



# Monetary Policy in Russia: Identifying exchange rate shocks<sup>☆</sup>

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## ABSTRACT

Russian monetary policy has failed persistently to achieve sustained low inflation, both in absolute terms and relative to the peer group of countries similarly exiting from Soviet-style central planning. This paper explores the reasons for this state of affairs by analysing the kind of monetary policy that has been pursued by the central bank during the period 1995 to 2009. Our contribution is to search for a possible transmission channel between the real interest rate, inflation rate, exchange rate, output growth and foreign reserve growth, after having controlled for the effect of oil price inflation. Using a vector autoregressive model in error-correction form and using sign restrictions methodology, we show that the monetary authorities' failure to abate double-digit inflation appears to be driven by the policy of exchange rate targeting, as reflected in our identified exchange rate shocks.

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## 1. Introduction

In recent years, for most central banks around the world, monetary policy – whether expressed in terms of interest rates or growth of monetary aggregates – has been increasingly geared towards the achievement of price stability and low inflation. Very high or hyperinflation seems to have disappeared, at least since the mid 1990s. Average inflation in developing countries (including many countries of Eastern Europe and Latin America with histories of high inflation) has declined from triple-digit figures in the late 1980s to low single-digit figures by the end of 2001 (Domaç and Yücel, 2005). Wynne and Kersting (2007: 2) report that inflation in the last three decades has dropped dramatically, averaging just 5.8 percent in developing countries and 2 percent in industrial countries since 2000. It is in this context of a global environment where inflation outcomes have dramatically improved independent of the monetary framework for achieving price stability – that is, both in countries that have adopted inflation targets as well as in countries that have not (Ball and Sheridan, 2005) – that double-digit Russian inflation stands out. This has emerged particularly clearly since the global crash of 2008. Despite the deflationary global environment which took hold in the wake of that crash, Russian inflation declined relatively slowly from its 2008 peak of 14% for the CPI (with the PPI running at 30%) and

12 months into the crisis remained in double digits in annualized terms. Russia's inflation performance looks less poor, however, in comparison with more narrowly defined peer groups – whether regional (CIS countries) or structural (oil exporters), which in turn suggests some common roots of the monetary policy challenges discussed in this paper (see Fig. 1), and points to the persistence of the inflationary effects of the authorities' chosen policy responses.

This paper aims to identify the true strategy pursued by the Bank of Russia: targets are announced for both the exchange and the inflation rates (respectively, a managed float (Keller and Richardson, 2003) and a twelve-month CPI target) reflecting therefore a problematic mix (Vdovichenko and Voronina, 2006). These targets seem to be often missed with no consequence for the monetary authority. Stabilizing the exchange rate has become a major monetary policy goal in a number of CIS countries, namely Belarus, Kazakhstan, Russia and Ukraine, (Bauer and Herz, 2007).

In the absence of well-developed financial markets (Kutan and Brada, 2000), capital inflows causes serious problems for domestic monetary policies. With rising capital inflows, the central bank is more likely to buy excess foreign exchange supply on the market, leading to monetary expansion and inflation. On the other hand, if the central bank does not intervene in the foreign exchange market, the result could be nominal appreciation of the local currency which may lead to deterioration of the current account combined with reduced profitability. At the same time, repatriated proceeds from the export of oil and gas are quite successfully sterilized by means of oil price-related variations in the marginal rates of taxes specific to the oil sector, the proceeds of which flow into the stabilization fund.

Against this background, we search for a possible relation between the real interest rate, inflation rate, exchange rate, reserve growth, output growth (proxied by growth in industrial production) and oil prices to indicate what type of monetary policy has been followed by

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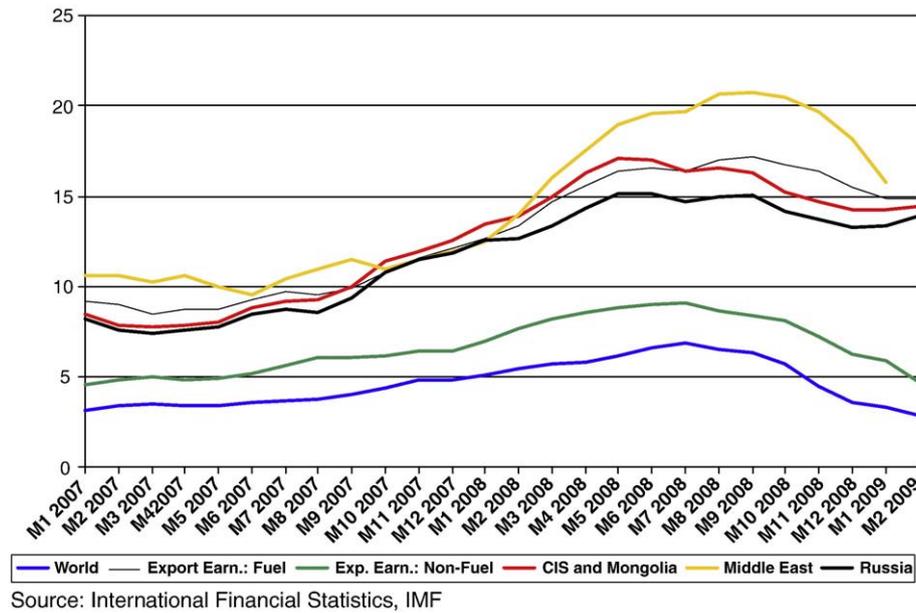


Fig. 1. Russia's comparative speed of disinflation.

the Bank of Russia during the period 1995 to 2009. We test whether the real interest rate is reacting to policy driven exchange rate shocks. If this is the case, then it can be demonstrated that the monetary policy stance of the central bank has not been primarily designed for price stability. Our focus is informed by the argument that inflation persistence is shown to come from economic agents' limited information about the central bank's policy objectives (Erceg and Levin, 2003). Thus in this paper, by imposing sign restrictions on impulse responses, we identify exchange rate shocks and then examine the impulse response functions.

The structure of this paper is as follows. Section 2 gives a snapshot of the story of Russian inflation and derives an inflation equation. A monetary policy rule in an open economy is formulated in order to test empirically the reaction of the real interest rate to exchange rate changes, inflation, and output and reserve growth. Section 3 then presents the data, methodology and empirical results. Using both a vector error correction (VEC) and Uhlig (2005)'s 'pure sign restriction' modelling strategy, this paper suggests that the authorities have targeted the exchange rate – specifically, accumulating foreign reserves in an attempt to prevent nominal appreciation, but the net effect of what might be termed this weak rouble policy has become a rise in inflation. Section 4 concludes.

## 2. Modelling inflation Dynamics

We have written extensively on the repeated episodes of high inflation in post-communist Russia (Granville, 1995; Ferguson and Granville, 2000; Granville, 2001; Granville and Mallick, 2006), explaining the constraints – namely the budget deficit (until 2000 when the fiscal adjustment was made) and the exchange rate – faced by the central bank in its conduct of monetary policy. While the literature is extensive, naming a few include Choudhry (1998), Cotarelli and Doyle (1999) Esanov, Merkl and Vinhas de Souza (2005), Oomes and Ohnsorge (2005), Papazoglou and Pentecost (2004), Starr (2005) and Vdovichenko and Voronina (2006), our aim in this section is not to offer a review of this literature but rather a brief summary of our work aimed primarily at explaining why we see the Russian authorities' preoccupation with the exchange rate as hampering monetary policy in its task of achieving low inflation.

### 2.1. A Snapshot of Russian monetary policy settings

In the early period 1992–93, an effective monetary policy framework was lacking due not only to the challenge of establishing new institutions and regulations, but especially also to the difficulty of overcoming the legacy of central planning where budget and credit financing were indistinguishable. The absence of domestic financial markets (the first T-bills were issued in May 1993) and access to international capital meant that the government budget deficits (consistently over 5% of GDP year after year) were financed by borrowing from the central bank. This 'monetary financing' led to very high inflation. The average monthly inflation rate reached 41 percent in 1992 due to the price jump of over 200 percent in January 1992 following price liberalization (that average monthly figure would be 18 percent without the January 1992 observation), and 21 percent in 1993 (Granville, 2001:100). In our empirical analysis, we decided to omit 1992 and 1993 in the hope that by omitting these first years of transition, the data will produce a less noisy measure to extract the results of the central bank's performance.<sup>1</sup>

The hard inflationary times of this early period eventually forced the government into a stabilization effort, culminating in the signing of a fully-fledged IMF programme on 26 March 1995, and in April that year, the independence of the central bank was increased allowing for the institutional separation of monetary and fiscal policy.<sup>2</sup> The central bank stopped officially acting as the banker of the government and state firms.<sup>3</sup>

It is during this period that the exchange rate started to act as the other major constraint for monetary policy – especially after T-bill issuance replaced seigniorage as the deficit financing mechanism. From early 1995, there was a shift in the financing of the budget deficit away from central bank credits in favour of short-term treasury bills (or 'GKOs').<sup>4</sup> The curbing in the growth of domestic credits brought a sharp appreciation of the domestic currency – the rouble – in April–May (Granville, 2001:108). This led to the adoption in July 1995 of an

<sup>1</sup> Although our sample starts from 1995, in calculating growth rates of different variables, 1994 observations have been used as the initial values.

<sup>2</sup> The "Central Bank Law" enacted in April 1995.

<sup>3</sup> [http://www.cbr.ru/eng/today/history/central\\_bank.asp](http://www.cbr.ru/eng/today/history/central_bank.asp): "On April 26, 1995, the Bank of Russia stopped extending loans to finance the federal budget deficit and centralised loans to individual industries and sectors of the economy."

<sup>4</sup> 1995 Federal Budget Law.

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