
 - Transaction in Travel and Tourism (e-booking)
 - And in many other similar transactions
- But this type of cashless transactions should not be followed in transactions dealing with minimum price such as food, groceries, clothing, as it will not be convenient
- This type of cashless society is mainly planned for the present young and future generation of people. So senior citizens should be left out of this theory as they are unaware of the "E-WORLD". But doors should not be closed for the interested people
- Cashless credits should not be converted into real cash but the reverse may be possible.
- "E-BANKS" should be there to maintain cashless accounts just like the real cash is maintained by the real life banks. These e-banks will just be websites and called Cashless Banks and will maintain the credits, debits, and savings and record the transactions made by every account holder. Thus it will eliminate the manual banking system which is relevant presently.

This hypothetical concept for a "Cashless Society" may not be relevant for the economically weaker section of the society, but if this type of system is followed by the government it will be hugely beneficial for the present & future generations. This concept will go on making the world economy mostly

digitalized and a unique convenient system of "cashless transaction" can be developed.

5. BENEFITS AND ITS SOCIAL ASPECTS

Presently, the developing "global culture" has reduced the world's currencies to only a few, making the way for purely electronic commerce which leads us to a cashless society. So let's have a look at some of the Major benefits & few social aspects of this cashless society.

There is a lot of talk about the convenience of electronic cash, the time it saves for individuals, etc, but the social aspect of it, should not be left out. Money will be instantly available to us without having to carry it around, and currency exchanges will be largely unnecessary. Let's consider the example of internet shopping. An individual can complete their order online via the internet and have even their week's supply of groceries at their doorstep! This option must be left open to those who chose to live this type of life (i.e. younger people), but we should not close the door on the individuals that want, to have this type of socialization in their everyday lives. People now reduce the amount of paper trail they have and can use computerized systems to handle this for them.

Replacing paper cash with Cashless credits or electronic money transfers we can stop crime, the illegal drug trade, terrorism, illegal immigration, human trafficking, and corruption. A Cashless Society will go down a long way in making our society and the earth a better place to live with a reduced rate of criminal activities. Physical paper Cash is non-traceable, unaccountable, easy to hide or lose, steal, counterfeit, and spend without a trace. As such, paper cash has allowed all sorts of criminal activity to thrive. However, in a Cashless Society economy, this will change overnight. In fact, certain crimes would be eliminated altogether. Violent crimes; such as, bank and ATM robberies, store holdups, armed robberies, employee cash theft, armor car heists, kidnap for ransom, and purse snatchings would be significantly reduced, if not entirely eliminated, because there will be no physical paper cash to steal. The illegal drug trade and human trafficking are "cash" businesses, and in a Cashless Money economy all illegal enterprises

will be completely disrupted. Let's have a look at a more practical example----

An individual walks into a casino, and gamble for a period of time, buy \$100,000 worth of chips, and cash in at around the same amount. His object was never to gamble, but to buy and sell chips. The reason for this is the casino doesn't keep track of the cash bought in at. Everyone knows, this guy walked in with \$10 and ended up winning \$100,000! The casino then writes them a cheque for the \$150,000, and the amount is deposited into their respective bank account without any flags being raised because it is counted as winnings from gambling. By having electronic cash, this could be stopped dead in its tracks. It would be easy to tell how much was debited from or credited to a particular e-bank account. [2]

In a brief a Cashless Society will be very beneficial for the society and its benefits in crime reduction, time reduction and security can never be ignored at any cost.

If something sounds too good to be true, it probably will be, and it is true for this cashless society.

6. The Darker Side of this Cashless Society

As we have already seen the pros of the "CASHLESS SOCIETY" there are still few cons regarding this new money-model. A brief look at some of them will be useful.

- The already-unstable electronic "value" of money will become even more volatile. We will, in essence, be conducting business with imaginary money!
- There also arises a major question that in the case of a financial crisis, how could we possibly back up the purely electronic financial reserves?
- The government would be able to monitor purchases, spending habits and businesses patronized. Under this new system, the government will have a total control over everything we do. It can suppress or oppress society where it hurts the most and that is money. [1]

Privacy under Scanner

Although there are many advantages to utilizing this cashless society, one of the main disadvantages is the disappearance of the privacy of individuals. People value their ability to make some of their purchases using cash, with absolutely no record, electronic log of those transactions, as a way to safeguard their privacy.

It is believed that possibly the most frightening aspect of this movement toward a cashless society will be the emergence of technology that would allow a microchip to be placed in the human hand that would identify every human being on the planet and allow them to transact cashless. But this is just a hypothetical idea of the unseen future and it doesn't seem to be realistic, but we cannot still ignore its probability.

In a Cashless Society, it will be very difficult to implement a system that will please everyone, and all groups of the society. So to introduce this type of a Cashless Society we can expect a high degree of resistance.

7. Are we ready for this Cashless society?

The biggest question that arises after all these discussions is—Are we really ready for this Cashless society?

The answer to this will be affirmative, since it is realized that our money has no intrinsic value and is becoming largely electronic. We are not yet truly "cashless", but we are surely moving that way...and very quickly too.

Take London as an example [3-a] People in London are actively encouraging people not to carry cash around with them with recent initiatives they've introduced. First of all they issued Oyster cards, which people can use to pay for London's bus and tube networks, and just recently the Evening Standard made it possible for customers to pay for their newspaper via a cashless payment card.

A cashless society will be a very controlled society. The move from cash to electronic money (electronic credit) is a part of a well-organized attempt to unify the world and control it through its currency.

It will be a big booster for bringing the economic uniformity in the world. A cashless society will further enhance the globalization that characterizing our present times. Whether we should go down this path, and whether it is ultimately good or bad, we are on our way to becoming a society without the cold-hard paper-cash!

8. CONCLUSION

Electronic cash is a system which allows individuals to purchase goods or services in today's society without the exchange of anything tangible (touchable). The term money still exists, but it is more in an electronic form than previously.

In our modern day life, the only reason we need cash at the moment is to pay for those small items from retail stores. But surely the technology will be there to make payment cards fit for this purpose also and pretty soon it will become the norm to pay for everyday goods via some kind of electronic transaction system.

Here some of the important issues have been identified which have been, or will be encountered in a cashless society brought on in part by the electronic credit. Some of these issues include: The transfer to a Cashless Society, social aspects, the Darker side, the computerized world, privacy issues, etc.

This paper discussed some of the benefits and concerns surrounding each of these issues, and tried to provide some guidance towards a solution in some of

them. A "MODEL CASHLESS SOCIETY" has been talked about and few ideas are enclosed which if implemented in a proper manner can make a perfect cashless transaction system in the future. Speaking about the "darker side" electronic cash in it is not evil, nor is money itself; it is the love of money that is evil and breeds greed and is the base of all types of corruption prevailing in the society.

It is not possible to discuss all of the issues and investigations during the compilation of this paper. It is very likely that this paper has only scratched the surface of the subject, and is designed to provide the reader a platform to launch out on this emerging new system. As the trend towards the economic globalization continues, surely we are all for a cashless society.

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