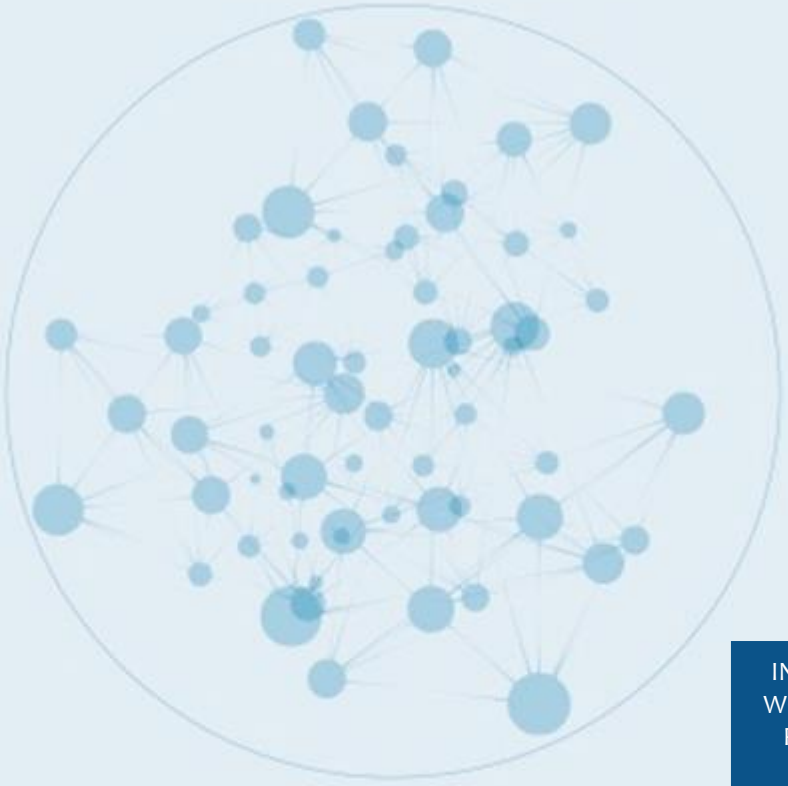
Inquiry: Design of a
Sustainable Financial System

UN environment

ON THE ROLE OF CENTRAL BANKS IN ENHANCING GREEN FINANCE



INQUIRY WORKING PAPER

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The UN Environment Inquiry

The Inquiry into the Design of a Sustainable Financial System has been initiated by the United Nations Environment Programme to advance policy options to improve the financial system's effectiveness in mobilizing capital towards a green and inclusive economy—in other words, sustainable development. Established in January 2014, it published the first edition of 'The Financial System We Need' in October 2015, with the second edition launched in October 2016. The Inquiry's mandate currently extends to the end of 2017, with work focused on deepening and taking forward its findings.

More information on the Inquiry is at: *www.unep.org/inquiry* or from: Ms. Mahenau Agha, Director of Outreach *mahenau.agha@unep.org*.

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About this report

This working paper results from a workshop the UN Environment Inquiry and CIGI held on 2-3 December 2014 in Waterloo, Canada to discuss options for a sustainable global financial system. The workshop included participants from a range of academic and research institutions from the Waterloo region and abroad, including the University of Waterloo, the University of London, Harvard University, and the University of Gothenburg.

Comments are welcome and should be sent to *simon.zadek@unep.org*.

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Abstract

The paper examines the role of central banks in 'greening' financial systems. Given the enormous investments needed to bring about a green transformation, the financial sector will have to play a central role in allocating resources towards a sustainable and green economy – and stop financing activities that harm the environment. Against this backdrop, the paper examines the extent to which environmental factors impinge on central banks' conventional goals and provides a theoretical analysis of the cases for and against central banks to respond to environmental and sustainability challenges. Moreover, the paper explores the ways in which central banks (as well as financial regulatory authorities) can impact investment decisions and the creation and allocation of credit through monetary as well as micro- and macroprudential policies, including disclosure requirements, climate-related stress testing and differentiation of reserve or capital requirements according to environmental impact. Although theoretical in nature, the paper is enriched by real-world examples. While making the case for a pro-active, 'sustainable development role' of central banks, the paper also discusses the risks of overstretching central banks' mandates and vesting too much power in unaccountable institutions as well as the division of labour between central banks and other institutions.

1 Introduction

Given the enormous investments needed to bring about a 'green transformation' towards sustainable, low-carbon development, the financial sector will have to play a central role in allocating resources to sustainable investments – and stop financing activities that harm the environment. Awareness has been rising that the financial system needs to take account of environmental and climate risks facing the real economy, and a large and growing number of central banks and regulators in developing and developed economies alike have already started dealing with this challenge in practice.[1]

And yet, the academic literature on central banking has largely ignored this topic thus far. The years since the outbreak of the Global Financial Crisis have seen an intensive discourse on the changing mandate of central banks and their role in safeguarding financial stability (e.g., Goodhart 2010; Eichengreen 2011; Buiter 2012; G30 2015). As pointed out in a recent G30 (2015: xi) report on the fundamentals of central banking, "important questions have arisen as to the proper roles, duties, and obligations of central banks in the years ahead." However, little attention has been dedicated to the role for central banks in addressing environmental and climate challenges despite the material risks they pose for real economies and financial stability.

Against this backdrop, this paper examines the extent to which environmental factors impinge on central banks' conventional goals and provides a theoretical analysis of the arguments for and against mandating central banks with environmental objectives. The paper also explores the ways in which central banks (as well as financial regulatory authorities if financial stability has been delegated to them) can impact on investment decisions and the creation and allocation of credit through monetary as well as micro- and macroprudential policies. Possible instruments include disclosure requirements, climate-related stress testing, differentiation of interest rate setting and variation of reserve or capital requirements according to environmental impact, or limits to certain types of investment or lending. Although theoretical in nature, the paper is enriched by real-world examples. While making the case for a pro-active role of central banks, the paper at the same time cautions against overburdening central banks' mandates. Central banks and financial regulators can make important contributions towards greening finance, but as will be discussed later they are not always the institutions best placed to do so.

The paper is structured as follows. Section 2 briefly reviews recent discussions about the roles and responsibilities of central banks. As a consequence of the Global Financial Crisis, the previously dominant consensus that central banks should essentially target inflation has been questioned, and a discussion has developed about other targets, especially financial stability, that central banks need to focus on and the tools needed to achieve them. In this context, the paper extends the discussion about central banks' responsibilities to include sustainability targets and the extent to which they may conflict with or complement other goals. Subsequently, Section 3 analyses the case for central banks to respond to sustainability challenges, and the relationship between possible sustainability objectives and financial stability and growth targets. Section 4 then discusses the range of policy instruments that may be employed by the central bank and financial regulation to achieve sustainability targets. This is followed by a discussion of the risks of overstretching central banks' mandates and undermining their institutional independence in Section 5. Section 6 concludes with some thoughts on the optimal division of labour between central banks and other public institutions.

2 The Changing Role of Central Banks

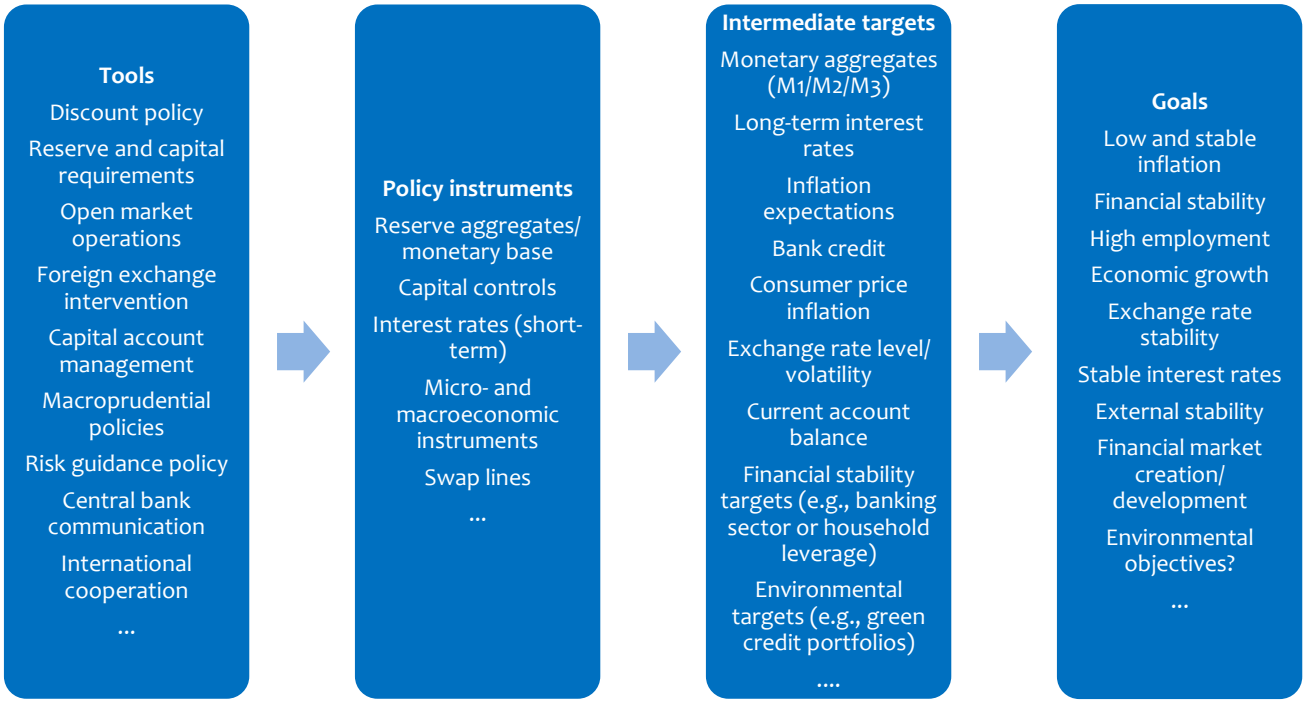
Milton Friedman (1968: 1) once remarked that "[t]here is wide agreement about the major goals of economic policy: high employment, stable prices, and rapid growth. There is less agreement that these goals are mutually compatible or, among those who regard them as incompatible, about the terms at which they can and should be substituted for one another. There is least agreement about the role that various instruments of policy can and should play in achieving the several goals." Today, most would agree that environmental and social sustainability should be added to Friedman's list of major goals of economic policy, but disagreements persist regarding the appropriate policies that should be adopted to reach these goals, their compatibility and who should be in charge.

Until recently, a relatively broad consensus existed regarding the role of central banks and monetary policy. The best contribution that central banks could make to societal prosperity, most economists believed, was to secure low and stable inflation rates. This conviction was epitomized by the so-called inflation targeting framework that dominated mainstream economic thinking since the early 1990s. Although maintaining financial stability had been historically one of the three main objectives of central banking (Goodhart 2010),[2] the rise of inflation targeting went along with a trend to delegate financial supervisory functions from central banks to dedicated financial regulatory authorities. Though appealing in its simplicity and clear rules-based approach, the inflation targeting concept has been severely criticized since the outbreak of the Global Financial Crisis for failing to address concerns other than price stability, and most importantly for its disregard of financial stability. Unsurprisingly, financial stability has again become a focal concern for central banks since the outbreak of the crisis. As Buiter (2012: 1) puts it, "there can be little doubt that, for any central bank faced with a potential conflict between price stability (or macroeconomic stability) on the one hand and systemic financial stability on the other, the primary of financial stability has been rediscovered with a vengeance. Systemic financial stability trumps price stability or macroeconomic stability every time – anywhere." This has serious implications for central banks with an inflation targeting framework as it questions the tenets of this approach. Frankel (2012) even went as far as to declare "the death of inflation targeting". In the same vein, Blanchard (2011: 8) debunked the simplistic pre-crisis orthodoxy which he described as "a one target, one instrument world" as follows: "Before the crisis, mainstream economists and policymakers had converged on a beautiful construction for monetary policy. To caricature just a bit: we had convinced ourselves that there was one target, inflation. There was one instrument, the policy rate. And that was basically enough to get things done. If there is one lesson to be drawn from this crisis, it is that this construction wasn't right, that beauty is unfortunately not always synonymous with truth. The fact is that there are many targets and there are many instruments. How you map the instruments onto the targets, and how you use these instruments best is a very complicated problem. This is the problem we have to solve. Future monetary policy is likely to be much messier than the simple construction we had developed earlier." (Blanchard 2011: 1)

Indeed, as Blanchard points out, there are numerous potential targets for the central bank and also a number of instruments that could be used to achieved them. Figure 1 provides an overview of potential tools, policy instruments, intermediate targets and policy goals. The policy goals of central banks can be broadly grouped into three main functional roles: maintaining price stability, maintaining financial stability, and supporting wider economic policy objectives. The latter may include objectives such as high employment, economic growth, exchange rate stability, stable interest rates, external stability, financial market creation/development, and possibly also sustainable development. The objectives will not

necessarily be of equal ranking. Price stability is specified as a primary objective in most central bank legislation, either as "an explicit legislative mandate or because more general objectives have been interpreted to require it" (BIS 2009: 3). Price stability is widely regarded as the sine qua non for achieving high and sustainable real growth. Price stability, however, need not be a singular or the only primary objective.[3] As discussed, since the Global Financial Crisis, financial stability has been rediscovered as a primary objective, even in cases where it is not specified as a dominant policy objective in a central bank's legislation. It is in the context of the demise of the inflation targeting framework and the discussion on a wider central bank mandate that the following analysis of a potential environmental role of central banks needs to be placed. Indeed, as will be argued in the next section, the renewed emphasis on the role of central banks in safeguarding financial stability can be directly linked to the case for responding to environmental and sustainability challenges. Arguably, even when environmental and sustainability objectives are not part of a central bank's explicit mandate, the instrumental incorporation of sustainability factors may be relevant in order to achieve price stability or safeguard financial stability.

Figure 1: Tools, Policy Instruments, Intermediate Targets and Policy Goals



Source: Compiled by author.

While multiple potential instruments exist, it is important that the Tinbergen rule, according to which the number of policy goals cannot exceed the number of policy instruments, is adhered to (Tinbergen 1952). This is no trivial matter, as highlighted by Mundell (1963: 262):"To achieve a given target there must be an effective instrument and to achieve various independent targets there must be at least an equal number of effective instruments. If a program includes more targets than instruments at least one target cannot be fully attained; whereas if it contains more instruments than targets, there will be more than one way of achieving the combination of targets. Just as a mathematical system will be "overdetermined" or "underdetermined" if the number of variables differs from the number of equations, so a policy system will not generally have a unique attainable solution if the number of targets differs from the number of instruments."

Hence, when discussing whether central banks ought to incorporate sustainability goals, it will be important to analyse the extent to which these can be included in a consistent and effective policy system. While central banks with more targets than instruments need to discuss how to recover more instruments, there is also a danger of overstretching central banks' mandates, as will be discussed in Section 5. But before this, however, the next section discusses whether there is a case for the central bank to include sustainability goals in their policy functions.