Globalisation and Payment Intermediation
Prof. Dr. Hans Geiger

Abstract

Besides “financial intermediation I” which describes the financial service industry’s role as a middleman between the ultimate saver and the ultimate investor, there does exist a second sphere of financial intermediation which can be described as payment intermediation between the payer and the payee. This “financial intermediation II” has equally important economic and strategic aspects in the context of globalisation.

It is the goal of this paper to make a contribution to understanding the economic relevance of payment intermediation in the context of globalisation, to illustrate the opportunities and threats facing the banks in their role as payment intermediaries in our globalising economy.

This paper was presented at the 22nd SUERF Colloquium on “Adapting to Financial Globalisation” (27 – 29 April 2000) in Vienna.

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Globalisation and Payment Intermediation

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1. Introduction
2. A concept for payment intermediation
3. Globalisation and payment intermediation
4. Hypotheses for the future of payment intermediation

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1. Introduction

1.1 Payment intermediation

The term “financial intermediation” is generally used to describe the financial service industry's role as a middleman between the ultimate saver and the ultimate investor (financial intermediation I). The impact of globalisation on this first type of intermediation and vice versa has been widely and controversially discussed among bankers, supervisors, politicians, and academics. Without commenting further on this issue, it is sufficient to say that globalisation of financial intermediation and markets can reduce the cost of capital in different ways and thus contribute to the economic wealth of the world (Stulz 1999).

In addition to this “financial intermediation I” there does exist a second sphere of financial intermediation which can be described as payment intermediation or financial intermediation II (McAndrews and Roberds 1999: 1). It stands for the financial function of the middleman between the payer and the payee in a market transaction. According to Merton and Bodie “clearing and settling payments” is one of the six core functions performed by a financial system (Merton and Bodie 1995: 5). Although payment intermediation is a less popular subject than financial intermediation I it has equally important economic and strategic aspects in the context of globalisation.

It is the goal of this paper
• to make a contribution to understanding the economic relevance of payment intermediation in the context of globalisation,
• to illustrate the opportunities and threats facing the banks in their role as payment intermediaries in our globalising economy.

1.2 Globalisation and the forces of change in banking

“Globalization ... reflects the progressive integration of the world economies” (World Bank 2000: 2). It can be described in the following words: “The need of a constantly expanding market for its products chases the global enterprise over the entire surface of the globe. It must nestle everywhere, settle everywhere, establish connections everywhere. The global enterprise has, through its exploitation of the world market, given a cosmopolitan character to production and consumption in every country”. If we replace the expression “global enterprise” by the word “bourgeoisie”, this quotation is the original wording of the Communist Manifesto of Marx and Engels, written in 1848 (Marx and Engels 1848: 3). In fact globalisation is by no means a new phenomenon, it has been around for many centuries, mostly in times of peace. Pax Augusta and Pax Britannica were famous eras of intensive border-crossing relations and activities.

Geographical distance is an important, but not the only border whose crossing is a constituent element of globalisation. Other boundaries that tradition-
ally separate economic markets and activities are time, political territories, legal frameworks, cultures, languages, and currencies. These boundaries determine the relative costs of market transactions. In this article the word “local” stands as the opposite term for “global”, thus including both “national” and “regional” aspects.

If globalisation is no new phenomenon, what are the reasons which attract the attention of academics, bankers, and SUERF today? From a historic perspective there are only three really new aspects, namely:

- The enormous progress in information and communication technology which leads to a collapse of space and time, two decisive physical boundaries between markets.
- The creation of a common European currency area. Euroland is emerging as a border-less market that until recently was strongly segmented by currency borders.
- Today’s globalisation is not a stand-alone development, but rather one manifestation of six fundamental forces of change (White 1998): These are, besides technology and Euroland, liberalisation, value orientation, new demographic trends, and progress in the theory of finance. Two further manifestations of these forces are the phenomenal rate of innovation in financial products and processes, and the emergence of new competitors (exhibit 1). Many of today’s strategic challenges of banks do not primarily or exclusively stem from globalisation, they are often also relevant in a local context. Both from a practical and a theoretical standpoint we cannot isolate globalisation from the six forces of change and its further manifestations, because all these forces work in combination.
EXHIBIT 1: Globalisation and the forces of change in Banking  
Source: White (1998), modified by author

With respect to the role and strategy of banks in the payment business for global market transactions, several new aspects come into play:

- Not only goods, persons, and capital, but also services and knowledge in the form of information can be transported across borders. “The growing importance of services and information in the world economy means that an increasing proportion of economic value is weightless – that is, it can be transmitted over fiber-optic cable rather than transported in a container ship” (World Bank 2000: 4).

- The geographical and organisational deconstruction of the value-chain leads to a further cross-border division of labour. “Foreign trade has grown more quickly than the world economy in recent years, a trend that is likely to continue” (World Bank 2000: 5). This global deconstruction of the value-chain is promoted by reduced transaction costs of physical and digital market transactions crossing any type of borders.¹

- “Financial flows across national borders have risen far more quickly than trade in recent years” (World Bank 2000: 6).

- The geographical deconstruction of the value-chain is in some spheres compensated by the growing impact of multinational companies in the global economy. 30 per cent of world trade takes place within multinational companies (Neue Zürcher Zeitung 1999: 20).

¹ World Bank (2000).
The Internet, global brands, electronic commerce, and global connectivity all lead to networks of worldwide and border-crossing relations and dependencies.

2. A concept for payment intermediation

2.1 The importance of payment intermediation

Payment intermediation is of highest importance for the economic wealth of the world. Without the use of money and other payment mechanisms, today's division of labour through market transactions would be impossible, the world would remain stuck in a prehistoric, self-sufficient economy. The lower the costs of payments and thus of market transactions, the more advantageous the division of labour, the more intensive the competition, the higher the wealth of an economy.

The history of market transactions is the history of decreasing transaction costs and increasing efficiency of payment methods: From self-sufficiency to barter to commodity money to paper money to bank money. Due to the partial and increasing replacement of cash (coins, banknotes) by "bank money" or book payments, the banks have moved into their present intermediary role, substituting the counterparty both for the seller and the buyer (McAndrews and Roberds 1999: 10). The future development of an emerging new type of money, digital or electronic money, may result in a further reduction of the transaction costs. Such a development would cause a partial replacement of book-entry payments by digital money and could challenge the very role of banks as intermediaries in the exchange economy.

Payment intermediation is not only important for the economy as a whole, but also for the future of banks, both in a global and a local context. Payment services are one area where banks still enjoy significant advantages over other competitors. Since banks are challenged at many fronts in financial intermediation between the saver and the investor, their role in payment systems might become a decisive factor for future success or failure. But it would be dangerous to assume that the past advantages of banks in payment services will survive naturally and will remain unchallenged (Llewellyn 1999: 19-20). Banks, both as individual firms and as an industry group, must therefore clarify and possibly redefine their role and strategy in the area of payment intermediation.

2.2 Classification of market transactions

There are many different ways to structure the field of payment intermediation. Classification by the types of underlying market transactions of the
banks' customers makes sense in our context. Such a classification leads to three general categories, which are described below (exhibit 2).

### Classification of Market Transactions

1. **Commercial Transactions**
   - 1.1 **B2B** Business to Business
     - Domestic or International
     - Physical or Digital
   - 1.2 **B2C** Business to Consumer
     - Domestic or International
     - Physical or Digital

2. **Financial Transactions**
   - 2.1 **ß2B, ß2C** Bank to Business or Consumer
   - 2.2 **ß2ß** Bank to Bank

3. **Street Side Transactions**

**EXHIBIT 2**: Classification of market transactions

Source: Author

1. **Commercial transactions**

1.1 **B2B** Business to business: This is an area of rather complex transactions, because both sides have specific needs for administrative and financial services within their business processes. The values of the payments are often quite large. Operating and financial costs (interest, risks) are equally important. In the area of operating cost, it is not only the cost of the payment that matters, but the cost of the whole market transaction (see chapter 2.3).

1.2 **B2C** Business to consumer: These are typically mass transactions with high volumes and normally low amounts. The services required by the two parties can be highly standardised. Low operating costs are more important than the financial costs.

Both B2B- and B2C-transactions can be split up further into
- Domestic and international/ border-crossing transactions
- Transactions of physical goods and services, and digital goods and services.

The latter can be offered and delivered via telecom networks. This sub-category is made in view of the growing importance of electronic commerce. Digital goods sold and delivered over electronic networks have produced a growing and urgent need for micro-payments, where the actual costs of pay-
ment are often larger than the potential values of the goods sold (Crameri 2000:2).

2. **Financial transactions**

2.1 **B2B, B2C** Bank to business and bank to consumer transactions: The underlying transaction is a financial product or service delivered by a bank to its customers (e.g. securities or forex transactions and asset management). The transaction value is often high. The financial costs are more important for high amounts, whereas the operating costs do matter more for small amounts. Financial transactions may be provided nationally and internationally with slight differences. They are typically digital and can be offered, delivered, and paid over electronic networks. Linking delivery and payment through electronic mechanisms can result in the elimination of counterparty risk and thus of a significant cost factor.

2.2 **B2B** Bank to bank transactions are normally of high or very high value, hence the financial costs are extremely important. The benefits of “delivery versus payment” (DVP) mechanisms are even higher than in the case of B2B- and B2C-transactions. They are conducted nationally and internationally, often traded over electronic exchanges, and delivered and paid over dedicated networks.

3. **“Street side” transactions**

Interbank **B2B** This category does not fit naturally into the classification. Street side transactions are not original market transactions of the bank’s customers, but rather derived or secondary transactions. All non-cash payments for those primary transactions, where the buyer and the seller do not have their accounts in the same bank, trigger such secondary (clearing and settlement) transactions between the banks and banking systems involved. As both small and large primary transactions require such street side solutions, both operational and financial costs are highly relevant. The street side payment systems have traditionally been organised by country (and currency), thus making cross-border transactions expensive and inefficient. For financial (B2B and B2C) and digital commercial transactions the street side systems have not only the potential to settle the payment, but also the delivery side of “digital goods”, such as securities or news. DVP-mechanisms are of highest relevance.

2.3 **Some characteristics of payment transactions**

The following characteristics of payments and payment systems are important in a global context:

- In the view of both buyers and sellers payments are not independent financial services, but rather derived services and thus an integral part of a
primary market transaction. Such a market transaction consists of four phases: Information, agreement, settlement, and enforcement or adaptation (Schmid and Lindemann 1997:14 and Geiger 1999:7). Payment is one element within phase three (exhibit 3). The sales agreement between the seller and the buyer (phase two) is an agreement to deliver and pay the product or service immediately or later.2

EXHIBIT 3: The 4 phases of market transaction and settlement
Source: Schmid, Lindemann (1997), modified by author

- There are three different modes for the timing of payments: Payment before, simultaneous, and after delivery of the product or service. The aspect of timing has considerable consequences for risk management of all parties involved.
- As shown earlier, the large number of different payment products can be grouped in three broad categories: Cash (notes and coins), book-entry transfers (electronic or paper based), and digital or electronic money. “Electronic money refers to “stored value” or prepaid mechanism for executing payments via point of sale terminal, direct transfer between two devices, or over open computer networks such as the Internet. ... [They] include “hardware” or “card based” mechanisms (also called “electronic purse”) and “software” or “network based” mechanisms (also called “digital cash”).” (Bank for International Settlements 1998: 3-4). European bank supervisors and central banks decided to authorise only banks and similarly supervised intermediaries to issue such digital money. This supervisory
policy seems to protect banks from competitors from other industries in the field of electronic money. However, it might be dangerous for the banks to rely on such a regulatory concept. There exist several different strategies for new competitors who could escape this problem. One example is “digital money” based on credit, i.e. a “pay later” product, which is not covered by the above definition of the Bank for International Settlements (BIS) (Weber 1999: 91).

- There are important differences between domestic and international payments: Nearly 99 per cent of the quantity and 90 per cent of the value of all non-cash payments are still domestic, but cross-border payments are growing much faster than the domestic ones (The Boston Consulting Group 1999: 1-4).

- Effectiveness and efficiency of payments can be measured in terms of cost, quality, productivity, and risk. The ultimate goal for the payee and payer is not the isolated efficiency of a payment transaction, but rather the cost and the quality of the whole business process. In general, domestic payment services in the developed world are quite effective and efficient, whereas international payments are expensive, time consuming and often neither user-friendly nor reliable.³

- The weaknesses and deficiencies of the international retail payment system were demonstrated in a survey initiated by the European Commission in 1994: The study encompassed 1,058 trans-border payments between 34 endpoints in 12 countries, each to the amount of 100 ECU. The payee was supposed to bear any cost, i.e. he should receive the full 100 ECU. The result was extremely disappointing. The average cost of one payment was 25,40 ECU, the average total time elapsed from the payment instruction by the payer to the availability for the payee was 4.8 working days, and in 36 per cent of the cases the payee did not receive the full amount (Retail Banking Research Ltd 1994: 16-7). These inefficiencies are so grave that they inhibit the development of global (or in this case even European) B2C-business. Although some improvements have been achieved since 1994, prices for international retail transfers still remain intolerably high and no substantial progress has been made regarding the timeliness of the payments (European Central Bank 1999: 7).

- Payments are not just technical operations, but financial transactions subject to three financial risks, well-known from other banking activities (Hitachi Research Institute 1993: 49):
  - The market risk, which can arise in the case of a time delay between agreement, delivery, and payment of a market transaction.
  - The credit risk, which results from a time difference between delivery of the product or service and the payment (in the cases of “pay before” and “pay later”).
  - The liquidity risk in the case of delayed payment or delivery.

These financial risks are especially relevant in the case of high-value payments. They can arise for the payer, the payee, or the intermediary. They
are managed reasonably well in most domestic payment systems, whereas in international transactions they are often little understood and not well controlled. In the case of large-value payment systems, especially for financial transactions, supervisors worry about the potentially contagious effects of the current payment systems. This can result in a systemic risk.\footnote{4}

- Payments are not only geographical transfers of money; in bridging time they often incorporate implicit or explicit funding of the transaction by the payee, the payer, or the intermediary.
- Information and communication technologies are decisive design factors of payment services and systems. The striking progress in these technologies and the digitalisation of the underlying market transactions (“E-commerce”) leads and will continue to lead, to fundamental changes in the payment intermediation function of financial and other service providers. The international trade and payment transactions, typically not well supported by today’s payment systems, will be particularly affected. A special development, whose potential and consequences have not yet clearly emerged, is the development of digital money.
- The act of payment is a major element of the transaction both for the payee and the payer. Payment services can therefore play a crucial role for the satisfaction and retention of both payee and payer as customers for the bank. In addition, the provision of payment services gives the bank a privileged access to transaction-based information about their customers, no doubt valuable in other transactions.

2.4 The street side infrastructure of payment intermediation (828)

All non-cash payments for transactions, where the buyer and the seller do not have their accounts with the same bank, trigger clearing and settlement transactions between the banks and the banking systems involved. As both small and large transactions require such secondary or street side transactions, this is a formidable task, necessitating among other complex things the mastering of both operational and financial costs within the worldwide banking community. These street side systems are the very heart of an effective and efficient payment system. The systems have traditionally been organised by each individual country. Sophisticated international systems are almost nonexistent, a serious weakness in the payment business. Without effective street side systems, banks face great difficulties to satisfy the transaction and payment needs of their customers in a globalised world.

In future, a potential competitive situation between the banks and their street side systems may exist or emerge. For any type of clients, but primarily for large multinational and institutional customers, it might be worth having direct access to street side systems, thus reducing or eliminating the intermediary role of the bank. In spite of this potential conflict of interest between the banks and their street side utilities the banking industry has a long-term self-interest in the development and operation of street side systems, because
without these systems outsiders may develop competitive structures and give
direct access to the customers.

For practical purposes we can discern three different methods to solve the street
side problem of payments:

- The traditional method of using correspondent banks for the transfer of
  funds was already well developed by the Italian money-changers in the
  14th century. In theory, each bank maintains an account with each other,
  debiting and crediting the payments to these accounts. In practice some
  banks in the various countries have specialised in such correspondent
  banking systems and serve as centralised nodes for other banks. This
  structure reduces the number of necessary accounts and connections
  throughout the systems, but it lengthens the process chain.

- In clearing systems banks present the payment documents at one central lo-
  cation, the clearinghouse. This procedure often includes a mechanism for
  the calculation of the participating banks’ net positions, which are settled
  at a designated time. The clearinghouse with a multilateral netting mecha-
  nism was the traditional interbank infrastructure in domestic check-based
  payment systems. Such netting systems are still common in many national
  systems, especially for clearing low-value retail payments.

- In real time gross settlement systems (RTGS) the settlement of payments be-
  tween banks takes place continuously at a central point without prior
  clearance, transaction by transaction. RTGS’s are usually linked to the
  central bank and have been made feasible thanks to the advances in in-
  formation and network technology. They enjoy the advantage of direct use
  of central bank money and have become the dominant method for the set-
  tlement of large value payments. In some countries the RTGS-mechanism
  is also used for the settlement of retail payments.

In international payments the dominant method to settle payments between
banks is still the correspondent banking mechanism. Sophisticated S.W.I.F.T.Ver.
networks and standards support the system. However, this technical up-
grading does not make the model an appropriate infrastructure for global
payments in a global economy. Correspondent banking is an obsolete archi-
tecture for this type of transactions, and the system suffers additionally from a
lack of international standardisation between the various national payment
systems.

One of the most pressing problems in international payments, the counter-
party risk in the settlement of foreign exchange transactions (named “Herstatt
risk” after a bank failed in 1974), will soon be solved. The Continuous Linked
Settlement Bank (CLS) (Lambe 2000) should become operational by next year.
CLS is a highly sophisticated central RTGS-system, whereby the two payment
legs of a forex-transaction are settled simultaneously in a self-collateralising
mechanism called “payment versus payment” (PVP). The system is expected
to be effective and efficient in eliminating the Herstatt risk and reducing cost
and time between banks. The system will facilitate the global foreign exchange business and thus indirectly global trade. But it is not designed to be used for the settlement of other financial or commercial transactions, although the basic concepts of CLS would be suitable to rationalise also other trans-border and trans-currency payments.

Outside the forex business there is a new initiative “WATCH” (NACHA Cross Border Council 1999) for a Global Automated Clearing House, which should make B2B and B2C payments across borders as easy as domestic payments. The goal of the initiative is to build a low cost system that provides certainty of payment delivery, ease of use, global reach, and multi-currency capabilities. These objectives should be reached with an electronic system for batch-based cross border payments for commercial and private banking customers. WATCH is designed as an automated clearing system without netting functionality. In the terminology of the Bank for International Settlements it is a “designated-time gross settlement system” (Bank for International Settlements 1997: 4-5). The project is presently in its initial phase with 48 international banks and banking organisations from 14 different countries participating. It is scheduled to go ahead with 175 to 200 participating financial institutions in the year 2002.

Until the successful implementation of the WATCH-initiative (or a competing concept), global credit card systems are the only efficient infrastructure for trans-border retail payments. Accordingly credit cards are among the fastest growing segments of cash-less payment instruments.

Ever since the successful implementation of the Euro as a common currency in Europe, Euroland should be considered a domestic market for payments rather than an international one. Yet this has not been the case so far. The European Commission, the European Central Bank, and the customers are all complaining about the fact that the single market is not supported by any efficient system for cross-border payments within Euroland (European Central Bank 1999). Ideally a payment between a payer and a payee in two member states of Euroland should be as simple and efficient as a domestic transaction, since no currency borders hinder the easy flow of money. From the beginning of the currency union the TARGET-System has been available for trans-border Euro-payments, but it was not designed as a system for commercial and retail payments. Fundamentally TARGET seems to be an unnecessary or only temporarily necessary system, because in the forthcoming single currency area there will be no justification for national clearing and settlement systems any more, so there will be no need to connect such national systems. Any one (or several) of the existing national RTGS of the Euroland countries could serve the whole Euro currency area. For the intermediate phase there is an urgent need for more efficient “cross-border” payments. Right now the Euro1-System of the European Banking Association (EBA) seems to be the most successful platform for commercial payments in Euroland, and the op-
erators plan to develop it into an automated clearinghouse (Young 1999: 101). The fact is that in the foreseeable future payments within Euroland will remain much closer to the international types than to the domestic ones.

2.5 Traditional strengths and weaknesses of banks in payment systems

In order to assess the strategic opportunities and threats for banks in payment services it is mandatory to analyse their traditional strengths and weaknesses.

Traditional strengths of banks in the field of payment services are:
- Access to central bank money and final settlement.
- Privileged access to central trading, clearing, and settlement institutions.
- Access to proprietary interbank networks and standards, e.g. S.W.I.F.T.
- Access to transaction-based information, which the banks can use in a variety of value-added retail and corporate services, and which can also be valuable for monitoring credit risk.
- Access to established networks of customers, agents, and products.
- In general banks enjoy the advantage of trust, credit-worthiness, prudential supervision, monetary supervision and money laundering supervision.

The weaknesses of banks in payment intermediation are:
- The fundamental weakness of payment intermediation is that banks have so far not been able or willing to make it a global business. With a few exceptions payments do not easily cross borders of geographical distance, time, states, and currencies. The reliance on traditional correspondent banking and the incompatibility of most national payment systems result in high costs and prices, long time delays, high financial risks, poor service quality and a general lack of transparency. It is interesting to note that the Financial Action Task Force on Money Laundering (FATF) in its recent study concluded that even alternative remittance systems, pre-dating modern banking of the 19th and 20th centuries, are “secure and less expensive than traditional banks” (Financial Action Task Force on Money Laundering 2000: 5). These inefficiencies are a serious obstacle for the further globalisation of economic activities; they could also turn into a serious threat to the role of banks in payment intermediation.
- A new weakness arises in the emerging world of E-commerce: New transaction intermediaries, which often have their roots in software-, Internet- and telecom-services, are supporting the whole value chain of market transactions for the payee and also the payer, and not only the payment phase. These new intermediaries create additional value for their customers and the economy, leading to a relative decline of status and value in the traditional payment franchise of banks.
3. Globalisation and payment intermediation

The basic relationships between globalisation and payment intermediation are straightforward: If there is no global trade, there is no need for global payments. If there are no efficient global payment services, global trade is impossible or at least severely hindered. This is a classical hen and egg situation: Until recently the banking industry was not willing to support the development of a new common international cross-border payment system, on the basis that today’s volumes and obvious customer demand would not justify the necessary big investments. Customers do not and cannot develop the demand for international and even European trade, because no efficient payment mechanism is yet available.

By closely analysing globalisation and the six fundamental forces of change in banking (exhibit 1), you realise that the shrinking of the boundaries of distance, time, legal frameworks, cultures, languages, and currencies (all related to globalisation) has far-reaching consequences for the payment function of banks. The relevance of some important changes shall now be analysed for the different categories of market transactions developed in chapter 2.2.

1. Further globalisation of the world economy will lead to a growing demand for trans-border payment services in the B2B- and also B2C-business.
2. The high proportion of global trade taking place among multinationals requires special global payment and transaction services for these companies, otherwise the multinationals provide (or continue to provide) such services internally for themselves and for their suppliers and customers, or they outsource them to non-bank providers.
3. The emergence of E-commerce B2C and B2B, which is by nature not limited by national borders, might shift the balance of power from payment intermediaries to transaction intermediaries. The very optimistic view expressed by American vice-president Al Gore in a remarkable document he published together with president Clinton, could be interpreted as a signal of a future challenge for banks (Clinton and Gore Jr. 1998: 1): “Soon electronic networks will allow people to transcend the barriers of time and distance and take advantage of global markets and business opportunities not even imaginable today, opening up a new world of economic possibilities and progress.” In the case of digital E-commerce, which is growing much faster than physical trade, this trend is even stronger and also much more urgent than for physical transactions.
4. The rapid development of information technologies favours new competitors for commercial payment services.
5. In the area of financial transactions, the internationalisation of exchanges calls for an internationalisation of clearing and settlement systems. It is possible that the clearing and settlement systems will be more important in the global race for dominance in the security trading world than the ex-
changes themselves. Today international clearing and settlement is vastly inefficient compared to leading domestic systems.

6. Information technologies also favour new competitors for financial transactions and payment services. Examples of such new competitors are Alternative Trading Systems (ATM), in recent times often in the form of Electronic Communication Networks (ECN), offered by financial information providers such as Reuters or new technology driven competitors. These new competitors challenge the dominant role of organised exchanges and financial intermediaries for dealing and issuing securities and other financial instruments.

7. The initiative of central banks and bank supervisors regarding the elimination or mitigation of the Herstatt-risk and the improvement of financial stability will exert a continuous pressure on the traditional payment intermediaries to reduce the financial risks in all payment systems.

8. The completion of the European currency union will transform today’s largest market for international commercial payments into a local payment market. The pressure by the European Union and the European Central Bank will add to the demand by the customers for rapid improvements in the European payment systems.

The author’s personal and admittedly subjective assessment of these changes for the different categories of payment transactions leads to the following conclusions (exhibit 4):

<table>
<thead>
<tr>
<th>Changes in the context of globalisation</th>
<th>Commercial Transactions</th>
<th>Financial Transactions</th>
<th>Street Side Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Globalisation of economy</td>
<td>+++ +</td>
<td>++ +</td>
<td>- - +</td>
</tr>
<tr>
<td>2. Global trade within multinationals</td>
<td>+++ +</td>
<td>- -</td>
<td>- - +</td>
</tr>
<tr>
<td>3. Global E-commerce</td>
<td>+ +++ +</td>
<td>+ +++ +</td>
<td>+++ +++ +</td>
</tr>
<tr>
<td>4. New competitors comm. payments</td>
<td>+ ++ +</td>
<td>+ + +</td>
<td>- - +</td>
</tr>
<tr>
<td>5. Internationalisation of fin. exchanges</td>
<td>- - -</td>
<td>- -</td>
<td>+++ +++ +</td>
</tr>
<tr>
<td>6. New competitors financ. transactions</td>
<td>- - -</td>
<td>- -</td>
<td>+++ + +</td>
</tr>
<tr>
<td>7. Initiatives Herstatt risk</td>
<td>+++ +</td>
<td>+++ +</td>
<td>- + +</td>
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<tr>
<td>8. Emergence of Euroland</td>
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<td>+++ + +</td>
</tr>
</tbody>
</table>

| Impact on payment intermediation by banks |
| +++ strong | ++ medium | + weak | - none |

EXHIBIT 4: Impact of globalisation on payment intermediation
Source: Author
1. The most relevant external developments for the next years are
   - The emergence of global E-commerce,
   - the development of Euroland,
   - the internationalisation of many financial transactions.

2. The most urgent and important needs for action by the banking industry and the individual banks are
   - The establishment of effective and efficient trans-border street side systems,
   - the adjustments in the payment systems for financial transactions, both for β2B/ β2C and β2B,
   - the improvement of international payment services for B2B transactions, with a special urgency for trade within Euroland.

4. Hypotheses for the future of payment intermediation by banks

Beyond these urgent action tasks, the challenges for the banks in their role as payment intermediaries shall be summarised in the form of ten hypotheses:

1. Technology is a revolutionary force that will change both global trade and global payment in often unpredictable ways. One aspect is the fact that modern information technology can help to overcome some of the important weaknesses of today’s payment systems and services in a global context. This is certainly the case for the reduction of risks and costs, and for the improvement of services, especially the information quality for payee, payer, and intermediary. Another promising trend is the steady move from paper based towards electronic payments. 

2. Digital money may have an important impact through its potential to relegate banks to their historic role in a pure cash society. The role of counterparty substitution in the payment process of commercial transactions could thus be lost. Several large banks have experimented with digital money, but so far with no commercial success. It looks as if digital money can only succeed in a global and multi-bank context. So far, little or no initiatives to set up a global clearing and settlement process have been observed. Such a system would be necessary for the implementation of a new global payment product. The early experiments by individual banks as well as the lessons learnt from the history of credit card systems suggest that a single bank cannot successfully implement a proprietary digital money system.

3. New competitors for banks are arising in payment services, especially in the E-commerce area. The balance of power in the commercial payment business is shifting from pure payment providers towards commerce enablers (The Boston Consulting Group 1999: 1).
4. Role of banks in their customers’ E-commerce. Banks striving to remain successful in payments, and also trying to become successful in payments for E-commerce, must reconsider their role in the whole business process of their customers. Opportunities for banks may arise in areas such as purchasing platforms, certification, trade services and finance, electronic bill presentment, consumer Internet payments and payment aggregation services (The Boston Consulting Group 1999: 13-4).

5. Banks will have to specialise their payment services. Many banks will not be able to offer local and global, traditional and new payment services. Banks will have to decide whether (and if yes, how) they want to compete in the global payment arena or whether they will concentrate on the still dominant local business. There will probably be only a few highly specialised banks that will be fully equipped to offer comprehensive global payment services to multinational and other corporate customers with sophisticated needs. The extent to which a larger number of banks will be able to offer such global services will depend on the future of common industry infrastructures.

6. Common infrastructures or utilities of banks play, and will continue to play, an important role for the future of banks in global payment intermediation. To succeed as an industry against the new competitors it is vital for banks to extend the reach of the traditionally national infrastructures internationally. They will probably have to give their customers direct access to their payment networks such as S.W.I.F.T., at least to the large corporate and institutional clients. In the E-commerce arena for B2C business there might be an urgent need for banks to build up some common, global infrastructure that includes some type of clearing and settlement mechanisms for digital money. In general, the better the global common infrastructure, the better the chances of the banking industry as a whole and of the smaller banks in particular to play a role in global payments.

7. Euroland is a special case, transforming “trans-border” issues into “national” or “domestic” ones.

8. B2B is more important than B2C. Total market transaction costs and qualities are more important for businesses than just the costs and qualities of payments. The restructuring of the global value chain is paramount for the corporate customers, whereas this aspect matters less with private persons.

9. In financial (i.e. $\beta$-) transactions, which are normally characterised by high amounts, risk aspects are often more serious than the operational costs. In commercial transactions the transaction costs, ease of use, integration into the business process of the commercial customers are the more important factors.

10. Building on the traditional strengths and enlarging them to the new challenges of globalisation and the new technologies should give the banking industry a fair chance to remain the key payment intermediary in our globalised world.
These are tentative statements, hypotheses which may raise more questions than they answer. The author hopes to motivate academics to research these issues in more detail. At the same time he wants to point out to the practitioners that payment intermediation is a strategically highly relevant subject both for individual banks and for the industry as a whole.
Endnotes

1 Examples see Neue Zürcher Zeitung 1999, p. 23.
2 Delayed delivery and payment corresponds logically to a “forward contract” with the related risks see Perold 1995: 56. This is an area in which the banks have a special expertise reaching far beyond a pure technical payment transaction.
3 According to The Boston Consulting Group 1999: 1, the price per payment averaged $1,11 for domestic transactions, $13,52 for cross-border transactions (figures for 1997). Similarly, the costs for cross-border securities clearing/settlement are about 10 times higher than domestic transactions. See Cathomen 2000: 27.

5 There are other models, but more of academic interest than practical relevance, e.g. the use of derivatives in lieu of settlement for financial market transactions (see Perold 1995: 74).
6 S.W.I.F.T.: Society for Worldwide Interbank Financial Telecommunication
7 These concepts are: Unity of accounts principle, whereby settlement banks have only to maintain a positive value over all currencies, and additional rules, such as several short position limits and a minimum haircut on the overall positive value.
10 Examples see Hitachi Research Institute 1993: 86-7.
11 For specific figures see Cathomen 2000: 27.
12 The most important alternative systems are Instinet and Island.
14 Such clearing systems are analysed by Janssen and Lüthi 1999: 9-10.
15 BCG estimates that 3 to 5 global providers will emerge as winners over a 10-year period. The Boston Consulting Group 1998: 13-4.
Bibliography


