Electronic Money and the Law: Legal Realities and Future Challenges

Nobuhiko Sugiura

Jean J. Luyat

Follow this and additional works at: https://digitalcommons.law.uw.edu/wilj

Part of the Banking and Finance Law Commons, and the Comparative and Foreign Law Commons

Recommended Citation
Available at: https://digitalcommons.law.uw.edu/wilj/vol18/iss3/3

This Translation is brought to you for free and open access by the Law Reviews and Journals at UW Law Digital Commons. It has been accepted for inclusion in Washington International Law Journal by an authorized editor of UW Law Digital Commons. For more information, please contact cnyberg@uw.edu.
Translator’s Note: The following is a translation of Electronic Money and the Law: Legal Realities and Future Challenges, an essay written by Professor Nobuhiko Sugiura in the August 1, 2008 issue of the Japanese periodical Jurisuto. Stored-value cards are growing rapidly in urban areas in Japan, to a degree where they are beginning to challenge cash as a primary method of payment. In this article, Professor Sugiura outlines the growth of stored-value cards, how stored-value cards should be defined, legal structures that currently regulate stored-value cards, and how growth and technological development are likely to affect that legal structure. As Japan’s takes a leadership position in the field, Professor Sugiura’s article provides useful insight into Japanese regulation and how the Japanese are likely to address future legal challenges.

I. FOREWORD: THE SPREAD OF ELECTRONIC MONEY

Currently, stored-value cards are issued at a pace of three million cards a month, exceeding a momentum of one billion cards by this summer, while the value of transactions is expected to increase from 175.6 billion yen in 2006 to 3.269 trillion yen in 2012. Although electronic money has existed since the 1990s, this widespread growth began just two or three years ago. In terms of pace, in 2005 there were 30 million cards issued but that number had increased to 80 million by 2007. See Chart 1. These figures, although they may appear trivial when compared with the 158 trillion yen in household consumer expenditure according to the Ministry of Internal Affairs and Communications 2006 Family Income and Expenditure Survey, when we consider that during the same period the total value of credit card

---

1 Dr. Nobuhiko Sugiura is currently a professor and Associate Dean at the Chuo University Graduate School of Strategic Management. Dr. Sugiura specializes in commercial law, particularly electronic transactions regulation and financial law. He has been responsible for a broad range of subject areas throughout his career, including commercial law, trust law, and finance law. Professor Sugiura has served as a senior legal advisor and Vice-President at JP Morgan Securities and as a research fellow at the Japanese Financial Services Agency. Professor Sugiura has also worked for HSBC. He is an active member of eight professional academic organizations and several research institutions. Dr. Sugiura received his Ph.D. in law from Chuo University.

2 Juris Doctor expected 2010, University of Washington School of Law.


Translator’s note: in Japan, as the author notes below, electronic money refers to stored-value cards.
transactions represented 35 trillion yen, then electronic money has now reached a level that we can no longer disregard.

An important factor in this advance has been technological improvements which have improved payment convenience simultaneously with the bundling of services. Originally, people used electronic money the same way they used cash for small-amount transactions because electronic money did not require taking out coins, receiving change, a signature or a PIN, and was generally a speedy means of payment; but with the emergence of contactless IC cards, users have experienced first-hand the simplicity and speed of electronic money payment. Usability-wise, in addition to the ability to use electronic payment systems as an alternative to transit tickets, they can be used for purchases at the supermarket or convenience store, and are so usable in everyday life to the point where they might one day replace cash, which for so long has been the primary means of payment in Japan.

Furthermore, operators offering electronic money services are not financial services providers but train companies as epitomized by Suica and Pasmo, major mainstream retailers with services such as nanaco and WAON, and even independent dedicated systems such as Edy have agreements with airlines and retailers in varying forms. Electronic money systems are not just simple payment systems but also railway tickets, point cards, membership identifications (and even recently student IDs), with many capabilities attached and a very high degree of usability. For corporations, there is also a great benefit in issuing these cards. For example, one of the major reasons for implementing Japan Railway’s Suica is the maintenance cost reduction involved in eliminating tickets and ticket collectors; for the Seven & i Group, the goal of implementing nanaco was to improve the efficiency of their cashiers and gather buyer data to improve advertisement effectiveness. In other words, the growth of electronic money is not only a product of the convenience and rapidity as a means of payment, but also to the merits it provides to issuers and their business partners.3

Additionally, as the benefits of electronic money expand, electronic money is becoming more multifaceted as point programs, such as airline mileage programs, are being tied to electronic money, and, on the technical side, electronic money is no longer limited to IC cards but is being integrated into cell phones and electronic money will even become an effective means of payment over the internet. As a result, we have entered a period in which we must consider the current legal structure from both the

---

3 [FN 2] In other words, a system that only offers a payment method is unlikely to expand. France’s Moneo, which has been made available to users on a large scale early, is one such system where usage rates have clearly remained low.
perspective of the protection of users and means of payment yet unfathomed.
In response, last year, the Financial Services Agency’s “Payment Systems Research Group”\(^4\) and the Financial Council Finance’s Subcommittee’s “Panel 2_Payment Systems Working Group,” have been shaping user risk and protection, and debating the relevancy of the existing legal structure and the direction of new regulation.

This is where the topic becomes a hot issue: explaining the legal reality of electronic money, and how the appearance of multi-functional electronic money is likely to impact the legal structure of Japan.

This article defines “electronic money” as the prepaid type whereby users pay for funds before use. Although there are other generic payment systems (mainly credit card companies’ delayed payment systems), and such post-paid systems are electronic money, they differ little from credit cards and are not covered here because they are not a new payment tool.

**Chart 1: The Principal Stored-Value Cards (Prepaid Type)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Edy</th>
<th>Suica</th>
<th>Pasmo</th>
<th>ICOCA</th>
<th>nanaco</th>
<th>WAON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issuer</td>
<td>bitWallet, Inc.</td>
<td>JR East Pasmo</td>
<td>JR West</td>
<td>Seven &amp; i Holdings</td>
<td>Aeon</td>
<td></td>
</tr>
<tr>
<td>Number of issued cards (millions)</td>
<td>37.8</td>
<td>21.5</td>
<td>.8</td>
<td>.342</td>
<td>.540</td>
<td>.240</td>
</tr>
<tr>
<td>Number of usages per month (millions)</td>
<td>21.5</td>
<td>30 (combined)</td>
<td>42.7</td>
<td>28</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

II. THE LEGAL STATE OF ELECTRONIC MONEY

A. The Legal Definition of Electronic Money

As outlined above, there are many different types of electronic money. There are just as many definitions of electronic money, and even when discussing legal issues, there is a bias towards defining it in economic or technical terms or by using other undefined terms, but this is the result of there being no law on electronic money, and it is also because there is no constant legal definition of electronic money. However, as electronic money uses the term “money,” we must begin by examining the legal definition of “money,” and, considering the current condition of electronic money services, and their similarities with “money”, evaluate the legal meaning and nature of electronic money.

I. The Legal Definition and Legal Nature of “Currency”

Narrowly defined, “money” is, legally speaking, “currency” (Civil Code, Art. 402 sec. 1), and “currency” denotes “legal tender” or a “banknote issued by the Bank of Japan under Art. 46 sec. 1” of the Banking Law of Japan. Furthermore, under these laws, legal tender, to a limited degree, and Bank of Japan notes, without limit, are used as “legal currency” with compulsory power, meaning “that which by its delivery is effective for settling monetary obligations.” Consequently, from a legal standpoint, currency (legal currency) carries substantially the same meaning as the Civil Code’s “money.”

---


6. [FN 5] ŌKURASHŌ, DENSHI MANÉ OYOBI DENSHEI KESSAI NI KANSURU KONDANKAI JÖKOKUSHŌ, [REPORT ON THE COMMITTEE ON ELECTRONIC MONEY AND ELECTRONIC PAYMENT SYSTEMS] (MAY 23, 1997). There, two broad definitions are used: “new payment/settlement system utilizing information-communication technology,” and “digital data that has monetary value in computerized payment systems.” The following year, the Ministry of Finance adopted a legal definition in DENSHI MANÉ OYOBI DENSHEI KESSAI NO KANKYŌ SEIBI NI MUKETA KONDANKAI JÖKOKUSHŌ [REPORT ON THE COMMITTEE ON IMPROVEMENT OF ELECTRONIC MONEY AND ELECTRONIC PAYMENT] (Jun. 17, 1998): “system in which the payment is made by exchanging or renewing between users the electromagnetic records that are issued in accordance with the amount of funds provided by the users, or such electromagnetic records themselves.”

7. Translator’s note: in Japanese, the author uses the word Kahei (貨幣), which can also be used to denote “money” and “coinage.”

8. Translator’s note: in Japanese, the author uses the word Hōka (法貨), which is generally used to denote “legal tender.”

9. [FN 6] MINPÔ, art. 402 § 1; SAKAE WAGATSUMA, SHINTEI SAIKEN S ÔRON (MINPÔ KÔGI IV) [SURVEY OF OBLIGATIONS (CIVIL CODE DEBATES IV)] 37 (Iwanami Shoten, 1964).
It can be said that currency shares practically the same meaning as money as it is defined in Japan, and that its legal nature is not defined by the type of transaction but rather as “as stipulated by law, a voucher or some other thing which by its delivery is effective for settling all monetary obligations.” This voucher, which is legal tender, is paper money or Bank of Japan notes and the other thing, which is also legal tender, is coins, in other words currency. Currency and money are the complete embodiment of conceptual value and through their ownership and transfer of that ownership they derive the ability to immediately effect the settlement of monetary obligations.10

2. The Meaning of Money

However, when discussing electronic money the narrow definition of “money” as currency (legal currency) above is not used. When currency or Bank of Japan notes are converted to electronic form, they naturally become electronic money, but the subject of this discussion is electronic money that is issued by the private sector and that lacks compulsory power. If we look at the general, broadly used definition of “money” we see that within economics’ money supply, deposits are second only to cash in the wide sense of money, and prepaid vouchers and credit cards, as “plastic money,” are also included. Therefore, if we define this so-called broadest definition of money as a legal concept, broadly it becomes “that which can be used to settle obligations.” In addition, if we think of “payment” as the elimination of debts and credits, then money becomes “that which enables the elimination of monetary obligations.”

3. A Contracts-Based Force

Furthermore, money issued by the private sector such as electronic money does not find its power to settle monetary obligations in provisions of law but rather in contract. Furthermore, this contractual obligation must be understood as allowing settlement of debts in participating stores only. Thus, if we give a legal definition to this private money it becomes “based on a contractual relationship, that which by its use has the effect of settling a range of monetary obligations authorized by contract.”

4. The Transfer of Amount Information Involved in the Effective Settlement of Obligations

Unlike cash, which derives its ability to settle obligations from its actual transfer, credit cards and debit cards derive their ability to effectuate payment of monetary claims from their owners’ use of it, which in turns creates a claim for reimbursement against the owner. Thus, excluding credit and debit cards, if we take a narrow definition of money that limits it to that, which, like cash, derives its ability to settle obligations through the transfer of its ownership, we can think of the origin of effective settlement of obligations not as “use,” but as “transfer.” If we include this concept, the definition of electronic money becomes “based on a contractual relationship, that which by its transfer has the effect of settling a range of monetary obligations authorized by contract.”

5. Consideration

In addition, as opposed to promotional coupons, points, 11 mileage and coupons earned through transactions or at no cost, electronic money is currently issued in the amount deposited therein. Thus, electronic money becomes “based on a contractual relationship with a creditor, that which is issued having received the recorded amount as consideration, the transfer of which has the effect of settling a range of monetary obligations authorized by contract.”

11 [FN 8] Points are issued as a bonus, and as such are not covered under the Prepaid Card Law because they do not carry value in and of themselves. However, they constitute a property right because they can be exchanged for goods (see Nobuhiko Sugiura, Kakudai suru Pointo Puruguramu no Hōteki Mondaiten [The Legal Issues of Expanding Point Programs], 54 KINYO ZASEI JUO 28, 41 (2003)), and if we somewhat expand the concept of “issued value corresponding to a monetary amount” and replace it with “issued based on a contract for value” instead, then the concept can be subsumed identically. Sales promotion are an important factor where the points are issued by the same entity that issues the electronic money, but where the points are issued by a third party, there arises a growing number of settlement and transactions between different parties because through the exchange of value for points, electronic money begins to resemble actual money and emerge out of the domain of simple “discounts.” In the future, in considering a policy for user protection, there is a need to address the exchangeability and versatility of these points programs. In the United States of America, airline mileage programs went beyond the simple exchange of points for free airline tickets and could be used to purchase a number of fee-based items, creating a major problem when some airlines went bankrupt. Similarly (although this is already happening), in Japan, for businesses that issue points with a high degree of versatility and exchangeability, there is probably a need to establish provisions by which business are required to set aside a certain percentage of the sale value of the points.
6. **Electromagnetic Value**

And finally, electronic money is a digitized monetary obligation. If we incorporate this, we obtain the most suitable and encompassing definition of electronic money as it circulates today. Thus, we can say that privately issued “electronic money” is “the amount information which is issued having received the electromagnetic recorded amount as consideration, and that is based on a contractual relationship with the recording entity, the transfer of which has the effect of settling a range of monetary obligations as authorized by contract.”

B. **The Legal Structure of Electronic Money**

1. **The Source of Law of Electronic Money Is in Between Public and Private Law**

As noted above, electronic money is based on contracts, and the Civil Code should be one of the foremost sources of law, and since commercial businesses engage in the business of electronic money, the Commercial Code is also a source of law. Next, electronic money also involves transactions that use an electronic signature, and when thinking that the consumer engaging in the electronic transaction is the same party as the one in the electromagnetic contract, there are laws to protect consumers from errors and blunders arising out of the use of electronic signatures, such as the Signature and Authentification Law (“the Electronic Signature Law”), which replaces the mailbox rule with the receipt rule, as well as the Civil Code’s Electronic Contract Consumer Law (“the Electronic Contract Law”).

In addition, the following laws are also related to the public regulations that encompass electronic money:

1. The Prepaid Card Law
2. The Capital Subscription law
3. The Banking Law
4. The Foreign Exchange and Foreign Trade Act
5. The Law Controlling Note-Like Securities
6. The Penal Code

Except for the Prepaid Card Law, we can think of the relationship between electronic money and these laws as established below. Under article 2 of the Capital Subscription Law and article 10 of the Banking law, institutions that are not banks may not accept monetary deposits. Consequently, except where banks themselves issue electronic money, with regards to privately issued electronic money, prepaid funds cannot be
deposited under the Capital Subscription Law as they have the nature of a deposit. But if we follow the narrow definition of electronic money outlined above, “electronic money” is “the amount information that is electromagnetically recorded corresponding to the value of that monetary amount, and that is based on a contractual relationship with the recording entity, the transfer of which has the effect of settling a range of monetary obligations as authorized by contract.” Under that definition, electronic money can easily be understood as money that has been appropriated for future settlement of obligations as authorized by contract and not as safeguarding deposits. Under this definition, electronic money does not interfere with the Capital Subscription Law.

Furthermore, among the different business models of electronic money, some, which allow the assignment of value, have the potential for falling under the definition of currency trading. Under Article 3, Article 2 Section 2, and Article 10 Section 1 Subsection 3 of the Banking Law, only financial institutions (banks) may trade currency. The basic definition of currency trading is “the payment of debts and credits between entities, not involving cash remittances.” But, if we include the payment of debts and credits, there is a difference between payment and currency trading, and “to achieve the purpose of a cash remittance” thus becomes a pertinent conceptual definition. With electronic money, although payment occurs, it is limited to the burden of debts and credits and the exchange of money ultimately takes place between banks. Thus the business of electronic money differs from the business of currency exchange, as it is not like a non-bank institution is engaging in currency trading.

In addition, the Law Controlling Note-Like Securities domestically protects the issuance of currency rights that have compulsory power, but this law permits the Minister of Finance to stop the issuance and circulation of note-like securities. However, this law ultimately concerns securities and therefore does not cover electronic money that does not use a voucher. Article 18 Section 2 of the Penal Code (Crimes Concerning the Electronic Recording of Payment Cards) is one source of law, but because it only covers card payments, it does not cover the latest developments in electronic money technology and the crimes that are possible with them. The Foreign Exchange Law in Article 6 Section 1 No. 7 (ha) also has a definition of electronic money.

---

13 [FN 10] “Voucher, electronic equipment and others things that have a property right inserted electromagnetically (an electronic or magnetic method that cannot be perceptually acknowledged by
2. *The Prepaid Card Law and Electronic Money*

While there is no unified and comprehensive law regulating electronic money, the concept of “prepaid voucher” in Article 2 Section 1 of the Prepaid Card Law touches on the definition of electronic money.

The legal concept of prepaid voucher is:

1. A tangible item.
2. A tangible item on which accounting unit information (of monetary amounts) is recorded
3. The transfer of the accounting unit information occurs for consideration
4. That this accounting unit information can be used to settle goods, loans or service transactions from either the entity who records this accounting unit information or the entity who assigns them.\(^{14}\)

If we look at this concept and the definition of electronic money, “voucher” as established in Article 2 Section 1 of the Prepaid Card Law precisely fit the definition and reality of electronic money as it is used today. Indeed, IC cards, cell phones, computers and servers are all tangible things, and if we substitute “accounting unit information” for the concept of “monetary amount,” and since with electronic money the “settlement of obligations” and the “recording of money amounts or converted money amounts” are all completed on these tangible items, this concept is satisfied.

Furthermore, with regards to the prong of “the transfer of accounting unit information occurs for consideration,” systems like *Suica* and *Edy* fit the definition because they are systems through which value is purchased in advance in cash and other things, and where the amount can be transferred.

With regards to the fourth prong, the law defines the counterparty as the “aforementioned issuer or assigner of the voucher,” but it does not authorize, as with real money, the unbridled application to any counterparty but rather can be understood to circumscribe it contractually. Next, with regards to the type of transactions, the law defines them as “purchase of goods, loans or service transactions.” Electronic money can be used as consideration for these transactions but the means of settlement of mere financial transactions or objects involved in transaction-less yet valid

---

monetary settlements do not correspond to prepaid vouchers. In reality, electronic money is included in this legal framework because it is not designed for complex financial transactions but for the purchase of goods and services.

Thus, at this point, the main regulation for electronic money is the Prepaid Card Law, and in fact most electronic money systems such as Suica and Edy are registered as prepaid vouchers.

III. THE EXPANSION OF ELECTRONIC MONEY SERVICES AND THE CHALLENGES OF ELECTRONIC MONEY.

A. The Expansion of Electronic Money Services

In the previous section, we covered the existing schemes and capabilities of electronic money and pointed out that, for the majority of electronic money currently in circulation, electronic money essentially equals a prepaid voucher, and because it basically conforms to the Prepaid Card Law’s legal concept, the regulation of electronic money fits within the Prepaid Card Law. However, that major business schemes of electronic money resemble prepaid vouchers is mostly a product of chance. With rapid developments in IT technology, systems are already being introduced where transaction records are no longer stored on cards and cell phones but rather on internet servers, while some systems are switching to schemes where IC cards display no more than a record of the value, and where the actual monetary value is managed on a server. In addition, some electronic money services actually offer a fund transfer service.

Furthermore, providers have also placed airline mileage programs at the core of their electronic money systems while cooperation with businesses to bundle point programs is also developing. Systems where mileage can now be exchanged for electronic money, and points can be collected by using electronic money are now emerging, as well as systems where intermediary businesses exchanges points for different electronic money or money; we have reached a point where these systems can no longer be contained in the category of prepaid vouchers. In that sense, the electronic value of electronic money is becoming a lot closer to actual money in the eyes of the user.
B. Detailed Challenges Facing the Legal Structure of Electronic Money

Keeping in mind the state of electronic money outlined above, we should consider for the moment the following points when thinking about the next legal structure for electronic money.

1. Server Management Control

As outlined above, server-based electronic money is emerging whereby recording tools are no longer recorded on a card or cell phone but rather on a server.

The principal depository for the electronically stored value is the server, and although it does not impact the usage or economic impact of electronic money, it is beyond the control of the Prepaid Card Law. Currently, because it is unclear what kind of issuers issue electronic money, in the event of an accident or the bankruptcy of an issuer, at the very least, there remains major concern, from the viewpoint of consumer protection, that there is no similar regulation.

Consequently, at a minimum, there is a need to expand the concept of “tangible item” under the Prepaid Card Law to fit the legal framework.

2. Similarity with Deposits

Because electronic money is beginning to resemble bank deposits, whether electronic money has the potential to become “money” and whether the restitution of advance payments should be institutionalized under the Prepaid Card Law will be major issues. However, in that case, for example, an amendment could be applied to one area of the Prepaid Card Law so that it covers only businesses involved in the settlement of prepaid systems, and this would probably involve a not so broad interpretation of “electronic money” that is more complete than the Prepaid Card Law, but a type of regulation that is much milder than that which covers the deposits, lending, and currency trading of banks.

Then, in terms of options, if we do not prescribe to the narrow meaning of money, we can think that an amendment of the Prepaid Card Law could accommodate the issue to be consistent with the existing law, but in contrast, if we prescribe to the narrow meaning of money, and remove electronically recorded prepaid vouchers from that same law, an option accommodating the issue with a new law in conjunction with the narrow meaning of electronic money is conceivable. An encompassing option from the perspective of electronic payment that would include credit and debit
cards is also conceivable, but the problem is that it could not integrate the protection of prepaid funds.

3. **Guaranteeing Advance Payments**

When banks issue money, they are subjected to the existing deposits insurance, which, it goes without saying, does not require an important legal aftercare. But when that is not the case, and non-bank institutions engage in the business of electronic money in the narrow sense of the word and the guarantee of prepaid funds, we must consider the development of institutions regarding the guarantee of advance payments in particular.

In this regard, a legal problem regarding refund arises in connection to the guarantee of prepaid funds when an issuer enters bankruptcy proceedings. Under the Prepaid Card Law, the Financial Services Agency Commissioner (Financial Bureau) receives notification from right holders, and the Financial Bureau then distributes the cash from a set-aside fund. But electronically, the procedure is not as well defined because the electronic record must first be evaluated and verified, and there is no established legal framework to settle the claims of those who lost their executor rights. There is an important need to consider the technological problems of electronic money systems and the problems of bankruptcy law together in order to solve the problem of the legal status of electronically recorded value.

4. **Duty to Inform Users**

Issuers should be responsible to inform users and explain the risks of electronic money by entertaining a direct legal relationship with users. This is because under the various electronic money schemes, the direct recipient of introductory fees, the custodian, and the underwriter in many cases can all be different. In addition, with regards to issuing electronic money, there are many legal entities other than the issuer who may have a legal relationship, such as the trustee of the issuer (who should be treated the same as the issuer), and various agents, intermediary or acting representatives, and as such it should be issuers (at the retail level) who should hold the burden of informing and entertaining a legal relationship with customers, and issuers should not assume that they have no responsibility when other parties engage in disclosure or explain the risks associated with electronic money. In situations where participating businesses are bound by entry regulations, and it is appropriate for participating business to take responsibility, then the issuer should discharge its responsibility in a clear and legally explicit matter.
5.  **Fraud Prevention**

With regards to fraud prevention, in addition to system security, there are also a number of problems related to the strengthening of penal provisions that address fraud. Because the current Penal Code reform regarding electromagnetic recording has not been addressed from this viewpoint, the kinds of fraud that are likely to arise from an electronic money system which allows the exchange of electronic value from an outside network should be once again reexamined with this frame of reference in mind (for example, if we consider a mobile telephone wallet as a simple communication device, then it probably is not an “electronic recording” under the penal code).

6.  **Requirements**

With regards to civil law, there is also an issue concerning the legal requirements of the assignment of electronic money. Although it is partly a problem of agreeing on, and clarifying the legal structure encompassing electronic money transactions, it also involves the question as to what degree a mechanism of monetary transfer can be included, and especially if we visualize cases where such assignment occurs between parties (fund transfer services) and cash conversion cases, then we must identify that such transactions resemble “currency” transactions. Nevertheless, a lighter type of regulation as exemplified in paragraph (2) of this section should be considered.15

IV.  **Conclusion**

This paper has this time briefly outlined and investigated the legal issues surrounding electronic money, and the issues that are likely to emerge from the expansion of services, but also how technological developments are growing in tandem with new business models. Within this environment, and notwithstanding its economic effects, the Prepaid Card Law appears increasingly unsuited to meet the challenges of electronic money, offering protection to users in some areas, but not others. The conclusions currently coming out of the Financial Council Finance’s Subcommittee’s “Panel 2_Payments Working Group’s should be timely. Next, after having sorted

15 [FN 12] In this case, the United States’ Remittance law certainly provides useful guidance. See SHINSAKU ISHIHARA, DENSHI KESSAI TO HÔ [ELECTRONIC SETTLEMENT AND THE LAW] 528-30 (2003). The classifications of the European Banking Establishment with regards to this risk are also a hint in the direction of future regulations.
out further detailed problems, we should be able to display a legal framework that overcomes the discrepancies and challenges outlined above.

However, as electronic money has already emerged from its developmental stage and enters a period of rapid growth, and as cell phones and PCs become more common in homes, we will witness a corresponding rise in the number of transactions, a burgeoning of services, and a wider range of usability, and as we overcome the problems of electronic money taking on the role of currency and deposit operations, electronic money is likely to become a true currency issue as it begins to resemble “real money” in the near future. Once before, electronic money was defined as “digital data that contains legal value in a payment instrument enabled by electronic capabilities”\[FN 14\], but as electronic money has the potential to become real “money,” and with the problems of point systems and virtual currency, it seems that a new period of interdisciplinary research on currency is at our doorstep.

Nobuhiko Sugiura

\[FN 13\] That this problem involves non-financial businesses might very well be specific to Japan. In Europe, Hong-Kong and Singapore, the difference is that electronic banking business is conducted by bank-centered financial institutions.

\[FN 14\] ŌKURASHŌ, supra note 6.