

# SPEECH

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## Technological advances and the financial system

Thank you, Susan, for this exciting presentation. We know that technology has a profound impact on our society in many ways. And yet we cannot be passive bystanders in this development. Technology does not rule over technology. Humans do.

So my comments will focus on how to manage public sector objectives in this brave new world. The Riksbank may be a very old central bank, but we like to think we are still young at heart. We have to meet the challenge of how to perform public policy objectives as preferences are changing in our society.

First, a very obvious observation, is that *technological changes influence preferences both on the supply and demand sides of a market*. What I mean is, that once new opportunities have been introduced through technology, they change our habits and our expectations. The example that immediately comes to mind is payments. Here we have seen three trends enabled by technology during the last decade: faster transactions, increased cross-border transactions, and the increased scope to make payments 24/7. There are no opening hours for providers like Netflix, Spotify or Facebook. In a similar manner, a rapidly growing number of people expect to be able to access financial services, delivered instantly, everywhere and all the time.

My second observation, and here I sympathize deeply with Susan's call for action for regulators, is that the changes require an ongoing rethink of how we ensure that the financial system of the future will be safe, efficient and inclusive. First of all, we need to ask ourselves what is an appropriate distribution of responsibilities between the public and the private sector? Secondly, which is one aspect of the previous question, we need to consider what are appropriate regulations for the new markets that are opening up.

First of all, the public sector still has an important role to play. It is not just a passive bystander considering regulation while the private sector innovates; it needs to make some innovation and changes itself. Secondly, competition in markets for

financial services, especially financial infrastructure, have a tendency to be weak since only a few major players are established. This is due to inherent traits of the market, such as high network effects and high entry barriers. Infrastructures are in many cases controlled, or at least strongly influenced, by the incumbent players. This means that if we on the public sector side want to ensure that the financial infrastructure develops in a way that ensures free competition, which in turn facilitates further innovation and efficiency, then we need to get actively involved. The reason for this is that the public sector can act as a neutral party, and ensure a level playing field among private firms. Large private firms, on the other hand, are likely to want to reduce competition and the existence and growth of potential rivals.

How then does the Swedish Riksbank address these issues? Starting with payments, our vision for the future is that all payments should be settled in central bank money. In short, this is because a central bank can always meet its obligations in the domestic currency; its money is the safest money in the financial system. That is the reason why it is used by large financial institutions to make payments between them, and the central bank facilitates this because it wants to reduce risks in the financial system as a whole. The Riksbank therefore wants to ensure that all the new main forms of payment we are seeing today as a result of technological innovation are also settled in central bank money. This means that we as central bank need to update ourselves.

As part of this process, we are looking into changes to our real time gross settlement system, RIX, with increased opening hours, and allowing for an increased number of counterparties. We are also looking into the services we offer. In particular we are at present aiming to facilitate instant payments 24/7, with settlement in central bank money. In order to achieve higher efficiency we are prepared to share an infrastructure with other central banks. In this regard the European Central Bank's platform for instant payments, TIPS, is a very interesting alternative for us. We have initiated discussions with the European Central Bank on an agreement that will make it possible for the Swedish krona to settle on TIPS. The Swish payment method, today controlled by the existing banks in Sweden, may then be exposed to competition. Once payments in Swedish krona are settled through the ECB platform, I can imagine that instant payments between euros and krona will become possible. I would imagine that no one, who has a bank account and wants to make an instant transaction between euro and krona would in future need any so called Libras from Facebook, should they come into existence.

How do we feel about being dependent on a financial infrastructure situated outside our own border? The somewhat blunt answer is that we are already living in that reality. Allow me to demonstrate: This is a bird's eye view of Stockholm, and

bank A wants to make a payment to bank B.

## Financial infrastructure outside of Sweden?



Payment from Bank A to Bank B



Physical distance Bank A to Bank B via the Riksbank ~ 0.7 km



Communication distance Bank A to Bank B via the Riksbank ~ 6,000 km

My message is, that as people want to financial services to be instant, 24/7 and cross border, we on the public sector side have to be prepared to update our services and manage the infrastructure in such a way that we facilitate safety, efficiency and inclusiveness.

Another aspect of technological change, at least in Sweden, is that the use of cash is diminishing. Increased use of digital payments among users has facilitated this development, but banks in Sweden have also consciously pushed to remove the use of cash. There have been positive aspects of this development, but there are also several risks associated with it. Among these risks are the fact that the public can no longer access central bank money, which entails a risk of financial exclusion and a less efficient market for payment services. As a central bank we have been entrusted by society to ensure that everyone has access to safe and efficient payment methods, and this means that we analyse the situation deeply with an open mind.

It is therefore prudent to look into alternatives. I am referring here to what are known as Central Bank Digital Currencies, or CBDCs. We have for the last two years been looking into the possibility of issuing a CBDC in the future, the e-krona. The key question here has been whether there is a need for an e-krona, and whether this could mean a safe and efficient addition to the payments market. While there is no decision to launch an e-krona, the Riksbank is exploring potential technologies that could underlie an e-krona, and has therefore – like many other central banks around the world – launched a prototype project.

My last point is about technology and the law. The Riksbank works to ensure that the legal framework surrounding the future payment market is clarified. As a result, banks are from next year likely to be legally obliged to provide the public with a minimum of access to cash. Recently, the Swedish Parliament has also approved the Riksbank's proposal that there should be a public and multi-disciplinary enquiry that will look into the role of the public sector in the future payments market. Potentially, this enquiry will then lead to further proposals for

changes in legislation. To me, this process shows that technology has to interact with the law – the law underlies technology, and in the end technology can only be controlled by law. I am also convinced that the Parliament would not have made these decisions, if the Riksbank had not in recent years been consistently vocal about the need to prepare for a very different future when it comes to money and payments.

Let me conclude by saying, first, it is good to start early instead of being surprised by the emergence of Bitcoins, Libras and the like. And second, as representatives of public sector objectives we need to prepare, not only to regulate and supervise the private sector, but also to change the central bank services and infrastructures. By doing that, technological advances will work for the benefit of society instead of only a few.