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Challenges for Central Banking

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FOREWORD

It may be possible to claim that, generally speaking, central banks around the world have never before held such a central and well-respected position in their respective countries as they hold now. Their tasks seem to be reasonably well defined and the mandate given to them to guarantee price stability has so far worked more successfully than was perhaps expected. Inflation is lower than it has been for a long time. One central bank after the other has been given a position independent of normal party political processes. Research concerning monetary policy and other topics of relevance for central banking has made good progress during the past decade. Much of the mystique that has typically surrounded the internal work and decision-making of central banks has gradually disappeared. Instead, openness and transparency have become the key words of the day. The communication channels of central banks; speeches, inflation reports, minutes of meetings, etc. receive considerable attention and often give rise to headlines in the media. The environment in which central banks work and act today has thus undergone changes that in my view are very positive.

However, we should always be on our guard against complacency. It would be most dangerous for central bankers today to sit back and relax in the belief that all of the important problems have been resolved and need no further consideration. Unless central bankers remain constantly alert and vigilant, their policy-making can easily deteriorate. The confidence and respect that have gradually been built up with hard work can be lost in no time. Knowledge that was considered sound and well established yesterday may be obsolete and misleading tomorrow. In a rapidly changing environment mistakes could prove fatal. Central bankers who do not closely follow this development run the risk of suddenly and abruptly losing the respect and confidence that are vital for them. There will certainly always be new important challenges to be met by central banks.

With these words of warning in mind, it should be easy to argue convincingly in favour of thinking more deeply about the basic rationale for the existence of central banks. For those of us who are actively involved in cen-

tral banking it is important to sit down now and then and try to gain a deeper perspective on what we are doing and why we are doing it. In that context basic questions of why there are central banks and what they should do ought to be raised. Let me give a couple of examples of what such a thought process might lead to.

Firstly, there has been a *paradigmatic change in the theory and practice of macroeconomic policy.* The worldwide economic depressions in the interwar period fostered the idea that central banks had a responsibility for economic development and macroeconomic stability in general. Although this is still reflected in the legal framework that governs central banking in some countries, there has been a clear trend in recent decades to make the objectives of central banking more narrow again. Many central banks have received a more clearly defined responsibility for price stability, and increased independence from the government to fulfil that task. The experiences so far have been very positive, but some questions need further discussion. One is how an operational price stability target should be precisely defined, another is whether the central bank could really pursue an inflation target policy without due consideration to the consequences for the real economy. Another important issue is whether the central bank should be responsible for financial stability, and if so, what the relations are between price stability, financial stability and macroeconomic stability in general. Given that central banks should maintain price stability and/or financial stability, what is the minimum set of instruments needed to achieve these goals? And how can we measure the success of the central banks in meeting their objectives?

Secondly, innovations in financial markets continuously change both the instruments that are traded and the institutions that are active in those markets. When financial markets were heavily regulated, central banks could in principle easily maintain a stable payments system. In practice this task was not so easy, since central banking at that time had a wide variety of objectives. Furthermore, maintaining stable markets in a regulated system furthermore was not the same thing as achieving efficiency. On the contrary, the regulations became increasingly costly and the inefficiencies were the driving force behind the deregulation process. We have reason to believe that financial markets are much more efficient today. But that does not mean that no forms of supervision or regulation are needed. We need to formulate a new set of rules that is both flexible enough not to become rapidly obsolete as financial markets continue to develop, yet detailed enough to be useful to the authorities responsible for financial market stability and efficiency. What role central banks should play in this process is very much an open issue.

Finally, increased international economic integration, sometimes called "globalisation", is making it less useful to define separate sets of rules for

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monetary policy and financial market regulation for different countries. This has become obvious in the European Union, where the members of EMU have agreed on a common monetary policy. Whether or not there should also be a common policy of supervision and regulation of financial markets within the European Union is, however, still a controversial issue. At the global level, financial crises in different parts of the world have given rise to a discussion on the need for "a new financial architecture". The questions that are addressed in this discussion are largely the same as those that have previously been discussed within different countries. For example, how can a system with a lender of last resort and other forms of insurance against financial instability withstand problems of moral hazard and asymmetric information? The fact that these discussions have been lifted from the national to the global level reflects how far the internationalisation process has progressed.

These are some of the important topics discussed in this volume. In the introductory chapter it is suggested that the overriding rationale behind the creation of a central bank is to secure an efficient payment system and this theory would provide the discussion of the above-mentioned topics with a neat general framework. Be that as it may, whatever starting point is chosen, the various contributions to this volume will certainly help policymakers, central bankers, business economists and students organise their thinking about central banking.

The papers presented in this volume were discussed at a workshop on "Challenges for Modern Central Banking" in Stockholm 14-15 January 2000 organised by Sveriges Riksbank. I would like to thank all contributors, and in particular the members of the organising committee of this workshop—Helena Matheou, Torsten Persson, Anthony M. Santomero, Staffan Viotti and Anders Vredin—for their valuable work.

Stockholm, December 2000

Urban Bäckström
Governor, Sveriges Riksbank

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Chapter 1

CHALLENGES FOR CENTRAL BANKING: AN INTRODUCTION

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1. BACKGROUND

The rapid development of financial markets requires that central banks reformulate, or at least re-evaluate their current practice. There are several reasons for this. First, with innovations in financial markets changing both the instruments that are traded and the institutions that are active in those markets, the effect of some of traditional central banks tools may have changed substantially, and entirely new instruments may be needed. Second, because of the rapid expansion of the financial sector some areas of current concern, such as financial stability and the evolving payment system, seem to be more pertinent today than in the past. Third, there may well have been a paradigm change in the theory and practice of macroeconomic policy. Many central banks now receive clearly defined responsibility for price stability, and increased independence from the government to fulfil that task. Other potential social objectives of central banking, such as full employment, trade balance and exchange rate stabilisation have been given less weight than earlier in the post World War II period. Fourth and finally, modern central banking is heavily influenced by increased international integration, sometimes called "globalisation." This makes it less useful to define separate sets of rules for both monetary policy and financial market regulation for different countries.

* The authors want to thank Sonja Daltung for helpful comments on this introduction. The views expressed in this paper are those of the authors and do not necessarily represent those of the Federal Reserve System or the Executive Board of Sveriges Riksbank.

This has become obvious in the European Union, but financial crises in different parts of the world have also given rise to a discussion about the need for "a new financial architecture" at the global level.

Against this background, Sveriges Riksbank organised a workshop on the "Challenges for Modern Central Banking" in Stockholm, on January 14-15, 2000. The contributed papers and the discussions covered many different, but related aspects of central banking: monetary policy, supervision, regulation of financial markets, the infrastructure of the payment system, and international co-ordination, among others. In this introductory chapter we provide a reader's guide to the subjects discussed and the contributions included in this particular volume. Our hope is that this introductory review, and the book as a whole, can help policy makers and central bank economists organise their thinking about central banking. It should be useful as well for researchers who want to see the relationship between their own contributions and the literature on central banking in general and for students and business economists who try to understand what central banks and bankers do.

2. WHY DO CENTRAL BANKS EXIST?

Central banks are public institutions with a variety of tasks that differ across countries. Among the twenty-nine OECD countries, seventeen have price stability as their primary objective, two (Mexico and Sweden) have both price stability and an efficient payment system as their goals, while the other ten have an even broader set of objectives.[1] Knowledge of the specific history of a country's central bank is no doubt important to fully understand why a central bank is given the design and mandates it happens to have. History matters.

However, governments have changed their views over time on what central banks should do. In extreme, but recurrent, situations, the financing of government deficits has been an overriding task assigned to many central banks. In normal times, central banks have been expected to promote economic stability. The definition of the relevant stability measure also has varied over time. During the decades of Keynesian macroeconomic policy, the 1930s-1970s, stability of the real economy (production, employment) was a major goal, while during earlier and latter periods, both price level and financial stability have been viewed as the main purposes of central banking.

We think it is useful to start a discussion about the role of central banks in today's world, and of the challenges facing modern central banking, with the following basic question: Can we identify some clear public goods or

[1] See Pringle and Courtis (1999).

externality problems that motivate the creation of public institutions similar to the central banks that we see around us?

We may begin with a recognition that one important role of government in any market economy is to provide a proper infrastructure in a broad sense, including a stable general legal framework within which all markets operate. It should also try to achieve a market structure that permits firms to operate under reasonably competitive conditions. These arguments are also relevant for government intervention in the financial sector. An efficiently functioning payment system is absolutely vital for a modern market economy. This special role played by the financial sector has led many to conclude that one cannot rely entirely on private market initiatives to assure an efficient payment system. We concur. Therefore, we believe a key motivation for a public institution, such as a central bank, is this unique mandate. This could be stated succinctly as: *The main rationale behind the creation of a central bank is to secure an efficient payment system.* We do not believe that everyone must share our view to read and comprehend this book. Indeed, some of the authors of the different papers in this volume may have other views. Yet, it should be helpful to clearly define the role of central banks before entering a discussion of the problems they face.

In order to better understand this view of why central banks exist, it may be useful to embark upon the following thought experiment. Suppose one is asked what should be done in a situation where no commonly accepted medium of exchange (money) exists.[2] Most economists would find it rather easy to see at least four potential tasks facing a specialised public institution in its attempt to provide an efficient payment system. They would:

1. *Institute a common or generally accepted medium of account.*
2. *Create efficient and safe production and distribution of the medium of exchange in the form of fiat money.*
3. *Establish an environment that encourages efficiency and stability in the production and distribution of payment services performed by the private financial sector.*
4. *Seek to guarantee the stability of the purchasing power of money, i.e., price stability.*

Point One does not need much comment. The establishment of a common "metric system" is of great importance for any payment system and may seem to be a natural task for the state. Common media of account that also served as media of exchange, however, existed long before central banks. The conditions under which a common medium of account and exchange can arise endogenously are certainly worth careful analysis and discussion.

[2] See Marquis (1996), ch. 1 for a text book treatment.

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Here, we choose to point out that the reason why central banks exist may be that a central bank can improve upon a private payment system by offering a simultaneous solution to all the goals enumerated above, even if there may be other solutions, in principle.

Point Two deals with the role of central banks in directly providing the medium of exchange. A central bank can provide money in different ways. The state can make the notes and coins, which it produces into a common medium of exchange by backing them with real resources, e.g., gold, and/or by always being willing to exchange gold for money at a pre-determined price. An even better solution, which will economise on the economy's resources, is to provide fiat money. This may become a common medium of exchange if it is "backed" by a legal tender status and/or a legislated mandate for the central bank to keep the value of its money stable. If so, the medium of exchange provided by the central bank quite naturally also becomes the unit of account. This does not necessarily imply that central banking is a "natural monopoly", although, in practice, central banks typically have been given the monopoly right to provide notes and coins, which have the special status of legal tender.

This situation deals with a primitive economy, where intra-temporal and inter-temporal transactions are carried out through only one kind of money. If we look at the very complex real-world payment system of today, additional tasks quickly emerge for public institutions. In every advanced market economy, the payment system has developed into a complex interaction among private sector agents, the central bank and other public sector institutions. Means of payment are provided both by a central bank and private financial institutions on both the "retail level," in the form of notes and coins and bank deposits, as well as on the "wholesale level," through clearing and settlement of large value payments. It seems reasonable, therefore, to argue that the stability and viability of the institutions that own, operate and assure the values being transferred is of interest to the public policymaker. By far the most important private institutions in the process are banks. Very broadly, therefore, the public institutions have the additional role presented as Point Three above.

It is widely believed that banks display inherent instability characteristics that threaten to cause a collapse of the payment system as a whole. The existence of asymmetric information between borrowers and lenders is often cited as the most important reason why the state of the private financial sector may be problematic. However, some genuine information problems cannot be solved by public policy. In some cases government intervention may easily lead to lower efficiency, e.g., if a subsidised safety net in itself gives rise to moral hazard problems.

Yet, in a large number of cases, there are rules and regulations that will lower the welfare costs of private information problems. It has, therefore, been deemed necessary to set up a special regulatory and supervisory framework to control the behaviour of banks, other financial institutions and financial markets in general. This is because asymmetric information hampers efficiency not only in the payment system, but in the financial sector as a whole. Central banks and other public sector institutions have traditionally received the mandate to implement this framework.

Today, Point Four above is perhaps the most obvious, not to mention the most conspicuous task of central banks! In the recent decade, a consensus view seems to have developed that the overriding goal of monetary policy should be price stability. There is also a growing conviction among both economists and policymakers that this task should be delegated with a clear mandate to the central bank. This view fits well into the general framework discussed above: The main reason why central banks have been set up as special public sector institutions is the general concern about the financial infrastructure. Central banks have been assigned exclusive means to handle the core of the structure of monetary matters. Inflation could be seen as a tax on money, and high and volatile inflation lowers the efficiency of the payment system. Stabilising the general price level is therefore a natural responsibility for central banks.

As stressed above, however, a stable price level is not the only task of central banking and not the only important characteristic of an efficient payment system. Central bankers are thus aware that central banks should not strive for price stability *at any cost.* If price stability is one of several tasks, the challenge facing the central banker will be to evaluate inherent trade-offs and the effect that policy actions will have on the payment system. For instance, in extreme circumstances, a rapid increase (decrease) in the money supply may be needed to support the stability of the payment system, even if such an action would be inflationary (deflationary).

We think that the arguments above provide a good explanation of why central banks exist, and why they have been given the tasks that they currently have in most countries.[3] This is not to say that economic arguments lead to a conclusion that central banks, as we know them, are absolutely necessary institutions. Indeed, proponents of "free banking" argue that they are not. Be that as it may, central banks are very important institutions in modern market economies today. The important policy questions in practice, therefore, concern how these institutions, and the regulations associated with their activities, can be improved. The contributions to this volume address these questions.

[3] For a detailed account of the history of central banking, see, e.g., Capie, Goodhart and Schnadt (1994).

3. ISSUES IN MODERN CENTRAL BANKING

In the preceding section we attempted to provide a simple "manual" for the study of central banks and their basic rationale. An important idea in our preferred framework is that the goals of price stability and payment system efficiency are, normally, strongly related. Price stability is a desirable feature of an efficient payment system. Nonetheless, central banks sometimes organise their work as if payment system issues could be analysed independently of price stability (and vice versa). Although we think that such a view should be questioned, we have found it pedagogically useful to review the contents in this book under separate headings, depending on whether the arguments made are more closely connected to financial stability or price stability. Hence, we refer to each task of central banking sequentially in the following presentation of the other chapters. We leave the question of their interrelationships to the reader studying the contributions of the papers in each section.

3.1 Safety and efficiency of the payment system and financial stability

Regulation and supervision—the general philosophy

There is a fair degree of consensus among the contributors to this volume concerning the general reasons for special regulation and supervision of the financial sector; see the contributions by Boot et al., Vives, Bruni, Litan and Estrella. The importance of the financial system, through its role in both credit allocation and risk management, makes its smooth functioning crucial for society. With the main players, the banks, being characterised by inherent fragility, possibly with contagious consequences, systemic risks may become considerable and must therefore be controlled by policymakers. These problems are also enhanced by the widespread existence of safety nets, such as deposit insurance, lender-of-last-resort functions, too-big-to-fail arrangements, which create further moral hazard problems.

The authors also seem to agree generally on the set of policy measures that should be applied in the pursuit of financial stability. They point to the importance of handling the increasingly complex financial systems, continuously influenced by various innovations, with more qualitative supervisory measures, as supplements to the more traditional quantitative regulations, such as Basle capital adequacy rules.

The three pillars of the recent Basle proposal (discussed by Estrella) give a good illustration of the broadening policy agenda for financial stability.

The first pillar deals with reforming capital regulation, the second brings (discretionary) supervision into the picture, and the third deals with transparency and disclosure. The third pillar stresses the importance of market discipline as a mechanism complementary to direct regulation and supervision. One example is the proposal to introduce compulsory requirements on banks to issue subordinated debt (discussed by Litan), another is the suggestion for wider use of external ratings.

Beyond this, however, the increasing globalisation of financial markets and institutions also create new challenges for regulators and supervisors. As discussed by Vives and Bruni the expected rapid integration of financial markets and institutions in the Euro area will lead to demands for more coordinated activities between the national central banks and supervisory authorities, and probably to the establishment of some central European institution to deal with financial stability issues.

Who should supervise?

A number of authors (Bruni, Vives, Boot et al.) discuss how the work on financial stability should be organised. There are two interrelated questions here. The first is whether the responsibilities for regulation and supervision should be assigned to the central bank or to a separate government body. The second asks whether there should be one supervisory authority for the whole financial sector or a number of institutions specialising on different supervisory tasks.

Concerning the second question there seems to be consensus among the authors who pay attention to this issue that the development in the financial sector makes it more necessary to have one supervisory authority responsible for the whole financial sector. The main reason is that all financial institutions tend to become involved in the production and sale of the whole spectrum of basic financial services. To get reasonably similar regulatory treatment for these activities, wherever they are performed, and thereby avoid regulatory arbitrage, one overriding supervisory authority is probably to be preferred.

The first question is less straightforward to answer. There are clearly arguments both for and against assigning supervisory tasks to central banks as opposed to a separate institution. Both approaches are also widely represented around the world. A couple of authors (Vives, and Bruni) feel inclined to recommend the following solution, in line with the recent choices made by the UK and the Scandinavian countries. Regulation and supervision of all financial *institutions* is assigned to a supervisory authority that is separate from the central bank. But, the central bank in addition to its task of maintaining price stability is given responsibility for the stability of the fi-

nancial *system*. The mandate could be formulated explicitly as a responsibility for the over-all financial system stability, as in the UK, or in terms of a task to promote the efficiency and safety of the payment system, as in Sweden. In both cases the central bank is assigned macro-prudential duties vis-à-vis the banking system.

Central banks and financial stability

Whether there is institutional separation of this kind or not, there seems to be a growing awareness among central banks that they must pay attention to financial stability. The most important reason for this interest is the number of serious banking crises during the last few decades that have occurred over the world. This is partly explained by the fact that the globalisation of financial markets necessitated a deregulation of the financial systems in countries wishing to take part in financial modernisation. Banks often went from being tightly regulated to more market-oriented institutions in a fairly short time-period, sometimes with disastrous consequences. In the recent crises, the central banks (as well as the supervisory authorities for that matter) were generally taken more or less by surprise.

Among the conclusions drawn from recent experiences is the understanding that the lender-of-last-resort role of central banks has to be taken more seriously. The role as provider of liquidity in crisis situations is clearly of strategic importance, and central banks have to be prepared to handle such emergencies well. As is pointed out by a number of authors (Bruni, Vives, Boot et al.) this brings central banks into active macro-prudential work. As with financial regulation and supervision generally, the complexity and rapid changes of the financial system make this task a challenge. There are no simple and well-established strategies from which to choose when it comes to evaluations of banks in distress. The old age prescription is that central banks should be lenders to illiquid but solvent banks. In practice, this distinction is very difficult to make for central banks, especially considering the short time they typically have to make such lending decisions. The publication of stability reports, which has recently been undertaken by a number of central banks, is one attempt to organise and bring publicity to macro-prudential policy issues, as well as to allow for continuous evaluations of the health of the financial sector.

Crisis management

Related, important and difficult issues concern the division of responsibilities and duties in the event of a financial crisis actually occurring and the question of how clearly formalised these procedures should be, a priori.

Bruni and Vives touch upon this topic in their papers, but it certainly deserves further treatment. In a couple of countries reforms have been implemented or proposed, in which duties and responsibilities in the handling of banking crises are explicitly spelled out. The most well known example is probably the U.S., where the FDICIA framework provides the American bank supervisors with a detailed action plan to be followed in case a bank moves into the danger zone. Prompt corrective action and structured early intervention are ingredients in FDICIA that were clearly inspired by the experiences from the S & L crisis. Other countries, for instance Sweden, have recently come up with reform proposals intended to solve similar problems. However, their responses are more suited to their financial and legal systems.[4]

Specific payment system issues

As noted above the issues of regulation and supervision of the financial system, especially banks, have been analysed within a framework that, although far from fully developed, seems to be generally accepted among economists. This is not the case when it comes to understanding the analytical foundations of payment systems. Somewhat paradoxically, economists analysing the working of the market economy have had special difficulties in coping with the intricacies of the payment system, in spite of the obvious fact that well-functioning payment mechanisms are absolutely vital for a successful market economy. The never-ending fights among macro economists about the proper definition of money—and about proper theories of money demand—illustrate the state of the art. This is also reflected in this volume by the fact that only three papers deal explicitly with payment system issues (Humphrey and the two Green papers).

Humphrey deals mainly with the development of the retail payment system, while Green provides a nice exposition of large value payment systems and their required legal and institutional infrastructure. Humphrey discusses a number of areas where central banks can improve efficiency and reduce the costs of the payment system. For instance, shifting from an all paper-based system to a fully electronic one would save a considerable amount of resources for a country. Humphrey also discusses whether e-money will take over the role of central bank notes and coins, and what the consequences would be for instance for monetary policy. (This issue is also the main subject in Ohanian's paper.)

[4] See Viotti (2000) for a presentation of the proposals for new legislation in Sweden. An English summary of the proposals is included in the same issue of the Riksbank's *Economic Review.*

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