COMMENT

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Cross-Border Electronic Banking: Some Reflections on Its Implications for Central Banks

The technological and communications revolution unleashed by the business and financial communities has engulfed banking. What its full implications will be is impossible to assess at this time, but it is clear that it will affect every dimension of finance and banking. Chapter 5 examines the implications of this revolution for central banks, focusing on two important aspects: use of private market-risk systems as a supplement to direct regulation, and cooperation among regulators in the form of a multilateral agreement, possibly under the aegis of the International Monetary Fund. This comment explores the advantages of regulation by private rule making and emphasizes the need for collaboration among bank regulators.

Need for Harmonization

Major commercial banks undertake transactions with cross-border elements thousands of times a day. Even banks with wholly domestic operations must maintain a correspondent relationship or relationships to offer their customers the array of services now required of commercial banks. As a result, it becomes increasingly difficult in practice to distinguish between a domestic and a cross-border transaction because many apparently domestic transactions have underlying cross-border dimensions. Because of the global character of these transactions, the need for integrated and consistent rules, regulations, and laws is critical. It is not feasible, nor is it desirable, to have separate provisions for municipal transactions (even assuming that it is possible to isolate them, given the global character of banking) on the day-to-day level of practice and other provisions for international ones. While such a regime may be possible at a certain level of legal abstraction, even at this level it is highly desirable that there be harmonization.

Many issues can arise in cross-border situations. They challenge banks and their regulators to adapt their approach to this new reality. While a systematic evaluation of the implications of electronic banking probably can only be written by virtue of hindsight, it is possible to offer several observations on discrete issues of relevance in this process.
Taxonomic Considerations: Toward an Understanding of Electronic Banking or Electronic Funds Transfer

There are two fundamental factors at the core of electronic banking or, for that matter, electronic commerce: rapid communication and the rapid manipulation of massive quantities of data. The latter of these two factors is relatively new, and its effect must be assessed. Although there have been significant improvements in the speed, quality, and quantity of communications, the introduction of the commercial telegraph system in the nineteenth century is the benchmark event for rapid communication. It is the ability to communicate and manipulate vast amounts of data permitted by microprocessing technology and the widespread use of such technology that have sparked recent changes.

The full implications of this revolution for banking are yet to be seen, but they have already had a profound influence on domestic and international banking. It is almost axiomatic that such changes increase opportunities and risks. For bank regulators and central banks, this phenomenon requires diligent observation and study.

The starting point in assessing the effect and increased risk of electronic banking is not banking itself but the commercial system that it serves. Electronic commerce has radically altered the face of business and accelerated the trend toward globalization of markets and businesses. In order to meet the changing needs of their customers, banks have had to change as well. The customer base serviced by the international banker remains the same—corporate and financial (correspondent banks) customers—but the needs of these customers are increasingly global and change at a sometimes dizzying pace. A corollary of this observation is that, while banks will rarely lead technological revolutions, they will closely follow them.

One consequence of these developments is the rapidly increasing globalization of banking. Currently, there are two prototypes: (i) the global bank that is present in every significant national market to provide a full array of commercial (including retail) banking services; and (ii) the global correspondent bank that has cultivated a correspondent network, which it services without offering direct competition across the board in the domestic market. There are, of course, interim positions where banks carve out niches in a region in which they can offer all services and market them to correspondents, enabling these banks to compete with global banks in their domestic market. Whatever the model, or to what degree it is followed, no commercial bank can expect to continue functioning unless it is linked in some fashion to a global banking network. While these developments have not as yet altered the categories of risk that must be taken
into account by the central banker, they do affect these risks and decrease the time within which they can be usefully recognized and addressed.

It is premature and may be misleading to attach too much significance to a precise definition of electronic banking.\(^1\) While more precision may be needed for the purposes of statutory drafting, the watchword should be flexibility. The technologies and possibilities involved are subject to rapid change. For example, it is unclear whether preformatting into data fields will continue to be a requisite and what role imaging technology will play. For regulatory purposes, any technological development that increases information flow and business possibilities should be of interest, regardless of whether it falls within a precise definitional category. To limit the scope of inquiry further is unnecessary. Given the current exponential increase of technological advances, it is unclear what constitutes a computer and whether linkage need be “computer to computer.” Current technologies permit voice and even written access. It is difficult to predict the shape of future hardware, software, or user configurations.

**The Effect of Electronic Banking on Risk**

The precise effect of electronic banking on risk is difficult to predict with any precision and will remain so until the occurrence or nonoccurrence of a crisis permits a careful assessment. Nonetheless, it is possible to anticipate the potential impact of electronic banking in general terms.

In the first place, it should be recognized that, as with all technological developments, there are both positive and negative dimensions from a regulatory and safety and soundness perspective. The very speed and mass assimilation of data that can compound problems can also place in the hands of regulators information heretofore unavailable and permit the early identification of trends.

Second, it is not likely that electronic banking introduces new risk per se, but more likely that it increases the possible types of risk in traditional categories.\(^2\) Moreover, it may increase the possible dimension of any crisis because of the increased linkage of the global financial system and the capacity for rapid transmission of information.

Some examples of increased risk include technical incompatibility of systems, system malfunction, and system failure due to internal or external causes, access or intervention by outsiders, viruses, and absence of laws or regulations addressing issues raised by electronic banking. The linkage of banks within a country through electronic banking may also increase country risk. In addition, there are specific operations issues that arise, as well as public policy issues, where governments seek to monitor payments (for example, boycotts or money-laundering policies) in order
to implement foreign policy objectives that are unrelated to the safety and soundness of the system.³

The possible ramifications of electronic banking in recent crises remain to be fully documented. The Bank of Credit and Commerce International (BCCI) scandal, the Mexican peso crisis, the Baring's collapse, the Daiwa loss, and the as yet undocumented difficulties with the Japanese bank system as a result of real estate losses are only partially understood. In each crisis, however, it appears that the magnitude of the problem was exacerbated by the global linkage of banks within the world financial system, making even greater the impetus for a swift international response.

Considerations in Formulating a Program

While it is not yet possible to offer a definitive program to address the increased cross-border risks introduced by electronic banking, several observations are in order.

Need for Harmonization and Upgrading of Domestic Law

It must be determined whether municipal legal infrastructures are capable of handling disputes arising from electronic banking. There are two aspects to this question. The first applies generally to all issues relating to electronic data interchange and involves fundamental questions. These matters include formal requirements (whether a writing is required, what constitutes a writing, and what constitutes an enforceable authentication or signature), classification (is the undertaking to be treated as a traditional bilateral contract and, if so, is such treatment consistent with the expectations of the parties), and the extent to which party autonomy can supplement or derogate from municipal law. In addition, there are specific issues regarding the legal regime to be applied to the specific area involved, such as funds transfer or foreign exchange. This would include questions as to the nature of the underlying transaction: when it becomes operative and binding; when and how it can be modified; the aspects of finality, mistake, and damage; and, where applicable, the impact on third parties, with concomitant questions on the applicability of the doctrine of abstraction.

In this regard, various legal systems are struggling to update in order to accommodate electronic commerce and banking. These varied efforts make issues of choice of law and choice of forum highly significant.

The efforts of the United Nations Commission on International Trade Law (UNCITRAL) are of great significance in this respect. UNCITRAL has produced two products that represent the collective efforts of its
members, the Model Law on International Credit Transfers and the Model Law on Electronic Commerce. These models should be given serious consideration in the formulation of municipal laws, in part because of the need for harmonization in this field and in part because they represent a solution that has attracted broad support.

The Need for International Regulatory Coordination

If electronic banking makes harmonization of relevant legal regimes significant, it makes coordination of regulatory efforts essential. The increasing globalization of banking permitted by electronic banking places serious pressures on the regulatory system. Recent difficulties such as those encountered by Banco Nazionale del Lavoro or the BCCI scandal have awakened the regulatory community to the need for assessment of the safety and soundness of nondomestic bank operations. The work of the Basle Committee on Banking Supervision in evolving capital adequacy requirements to be applied in member countries is an example of the type of coordination that will become increasingly important. A sound regulatory scheme may involve coordination between bank, security, and insurance regulators.

Unfortunately, there exists no definitive study of the effectiveness of this Basle Committee initiative and such an analysis is necessary for further efforts. Not only is there a need for judicious use of regulatory powers on an international level, but there is also a need for assurance that the results are implemented consistently. With regard to the capital adequacy requirements, for example, questions remain as to the effectiveness of the system of risk measurement employed, its application in various countries, the classification of certain types of undertakings, and its effect on other devices.

For example, the capital adequacy rules effectively stalled an increase in the use of standby letters of credit in the United States. While this development may lessen concerns about this type of balance sheet obligation, the experience of relief should not mask serious questions about the application of alternative devices in situations where there are no reported figures and, consequently, increased domestic risk. As applied, the capital adequacy guidelines made increased use of these technically understood and relatively safe instruments less attractive to the money center banks who were the ones best suited with sufficient expertise to handle the operational risks involved in them. Since the appetite of banks for profits has in no way been lessened by the capital adequacy rules, it also remains to be seen if the direction in which bank energies have been turned are equally useful and predictable or less so. Indeed, the increased sale and marketing of derivative products and the resulting confusion
might be explained in part by the need to develop alternative bank service products. What is needed after the decade in which they have been in effect is a complete reevaluation of the capital adequacy rules on a macro and micro level to address their influence, the lessening (if any) of risk, and the need for refinement as a model for future efforts.

**Systemic Rules and Rules of Practice**

Chapter 5 properly notes the historical significance of supervisory deference to bank risk-measurement systems. The appreciation of such systems should, however, extend beyond this limited scenario. One of the hallmarks of electronic banking is the evaluation of integrated systems. Funds transfers are the best-known example. These systems are subject to rules that provide norms, discipline, and internal regulations. In a sense, they order the transaction on an immediate day-to-day level and reflect the collective experience of the system members. The members of these systems not only share the regulator’s concerns for safety, soundness, and integrity of the system, but have a unique practical perspective on various types of risk and effective countermeasures.

Rather than duplicate these efforts, regulators should work closely with such systems where they exist and consider how to enhance their effectiveness. Members are likely to be acutely sensitive to system risk imposed by the behavior of other members, and it is the ability of such fault lines to signal risk that should attract special attention. The prime regulatory effort, then, should be to encourage sound rule making and enhance its effectiveness when present.

This conclusion obtains not only for formally established systems, such as a funds transfer system with membership requirements and a formal rule making process, but to other widely followed rules of practice as well. In this sense, rules of practice are those widely adhered to without the existence of a closed system. The best example is afforded by the Uniform Customs and Practice for Documentary Credits (UCP), which sets forth rules for commercial letters of credit. The UCP represents a systemic and integrated approach to letter-of-credit transactions. It is intended to operate as the source of law for a letter of credit that is subject to it, and sound commercial law and judicial decisions have given the UCP due deference.

Little attention has been given to the similarities between closed systems, such as a funds transfer system—for example, the Clearing House Interbank Payment System (CHIPS), the Society for Worldwide International Financial Telecommunication (SWIFT), or Fedwire—and open systems of rules, such as the UCP. In an innovative provision, Article
4A of the Uniform Commercial Code (a domestic model law that has been adopted within the United States) defers to a “funds-transfer system rule” “even if the rule conflicts with this Article and indirectly affects another party to the funds transfer who does not consent to this rule.” It also provides that the rule may govern the “rights and obligations of parties other than participating banks using the system” in certain situations. As noted in Official Comment 1, Section 4A-501 provides not only that system rules supplement the statute but, to the extent that it may be derogated from, such rules “override” it. While this rule may be self-evident in some systems of jurisprudence, it is not always apparent in other jurisdictions. More remarkable, however, is the departure that this provision represents from the fiction of giving effect to the intention of the parties, which is a consequence of traditional nineteenth century contract law. Upon reflection, it is irrelevant whether or not the parties have intended to agree to system rules. What matters is that they chose to use the system. If so, they must be bound by its rules in order to enable the system to function.

Under Section 4A-501(b), this concept is linked to the defined concept of a “funds-transfer system rule” which is

- a rule of an association of banks (i) governing transmission of payment orders by means of a funds-transfer system of the association or rights and obligations with respect to those orders, or (ii) to the extent the rule governs rights and obligations between banks that are parties to a funds transfer in which a Federal Reserve Bank, acting as an intermediary bank, sends a payment order to the beneficiary’s bank [Automated Clearinghouse transfers].

On its face, the provision applies to an association of banks and gives effect to their rules among themselves. It goes beyond this notion, however, at least to some extent in the provision indicated above, which applies the rules to nonmembers who opt to use the system itself without membership in it or, arguably, even knowledge of its rules.

This approach is consonant with commercial jurisprudence, which should foster sound rule making if it is a more effective means of ordering the behavior of the parties than legislation or regulation by governmental agencies. What it fails to address, however, is how to encourage sound rule making, and how unsound or biased rule making can be discouraged. It is the fear of self-serving rules that stimulates opposition to private rule making—the fear that groups with vested interests will create rules that are biased in their favor and will use these rules to the disadvantage of others who are not members of the group but who must use their system. Often such biased rule making is linked with economic leverage over the nonmember users.

One of the keys to sound rule making is to find rules that are promulgated by trusted brokers in the given market. These brokers are in the
middle of multiple transactions and could not operate under rules that are not essentially neutral and that do not reflect the commercial expectations of the parties. With respect to funds transfers (as is the case with many banking transactions), the trusted intermediary is the clearing bank—for example, in New York, the money center banks that dominate the funds transfer business. Because they must occupy virtually every position in a funds transfer at any given moment and because they are attuned to the commercial and financial realities behind a funds transfer, they are apt to be in a good position to formulate neutral rules. To the extent that these rules are accepted in the various systems, they should be given deference.

What is unclear from this approach, however, is the formality of the system in which the rules operate. For example, must they be linked to a funds transfer system in the sense of rules emanating from an association of banks? The suggestion from the experience of letter-of-credit law is that such a formal system is not necessary. The evolution of rules and the process of rule making for letters of credit demonstrate that it is possible to formulate what is in effect a system of rules that receives virtually universal adherence and to which each individual transaction is subjected without a formal system. The lesson to be learned from the letter-of-credit experience is that rules created by informal systems can be as efficacious as those emanating from formal systems and can affect all the parties to the transaction. There can be no realistic suggestion here of “agreement” in the normal sense with respect to the undertaking between the issuer and the beneficiary of a letter of credit. Nonetheless, the UCP has brought order to this field internationally. This has served as a basis for its widespread use and acceptance as an indispensable tool of commerce.

What is even more significant about the UCP and funds transfer system rules is that they are more than mere supplementary sources of the terms of the contract—contractual terms by incorporation. While there certainly is an element of contract interpretation in the application of all system rules, they involve elements that are very different from what is usually meant by incorporation of terms into a contract. Most significantly, they provide an integrated system of rules that are intended to oust traditional legal and equitable analysis where they apply. Thus, these systems not only supply a remedial scheme, define rights and obligations, and indicate when they are operative and when they terminate, but also contain their own jurisprudential approach, founded typically on principles of mercantile law.

One of the advantages of such rules is that they can operate in situations where there is no international legal regime. The UCP, for example, has
operated in an international environment that has largely been bereft of legislation and in which judicial decisions were typically few and of limited use.

**Conclusions**

Cross-border electronic banking poses unprecedented challenges and opportunities to the current nation-based system of banking regulation and to central bankers. The speed with which enormous quantities of information can be moved and assessed provides considerable advantage to the entity with the ability to access and act on it. Any response to this phenomenon must take into account the need for coordination and restraint. Its effectiveness may well depend also on the ability of bank regulators to harness systems within the international banking community that work to ensure balance, harmony, and order. To the extent that central bankers can encourage the development of sound methodology and practices—whether within one bank, as suggested in Chapter 5, or within entire areas of international banking—the process of maintaining safety and soundness in banking will be greatly enhanced.

**Hypotheticals**

The possible implications of cross-border transactions for banks and banking regulators can be illustrated by three hypotheticals based on everyday transactions involving daily activities of commercial banks related to funds transfers and trade finance.

**Hypothetical Number 1**

The originator in Country A initiates a payment order payable to Beneficiary B in Country B, placing it with Bank A in Country A (Originator’s Bank) (see Figure 1). The order is transmitted through SWIFT payable in the currency of Country X and transmitted through an intermediary bank in Country X (Bank X), which is a correspondent of the originator’s bank. That order is transmitted within Country X through a local funds transfer system to a Country X branch of the beneficiary’s bank (Bank B), which is headquartered in Country B. The payment order is then transmitted to the head office of Bank B in Country B through a proprietary system.

The transaction is for the sale of equipment whose production and sale are legal in Country A, but whose purchase is restricted in Country B, where the seller is from Country A. The laws of Country X forbid any action in furtherance of a prohibition such as that imposed by Country B.

- What if the transaction is a “pass through” handled automatically by computerized equipment without any human intervention in Country X?
What if the funds transfer system rules make the transaction effective in Country B on its receipt? What if the laws of Country B have this effect?

Is the office of Bank B in Country X governed by the laws of Country B or X?

All three countries require the banks requested to implement the transfers to monitor compliance with their various policies and impose heavy fines for violations.

Does it make any difference if the data fields for the multilateral system (SWIFT) do not permit transmission of the requisite information?

To what extent should the branch office of Bank B located in Country X be required to facilitate the policies of Country B when they run contrary to the policies of Country X?

Is there any difference if the transaction at issue is one of money laundering or for a shipment of nuclear arms?

**Hypothetical Number 2**

Bank A in Country A regularly engages in trade finance, extending credit against documents of title (such as bills of lading), issuing letters of
credit specifying presentation of such documents, and issuing trust receipts (see Figure 2). Carrier C, whose ships are registered in Country C, issues an electronic bill of lading to Shipper S located in Country S who causes it to be transmitted and transferred to Bank A, which has issued a letter of credit calling for presentation of electronic bills of lading on behalf of Buyer A in Country A. Can and should Bank A make such an undertaking? What are the legal, regulatory, and business considerations that would affect such a decision?

**Hypothetical Number 3**

Bank A in Country A transmits a payment order through the auspices of SWIFT on behalf of Customer A (see Figure 3). Customer A, a corporation, provides an erroneous account number but the correct name of the beneficiary bank (Bank B in Country B). Relying on the number, as it is entitled to under SWIFT rules, Bank A transfers the funds to Bank B in Country B who pays the funds into its corresponding account number. The holder of that account (who was not the intended beneficiary) absconds with the funds. When the intended beneficiary does not receive the transfer, inquiries are made and the misrouting is discovered. Litigation ensues.
What should be the source of the rules that resolve the dispute and of the beneficiary’s claims for the transfer and consequential damages, the claims of Bank B and Bank A for reimbursement and interest, and the claims of the originator for the funds charges against its account and consequential damages resulting from losses experienced in its dealings with the intended beneficiary?

Should this source be the law of one of the countries? If so, which law—the law regarding litigated contracts, commercial paper, abstract undertakings (assuming that there is no “law” for electronic funds transfer); the UNCITRAL Model Law on International Credit Transfers; or the SWIFT rules?

Would there be any difference (assuming that the issue was governed by the SWIFT rules) if the error were made by one of the banks or if the error were due to a telecommunications failure of a third-party network?

Assume that the actual recipient had relied on and spent the funds. What rules should govern the ability of whoever bore the loss to obtain reimbursement? Should it make a difference which party bore the loss?