

Smart cards, a currency substitute with an electronic chip, may represent the next stage in the evolution of money. The HKMA will monitor their introduction given our concerns over the integrity of the payments system and any impact on monetary policy and seigniorage.

Thank you for inviting me to speak at the opening of this International Conference on Smart Cards. This conference is timely. Technological innovation is rapidly changing our lifestyle, and the arrival of the smart card promises another major breakthrough. It also has the potential of transforming our traditional concept of money.

Looking back, money is undoubtedly one of the greatest innovations in the history of mankind. The invention of money liberated society from barter trade, facilitated the efficient allocation and use of resources, and thereby laid the foundation of social and economic progress. Money as we know it has gone through a number of phases, from tokens to coins, currency notes, bank deposits and credit cards. The emergence of smart cards, an electronic payment device that stores not only information but also value, holds promises for further social and economic progress. With a powerful chip, the smart card will revolutionise not only banking, but also the way we conduct daily life. One day, unique personal smart cards can become our passports, driving licence, home key and electronic purse, all rolled in one.

Hong Kong has an open and free market environment that encourages technological innovation. We thus welcome the arrival of smart cards. There is already considerable effort by the private sector in their development. The Hongkong Bank is involved in the Mondex card project. Standard Chartered Bank has announced its participation in a pilot scheme launched by Master Card International. In addition, the Royal Hong Kong Jockey Club and a few others are already developing smart cards for specific purposes. There will be keen competition for the business and we would leave technology and market forces to play their appropriate roles.

But for three reasons we the Monetary Authority would maintain a close interest in

developments in this area. I would like to share our thinking with you because it may have a bearing on how you position yourselves for this business. Our thinking has been very much influenced by discussions in other parts of the world on the same subject, in particular by the study of the Working Group on EU Payment Systems.

First, as Monetary Authority we feel that we have some responsibility over the integrity, stability and efficiency of the payment systems in our economy. These include not only the interbank payment system, which we are looking at closely with a view to moving it to real time gross settlement, but also the use of different instruments as a medium of day to day transactions by members of the public. Specifically, our interest lies, for any instrument which performs the function of money, in ensuring the soundness of the issuer and the soundness of the instrument itself. Banknotes, for example, are issued by three note issuing banks of high reputation under very strict arrangements, and the banknotes themselves are highly secured pieces of paper backed 100 per cent by US dollars held at the Exchange Fund. As smart cards have the potential of playing a significant role as a medium of transaction, we have a keen interest in following their development.

We feel quite comfortable about single purpose smart cards where the issuer is also the provider of goods and services on which the smart cards can only be used. However, for multi-purpose smart cards, particularly when they are pre-paid, it appears to us that the issue of those cards would constitute the business of taking deposits. In other words, the activity would fall within the ambit of the Banking Ordinance. This seems convenient because, by limiting the issue of multi-purpose smart cards to authorised institutions under the Banking Ordinance, our concerns on the soundness of the issuer and the soundness of the instrument

would seem adequately addressed. Having said that, I would still expect authorised institutions, who are thinking of venturing into this area of activity, to talk first to us about possible prudential issues specific to the individual institutions.

Our **second** area of interest concerns the implications of smart cards for monetary policy. The monetary system of Hong Kong is somewhat unusual in that we have a currency board arrangement whereby banknotes are issued and redeemed against the US dollar at the fixed rate of 7.80. The assured convertibility of our banknotes into a foreign currency at a fixed rate is an important anchor for currency stability and so it gives our banknotes a special, additional macro monetary function. I do not think that the evolution of smart cards would in any way undermine the effectiveness of our banknotes in playing that function, but obviously we need to be careful. (The result of Mondex's experiment in Swindon will provide useful information on the implication of smart cards for cash demand.) Our interest on this

front also has a statistical dimension. This involves the need to measure, and therefore appreciate the behaviour of, monetary aggregates meaningfully. We will inevitably be asking issuers to supply yet more statistical information.

Our **third** area of interest concerns the seigniorage of the legal tender. Banknotes are indirectly non-interest bearing liabilities on the balance sheet of the Exchange Fund and the Fund earns interest on the corresponding US dollar assets backing the banknotes. To the extent that smart cards may reduce the use of banknotes, this profit would be reduced. However, we do not feel that this is, at this point of time, a cause for concern. Certainly we do not feel that profits to the Exchange Fund should stand in the way of technological progress **if** it promises to produce a safer and more efficient medium of transaction than banknotes.

I wish the Conference every success in its deliberations. Thank you. ☺