



Journal of Banking & Finance 25 (2001) 2089-2101

www.elsevier.com/locate/econbase

## Interest rate and liquidity risk management and the European money supply process

Kay Mitusch <sup>a</sup>, Dieter Nautz <sup>b,\*</sup>

<sup>a</sup> Technische Universität Berlin, Fakultät Wirtschaft und Management, WIP, Sekr. WW 17, Uhlandstr. 4–5, D-10623 Berlin, Germany

Received 1 June 2000; accepted 10 November 2000

#### Abstract

The monetary setup of the European Central Bank (ECB) centers around short-term securities repurchase agreements (repos) which ensure the flexibility of its money market management. However, a flexible repo-based monetary policy exposes banks to both interest rate risk and liquidity risk. This paper investigates the consequences for the money supply process and the conduct of monetary policy. We develop a loan supply model with maturity transformation and show how banks respond when future monetary policy is expected to become tighter or more uncertain. Our results also shed light on the rationale behind the use of different pricing rules in the ECB's repo auctions. © 2001 Elsevier Science B.V. All rights reserved.

JEL classification: E51; E52

Keywords: Loan and money supply; Monetary policy instruments; Interest rate risk; Liquidity risk

E-mail address: nautz@wiwi.uni-frankfurt.de (D. Nautz).

<sup>&</sup>lt;sup>b</sup> Department of Economics, Johann Wolfgang Goethe-Universität, Frankfurt am Main, Mertonstr. 17–21, D-60054 Frankfurt am Main, Germany

<sup>\*</sup>Corresponding author.

#### 1. Introduction

On 1 January 1999 the Euro was created and the European Central Bank (ECB) started its monetary policy operations. In contrast to the US and the UK, where open market operations dominate, central bank credits are of overwhelming importance in the monetary setup of the ECB. Specifically, the ECB's most important policy instruments for money market management and the control of the monetary base involve short-term securities repurchase aggreements (repos) where the bulk of reserves is auctioned off. <sup>1</sup> The repo rate is the key interest rate that governs short-term interest rates and signals the stance of monetary policy. This paper investigates how the characteristic features of the repo-based European monetary setup affect the money supply process and the conduct of monetary policy.

Since repos mature and are renewed on a weekly basis, the extensive use of repos enables the ECB to adjust banks' refinancing conditions flexibly and even at short notice. This flexibility increases the importance of policy signals and of banks' expectations and guesstimates for the money supply process. For example, for European banks it is of considerable interest whether the ECB performs its upcoming repo auctions as 'variable rate tenders' (where the repo rate is uncertain) or as 'fixed rate tenders' where the repo rate is preannounced and the central bank gives a strong signal about the monetary policy stance. This indicates that the ECB influences money supply just by being more or less vague or determined about the future course of monetary policy. We are therefore particularly interested in the question how banks cope with uncertainty about future monetary policy.

Until recently, the ECB has organized its main refinancing operations exclusively as fixed rate tenders in order to reduce the prevailing uncertainty at the start of the monetary union. In a fixed rate tender, the ECB sets the refinancing rate and banks bid the amount of reserves they wish to borrow. As a result, the European monetary base becomes endogenous. Endogeneity of the monetary base is limited, however, since the central bank controls the access to repo credits.

In order to explore these features of the European monetary setup, we will employ a two-period loan supply model where banks use a sequence of short-term central bank credits to refinance long-term loans. In this situation banks care about the future course of monetary policy for two reasons. First, the flexibility of monetary policy implies that future refinancing rates are uncertain. Banks are therefore exposed to interest rate risk. Second, due to the controllability of repo credits there is a liquidity risk because, if access to

<sup>&</sup>lt;sup>1</sup> In a repo, the central bank buys securities on condition that the seller (the bank) simultaneously repurchases the securities forward. Hence repos are central bank credits collaterized with securities.

# دريافت فورى ب متن كامل مقاله

### ISIArticles مرجع مقالات تخصصی ایران

- ✔ امكان دانلود نسخه تمام متن مقالات انگليسي
  - ✓ امكان دانلود نسخه ترجمه شده مقالات
    - ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
  - ✓ امكان دانلود رايگان ۲ صفحه اول هر مقاله
  - ✔ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
    - ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات