Ladies and gentlemen,

It is my pleasure to welcome you to this conference. I consider this meeting to be a very important one, not least because it is our first meeting in the enlarged European Union. There has been much contact and cooperation in the past, but as of 1 May we are all in the same boat, and I firmly believe that our cooperation will continue on an even higher level. This conference represents the perfect forum for exchanging information on payment systems in the enlarged European Union. Over the next two days you will hear many highly respected speakers presenting information on the latest developments in the area of payment systems. I am especially looking forward to the panel discussion on challenges for the new member states.

The Czech National Bank considers the topics of the conference to be highly relevant. This is because we, as newcomers to the European Union, have started our regular work in the committees and working groups and we intend to be active contributors to the ongoing discussions. Another reason is the future adoption of the single currency, which will require lots of preparations and adjustments of our systems and procedures. And yet another reason is the interaction between payment systems and financial stability issues.

In my introductory remarks I would like to draw your attention to the relationship between payment system analysis and the financial sector and monetary policy, so as to frame the more technical discussions that will come later in the course of the conference.

**Introduction – The emergence of payment system analysis**

In the brief history of the modern market economy in the Czech Republic, payment system analysis and its development were not always viewed as a subject of primary importance. The topics of monetary policy, banking regulation and supervision, and the creation of efficient money markets were considered the top priorities. Payment system issues were often seen as technical and without much connection to the other areas of interest of central banks. However, the situation has changed
significantly over the last few years. As I would like to show in my presentation, the issues of designing, overseeing and regulating payment systems have gained much attention in recent years, mainly in connection with the relatively new area of interest of our central bank, namely financial stability. What were the other reasons for this increasing interest in payment systems?

**Firstly**, the overall activity of payment systems has increased significantly. This is mainly thanks to rapid development in the area of information technology. The deepening of payment systems definitely means more effective allocation of resources. However, it also means that potential malfunctions in the payment system would have much bigger impacts on the banking sector and real economy than 20 years ago.

**Secondly**, together with the deepening of payment systems, these systems are also undergoing a period of rapid internationalisation not only on the current account of the balance of payments, but also on the financial account. Thus there is a higher likelihood of contagion from other countries via payment systems, which could be hard to contain after a crisis arises.

**Thirdly**, the integration of the financial markets and the development of non-banking financial intermediation means that there is a much wider group of payment system participants, be they direct, or, more importantly, indirect ones.

**And finally**, much of the increased interest in payment systems could also be due to the introduction of the single currency, the euro, in many countries, which has resulted in wider considerations of multinational payment systems. As I will mention in the next parts of my presentation, these reasons also apply to the Czech payment system.

As the following diagram shows, payment system functioning has many direct links to financial sector analysis and to traditional macroeconomic analysis. The links with financial sector analysis include in particular issues connected with the possible effects of systemic risks, which play an indispensable role in the area of financial stability. A payment system potentially influences macroeconomic analysis in the study of the transmission mechanism, as the institutional set-up of the payment system can influence monetary transmission. On the other hand, the payment system is strongly influenced by macroeconomic developments, as macroeconomic instability can cause shocks to the payment system through materialisation of risks (credit risk, foreign exchange risk, etc…).
1. **Historical features of the Czech payment system**

It is true that historical experience significantly influences the potential to make changes to the payment system in the near future (so-called “path dependency”). For countries with short history of market economy, such as the Czech Republic, this phenomenon is even more important. The starting point of the Czech payment system (called CERTIS) in 1989 was strongly influenced by the previous centrally planned model of the economy. The banking sector, and thus also the payment system, was dominated by the state “monobank”, with the remaining only four “commercial” banks conducting specialised and limited activities only. Despite the fact that the new modern payment system was built practically from scratch, the decisions of the CNB ultimately proved to be wise and forward looking. The new payment system was constructed as a Real Time Gross Settlement System (RTGS), which proved to be a good decision, as this type of payment system gradually became the standard in the industry. The current payment system is centralised, and it has enabled more effective supervision of the system during the economic transformation. Despite the fact that the payment system during the 1990s was subject to many shocks arising from the separation from the Slovak Republic and thus the splitting of the common currency, as well as from massive problems with banking sector insolvency, the Czech payment system remained modern and stable.
This can be illustrated, for example, by the continuous rise in the value of payments during the 1990s, from less than CZK 50 billion per day to approximately CZK 400 billion per day (see the figure).

2. **Payment system analysis within financial stability analysis**

It is not just a coincidence that the emergence of financial stability analysis appeared simultaneously with the emergence of more sophisticated payment systems. The stability of the payment system has empirical links to the “quality” of the overall financial system (to some extent it is true that the health of the payment system depends mainly on the health of its participants). This is partly illustrated by the following figure for the new member states. Payment system turnover (as measured by number of days during which the payment system reports volumes equal to the country’s GDP) has negative relationships to the financial depth ratio (thus countries with larger relative volumes processed by the payment system usually report higher financial depth ratios).
Payment systems also play an important role in specifying the legal foundation of financial stability analysis. The financial stability issue nowadays plays an important role in the operations of many central banks. Central banks usually derive their mandate to analyse financial stability from the usual obligation to promote a stable and efficient payment system and to reduce systemic risk.

As I have already mentioned, one of the features requiring more comprehensive analysis of payment systems has been the increase in non-banking financial intermediation. The following figure shows that the increase in the share of non-banking financial intermediators also applies in the case of the Czech Republic. Although the banking sector remains the dominant player in the financial sector (having an approximately 3/4 share of the whole financial sector), other financial intermediators have been gaining a greater share of the market. This is especially true for insurance companies (with an increase from 4.8% in 1997 to 7.7% in 2003), financial leasing institutions (from 3.9% to 6.4%) and pension funds (from 0.9% to 2.4%). On the other hand, the shares of investment companies and investment funds and of cooperative banks have decreased owing to previous problems in these sectors and a subsequent loss of confidence (IC&IFs from 6.3% to 3.2%, with a minimum of 2.8% in 2001; cooperative banks/credit unions from 0.1% to 0.0%; commercial banks from 82.1% to 74.2%).
Another argument for more thorough payment system analysis is the internationalisation of the financial markets as well as payment systems. As can be seen from the following figure, this is also true for the Czech Republic. Foreign banks, through their local subsidiaries, control almost all the assets in the Czech banking sector. Since 2001 we can even see a gradual increase in their share of capital – partly due to their intention to buy the whole 100% share in a majority-owned bank and partly to the signalling role of dominant foreign ownership and resulting increased confidence of foreign portfolio investors. In addition to direct ownership links, the Czech Republic’s accession to the European Union has resulted in further integration of the domestic financial sector into the EU one. Probably the most important feature is the EU single licence, which allows banks licensed anywhere in the EU to carry on banking operations in the Czech Republic and vice versa.
I have mentioned some of the reasons why the attention paid to payment systems has a similar motivation to financial stability analysis.

The first reason is the fact that an unstable and unsafe payment system can itself represent a source of financial instability. It is evident that if a payment system allows frauds, it can destroy an otherwise relatively healthy financial system. However, as payment systems have developed significantly over the last 20 years, this reason has become slightly less important.

The second reason is obvious from the opposite angle: financial instability can influence otherwise healthy payment systems and eventually destroy all the positive externalities related to the existence of a well-functioning payment system. Therefore, analysis of the reaction of payment systems to overall financial system instability is a valid interest of the central bank.

The third reason is the fact that the payment system also plays the role of first buffer to potential financial instability. Thus the set-up and robustness of the payment system has an important signalling effect for overall financial stability.

3. Major risks connected with payment systems

The aforementioned analysis of payment systems usually addresses the major risks connected with payment systems. It should be mentioned that there is a potential trade-off between the safety and efficiency of a payment system. In other words, there is sometimes a trade-off between the
objective of minimising the risk of the payment system and the objective of maximising the speed of transactions and minimising the costs associated with the payment system. It should also be mentioned that the risks associated with payment systems are similar to those of the banking sector, although they are not exactly the same.

The most important risks are the following:

- **Systemic risk** – is a major issue in payment system and financial stability analysis. It reflects the special case where counterparty risk increases so much that it causes a domino effect in the payment system. Even those participants who were originally assumed to be “healthy” run into serious problems due to these second-run effects and the survival of the whole payment system is threatened. Usually the action of some central authority (for example the central bank) is necessary;

- **Credit risk** – is the risk that another party in the payment system does not fulfil its obligation at some time in the future;

- **Liquidity risk** – is the risk that another party cannot fulfil its obligation at the expected time but can do so later. It can be decreased by sufficient collateral;

- **Counterparty risk** = credit risk + liquidity risk;

- **Legal risk** – is the risk of a weakly arranged legal framework causing credit and liquidity risk;

- **Operational risk** – is the risk of weakly functioning operational factors (technical factors, control procedures) causing credit and liquidity risks.

4. **Changes to payment system legislation**

In connection with legal risk, which the central authorities, can most easily influence, let me summarise the recent legislative changes in the Czech Republic. The main changes have arisen from Act No. 124/2002 on Payment Systems, instigated mainly by EU accession and changes in the European legislation.
The main changes to the legislation were in the following areas:

- regulation of cross-border payments and a change to regulation of payments within the Czech Republic,
- information duties,
- time limits (within one bank 1 day, within the Czech Republic 3D, cross-border 6D; 0;2;5),
- sanctions,
- electronic payment instruments (97/489/ES),
- payment systems (98/26/ES),
- irreversibility of payments made through the payment system (e.g. in the case of bankruptcy),
- possibility of payment systems other than CERTIS,
- licensing conditions,
- financial arbiter (Act 229/2002).

Most of these changes took effect on 1 January 2003, but some are effective from 1 May 2004 (the EU accession date)

5. **Challenges connected with payment systems**

To summarise, I would like to list the main challenges connected with payment systems having implications for the stability of the whole financial sector.

- The main and most real challenge connected with the payment system in the Czech Republic is EU accession. Legal changes have already taken place and have been successfully implemented. The main challenge, which will be discussed in more detail during this conference, is building of the “Single Euro Payment Area” (retail) and implementing TARGET 2 (for large payments).

- Another important challenge facing the CNB linked (not only) with payment system development is the preparations for euro implementation. Again, euro adoption would mean a further deepening of the interconnections between the Czech payment system and other European payment systems.
• An issue connected with the previous two is the probable increase in the volume of cross-border payments. This would mean a positive influence on allocation efficiency and thus real economic activity, but it also presents some increase in risks, which have to be addressed properly.

• A challenge connected with the previous one is the implementation of the Single European Passport, which means the possibility for EU banks to do business in the Czech Republic without having to obtain an additional licence. Also, this challenge is connected more with the banking sector (raising, for example, a question about the deposit insurance fund), which has an influence on payment systems (intraday credit)

• An issue I have already addressed in this presentation is that of continuing financial disintermediation (non-banking financial institutions).

• Another relatively recent issue connected with the payment system is the Basel-II implementation. One of the new issues included in these new standards is the treatment of operational risk and the capital requirements connected with this risk. Thus, the quality of payment system analysis by individual banks could influence their capital requirements.

Ladies and gentlemen, thank you for your attention. I am sure that the following conference will address these challenges connected with payment systems in much greater detail. I wish you a fruitful two days in Prague.