

# Payment systems

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Very important long-term technical changes are beginning to affect the payment systems, especially the continuing decline in computing costs and the physical size of powerful computer chips, along with the associated spread of powerful telecommunications technologies. The widespread availability and acceptability of computers both at home and in the offices has accelerated the process. At the same time, the cost of communications has been falling dramatically, broadly opening up markets world-wide.

These trends have a marked impact on the payment systems and they offer potentially significant avenues for improvement of the efficiency of existing arrangements and for the creation of new payment mechanisms. In this section a brief description of the development in payment systems and methods in the banking industry are introduced. A brief history of payment systems describes the main points of its development, beginning already from the seventies.

A short introduction of payment methods is also included, to describe how the " money" we use has developed during the years and also to help in illustrating the increasing role of information technology for such a simple thing as " money". The following case studies are included in this study to show the diffusion of these new payment methods. " Payment system - a set of instruments, banking procedures and, typically, interbank funds transfer systems that ensure the circulation of money. " (European Monetary Institute, 1997 - p. 206) Payment systems constitute part of the basic structure of a country's economy and financial markets.

A payment system includes payment instruments as well as the various facilities required for transferring funds. Payment systems fulfil a variety of tasks, such as the payment of households' daily purchases and bills.

Payments of businesses and public sector entities, as well as the handling of inter bank payments and transactions between residents and non-residents.

On the one hand, the payment systems process a large number of small-value payments, and on the other, they handle a small number of large-value payments with special requirements for safety and speed.

Small-value payments normally involve day-to-day payments by households and small enterprises, whereas large-value payments often involve banks' and industrial firms' foreign exchange, securities and money market transactions as well as some trade-related transactions. (Hirvonen et al, 1992) The significance of payment systems as one of the basic pillars of the financial markets has grown as the production of goods and services has come to rely increasingly on specialisation and trade. So their importance is being further enhanced by the process of international integration are currently under way.

Efficient and reliable payment flows are an essential requirement for the successful functioning of today's market economies. (Hirvonen et al, 1992) A starting point for development of new payment systems happened in the middle of 1970's, when a common on-line based system was created between different banks. A few years later, it became fully automatic, which made it possible to transfer daily payment information in a machines readable form. This new system created a ground for new payment services

for customers, because all banking affairs could be done through a one specific bank.

The reference bank giro was the first service using this new technique (1979). This new system required also more effective computers and better software to make it possible to handle all information. (EV-Kehitysyhtii?? t & Fistec, 1989) Historically payment system, transactions were exclusively provided by the banks. However, the dominance of small payment systems by the banking industry is being challenged by a nascent industry reacting to consumer demands. Today many non-bank entities provide these services. In fact, the competition for the provision of payment system mechanisms " has turned monetary value transfer into a commodity.

" The banking industry has trailed other industries in developing and offering electronic money payment systems for small-value transactions. For example, mass transit and telephone companies have offered stored value card technology for nearly a decade. (Heinonen, 1989) Electronic payment systems developed for transferring bank payments between the banks are becoming increasingly common in all the industrialised countries. They speed up payments transfer and improve the quality of payment transmission. Compared with traditional methods of transmitting payments, the new systems involve significant economies of scale and rationalisation gains.

It would hardly be possible to increase the volume and value of payments at the present pace without corresponding advances in payment technology. At the same time, the implementation of new payment systems is helping to

enhance the planning and monitoring of bank liquidity. As the systems require large investments, they also call for co-operation between banks and participation by the central bank. The payment system is a complicated and complex institution of society, which changes along with technological and social progress. (Hasko & Lahdenperi??

, 1992) The payment system's enabling mechanism is of particular importance because of its wide use as a means of payment, its availability, its universal acceptance, and its geographic dispersion. The role of a reliable and efficient payment system as a competitive factor has grown along with the internationalisation of economies. A payment system must not only be secure and sound, it must also be cost-effective and compatible with systems used in other countries. The more efficient the payment system is, the less economic resources it ties up.