



EUROPEAN CENTRAL BANK

## “The Euro Goes East”

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### 1. Introductory remarks<sup>1</sup>

I am very pleased to be with you today at the Eighth Dubrovnik Economic Conference. One part of my pleasure, I admit, is being here in one of the major cities of south-east Europe, in this beautiful location on the Adriatic. This region was, is and will remain connected in many ways with the countries of the euro area. The role of the euro in the region is one of the salient links between the euro area and south-east Europe, a link that is particularly noteworthy seen from Frankfurt.

The other part of my pleasure derives from the theme of the conference – currency substitution – which I find particularly interesting. Indeed, one facet of the presence of the euro in south-east Europe is its circulation as a parallel currency. This means that the euro is either used in fiduciary or scriptural form by private agents together with, and even instead of, the domestic currencies. Other speakers have covered this topic from the perspective of the countries concerned. I would like to talk today about the “mirror image” of this phenomenon, namely the perspective of the central bank that issues the euro. In particular, I would like to present some recent evidence on the euro’s circulation abroad and some policy considerations related to this issue.

The Euro goes East. As this title suggests, I will take a broad perspective and focus on “eastern” Europe in a wide sense, embracing all the regions to the East of the European Union (EU). I am aware that this geographical reference is somewhat deceptive. I come from Italy, whose “heel” extends further east than Dubrovnik. Moreover, for a continent coming closer together, living by democratic principles and in economic freedom, references to “east” and “west” are purely indicative. So please take the notion of “east” as nothing more than a label of convenience for where most of the action is taking place, namely in central, eastern and south-east Europe.

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<sup>1</sup> The paper is based on background work undertaken by Francesco Mazzaferro, Arnaud Mehl and Adalbert Winkler of the Directorate General International and European Relations, in co-operation with colleagues of the Directorates General Statistics, Economics and Banknotes. The author is also grateful to Christian Thimann for support in the preparation of this paper.

As I will show in the first part of this lecture, the evidence suggests that the euro has smoothly and successfully replaced the legacy currencies, notably the Deutsche Mark (DM), in this region. The evidence also suggests that the cash changeover outside the euro area probably consisted of three elements:

1. First, a large proportion of the legacy currency banknotes circulating outside the euro area was converted into euro banknotes, its value totalling EUR 18 billion;
2. Second, quite unexpectedly, a significant share of the legacy currency banknotes that used to circulate outside the euro area, amounting to more than EUR 13.5 billion, has been deposited in euro-denominated accounts, in particular in eastern Europe;
3. Lastly, a residual, and probably more limited volume of the legacy currency banknotes may have been converted into banknotes denominated in currencies other than the euro.

Overall, the bulk of legacy currency banknotes held abroad has been converted into euros, either in cash or deposit form. A noteworthy implication of this rising volume of euro-denominated deposits abroad is that the euro circulates increasingly in scriptural and less in fiduciary form outside the euro area, in particular in eastern Europe.

Even though the euro has followed the Deutsche Mark to the east, its role as a parallel currency differs in one major respect to that of the German currency. Eastern Europeans mostly held DM banknotes for the same reason as they once held gold: to protect their wealth in times of uncertainty and as a means of payment whenever confidence in the domestic currency was lost. While this behaviour may not have disappeared with the advent of the euro, another factor has come into play. As I will explain, this factor consists in the fact that the financial, economic and institutional links between the region and the euro area are strong and likely to become stronger in the future. The role of the euro thus reflects an “ever closer union” among the two parts of the European continent.

Let me now elaborate on these points.

## **2. The starting point: a puzzle and an opportunity**

Central banks know precisely how many banknotes their printing works produce. However, they do not know where banknotes are held once they enter into circulation, due to their anonymity.

Central bankers would like to know who uses their currency, particularly to know about circulation abroad, because this information would shed light on the international role played by their currency and would also help, through the improvement of monetary aggregates statistics, the conduct of monetary policy.

So far, central banks could only rely on estimates of currency in circulation abroad which, in spite of sophisticated econometric techniques, are highly imprecise. More direct methods, using balance of

payments statistics and data on banknotes shipped abroad by domestic banks, also give rather poor estimates because they do not track the many unrecorded channels through which banknotes flow out of their country of issuance. Banknotes can easily flow out unrecorded, and for that very reason they are popular. They can be easily concealed and effortlessly carried across borders, both for legal purposes, such as workers' remittances, tourists' money, and for illegal activities, ranging from tax evasion to organised crime.

The US dollar is of course the foremost example of a currency that circulates far beyond its national borders.<sup>2</sup> In Europe, prior to the cash changeover, this was the case for the DM. A Bundesbank staff study, published in the mid-1990s, estimated that around one-third of DM banknotes, equivalent to EUR 32–45 billion, circulated outside Germany.<sup>3</sup> The total amount of legacy currencies, that is all the currencies replaced by the euro, in circulation outside the euro area was unknown. There was only anecdotal evidence that a number of them circulated abroad, like the Spanish peseta, the French franc and, to some extent, the Austrian schilling or the Italian lira. Even less was known about where these banknotes were held. A large share of DM banknotes was believed to be circulating in central Europe, south-east Europe and Turkey.<sup>4 5</sup>

A unique opportunity came with the advent of euro banknotes and coins at the beginning of this year, the so-called cash changeover. All legacy currency banknotes held inside and outside the euro area had to be replaced by the new euro banknotes and coins. For this reason, the changeover has provided an opportunity to gain first-hand evidence on the foreign circulation of the euro. On the occasion of the changeover, information from three distinct sources has been compiled:

1. Shipments by banks of euro banknotes outside the euro area, with the help of the national central banks of the Eurosystem, which are likely to have been the main channel of outflows so far;<sup>6</sup>

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<sup>2</sup> It is estimated by the Federal Reserve System that in fact the majority of US dollar banknotes – between 55 and 70 percent of the US dollar currency stock – circulates outside the United States (Porter and Judson, 1996). Of this quantity, a large share is believed to circulate in Latin America and Russia (Rogoff, 1998).

<sup>3</sup> See Seitz (1995). An even higher estimate, based on other econometric techniques, was published by staff of the Federal Reserve System (Doyle, 2000).

<sup>4</sup> Regular surveys commissioned by the Oesterreichische Nationalbank (Stix, 2001) had indeed confirmed, prior to the cash changeover, that the Deutsche Mark and, to a lesser extent, the Austrian schilling, were circulating in a number of countries of central, eastern and southern Europe. There is also anecdotal evidence that the French franc was circulating in North and sub-Saharan Africa.

<sup>5</sup> South-east Europe, in this lecture, comprises the transition economies in the Balkans, excluding Bulgaria and Romania which are part of the group of accession countries.

<sup>6</sup> As the initial supply of euro banknotes abroad, the so-called frontloading, was entirely channelled in December 2001 through central banks and commercial banks, the initial amount of banknotes that foreigners received was meticulously captured in data on euro area banks' banknotes shipments. After the frontloading period, from 1 January 2002 onwards, there have been additional shipments of banknotes by banks. However, as euro banknotes have been available to anyone inside the euro area since then, they can flow out through the many unrecorded channels. As time goes by, with the upcoming summer season and cross-border transactions in the grey economy, data on banknotes shipments by banks will become increasingly less reliable as a measure of the foreign circulation of the euro. However, in the period between the beginning of the cash changeover and the start of the tourist season, they can be considered as a satisfactory proxy of outflows of euro banknotes abroad.

2. the evolution of euro-denominated commercial bank deposits in almost 30 countries neighbouring the euro area (in eastern Europe, the Mediterranean and Africa), before and after the cash changeover. This was done in co-operation with the respective central banks;<sup>7</sup>
3. shipments abroad of other major international currencies, which were assessed on the basis of available evidence. In the run-up to the cash changeover, a series of academic papers, widely reported in the press, argued that holders of DM banknotes in eastern Europe had massively switched to banknotes denominated in other currencies, putting pressure on the euro in foreign exchange markets. This was allegedly due to a lack of information on changeover operations and uncertainty about the future value of their holdings.<sup>8</sup> As I will argue, these concerns were probably overestimated.

Let me review these three developments, focusing in particular on their relevance for eastern Europe.

### **3. Putting the pieces together**

Consider *banknotes* first. Cumulated net shipments by banks of euro banknotes to destinations outside the euro area were estimated end-April 2002 to be close to EUR 18 billion (Chart 1). This figure, which represents around 7 percent of the euro's total currency in circulation, is net of banknotes inflows and includes the initial amount supplied during the frontloading period in December 2001.

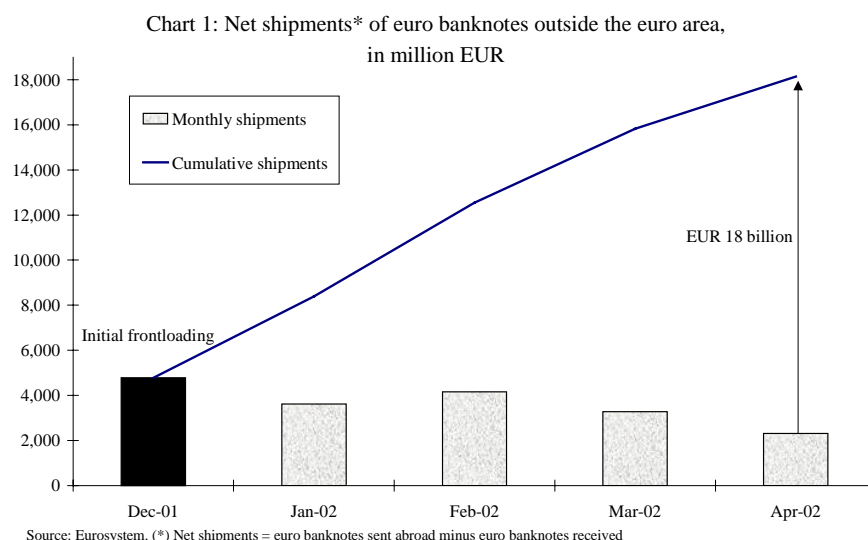
As to the *destination* of shipments, the ECB has information only on the part that was frontloaded. Eastern Europe and Turkey, two regions where the circulation of legacy currencies was presumably large, received together more than half of the banknotes at that time.<sup>9</sup> Large amounts were also transferred to North Africa and to international banks based in industrialised countries.

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<sup>7</sup> The following 28 countries participated in the data collection campaign: Albania, Belarus, Bosnia, Bulgaria, Croatia, Cyprus, the Czech Republic, Egypt, Estonia, Yugoslavia, Hungary, Israel, Kosovo, Latvia, Lebanon, Lithuania, the Former Yugoslav Republic of Macedonia, Malta, Moldova, Montenegro, Morocco, Poland, Romania, Slovakia, Slovenia, South Africa, Turkey, and Ukraine. Their co-operation is gratefully acknowledged. The ECB also obtained data from a number of industrialised economies neighbouring the euro area (e.g. Iceland, Norway, Switzerland), which are disregarded in this paper, as developments in these countries are likely to be explained by reasons very different from those relevant for the first group of countries.

<sup>8</sup> See, in particular, Sinn and Westermann (2001a, 2001b). This issue was brought to the policy agenda of the Economic and Monetary Affairs Committee of the European Parliament at a recent hearing of the ECB's President, where a number of observers urged the ECB to monitor and inform the public about the foreign circulation of the euro. See the background documentation to the hearing prepared by de Boissieu (2002), Gros (2002) and Walter (2002).

<sup>9</sup> Other data compiled in countries where the euro circulates, including those of the Croatian National Bank which were presented during the conference (see Feige, 2002 and Kraft, 2002) can be a valuable complement to the information collected by the Eurosystem to gain evidence on the location of euro holdings abroad.



It is reasonable to presume that, by now, a substantial share of legacy currency banknotes may have already been exchanged into new euro banknotes.

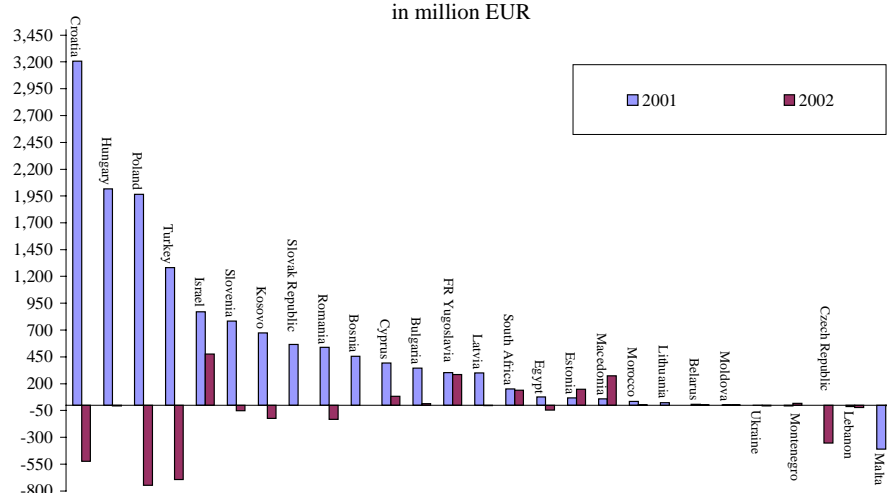
The second part of the picture is an unexpected development: *legacy banknotes converted into euro-denominated deposits*. Indeed, in the run-up to the cash changeover, several countries in eastern Europe encouraged households to deposit “under the mattress” foreign *cash* in foreign currency *accounts* rather than exchange them directly into new euro banknotes. Credit institutions, in particular foreign-owned banks, widely advertised euro-denominated accounts at attractive conditions. This strategy was intended to boost confidence in banking systems that, in some countries, had a weak reputation after years of mismanagement and crises.

In co-operation with the central banks of neighbouring countries, the ECB has collected information on the scale of these developments. In 28 such countries, euro-denominated deposits increased markedly in 2001, in total by more than EUR 13.5 billion. Interestingly, the bulk of the increase took place in the last months of the year, in the run-up to the cash changeover.<sup>10</sup>

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<sup>10</sup> It goes without saying that the EUR 13.5 billion estimate should be taken as an approximation of the total amount of legacy currency banknotes in circulation outside the euro area which were deposited in euro-denominated accounts. On the one hand, data are missing for a few relevant countries. This suggests a possible underestimate. On the other hand, the surge in euro-denominated deposits may result from the granting of euro-denominated loans and reflect a share thereof which has been deposited. This suggests a possible overestimate.

Chart 2: Changes in euro-denominated bank deposits (in 2001 and 2002), in million EUR



Note: 2001 - second half-year data for Hungary and Slovakia; last quarter data for Albania; no available data for the Czech Republic; 2002 - January data for Belarus, Bosnia, Egypt, Latvia, Lithuania and Ukraine; January-March data for Albania, Croatia, the Czech Republic, FYR of Macedonia, Montenegro, Morocco and Romania; January-April data for Bulgaria, Cyprus, Estonia, Hungary, Israel, Malta, Poland, South Africa and Slovenia; January-May data for Kosovo, Lebanon, Moldova, Turkey and FR Yugoslavia; no available data for Slovakia.  
Sources: respective central banks and ECB staff computations. Data may be subject to revisions.

Turning to country-specific developments (Chart 2), Croatia, the country hosting this conference, has experienced the largest increase in euro-denominated deposits in 2001, more than EUR 3 billion. It is followed by Hungary and Poland, with around EUR 2 billion each. The countries and territories of the former Socialist Federal Republic of Yugoslavia account for almost half of the total increase recorded in 2001, EUR 5 billion. With the exception of Montenegro, the percentage increase from end-2000 to end-2001 ranged between 900 percent in Kosovo and 65 percent in Croatia.<sup>11</sup> In the rest of south-east Europe, large increases in euro-denominated deposits were also observed in Turkey, Bulgaria and Romania, for an overall amount of more than EUR 2 billion.

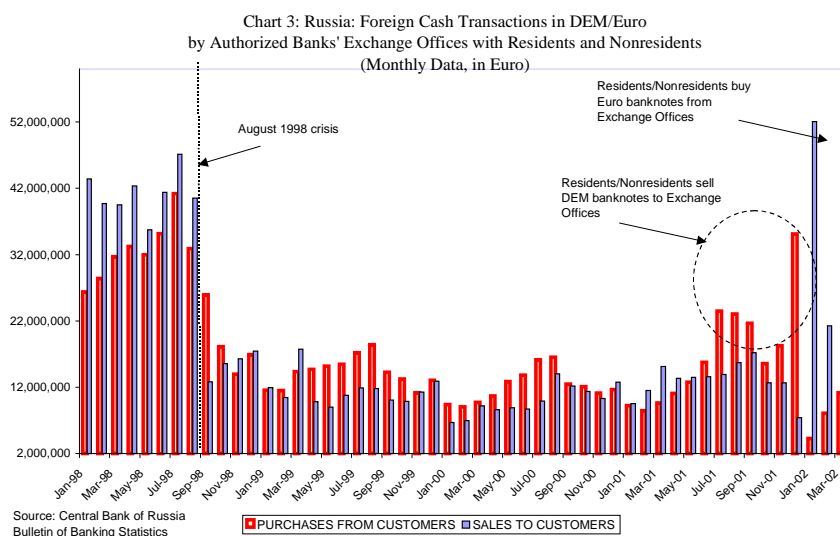
On the whole, the surge in deposits can be explained by the fact that all those involved could gain from it. Authorities welcomed the strengthening of banking sectors, banks benefited from the increase in their deposit base, and households were able to conduct the changeover at low risk and low cost.

The implication of these developments is that the euro increasingly circulates in scriptural form rather than in paper form. If confirmed, this may reflect a significant change from *currency* substitution to *asset* substitution in countries outside the euro area where the euro circulates as a parallel currency.

Evidence for the first months of 2002 actually suggests that the change may be a lasting phenomenon as, overall, euro-denominated deposits decreased only slightly, by EUR 1.2 billion. This may reflect the fact that some economies, especially in south-east Europe, are still largely cash-based. Moreover, it may also be due to the fact that, in some economies, cash is still the favourite store of value, as confidence in credit institutions remains weak.

The third part of the picture is the *switch from legacy banknotes to currencies other than the euro*. The ECB has gathered evidence that a “higher than usual” amount of banknotes denominated in currencies other than the euro were shipped out of their respective “home countries” late last year, equivalent to around a single-digit billion euro figure. This is at best a guesstimate of a possible switch from legacy currency banknotes to banknotes in currencies other than the euro. The final destination of those shipments is of course unknown and only part of it may have gone to eastern European countries. Another, possibly non-negligible, part may have been transferred to Latin America. In any case, this evidence suggests that the “massive flight” out of DM banknotes into other currencies, about which there was so much talk last year, probably did not occur at the time of the cash changeover.

Interestingly, even in countries where private agents had preferred foreign currencies other than the legacy currencies, e.g. Russia, official data on the activities of exchange offices give no evidence of a sell-off of DM banknotes in the run-up to the cash changeover. In Russia, sales of DM banknotes in the second half of 2001 (EUR 140 million) were almost offset by purchases of euro banknotes in the first quarter of 2002 (EUR 100 million). However, the amounts involved in that country are small; the US dollar is used as the main foreign currency there.



In conclusion, taking the Bundesbank staff estimates of DM banknotes in circulation outside Germany (equivalent to EUR 32–45 billion) as a rough guide to legacy currency banknote circulation outside the euro area, an assumption that remains subject to many caveats, the available evidence suggests that a very large proportion of this has been converted into euros, either in cash or deposit forms.<sup>12</sup> Indeed,

<sup>11</sup> In the Federal Republic of Yugoslavia (Serbia), the increase is almost infinite, as euro-denominated deposits jumped discretely from almost zero at the end of 2000 to around EUR 300 million at the end of 2001.

<sup>12</sup> It should be recalled that this estimate includes the unidentified amount of DM banknotes circulating outside Germany, but within the euro area (e.g. in some tourist areas of Greece, Italy or Spain), which should be subtracted. Moreover, banknotes circulation in other legacy currencies, for which hardly any quantitative

adding the total amount of euro banknotes shipped outside the euro area (EUR 18 billion) to the amount of legacy currency banknotes deposited in euro-denominated accounts (EUR 13.5 billion) yields a figure very close to the lower bound estimate of Bundesbank staff.

Interesting as it is, this assessment needs some caveats. Indeed, the assessment combines data with varying degrees of accuracy: certainty, for data on the frontloading; confidence, for data on subsequent shipments of euro banknotes and data on euro-denominated deposits; and speculation, for data on the switch to currencies other than the euro. The respective size of the components of the cash changeover outside the euro area is still uncertain, and could well be reassessed as new data become available.

The assessment also assumes that all legacy currency banknotes have by now been converted. This may, however, not be the case, as banknotes holders outside the euro area are aware that the national central banks of the Eurosystem and, in some cases, also their own central banks, will continue to convert legacy banknotes at par, for many years to come, or even indefinitely.

#### **4. Implications for eastern European countries**

There is one question that underlies the developments I have described and that needs now to be addressed: why is the euro used as a parallel currency?

To some extent, the euro is used today for the same reason for which the DM was used: as a safe haven to store wealth and to carry out transactions, especially those involving large amounts, when confidence in the domestic currency is weak.

I believe, however, that there is also another reason. The East also looks towards the European Union. The advent of the euro three years ago has marked an acceleration of the economic and institutional unification of the European continent. Citizens in eastern Europe deliberately prefer the euro to another international currency as they are aware of the increasing links between their region and the European Union. These links are of financial, economic and institutional nature. Allow me to develop further this point in the final part of my lecture. I will do so by emphasising three points.

Firstly, the East is increasingly oriented to the euro *financially*. Among the many links that exist between the euro area and eastern Europe, *financial* ones have been particularly strengthened in the wake of the cash changeover. Sizeable inflows of legacy currency banknotes into euro-denominated accounts are a positive development for the countries concerned. They reflect an increasing trust in their banking systems and are a token of their ongoing modernisation. If they persist over time, they

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evidence is available, would have to be added. In the absence of other information, it can be assumed that the magnitude of these two opposite biases is similar. It is also worth mentioning that, while no other estimates have been published after 1995, the Bundesbank believes that there is evidence of a reduction in the foreign circulation of DM banknotes in the second half of the 1990s, prior to Economic and Monetary Union (EMU).



will support long-term growth, as the expansion of the banks' deposit base will also be conducive to underpinning financial intermediation.

At the end of December 2001, euro-denominated bank deposits in the 28 reporting countries I referred to earlier amounted to around EUR 50 billion (Appendix, Table 1). Eastern European countries accounted for more than half of this amount. Turkey ranked first, followed by Croatia, Israel, Poland, the Czech Republic, Hungary, and Slovenia.

Compared with the euro area, where households' deposits held with monetary and financial institutions were close to EUR 3,700 billion, these amounts are of course small. They are, however, significant for many of the countries concerned (Appendix, Table 2). In the countries of the former Socialist Federal Republic of Yugoslavia, in particular, what is denominated in euro is the very bulk of bank deposits. In Kosovo and Montenegro, two unilaterally euroised territories, the share of euro-denominated deposits in total deposits is 100 percent, in Yugoslavia (Serbia) it is around 85 percent and in Croatia around 70 percent. The euro plays a fairly significant role in the banking sectors of a number of other countries in eastern Europe, including Bulgaria, Turkey, Latvia and Hungary – with a share amounting to between 10 percent and 20 percent of total deposits. The corresponding figure for most other transition countries in central Europe is between 5 percent and 10 percent.

The currency denomination of domestic bank deposits is a factor, although probably not the main factor, that contributes to the strength of the banking sector in the long run. Countries with a sizeable share of euro-denominated deposits may more easily interact with financial operators abroad, as this fraction of deposits can be re-invested fairly easily across borders, in particular in the euro area. In addition, the more customers become used to the euro, the more banks have an incentive to offer euro-denominated products and to take part in larger regional networks that support cross-border financial services.

Secondly, *exchange rate regimes* in the East are increasingly euro-oriented. Indeed, another link between the euro area and eastern European countries, which existed prior to the cash changeover, is the orientation of their exchange rate policies towards the euro. In spite of the diversity of exchange rate arrangements adopted in the region, which cover the full spectrum from hard pegs to free floats, the euro is clearly a common denominator across countries (Appendix, Table 3). Only Poland and the Czech Republic are exceptions, as they pursue a direct inflation targeting strategy and let their currencies float freely, together with Albania, whose currency tends to be linked to the US dollar.

In line with overall internal economic developments, many countries have already opted for a tight link to the euro. For instance, Bulgaria, Bosnia and Herzegovina, Estonia and Lithuania fully back the value, and hence the credibility, of their domestic currency with an equivalent amount of euros under a

currency board arrangement. Other countries peg their currency directly to the euro,<sup>13</sup> and an extreme case is represented by two small territories of the Federal Republic of Yugoslavia, Kosovo and Montenegro, which have decided, unilaterally, to use the euro as legal tender and the sole official currency.<sup>14</sup> The most common exchange rate regime, however, is a less stringent one, namely a managed float, with the euro as the main reference currency. This is the case in Croatia, the Former Yugoslav Republic of Macedonia, Romania, Slovakia, Slovenia and Yugoslavia (Serbia).

Thirdly, the East has an *economic and institutional orientation* towards the EU. The orientation of eastern European countries' exchange rate regimes to the euro is rooted in the significant economic relations they have with the EU and the euro area. For the so-called accession countries, i.e. those countries that are currently negotiating to become members of the EU, the choice of the euro as the main reference currency mirrors the role of the euro area as the main trading partner, which accounts for half of their total foreign trade. Moreover, the orientation of the accession countries to the euro is supported institutionally, as these countries are preparing to join the European Union and, thereafter, to adopt the euro.

Turning to south-east Europe, the euro area is also the main trading partner of the region, accounting for half of its total trade. Like in central and eastern Europe in the last decade, euro area corporations are starting to identify opportunities in south-east Europe and to invest. In these countries, the share of foreign direct investment originating from euro area countries is dominant, and approached 70 percent in the second half of the 1990s. Euro area banks are important players in the area, owning a significant share of local banks' capital and around 80 percent of total BIS reported banks' claims on the region. The EU is also the leading official aid donor to south-east Europe, accounting for 60 percent of official development assistance flows to the region from 1995 to 2000.

Although western Balkan countries are not "accession countries", i.e. do not have at present the status of candidates to EU membership and hence are not in the current negotiation process, here too the orientation of exchange rate regimes to the euro is supported institutionally. The objective remains the fullest possible integration of the countries of the region into Europe's political and economic mainstream. In line with this objective, the European Council of Feira granted them, in June 2000, the status of "potential candidates" for EU membership. The western Balkan countries have signed, or are about to stipulate, institutional agreements with the EU that create privileged relations, as part of the Stabilisation and Association Process. They are also active partners in the Stability Pact for South Eastern Europe, which has underpinned both regional trade integration and regional infrastructure

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<sup>13</sup> Hungary unilaterally shadows the ERM II (with an officially announced central rate and fluctuation bands of +/- 15 percent). Latvia maintains a conventional peg to a currency basket where the euro plays a role.

<sup>14</sup> An agreement on principles reached in March 2002 under the auspices of the EU paves the way for a new constitutional arrangement within the Federal Republic of Yugoslavia, which would be replaced by a new state, named Serbia and Montenegro. It is not clear whether this will have an impact on the monetary regime prevailing in Montenegro.

projects. This enables the establishment of new relations, beneficial to all of them, for peace in the region and stability throughout Europe.

## **5. The European Central Bank's perspective**

A few months after the introduction of the euro banknotes and coins we can say, on the basis of the evidence presented in this lecture, that the cash changeover was a success also outside the euro area. In a number of non-euro area countries, in particular those which have recently suffered political tension and military conflict, the cash changeover was a real challenge. It was the first significant logistical operation to be conducted by newly elected governments and newly appointed administrations. There was no guarantee of success.

The Eurosystem contributed to this achievement, mainly by providing the legislative and logistical framework necessary to supply banknotes well before 1 January 2002, thus helping to ensure that the very first cash needs of the population would be met. The Eurosystem has co-operated at the technical level with authorities of the regions neighbouring the euro area, in particular on communication issues and security measures to be taken against counterfeiting. Moreover, local authorities, credit institutions and citizens played an essential part in the successful introduction of euro banknotes.

The developments analysed in this lecture, such as the change in the use of the euro outside the euro area from a fiduciary to a scriptural form, remain exogenous to the Eurosystem. The ECB has only endeavoured to collect information on these developments in the light of the cash changeover. The magnitudes involved remain of little significance for the euro area and, as such, do not raise any policy issue for the Eurosystem. The ECB will continue to monitor these developments for information purposes, in particular in its regular annual review of the international role of the euro.

Correspondingly, for countries outside the euro area, the issues involved, including those concerning the orientation of their exchange rate regime to the euro, fall under the sole responsibility of the respective authorities. Even the most radical decisions observed in the recent past, such as unilateral euroisation in Kosovo and Montenegro, were taken and implemented by local authorities without the Eurosystem taking any special responsibility or playing a formal role. It goes without saying that monetary policy decisions in the euro area are taken by the ECB by looking only at economic conditions within the euro area.

## **6. Conclusion: the East is coming to the euro**

By way of conclusion, allow me to emphasise again that estimating the amount of euro banknotes in circulation in eastern Europe has implications that go beyond a stocktaking exercise. As I have tried to show, the parallel use of euro banknotes and deposits reveals, and is supported by, the many links –

whether historical, institutional, economic or financial – that the euro area entertains with its immediate neighbours.

I have always thought of money as more than a convenient instrument; more than a unit of account, means of exchange and store of value. Money is also a social phenomenon, one that creates a sense of community among individuals, based on economic relations. Going beyond the strict borders of the euro area, the role of the euro in eastern Europe, in particular in south-east Europe, is a sign that we are all already part of a Europe-wide community. Indeed, I am sure you will agree that the successful introduction of euro banknotes and coins this year has marked far more than the emergence of a new payment instrument.

Inside the euro area, for many years citizens have perceived the construction of Europe as a remote undertaking. With the advent of euro banknotes and coins, the European Union is now in their pockets. It can be tangibly seen and touched by everyone, every day. It is an intrinsic part of daily life. Euro area citizens have realised, and will increasingly do so, that they belong to a community which extends well beyond their home country, as they take the single currency in their wallets wherever they travel in the euro area. As such, the new euro banknotes and coins put flesh on the bones of the European construction. They also give a new, European, identity to euro area citizens, on top of their national identity.

Outside the euro area, the confidence in the euro expressed by our immediate neighbours has confirmed, and is supported by, the privileged relationship that this part of the world enjoys with the euro area. Back to the profound meaning of *fiat* money, this confidence has also shown that the euro is a depository of trust in the region. Trust in the value of the euro, as it remains the favourite foreign currency used in the area and the privileged anchor currency. Trust in the modernisation of their economies, as citizens seem to be regaining confidence in their banking systems. Trust, above all, in their common future with the euro area, which is expressed every day by the significant role that the euro is already playing in the region.

## References

- De Boissieu, C. (2002): Briefing paper prepared for the Economic and Monetary Affairs Committee of the European Parliament, May 2002.
- Doyle, B. (2000): "Here, Dollars, Dollars... - Estimating Currency Demand and World-wide Currency Substitution." *International Finance Discussion Papers*, No 657, Board of Governors of the Federal Reserve System, January 2000.
- Feige, E. (2002): "Empirical Evidence on Currency Substitution, Dollarisation and Euroisation in Transition Economies." Paper presented at the 8<sup>th</sup> Dubrovnik Economic Conference 26-29 June 2002.
- Gros, D. (2002): "The Euro and Enlargement." Briefing paper prepared for the Economic and Monetary Affairs Committee of the European Parliament, May 2002.
- Kraft, E. (2002): "Monetary Policy Under Dollarisation: The Case of Croatia." Paper presented at the 8<sup>th</sup> Dubrovnik Economic Conference 26-29 June 2002.
- Porter, R. and R. A. Judson (1996): "The location of US currency: How much is abroad?" *Federal Reserve Bulletin*, Vol 82, N.10, pp. 884-903.
- Rogoff, K. (1998): "Blessing or Curse? Foreign and Underground Demand for Euro Notes." *Economic Policy*, April 1998, pp. 261-290.
- Seitz, F. (1995): *Circulation of Deutsche Mark Abroad*, Discussion Paper 1/95, Deutsche Bundesbank.
- Sinn, H.-W. and F. Westermann, (2001a): "Why has the Euro been falling?" *CESifo Working Paper*, No. 493, May 2001, also published as *NBER Working Paper* No 8352, July 2001.
- Sinn, H.-W. and F. Westermann, (2001b): "The Deutsche Mark in Eastern Europe, Black Money and the Euro: On the Size of the Effect." *CESifo Forum*, No. 3, Autumn 2001, pp. 35-40.
- Stix, H. (2001): "Survey Results about foreign currency holdings in five Central and Eastern European Countries." *CESifo Forum*, No. 3, Autumn 2001, pp. 41-48.
- Walter, N. (2002): "The international dimension of the euro and the path to the euro for enlargement countries." Briefing paper prepared for the Economic and Monetary Affairs Committee of the European Parliament, May 2002

## Appendix: tables

**Table 1: Outstanding euro-denominated bank deposits in selected countries  
(End-December 2001, EUR million)**

|                 | Absolute values | As a share of<br>total deposits | As a share of<br>foreign deposits |
|-----------------|-----------------|---------------------------------|-----------------------------------|
| Turkey          | 12,776          | 15.6%                           | 28.0%                             |
| Croatia         | 8,116           | 72.3%                           | 82.6%                             |
| Israel          | 6,451           | 4.5%                            | 15.3%                             |
| Poland          | 4,571           | 5.3%                            | 31.5%                             |
| Czech Republic  | 3,522           | 7.4%                            | 50.9%                             |
| Hungary         | 3,029           | 11.2%                           | 41.0%                             |
| Slovenia        | 3,006           | 37.9%                           | 83.6%                             |
| Lebanon         | 1,829           | 4.0%                            | 5.7%                              |
| Slovak Republic | 1,121           | 8.5%                            | 43.3%                             |
| Cyprus          | 1,066           | 5.0%                            | 13.5%                             |
| Bosnia          | 839             | 49.5%                           | 82.4%                             |
| Romania         | 779             | 9.3%                            | 18.9%                             |
| Kosovo          | 748             | 100.0%                          | 100.0%                            |
| Bulgaria        | 739             | 15.3%                           | 29.3%                             |
| Egypt           | 701             | 1.2%                            | 4.2%                              |
| Estonia         | 603             | 19.2%                           | 50.4%                             |
| Latvia          | 592             | 11.6%                           | 15.7%                             |
| Malta           | 547             | 6.6%                            | 17.7%                             |
| FR Yugoslavia   | 304             | 81.8%                           | 87.3%                             |
| South Africa    | 219             | 0.4%                            | 6.0%                              |
| Ukraine         | 101             | 1.9%                            | 5.8%                              |
| Morocco         | 85              | 0.3%                            | 35.4%                             |
| Macedonia       | 67              | 6.5%                            | 12.3%                             |
| Montenegro      | 56              | 100.0%                          | 100.0%                            |
| Lithuania       | 47              | 1.9%                            | 4.5%                              |
| Belarus         | 26              | 4.1%                            | 7.1%                              |
| Moldova         | 6               | 2.4%                            | 5.4%                              |
| Albania         | 3               | 0.1%                            | 0.4%                              |
| <b>TOTAL</b>    | <b>51,952</b>   |                                 |                                   |

*Note: for the Czech Republic, data refer to end January 2002*

*Source: National central banks, ECB staff computations.*

*Data may be subject to revisions.*

**Table 2: Euro-denominated deposits as a share of total deposits**

| <b>Euro-denominated deposits above 20% total deposits</b>              |        |        |        |        |
|--|--------|--------|--------|--------|
|  | Dec-00 | Jun-01 | Dec-01 | Mar-02 |
| Kosovo   | 100.0% | 100.0% | 100.0% | 100.0% |
| Montenegro   | 100.0% | 100.0% | 100.0% | 100.0% |
| FR Yugoslavia  | n.a.   | n.a.   | 81.8%  | 86.7%  |
| Croatia  | 56.1%  | 55.4%  | 72.3%  | 70.7%  |
| Bosnia   | 38.0%  | 31.2%  | 49.5%  | n.a.   |
| Macedonia  | 1.4%   | 1.3%   | 6.5%   | 40.0%  |
| Slovenia   | 36.3%  | 35.5%  | 37.9%  | 36.7%  |
| Estonia  | 20.4%  | 17.5%  | 19.2%  | 21.3%  |
| <b>Euro-denominated deposits between 10% and 20% of total deposits</b> |        |        |        |        |
|  | Dec-00 | Jun-01 | Dec-01 | Mar-02 |
| Bulgaria   | 11.8%  | 14.3%  | 15.3%  | 15.3%  |
| Turkey   | 12.3%  | 15.4%  | 15.6%  | 13.7%  |
| Latvia   | 7.8%   | 7.6%   | 11.6%  | n.a.   |
| Hungary  | n.a.   | 5.7%   | 11.2%  | 10.3%  |
| <b>Euro-denominated deposits below 10% of total deposits</b>           |        |        |        |        |
|  | Dec-00 | Jun-01 | Dec-01 | Mar-02 |
| Slovak Republic  | n.a.   | 4.1%   | 8.5%   | n.a.   |
| Romania  | 3.7%   | 5.4%   | 9.3%   | 7.7%   |
| Czech Republic   | n.a.   | n.a.   | 7.4%   | 6.5%   |
| Malta  | 12.0%  | 4.8%   | 6.6%   | 6.3%   |
| Poland   | 3.9%   | 3.2%   | 5.3%   | 4.7%   |
| Israel   | 3.8%   | 4.0%   | 4.5%   | 5.0%   |
| Cyprus   | 3.7%   | 4.3%   | 5.0%   | 5.4%   |
| Belarus  | 4.2%   | 3.0%   | 4.1%   | n.a.   |
| Lebanon  | 4.5%   | 4.3%   | 4.0%   | 4.1%   |
| Moldova  | 1.8%   | 1.3%   | 2.4%   | 2.6%   |
| Ukraine  | 2.9%   | 1.0%   | 1.9%   | n.a.   |
| Lithuania  | 1.2%   | 1.1%   | 1.9%   | n.a.   |
| Egypt  | 1.0%   | 0.9%   | 1.2%   | n.a.   |
| South Africa   | 0.1%   | 0.2%   | 0.4%   | 0.5%   |
| Morocco  | 0.2%   | 0.3%   | 0.3%   | 0.4%   |
| Albania  | n.a.   | n.a.   | 0.1%   | 0.1%   |

*Note: For Lithuania, share of euro-denominated term-deposits over all bank deposits*

*Source: National central banks, ECB staff computations.*

*Data may be subject to revisions.*

**Table 3 : Exchange rate regimes in Eastern Europe**

|                                       | Exchange rate regime <sup>1)</sup>              | Currency          | Features  |
|---------------------------------------|---|-------------------|---|
| <b>Unilateral euroisation</b>         |   |                   |   |
| Kosovo                                | Euroisation                                     | Euro              | Introduced in 1999  |
| Montenegro                            | Euroisation                                     | Euro              | Introduced in 2000  |
| <b>Currency board</b>                 |   |                   |   |
| Bosnia & Herzegovina                  | Currency board to the euro                      | Konvertible Marka | Introduced in 1997  |
| Bulgaria                              | Currency board to the euro                      | Lev               | Introduced in 1997  |
| Estonia                               | Currency board to the euro                      | Kroon             | Introduced in 1992  |
| Lithuania                             | Currency board to the euro                      | Litas             | Introduced in 1994; repegged from the US dollar to the euro in February 2002  |
| <b>Conventional fixed peg</b>         |   |                   |   |
| Latvia                                | Peg to the SDR                                  | Lats              | Exchange rate band $\pm 1\%$  |
| <b>Unilateral shadowing of ERM II</b> |   |                   |   |
| Hungary                               | Peg to the euro, with +/- 15% fluctuation bands | Forint            | Exchange rate regime combined with inflation targeting: 2.5%-4.5% by end-2003 |
| <b>Managed float</b>                  |   |                   |   |
| Albania                               | Managed float                                   | Lek               | The US dollar is mostly used as reference currency                            |
| Croatia                               | Managed float                                   | Kuna              | The euro is used informally as reference currency                             |
| Macedonia                             | Managed float                                   | Denar             | The euro is explicitly used as reference currency                             |
| Romania                               | Managed float                                   | Leu               | Currency basket (US dollar, euro) is used informally as reference             |
| Slovakia                              | Managed float                                   | Slovak koruna     |   |
| Slovenia                              | Managed float                                   | Tolar             | Monetary targeting: the euro is used informally as reference currency         |
| Yugoslavia                            | Managed float                                   | Dinar             | The euro is used informally as reference currency                             |
| <b>Free float</b>                     |   |                   |   |
| Czech Republic                        | Free float                                      | Czech koruna      | Inflation targeting: 2%-4% by end-2005  |
| Poland                                | Free float                                      | Zloty             | Inflation targeting: below 4% by end-2003                                     |

Sources: IMF and national central banks.

1) Based on the IMF Annual Report on Exchange Arrangements and Exchange Restrictions, 2001.