

# The Exchange Rate Policy of the ECB<sup>1</sup>

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## Executive Summary

- Misaligned or volatile exchange rates may be costly.
- Using monetary policy to target the exchange rate conflicts with attaining price stability.
- The central bank could be given multiple objectives, but this would cost it its credibility.
- It is suggested that sterilised foreign exchange intervention may be a second monetary policy tool.
- But, does sterilised foreign exchange intervention work?
- There is little evidence that sterilised intervention is effective through a portfolio-balance channel.
- There is little reason to believe that sterilised intervention has a signalling role.
- It is not obvious that foreign exchange intervention or central bank speeches can prevent coordination failures; it may even cause them.
- The ECB does not need an exchange rate policy. But, if it has one it should be transparent.

The most important role of a central bank in a modern society is to provide a stable means of payment; hence, price stability is the ECB's mandated primary goal. The ECB and other central banks, however, may also be interested in maintaining a stable exchange rate.

### *Misaligned or volatile exchange rates may be costly*

Swings in exchange rates can do real damage to an economy. A stronger domestic currency increases the foreign-currency prices of exported domestic goods, making them less attractive to foreign purchasers. For any home-currency price, it also increases the foreign-currency price of imported goods. This allows foreign producers to lower their home-currency prices and foreign goods become more attractive relative to domestic goods. The strong currency lowers competitiveness and

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workers and firms are hurt. A weaker currency increases the prices consumers and firms pay for foreign goods. This causes damage by increasing consumer price inflation and the prices that domestic firms pay for imported imports.

In addition to a too high or too low exchange rate causing harm, volatility of exchange rates may be injurious. The empirical evidence is inconclusive, but it seems reasonable that exchange rate uncertainty should reduce international trade and investment.

*Using monetary policy to affect the exchange rate conflicts with attaining price stability.*

Unfortunately, using monetary policy to influence an asset price – such as an exchange rate – may conflict with providing low and stable inflation. Suppose, for example, that a central bank is confronted with a rising external value of its domestic currency that it perceives as undesirable. If inflation is to be contained, it is not possible to reduce interest rates to lower the currency's value. A central bank cannot use monetary policy to target both inflation and the exchange rate and expect to achieve either objective.

*The central bank could be given multiple objectives, but this would cost it its credibility*

A possible solution is to adopt a more flexible attitude about the primary role of a central bank and to give the central bank multiple objectives, to allow it discretion in trading off the costs of inflation against the costs of a fluctuating currency. Unfortunately, this increased flexibility comes at the cost of a loss of credibility. If inflation is low and the home currency is appreciating, the central bank could lower the interest rate for opportunistic reasons unrelated under the guise of trying to contain the exchange rate.

*It is suggested that sterilised foreign exchange intervention may be a second monetary policy tool.*

Another solution is to realise that the monetary authorities potentially have more than one instrument. In addition to controlling the short-term interest rate, they can engage in sterilised foreign exchange intervention. In theory, sterilised intervention works as follows. Suppose that a government wants to lower the value of its domestic currency against the dollar. It would buy dollar-denominated debt from the private sector, selling its domestic currency in return. This, however, increases the supply of the domestic currency which is not compatible with the central bank maintaining its chosen short-term interest rate. Thus, to keep from having to change its monetary policy, the central bank sterilises or undoes the effect on its domestic money supply by performing an offsetting open-market operation: selling domestic-currency-denominated debt for domestic currency. Thus, the outcome is an unchanged domestic money supply and an increase in the supply of home-currency denominated securities relative to dollar-denominated securities.<sup>2</sup>

It should be noted that as long as the Governing Council has control of monetary policy, no matter who in the Euro zone has control of exchange rate policy, all ECB foreign exchange intervention can be sterilised.<sup>3</sup>

The idea of sterilised intervention is not new and its appeal to policy makers has varied over time. European countries and Japan bought dollars in an attempt to slow the dollar's decline in the late 1970s and they sold them to stem its rise in the early 1980s. In September 1985, the United States government – scared of rising domestic calls for protectionism – joined the other G-5 countries in signing the Plaza

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<sup>2</sup> In practice, central banks may not go through this whole two-part procedure. Instead, they may effect a more rapid transformation of the fraction of outstanding debt denominated in domestic currency with the use of derivatives, especially forward contracts and swaps. Thus, sterilised intervention is achieved synthetically.

<sup>3</sup> Central banks do not always choose a country's intervention policy. In the United States the Treasury is senior to the Federal Reserve in deciding foreign exchange intervention. In Japan, intervention is decided by the Ministry of Finance.

Accord and took part in the resulting concerted intervention to further the dollar's fall. In February 1987, G-6 finance ministers agreed at the Louvre on cooperative intervention to stabilise exchange rates. Most of this intervention, as well as the Bank of England's disastrous 1992 attempt to stave off the collapse of the pound – which reportedly resulted in a \$5 billion capital loss in only a few hours – was sterilised.

In recent years, many central banks of industrialised nations – perhaps convinced of its ineffectiveness – have done little intervention. The United States, which intervened in foreign exchange markets on average one out of four business days between February 1987 and July 1990, has intervened only twice since mid-August 1995 – in June 1998, when it sold dollars for yen in a cooperative action with the Bank of Japan, and in September 2000 when it sold dollars for euros in coordination with the ECB and the monetary authorities of Japan, Canada and the United Kingdom.

Policy makers' current attitudes toward intervention vary greatly. In 2004 the Reserve Bank of New Zealand Governor, Alan Bollard, asked for the capacity to intervene in disorderly conditions. But, the Bank of Israel Governor, Stanley Fischer says that it is not healthy, "It would change the nature of the market completely. If we intervene, instead of the market focusing on the fundamentals, it will be wondering how we were feeling that morning."<sup>4</sup>

*But, does sterilised foreign exchange intervention work?*

Does sterilised intervention work? Clearly *unsterilised* intervention works. All sensible theories of exchange rates predict that a – if not the – most important determinant of the exchange rate is the relative size of the relevant countries' money supplies. If the supply of domestic currency goes up relative to the supply of dollars,

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<sup>4</sup> Reported in the *Jerusalem Post* 12, April 2007.

then *ceteris paribus*, the domestic currency can be expected to depreciate against the dollar. The effect of an increase in the supply of home-currency-denominated debt relative to the supply of dollar-denominated debt on the value of the home currency is less clear, however. But, in theory it might cause the home currency to depreciate.

The reason is as follows. If financial assets denominated in different currencies have different risk characteristics, then members of the private sector will want to diversify their portfolios between securities denominated in different currencies. If the supply of euro-denominated debt rises relative to the supply of dollar-denominated debt then – at unchanged exchange rates – investors will find themselves holding a greater portion of their portfolios in euro-denominated securities than they want. Equilibrium can be restored if the euro depreciates, lowering the real value of euro bonds relative to dollar bonds.

There are, however, two potential reasons why this portfolio balance effect may be small. One reason is that is sometimes given is that investors do not regard bonds denominated in different currencies as having sufficiently different risk characteristics: they are good substitutes for investors. Thus, equilibrium in international bond markets is achieved when debt denominated in different currencies has similar returns on average. Given the similar returns, the investors do not care much how their portfolios are allocated. Thus investors are willing to accommodate a change in the relative supplies of securities denominated in different currencies; little change in the exchange rate is necessary.

This story is at odds, however, with a vast empirical literature demonstrating that assets denominated in different currencies are poor substitutes. Risk premia in foreign exchange markets are not small, but puzzlingly large and unpredictable; investors do care about how their portfolios are allocated.

An alternative explanation is that investors are *Ricardian*. Suppose that the tax liabilities of the current members of the home private sector depend on the government's net issuance of home-currency and foreign-currency debt. If the government conducts sterilised intervention, then the government's tax liabilities will change. If the private sector had chosen its investment portfolio optimally before the intervention, then the change in its tax liabilities means that its portfolio is no longer optimal. It can achieve the same net-of-tax income stream as before the intervention by conducting trades that are the opposite of the government's. Thus, for the country as a whole, the net issuance of home-currency debt relative to foreign-currency debt is not changed by sterilised intervention and there is no need for exchange rates to adjust.

*There is little evidence that foreign exchange intervention is effective through a portfolio-balance channel*

Does foreign exchange intervention affect the fundamental value of the exchange rate in this manner in practice? Participants at the 1982 G7 Economic Summits of the Heads of Government at Versailles agreed to coordinate a vast international study of the effectiveness of sterilised intervention. The study, along with a sizable body of later research, concluded that the effects of sterilised intervention are at most small and ephemeral.<sup>5</sup> Rare exceptions are Ghosh (1992) who finds weak evidence in favour of a portfolio-balance effect and Dominguez and Frenkel (1993) who find that intervention affects risk premia, supporting the hypothesis of a portfolio-balance effect.

*There is little reason to believe that sterilised intervention has a signalling role.*

If the portfolio-balance effect of sterilised intervention is small, it has often been suggested that sterilised intervention may still be effective because of its

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<sup>5</sup> See Edison (1993) for a survey of the early literature. Humpage (2003) is a more recent survey.

information-signalling role. A central bank that is better informed than the public can signal its knowledge that its currency is, say, overvalued by selling the currency. A problem is that the central tenet of this story – that the central bank is a better forecaster of future exchange rates than the private sector – is questionable. It is not clear – some studies find one thing and some another – that central banks make a profit on their intervention. There is also little evidence that foreign exchange intervention has forecasting value. Using US data for 1990 – 1997, Humpage (1997) casts doubt on central banks' ability to convey economic information through intervention by suggesting that official intervention does not improve on the informational efficiency of the foreign exchange market. Indeed, as much central bank intervention is secretive, it does not appear that central banks view their intervention as a signal.

It has been suggested that monetary authorities might use sterilised foreign exchange intervention to signal their own private information about their future plans. The idea is that if a central bank purchases foreign currency then this signals an easing of monetary policy; if it sells foreign currency then this signals a tightening. Credibility arises because intervention creates an open position for the monetary authorities. If the central bank purchases foreign exchange then it makes a profit only if its currency weakens; hence, the story goes, it pays to ease monetary policy. Likewise, if the central bank sells foreign currency it gains by following a tight monetary policy so as to cause an appreciation of the home currency.

For the above story to be sensible, private sector beliefs must be rational; hence, on average they must be validated. Thus, it must be that the monetary authorities' incentive to make a profit is so strong that a purchase, or sale, of foreign exchange is indeed followed by the expected loosening or tightening of monetary

policy. But, the weight that policy makers attach to foreign exchange gains and losses in their objective functions and the relatively small profits and losses involved in any reasonable amount of foreign exchange intervention suggest that it is unlikely that the other goals of monetary policy are likely to be subordinated to this purpose. Not surprisingly, there is little empirical evidence that foreign exchange intervention helps market participants predict monetary policy in this way. One paper did find some predictive power but found that it went the wrong way: a purchase (sale) of foreign exchange was followed by a tightening (loosening) of monetary policy.<sup>6</sup>

*It is not obvious that foreign exchange intervention or central bank speeches can prevent coordination failures*

Recent research has suggested that intervention might be used to correct coordination failures in the foreign exchange market. It is suggested that the foreign exchange market may be subject to irrational speculative bubbles, perhaps brought about by chartist or technical analysis. Once a bubble has started, publicly announced intervention may help market participants coordinate on moving back toward a fundamental equilibrium. The classic example is the 1985 Plaza Accord that led to concerted intervention which may have helped puncture a dollar bubble. The coordination channel is proposed by Sarno and Taylor (2001); Taylor (2005) finds evidence supporting the effectiveness of intervention through this channel. Obstfeld (1990) as well as several other studies, however, suggest that foreign exchange intervention played only a small role in the realignment of exchange rates after the Plaza Accord.

There are a number of difficulties with this argument. First, the authorities must be able to identify a bubble. Second, it is not clear why intervention is necessary for coordination. Why would it be any more effective than, say, a speech or other

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<sup>6</sup> Kaminsky and Lewis (1996).



official announcement. Second, recent research by suggests that providing public information in this manner may be harmful. Morris and Shin (2002) suggest that if the government provides credible and useful information, then members of the private sector – eager to coordinate – will focus on the government’s information at the expense of their own. The government’s information crowds out the private information.

*The ECB does not need an exchange rate policy*

Obviously the ECB analyses exchange rate and current account movements: this information is useful for predicting inflation and, hence, for picking the correct monetary policy. However, the previous arguments suggest that the ECB should not be in the business of influencing exchange rates independently of their effect on the price level. Thus, the ECB does not need an exchange rate policy that is separate from its monetary policy.

However, should the ECB – or any other Euro zone body -- have an exchange rate policy it should be transparent and any sterilised intervention should be promptly reported: secrecy does not promote accountability or credibility.

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