

# Chapter 11

## Payment System Analysis: The Central Bank Perspective

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### ABSTRACT

*Together with the growing importance of stable and efficient payment systems, payment systems analysis has gained importance in the recent years. Central banks play the most prominent role in this field since they have unique responsibilities but also unique opportunities. This chapter will systematize the different aspects of payment system analysis and show their respective importance from a central bank perspective. This will be done both from a theoretical but also from a practical point of view by giving examples of actual work in this field. Three types of Payment system analysis will be distinguished: Payment system analysis in the broad sense of the term, the analysis of particular payment systems and the use of payment system data.*

### INTRODUCTION<sup>1</sup>

Together with the growing importance of stable and efficient payment systems, payment system analysis has gained in importance in recent years. Central banks play the most prominent role in this field as they have unique responsibilities and at the same time unique opportunities. This chapter will systematize different aspects of payment system analysis and show their respective importance from a central bank perspective, both from a theoretical and a practical point of view. The most important current and recent research questions will be discussed and results of payment system analysis as performed in different central banks will be presented.

Payment system analysis is not *per se* a goal of central banks. Its basic aim should be to support and found the making of political and business decisions in the various business areas of a central bank, mainly by the central bank itself but also by other market participants. The discussion of the practical examples of payment system analysis will show that the term “analysis” has a very broad meaning here. Nevertheless, the common factor for all the cited examples is that information about or derived from payment systems is used for a systematical investigation of a research question related to the political and operative tasks of the central bank.

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Payment system analysis from a central bank perspective can be linked to the various tasks fulfilled by a central bank. The most prominent tasks of a central bank are monetary policy, payments and financial stability.<sup>2</sup> The importance of payment system analysis is most straightforward in the second case. Payment system analysis in this field is linked to the tasks of central banks associated with ensuring the smooth operation of the payment system in broad terms but also with cash management. Central banks potentially play three main roles in this field: First, some are directly active in operating payment infrastructures and also in cash handling. Second, most of them shape the overall payment system landscape through their “catalyst role”, facilitating agreements and rules between different market participants. Third, most central banks act as a payment system overseer and influence the regulatory framework of the payment system. However, it transpires that ensuring the functioning of the payment system is also closely tied to the objectives of financial stability and monetary policy. This means that payment system analysis can also contribute to these central bank tasks. There is a historical link between clearing and settlement and central banking due to the fact that some central banks were founded as central clearing institutions. Monetary policy, financial stability and payments are all based on the provision of central bank money as the ultimate settlement asset. Monetary policy is operationally dependent on payment infrastructures and these infrastructures are part of the financial system whose stability has to be safeguarded. Therefore, analysis of these infrastructures is indirectly connected with monetary policy and financial stability and data from these infrastructures can be put to direct use for these purposes.

The structure of the chapter is geared to the three different types of payment system analysis, defined as: Payment system analysis in the broad sense of the term, analysis of specific payment systems and use of payment system data. With regard to the first definition, the term “the payment system” relates to the entire set of instruments, banking procedures and interbank funds transfer systems employed to facilitate the circulation of money in an economy; this toolbox is then the object of analysis. In the second definition, “payment systems” is synonymous with interbank funds transfer systems, i.e. the definition is more technical and these technical systems are the object of analysis. In the third definition, data derived from payment systems is used for other, secondary purposes which go beyond the functioning of the systems.

The final section describes the particular central bank perspective, showing that the distinctiveness of the central bank perspective in payment system analysis is based on four elements:

- First, the uniqueness of the tasks performed by central banks, in particular their monopoly in terms of providing central bank money and the possibility of acting as lender of last resort.
- Second, their strong operational role in payments based on their specific risk profile concerning business and liquidity risk.
- Third, the fact that central banks act in the public interest.
- Fourth, the multitude and variety of the tasks of a central bank.

## **PAYMENT SYSTEM ANALYSIS IN THE BROAD SENSE OF THE TERM**

In the case of payment system analysis in the broad sense of the term, “the payment system” relates to the entire set of instruments, banking procedures and interbank funds transfer systems employed to facilitate the circulation of money in an economy. In this context, the ultimate goal of payment system analysis is to provide knowledge about the optimal structure of the payment system as a whole. The most

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