



EUROPEAN CENTRAL BANK



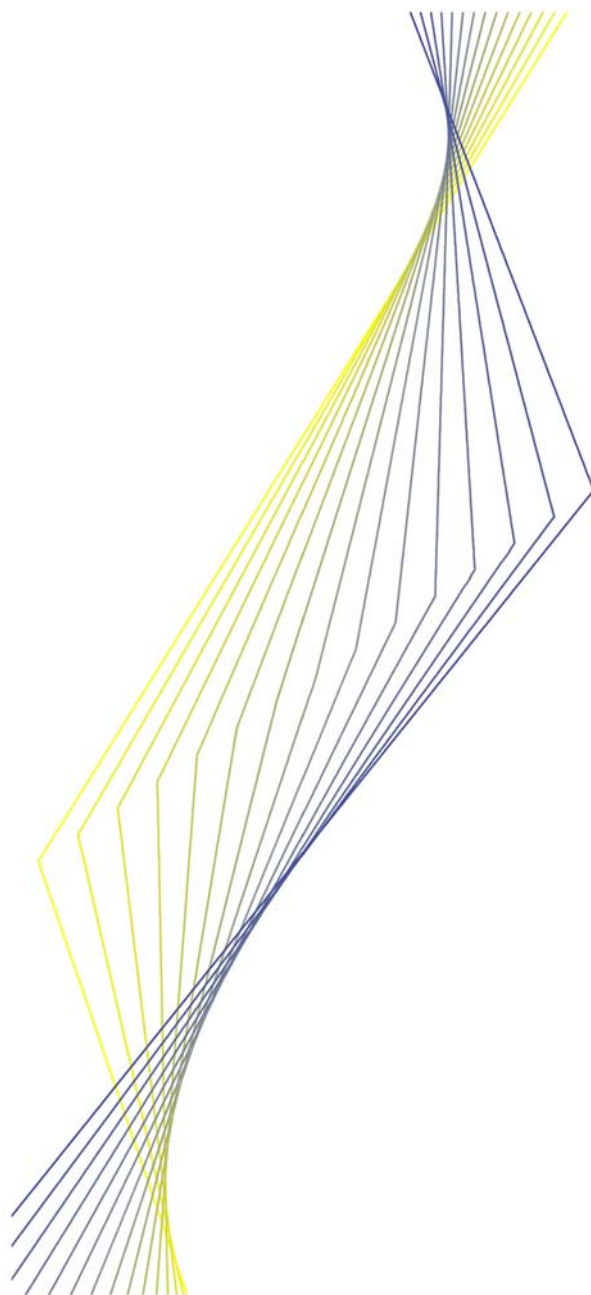
REVIEW OF THE INTERNATIONAL ROLE OF THE EURO

2001





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**REVIEW OF THE
INTERNATIONAL ROLE
OF THE EURO**

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Table of contents

Executive Summary	2
1. Evidence on the international use of the euro	5
1.1 The international private use of the euro as a store of value	5
<i>1.1.1 The euro as a financing currency</i>	<i>7</i>
<i>1.1.2 The euro as an investment currency</i>	<i>10</i>
1.2 The international private use of the euro as a medium of exchange and a unit of account	12
<i>1.2.1 The euro as a vehicle in the foreign exchange market</i>	<i>12</i>
<i>1.2.2 The euro as a pricing and quotation currency</i>	<i>16</i>
<i>1.2.3 The euro as a settlement and invoicing currency</i>	<i>17</i>
1.3 The international official use of the euro	18
<i>1.3.1 The euro as a reserve currency</i>	<i>18</i>
<i>1.3.2 The euro as an anchor currency</i>	<i>20</i>
<i>1.3.3 The euro as an intervention currency</i>	<i>21</i>
2. Policy assessment	22
2.1 Monetary policy issues	23
2.2 International policy issues	25
Tables and charts	27
<i>Table I Functions of international currencies.....</i>	<i>29</i>
A. <i>The international private use of the euro as a store of value</i>	<i>30</i>
B. <i>The international private use of the euro as a medium of exchange and a unit of account</i>	<i>36</i>
C. <i>The international official use of the euro</i>	<i>40</i>

Executive Summary

This report takes stock of information available on the use of the euro by non-residents of the euro area (Section 1) and, on this basis, draws a number of policy indications from the point of view of the Eurosystem (Section 2).

Evidence on the international use of the euro

Since its inception the euro is the second most widely used currency at the international level, as a result of both the weight of the euro area in the world economy and the legacy of the former national currencies which have been replaced by the single currency. Current trends in the internationalisation of the euro are the result of market developments and policies both inside and outside the euro area.

As a *financing* currency, at the end of 2000 the share of the euro in the overall stock of “truly international” debt securities (labelled “the narrow measure”, i.e. debt securities issued in a currency different from that of the country in which the borrower resides) reached 26%. This share is 7 percentage points higher than the total share of the euro’s legacy currencies at the end of 1998 (at constant exchange rates). The share of the euro is even larger (34%) if one also takes into account the issuance of debt securities denominated in the home currency of the borrower and targeted to the international financial market (“the broad measure”). In particular, the share of the euro in international issues of money market instruments recorded a substantial increase in gross terms in the period 1999-2000. This seems to be mainly the result of the rise in liquidity brought about by the creation of an integrated euro money market. A similar upsurge took place in the issuance of euro-denominated international bonds and notes in 1999, while the trend reversed – partly – in 2000, mainly as a result of market turbulence associated with the financing of UMTS licences in Europe and market appetite for yen issuance. Finally, with regard to the international use of the euro by commercial banks for financing purposes (cross-border deposits, local deposits in foreign currency and international securities issued by banks), following the introduction of the euro a rise of more than 4 percentage points has been recorded in the share of the euro in international bank liabilities (at 22% at end-September 2000) (Section 1.1.1).

As an *investment* currency (i.e. a currency of denomination of financial assets), the share of the euro in international bank assets (cross-border loans, local loans in foreign currency and international securities held by banks) was 22% at the end of September 2000, which represented an increase of almost 6 percentage points since the start of Stage Three. At the end of 2000 the estimated share of the euro in the portfolios of a small sample of major global asset managers was 32% (USD 47%; JPY 14%) for bond holdings, while euro area equity holdings accounted for 25%

(USA 50%; Japan 11%) (Section 1.1.2).

As a *vehicle currency in the foreign exchange market* (i.e. a currency that can be used as a means to exchange two other currencies) and a *pricing and quotation currency*, the euro does not play a role comparable to that of the US dollar at the global level. The predominance of the dollar is attributable mainly to the combined and reinforcing effects of network externalities and economies of scale in the use of the leading international currency. At the regional level, however, the euro inherited from the Deutsche Mark a certain vehicle role as a means to exchange other European currencies, in particular those of EU accession countries (Sections 1.2.1 and 1.2.2).

As a *reserve currency*, at the end of 1999 the euro accounted for 12.5% of the foreign exchange reserve assets of IMF Member States (source: IMF Annual Report 2000). With this share, the euro is the second world reserve currency well behind the US dollar (66.2%) and ahead of the Japanese yen (5.1%). On average, there has been no aggregate reallocation of official reserves out of the euro. As the IMF highlighted in its Annual Report 2000, on the basis of EMU-adjusted data, the combined share of the euro legacy currencies held outside the euro area in 1998 was practically identical to the share of the euro at the end of 1999 (section 1.3.1).

As an *anchor currency*, the euro plays some role in the exchange rate regime of 56 countries outside the euro area, which, however, on the whole account for only 4% of world GDP and 17% of the euro area GDP. Solutions adopted range from very strict – or even full – links to the euro (e.g. formal entitlement to use the euro as legal tender, euroisation and currency boards) to looser forms of anchoring (e.g. peg arrangements, crawling fluctuation bands and managed floating). Countries anchoring to the euro only (i.e. not to a basket of currencies including the euro) are all located in the so-called Euro-time zone (i.e. the geographical area that includes Europe, the Mediterranean area and Africa). This confirms that close trade and financial links with the euro area remain the main factor behind the choice of the euro as a reference for exchange rate policy (Section 1.3.2).

Finally, as an *intervention currency*, the use of the euro is mainly related to its function as an anchor currency. However, countries with currencies not pegged to the euro may also use it for intervention purposes other than as part of concerted intervention (Section 1.3.3).

Policy assessment

From a policy point of view, the Eurosystem does not pursue the internationalisation of the euro as an independent policy goal, which implies that it neither fosters nor hinders this process. The development of a domestic financial market in the euro area should be seen mainly as a precondition for the internationalisation of the euro rather than as its outcome, although of course

these two processes tend to interact. The neutral stance of the Eurosystem, however, should not be interpreted as implying that possible further internationalisation of the single currency would be policy irrelevant. Indeed, there are at least two broad reasons for the Eurosystem to monitor the international use of the euro.

The first reason is related to the “domestic dimension” of the activities of the Eurosystem. A further increase in the international use of the euro might have, within the euro area, some impact on both the transmission mechanism of monetary policy and the information content of indicators under the monetary policy strategy. The overall size and direction of this possible impact is difficult to assess, and requires continuous monitoring. It is not expected, however, that the international use of the euro will affect the ability of the Eurosystem to maintain price stability. The Eurosystem’s monetary policy strategy is well prepared to cope with uncertainty (Section 2.1).

The second reason involves the “international dimension” of the activities of the Eurosystem: an increasing international role of the euro would have policy implications at both the multilateral and the regional level. In this regard it should be stressed that, irrespective of future trends in the internationalisation of the euro, the advent of the single currency represents an institutional regime shift which per se has already affected international co-operation in many ways (Section 2.2).

* * * * *

1. Evidence on the international use of the euro

1. This chapter takes stock of the evidence available on the international use of the euro, i.e. the extent to which *private* and *official* agents and institutions residing outside the euro area use the single currency as a *store of value*, a *medium of exchange* and a *unit of account*. *Definition of international use of the euro*

Table I (see enclosed Tables and Charts, page 29) presents the standard typology of international currency use, based on an extension of the three classical money functions to the international sphere, distinguishing the type of agents (private or official) using international currency.

Accordingly, Section 1.1 focuses on the international private use of the euro as a store of value, i.e. either as a financing or as an investment currency. Section 1.2 deals with the international private use of the euro both as a medium of exchange (i.e. a vehicle currency in the foreign exchange market and a settlement currency in the real economy¹) and as a unit of account (i.e. a pricing/quotation currency in the financial markets and an invoicing currency in the real economy). Finally, Section 1.3 analyses the international official use of the euro as a store of value (reserve currency), a unit of account (anchor currency) and a medium of exchange (intervention currency).

1.1 The international private use of the euro as a store of value

2. The euro is, after the US dollar, the second most important financing currency used at the international level, with shares of between 22% and 34% of the total international private use depending on the financial instrument (see Section 1.1.1). Similarly, the euro is the second most important international investment currency, with shares in the range of 22-32% (see Section 1.1.2). *The euro accounts for a share of between 22% and 34% of the total international private use of currencies as a store of value*

While the investment share seems to have remained relatively constant following the start of Stage Three, more dynamic developments could be observed with regard to the issuance of international debt securities. In particular, the very strong increase in the share of euro-denominated issuance of debt securities in 1999 lasted in 2000 only for their money market component. However, although the share of the euro in bonds and notes issuance was lower

¹ *Strictu sensu*, the international private use of the euro as a medium of exchange would also include the use of banknotes denominated in Deutsche Mark/euro as a parallel currency in regions such as the Balkans (direct currency substitution). However, given the implications that these practices have for the foreign exchange regime of the countries involved, direct currency substitution is dealt with in the section focusing on the use of the euro as an anchor currency (see Section 1.3.2 and related tables).

in 2000 by comparison with 1999, the share remains above the pre-EMU average.

3. Sections 1.1.1 and 1.1.2 below present comprehensive evidence of the euro's international financing and investment roles, respectively. Three basic preliminary definitions are needed to this end². *Three preliminary definitions ...*

First, in Section 1.1.1 the distinction is made between a “narrow” and a “broad” measure of international financing by means of debt securities. The *narrow* measure focuses only on issuance in a currency different from the currency of the country in which the borrower resides. As such, the narrow measure highlights the international financing role of the euro in a strict sense. The *broad* measure adds to the narrow definition the issuance of debt securities denominated in the home currency of the borrower, provided that this issuance is addressed to the international financial market³. This measure therefore combines elements of both the international financing and the international investment role of the euro. Both measures have their justification, although the narrow measure corresponds more closely to the concept of an international financing currency. *1) Narrow and broad measure of international debt securities*

Second, in order to compare data before and after the introduction of the euro, it is not sufficient to add up all international assets and liabilities denominated in euro legacy currencies prior to 1999. For instance, debt securities previously considered international because placed with euro area investors now have to be classified as a domestic issue. This calls for a re-classification of data, i.e. for an “*arithmetic EMU adjustment*” (hereafter: “arithmetic drop”). If not explicitly mentioned otherwise⁴, all euro series presented in the enclosed set of charts are adjusted for the periods before 1999 to allow for direct comparison with the most recent figures. *2) Arithmetic EMU adjustment*

Third, the currency shares concerning debt securities issues are derived at current exchange rates (flow data), while the amounts outstanding (stock data) are calculated at constant Q1 1994 exchange rates.⁵ Although correcting for exchange rate valuation effects may imply some imprecision, for the stock variables the currency valuation effect has been deemed too *3) Different valuation of flow and stock data*

² Concerning details about the methodology used in this section, see Detken, C. and Hartmann, P. (2000): “*The euro and international capital markets*”, ECB Working Paper Series, No. 19.

³ At least one of the following three conditions must be fulfilled. The issue must: (i) be targeted to international investors; (ii) take place through an issuing syndicate where at least one foreign financial institution is involved; (iii) not be regulated through a domestic set of laws.

⁴ **Charts A.1 and A.3** also contain a series labelled “euro not adjusted for EMU” up to Q4 1998. This series neglects the arithmetic drop and simply sums the international assets and liabilities of individual euro area countries. This allows for a visualisation of the size of the arithmetic drop for both bonds/notes and money market instruments.

⁵ Q1 1994 was chosen as it is the beginning of our sample. Further checks showed that the Q1 1994 exchange rates for USD/ECU and JPY/USD differ only by 1.6% and 3.3%, respectively, from the Q1 1994-Q4 2000 sample average.

important to be neglected, as most stock variables cannot be easily adjusted by market participants in the face of exchange rate movements.

1.1.1 The euro as a financing currency

4. **Chart A.1** (see enclosed Tables and Charts, page 30) depicts the announced issues of international **bonds and notes** (i.e. maturity of one year or more) according to the narrow measure described in point 3 above. The average share of the euro legacy currencies in bonds and notes issuance was 19% in the period 1994-1998. Although 1998 had already been a year with above-average issuance of bonds and notes in euro legacy currencies, a significant rise occurred in 1999. The share of the euro rose on average to 31% (USD 38%; JPY 15%). This practically offset the arithmetic drop of the euro's share (see point 3 above), which amounted to 12 percentage points. In Q3 1999, issuance in euro even exceeded US dollar-denominated issuance.

1999 boom in the issuance of euro-denominated international bonds and notes ...

Likely explanations for the increased use of the euro as an international financing currency in 1999 are:⁶

- (i) market expectations of increasing liquidity in the euro-denominated bonds and notes market;
- (ii) a significant rise in European M&A activity (mainly visible in the broad measure discussed below);
- (iii) the diversification of foreign debt by several emerging market countries in favour of the euro;
- (iv) domestic interest rates below the US level and, in the first half of 1999, even widening interest rate spreads.

Euro issuance dropped in Q2 2000, temporarily falling below JPY issuance. This seems to have been mainly related to market turbulence associated with the financing of UMTS licences in Europe, which increased corporate bond yields for euro issuance and thus fuelled expectations of saturation in the euro bond market. This development seemingly made euro issuance unattractive for non-resident borrowers. At the same time, increasing corporate bond spreads in the United States (as a result of rising default rates on junk bonds and mounting fears of recession) drove liability managers temporarily towards the JPY, where (highly rated) corporate bond yields had been declining to levels only slightly exceeding

... and relative decline in 2000

⁶ Looking at the quarterly pattern of bonds and notes issuance there seems to be a "hold over" effect from Q4 1998 to Q1 1999, which overemphasises the change at the beginning of Stage Three. But this effect is unlikely to explain a significant part of the comparatively high issuance activity for the whole of 1999.

2%. On average, in 2000 the euro-denominated announced issuance of international bonds and notes amounted to 25% of total international issuance at current exchange rates. This compares to a USD share of 35% and a JPY share of 22%.

The above-described data, based on the narrow measure, can be usefully complemented with data based on the broad measure (see **Chart A.2**). A noteworthy difference is that, in the case of the broad measure, the shares of the euro and the US dollar are much larger than that of the Japanese yen. This reflects the fact that debt security issuance denominated in home currencies but with international characteristics (see footnote 3) is not as common for the yen as it is for the euro and the US dollar. The pre-Stage Three historical average of broad euro issuance of bonds and notes amounted to 26%. The average broad euro share reached 38% in 1999 (10 percentage points higher than the 1998 average). Finally, in 2000 the share of announced issuance at current exchange rates amounted to 34% for the euro, 42% for the USD and only 11% for the JPY. The Q3 2000 peak in USD issuance (and the corresponding low in euro issuance) has been attributed by the BIS to strong USD issuance of large US companies targeting international investors, i.e. a category not considered as international financing by the narrow measure. This explains the difference between **Chart A.1** and **Chart A.2**.

Higher share of the euro in the issuance of bonds and notes if one uses the broad measure instead of the narrow measure

5. With regard to announced issues of international money market instruments, regardless of whether one considers the narrow (**Chart A.3**) or the broad (**Chart A.4**) measure, EMU entailed a large increase in their euro-denominated component. According to the narrow measure, in 2000 the euro reached an average share of 22% (USD 61%; JPY 2.5%), while according to the broad measure the average share amounted to 33% (USD 47.5%; JPY 2%). Following a strong rise in 1999, shares stabilised in 2000, although absolute euro issuing amounts continued on an upward trend. The strong, and so far lasting, increase recorded by euro issuance in the international money market can be explained by an expected and actual increase in liquidity owing to the creation of an integrated euro money market.

Significant increase in the share of the euro as a currency of denomination of money market liabilities

Differences between the three major currencies' shares are much larger in the issuance of international money market instruments than for bonds and notes issuance. The Japanese yen, in fact, does not play any significant role as an international currency of denomination of money market instruments.

6. With regard to **stock data**, **Chart A.5** plots the outstanding amounts of international debt securities (i.e. the sum of bonds, notes and money market instruments) according to the narrow measure at *constant* exchange rates. **Chart A.6** depicts the same series for the broad measure. Obviously, the stock data change only gradually. For both the narrow and the broad measures, a clear increase can be observed for the share of the “euro” starting as early as the end of 1997. Concerning the narrow measure, this increase was at the expense of the US dollar and the Japanese yen, while for the broad measure it was due to the declining shares of the yen and other currencies⁷.

The euro accounts for 26% (narrow measure) and 34% (broad measure) of the stock of international debt securities

At constant exchange rates and according to the narrow measure (with the broad measure figures given in brackets), the euro reached a share in outstanding international debt securities of 26% (34%) compared with the USD share of 44% (45%) and the JPY share of 15% (8%) at the end of 2000. According to both measures, this corresponds to an increase in share of 7 percentage points since the end of 1998, which does not fully offset the arithmetic drop for the narrow measure (10 percentage points at the end of 1998). The fact that the euro’s share exceeds that of the Japanese yen according to the narrow measure is a recent phenomenon. As shown by **Chart A.5**, this would not have been the case before Q4 1998.

⁷ Not correcting for the exchange rate depreciation of the euro would result in an upward trend as of the end of 1997 with a slope of about half the size of those depicted in **Charts A.5** and **A.6**.

7. A final indicator concerns the use of the euro by the banking sector as an international financing currency. **Chart A.7** depicts international **bank liabilities** at *constant* exchange rates. Bank liabilities here only cover: (i) the stock of own securities that banks had issued in the international market, and (ii) international deposits.

The currency distribution of international bank liabilities is more stable than that of the stock of international debt securities, with a euro share of 22%

Between the end of 1998 and end-September 2000 (latest data), a rise of 4.3 percentage points can be observed in the share of the euro in international bank liabilities, bringing it to 22% (against 55% for the US dollar and 8% for the Japanese yen)⁸. This increase almost fully offset the relatively small arithmetic drop at the end of 1998, which amounted to 5 percentage points.

8. The above-described evidence on the international financing role of the euro leads to three main conclusions. *First*, the most sustained development since the start of EMU has been the marked increase in the euro's share in announced issues of international money market instruments. Owing to previously low levels of euro issuance, however, the US dollar still largely dominates this segment. *Second*, following a sharp increase in 1999, the share of the euro in announced issues of bonds and notes was partly dampened in 2000. *Third*, in terms of stocks, the most significant development is that international euro-denominated securities and bank liabilities have been on a steady upward trend in recent years. This has been associated with a downward trend for yen-denominated securities and liabilities, and, in terms of the narrow measure, also for dollar-denominated debt securities.

Main trends in 1999 and 2000

1.1.2 *The euro as an investment currency*

9. Owing to the scarcity of reliable quantitative evidence on the currency distribution of international investments, the role of the euro as an investment currency can only be assessed on the basis of two statistical sources. The first source is a series of fairly comprehensive statistics based on international banking data. The second source is the time series of portfolio polls of international asset managers, which, however, has a fairly narrow coverage.

Chart A.8 depicts **international bank assets** at *constant* exchange rates. Bank assets cover: (i) international loans, (ii) international debt securities held by banks, and (iii) foreign equities.

The share of the euro in international bank assets is 22%

⁸ If one did not correct for the depreciation of the euro, the trend would be flat (euro share of 17.5%). This shows that the currency distribution of international bank liabilities is more stable than that of the stock of international debt securities.

Developments in the share of the euro in international bank assets are slightly more dynamic than for bank liabilities, although less so than for debt securities. The share of the euro increased by 5.7 percentage points between the end of 1998 and end-September 2000, which does not make up for the arithmetic drop in the share by 7 percentage points at the end of 1998.

The euro's share in international bank assets was equal to 22% at constant exchange rates at the end of September 2000 (USD 51%; JPY 13%). This corresponds to USD 1,850 billion in absolute terms, which is equivalent to the size of the euro-denominated stock of "broad" international debt securities, and two and a half times the size of the euro stock of "narrow" international debt securities.

10. The investment role can also be assessed on the basis of a sample of **statements by eight-nine major global asset managers about the currency distribution of their portfolios**, as depicted by the quarterly portfolio poll by The Economist⁹.

The current share of the euro in bond and equity investments is around 32% and 25%, respectively

Chart A.9 presents the unweighted average currency distribution of bond holdings by this group of asset managers. After a short-lived peak in Q1 1999, bond investment in euro reached an overall share of 32% in Q4 2000 (USD 47%; JPY 14%). It should also be noted that, before declining in 2000, the share of the Japanese yen increased markedly in 1999, up from 7% in Q1 1999 to 18% in Q1 2000. This development took place along with an increase in the weight of this currency in global bond benchmarks.

Chart A.10 presents the geographical distribution of equity investment according to the quarterly portfolio poll by The Economist. European (excluding the United Kingdom) equity holdings, which can be seen as a proxy for euro area holdings, peaked at 37% in Q4 1998, and then declined to 25% in Q4 2000 (USA 50%; Japan 11%).

11. The above-described evidence seems to suggest two main conclusions. *First*, according to both international bank asset data and portfolio polls, the euro is the second most widely used international investment currency, with a share ranging between 22% and 32% depending on the assets under consideration. *Second*, the fact that at current exchange rates the euro shares are relatively constant suggests that investors followed a portfolio strategy which neither increased nor decreased the share euro-denominated investments.

Main trends in 1999 and 2000

⁹ Portfolio polls are to be read with care for three reasons. *First*, percentages of respective currency distributions are simple arithmetic averages, which do not account for the (unpublished) size of the respective investment. *Second*, the sample of asset managers is small and might not be representative. *Third*, the nationality of the owners of the funds invested is obviously unknown. At the same time, the portfolio poll reflects the preferences of a group of "truly international" investors, which is relatively unaffected by "home bias" considerations.

1.2 The international private use of the euro as a medium of exchange and a unit of account

12. By contrast with the use of the euro as a store of value, which involves the international financial markets, the use of the euro as a medium of exchange and a unit of account is relevant both to the financial markets (Sections 1.2.1 and 1.2.2. below) and to the real economy (Section 1.2.3.).

1.2.1 The euro as a vehicle in the foreign exchange market

13. A vehicle currency (B) can be defined as a currency that is used in the foreign exchange market as a means to exchange two other currencies, so that currencies A and C are not exchanged directly (AC) but via B in two transactions (AB and BC). Market-driven trends in the vehicle function will be one of the main factors affecting the international role of the euro in the future.

Definition and measurement of the international use of a currency as a vehicle in the foreign exchange market

The use of a currency as a vehicle in the foreign exchange market can be assessed in three different ways.

The *first* way is to look at *trading volumes*. Transactions such as those described above increase the trading volume of vehicle currencies.

The *second* method is to look at *bid-ask spreads*. One factor determining the use of a vehicle currency is *transaction costs* (i.e. for B to become a vehicle it must be cheaper for dealers and traders to undertake the two transactions, AB and BC, than to undertake one direct transaction). The most usual way to assess transaction costs is to measure bid-ask spreads in the foreign exchange market, e.g. in terms of basis points for spot transactions.

The *third* approach simply consists of collecting evidence on *market practices* on the basis of direct contacts with market participants.

14. With regard to trading volumes, it should be recalled that every three years the BIS conducts a comprehensive survey to estimate foreign exchange activity. The last survey took place in 1998, i.e. still in Stage Two of EMU, and the next one will not take place until April 2001. The results would normally be published in autumn 2001. Thus, any analyses undertaken before that time will have to rely on much more limited data (e.g. excluding swaps and derivatives).

Previous studies have shown that, at least since the 1960s, the US dollar has been the main global vehicle currency as it can benefit from direct interbank markets with all other currencies in the world. In the late 1980s/early 1990s, the Deutsche Mark emerged as a regional vehicle currency for trading European national currencies in the spot market. No other currency in the world has been identified to play a significant vehicle role so far.

The introduction of the euro gave rise to two mechanical and partly counterbalancing effects. The *first* effect was that intra-euro area foreign exchange trading by definition ceased to exist, and with it the largest part of the Deutsche Mark-related vehicle transactions (intra-area effect). The *second* effect was that the foreign exchange transactions between euro legacy currencies and non-euro area currencies were consolidated to produce a euro turnover (aggregation effect).

Pre-EMU estimates¹⁰ of these two effects showed that aggregate euro turnover in the spot foreign exchange market could be expected to decrease by some 10% to 12% as compared with total Deutsche Mark spot turnover prior to EMU. This reduction was explained by the fact that the first aforementioned effect was estimated to be larger than the second effect.

According to a more recent study on trading volumes¹¹ using data from one main electronic brokering system (EBS)¹², the daily average trading volume involving the euro¹³ was around 15% lower in the first eight months of 1999 as compared with the same period in 1998, whereas US dollar volumes did not show such a decline in the same period¹⁴ (see **Table**

Modest reduction in euro spot foreign exchange volumes compared with Deutsche Mark volumes

¹⁰ See Hartmann (1998): “*Currency Competition and Foreign Exchange Markets: The Dollar, the Yen and the Euro*”, Cambridge, UK: Cambridge University Press.

¹¹ See Hau, H., Killen, W.P. and Moore, M. (2000): “*The Euro as an International Currency: Explaining Puzzling First Evidence*” – CEPR Discussion Paper, No. 2510, July.

¹² The other major electronic brokering system in the foreign exchange market is Reuters Dealing 2000-2. Owing to a confidentiality agreement with EBS, these data are not displayed.

¹³ Only transactions against the US dollar, the Japanese yen and the Swiss franc (or the euro, respectively) are included in the calculations.

¹⁴ It should be noted, however, that for all euro pairs the volume decline started with the financial turbulence in autumn 1998 and that – with the possible exception of EUR/USD – they did not subsequently recover significantly (see Hau et al., cit., figures 1 and 3-7).

B.1). Since this reduction refers to trading volumes with outside currencies, it cannot be attributed to the elimination of intra-euro area trading. Ceteris paribus, one would have expected that purely external euro volumes would have increased by comparison with Deutsche Mark volumes as a result of the simple aggregation effect.

According to anecdotal evidence, the euro-related daily foreign exchange turnover fell only moderately in 2000, while turnover related to the US dollar dropped substantially. However, the aggregate turnover of the dollar still exceeds that of the euro by a wide margin.

Looking at specific currency pairs, one can see that one major factor was a marked decrease (of 44%) in the trading of euro against yen compared with Deutsche Mark against yen within the first eight months of Stage Three. With the introduction of the euro, market participants might have preferred to use the more familiar US dollar as the main vehicle (inertia effect) instead of shifting from the Deutsche Mark to the euro. However, no solid evidence explaining these observations seems to exist at present.

Surprising loss of liquidity against yen

15. Further insights can be gained from **transaction costs**. **Table B.2** details average spot bid-ask spreads for different time periods. The data are averages of all intra-day spreads quoted on Reuters. While these spreads are only indicative and not equal to the spreads that are observable in actual trading, the assumption is that the “traded” spreads are strongly correlated with the spreads shown on Reuters.¹⁵

In line with the decline in liquidity implied by the volume figures reported above, some euro spreads tended to be higher in 1999 than in 1998. Whereas this increase was rather limited vis-à-vis the dollar, at 1.5 basis points (40%), it was very large against the yen (exceeding 3 basis points, i.e. a 62% change), for which the reduction in market volume was the largest among the currencies reported. A particularly dramatic increase of 6 basis points in quoted spreads on Reuters could also be observed for the euro against the pound sterling, which is almost three times the 1998 level¹⁶. Conversely, dollar spreads other than those against the euro declined modestly in 1999.

Higher euro-pound and euro-yen spreads than former Deutsche Mark spreads

¹⁵ The correlation is not perfect: the banks quoting on Reuters are not necessarily leading market participants and at times they quote spreads of significantly different sizes within minutes of one another. Moreover, there are no indications of the amounts involved, with larger amounts commanding wider spreads. For the time being, however, no better data set is available to the ECB.

¹⁶ In contrast to the volume figures the spread increases all started with January 1999, so they coincide with the start of Stage Three of EMU (see Hau et al., cit., figures 1-5).

In order to assess whether this phenomenon was of a temporary or longer-term nature, **Table B.2** also considers different time periods before and after 1998 and 1999, for which comparable data have been published or are available from internal ECB sources. It turns out that, for the latest data (end-2000), euro-Swiss franc spreads (3 to 3.5 basis points) have either hardly changed compared with pre-EMU levels or are even lower, depending on the pre-EMU reference period. Similarly, the increase in euro-dollar spreads is somewhat overstated by the low spreads in 1998 as compared with 1989 or 1992, for example. On average, they are now almost back down to the levels recorded in 1992 (about 4.5 basis points). Their modest increase in 1999 might therefore have been temporary. However, euro-yen and euro-pound quoted spreads remain high compared with historical levels. In contrast to the euro, dollar spreads (other than those against the euro) were particularly high in 1998, which leads to an overemphasis of their decline in 1999. At the end of 2000 average dollar spreads were relatively close to their 1989 and 1992 levels. Finally, recent comments by market participants and EBS volume data for 2000 point to a continuing process of gradual liquidity increases for the euro against the yen, the Swiss franc and the pound sterling. Moreover, some market participants have observed that certain euro area banks split big orders in USD/CHF or GBP/USD into euro-crosses.

*Normal euro-dollar
and euro-Swiss franc
spreads*

Since a currency union implies a change of regime for spot foreign exchange trading, median spreads are reported in the last column of **Table B.2**. These medians should be more resistant to biases from outliers in the averages. For example, in a transitional situation following the introduction of a new currency, some inefficient traders might display unduly large quoted spreads on Reuters. Since spreads are bound to 0 from below, such a phenomenon could lead to an upward bias in average spreads. In fact, the median euro-yen spreads are lower than their average level (but not lower than pre-EMU Mark-yen spreads), so that the increase in transaction costs might not have been as dramatic as it appears. This is not the case for the euro-pound currency pair, for which the spread remains above 8 basis points, even for the median. Since no volume data could be obtained for this currency pair and since there is no clear evidence for traded spreads, it is difficult to assess the factors behind the high euro-pound spreads. One possibility, similar to the one mentioned above with regard to the yen, is that some euro-pound transactions were exchanged through the dollar right after the start of Stage Three. Another is reduced competition owing to the consolidation and concentration tendencies in the foreign exchange market¹⁷. Finally, it has

¹⁷ Following a formal question in the European Parliament about rising foreign exchange costs, the European Commission started an investigation into anti-competitive practices. No conclusive evidence could be produced (see "Answer by M. Monti to written question P.2164/99 from Christopher Huhne (ELDR) to the Commission: Inquiry into rising foreign exchange costs.")

been conjectured that the removal of intra-euro area hedging opportunities may lead to an increase in transaction costs. However, all these hypotheses seem to be rather speculative at the present juncture.

16. Some complementary insights can be gained from individual comments made recently by market participants. *First*, market participants confirm that the overall euro spot trading and liquidity is by now broadly comparable to pre-EMU Deutsche Mark trading and liquidity¹⁸. *Second*, according to anecdotal evidence the euro is playing a significant vehicle currency role for other European currencies. This is the case, in particular, with regard to the pound sterling against the Norwegian krone and to some EU accession countries' currencies, notably the Polish zloty. *Third*, a liquidity improvement is mentioned in the euro crosses against the Australian, New Zealand and Hong Kong dollars, as well as against the South African rand.

Anecdotal evidence suggests an increase in the use of the euro as a vehicle currency within Europe

17. In conclusion, the US dollar remains the main international vehicle currency at present. The spot foreign exchange trading volume associated with the euro is lower than might have been expected. At present, the liquidity of the euro spot market against the US dollar seems to be comparable to that of the Deutsche Mark prior to EMU. However, since its introduction, the euro spot market has suffered from a lower liquidity against the yen (compared with the Deutsche Mark) and – according to some evidence – the pound sterling. Moreover, as illustrated by euro-dollar and euro-Swiss franc spreads, and in line with recent evidence of an improved liquidity situation for euro trades vis-à-vis the pound sterling and the Japanese yen, it is rather unlikely that the earlier development in euro-yen and euro-pound spreads reflects a general long-term phenomenon for all euro spreads.

The US dollar remains the only global vehicle currency, while the euro has inherited a vehicle currency role from the Deutsche Mark at regional (i.e. European) level

While market participants deem the euro to be the main vehicle currency for European currencies, which could be further fostered by the EU accession process, at present and on the basis of the information available the euro does not play a significant role as a global vehicle currency. As mentioned above, more detailed and conclusive evidence will only become available in the context of the next BIS Triennial foreign exchange turnover survey, the preliminary outcome of which will appear in autumn 2001.

1.2.2 The euro as a pricing and quotation currency

18. The US dollar also remains the dominant quotation currency, except in the case of shares listed on the European stock exchanges. The picture is similar for commodities. The

The US dollar remains by far the most important

¹⁸ There are even reports that the currency pair euro-pound sterling would now be more liquid than pound sterling vis-à-vis the US dollar. This evidence contradicts the assessment of the euro-pound based on spreads. Only the next BIS Triennial foreign exchange turnover survey, to be conducted in April 2001, will provide the data needed for a conclusive assessment.

major commodities (oil and precious metals) are all priced in US dollar, although some countries – such as Iraq and Russia – are using the euro mainly for political reasons and not necessarily with a clear economic rationale. While there are some commodity futures listed in Europe and priced in euro, their number is rather limited, as is the number of open positions in these contracts. *pricing and quotation currency*

In the foreign exchange market, the role of the euro for cross-quotations is broadly comparable to that of the Deutsche Mark. Since the start of Stage Three, the euro has been quoted against all other major currencies and all European currencies. For some EU accession country currencies quotations are now made almost exclusively against the euro. The euro has now also come to be quoted comparably actively against the Australian, New Zealand and Hong Kong dollars and the South African rand.

1.2.3 The euro as a settlement and invoicing currency

19. Harmonised and aggregated data on the use of the euro for settlement and/or invoicing of international trade and services are, at least for the time being, not available. *Some evidence from the European Commission*

The only source is the European Commission (“Commission”), which on a quarterly basis conducts a survey of euro area banks regarding the share of the euro in international (non-cash) transactions of euro area firms, in terms of both value and volume.¹⁹ International transactions include the settlement and/or invoicing of trade and services, as well as all other non-cash payments, e.g. in the context of mergers and acquisitions, by euro area firms. Although these data might not be entirely reliable, in the absence of more detailed figures they may give at least some indication regarding the use of the euro in international transactions²⁰.

According to the data compiled by the Commission, during 2000 the share of the euro in international transactions of euro area firms remained roughly constant in terms of value but increased in terms of volume. **Chart B.3** illustrates that the share of the euro declined in terms of value between the second and the fourth quarter of 2000 (no earlier data are available), from 42.4% to 39.7%, while its share in terms of volume increased from 22.8% to 32.5%. The share of the euro in international non-cash transactions of euro area firms

¹⁹ “Volume” stands here for the number of transactions. The source of the data is the “Quarterly Review of the Use of the Euro” by the Commission (<http://europa.eu.int/comm/economyfinance/document/misc/euroseen.htm>).

²⁰ The Commission calculates the share of the euro in international transactions as follows: share of the euro transactions = euro transactions / (euro transactions + legacy currency transactions + transactions in all other currencies). The Commission’s survey, therefore, refers partly to the euro as opposed to legacy currencies. Consequently, data provided in this section are not fully comparable with those of the other sections of this review.

varies widely between the Member States (see **Chart B.4**).

20. While no recent data are available on the share of the euro in the settlement/invoicing of international trade, the Commission estimates that this share (also including trade not involving euro area residents) is somewhere around 15% to 17% of the total in 2000.

Moreover, it should be borne in mind that, according to the Commission, in the euro area the proportion of firms' accounts kept in euro is only 3.9%. The low number of firms that have switched to euro accounts so far may explain the slow progress in the international use of the euro for transactions, both in value and in volume terms, assuming that there is a link between the accounting currency and the transaction currency.

Regarding the interpretation of the Commission data, the increase in volume figures may indicate a somewhat more broad-based use of the euro, which now also seems to be used for smaller transactions. However, reasons for the stagnation of the share of the euro in international transactions in terms of value are difficult to identify. The Commission has, however, observed that the domestic share²¹ of the euro in firm-related transactions – for which longer time series are available – has been strongly influenced by large merger and acquisition deals that have involved cross-purchases of shares between merging companies, and these have been denominated in euro. Data on M&A transactions suggest that in the euro area both domestic and cross-border M&A activity was very strong in the first half of 2000 and significantly declined thereafter.²² This decline may also have affected the use of the euro for international transactions, assuming that M&A transactions also hold a high share in value in terms of share in international transactions. There are, however, no data available regarding the importance of M&A flows in international transactions of euro area companies, and, consequently, a firm conclusion cannot be drawn.

1.3 The international official use of the euro

1.3.1. The euro as a reserve currency

21. With an estimated share of 12.5% of the foreign exchange reserve assets of IMF Member States at the end of 1999, the euro is the second most important world reserve currency after the US dollar (66.2%) and ahead of the Japanese yen (5.1%) (source: IMF *The euro accounts for 12.5% of world foreign exchange reserves*)

²¹ The domestic share of the euro is calculated as follows: euro transactions / (euro transactions + legacy currency transactions).

²² Source: SDC Platinum.

Annual Report 2000). The predominance of the US dollar as a reserve currency mainly mirrors the pre-eminence of its financial market in terms of size, depth and liquidity, as well as its widespread use as an intervention currency at the global level.

22. The data published by the IMF in its Annual Report 2000 are the only statistics on euro-denominated foreign exchange reserves that have been released to the general public thus far. In this document the IMF correctly points out that, owing to the technical adjustments attributable to the introduction of the euro²³, the share of euro legacy currencies prior to the introduction of the euro needs to be adjusted in order to allow comparisons over time. While non-EMU-adjusted data show that the share of euro area currencies in world reserves declined by 7 percentage points between end-1997 and end-1999 (Table C.1), EMU-adjusted data show that, on average, there is no evidence of reallocation of foreign reserves away from the euro. In the words of the IMF, “on the basis of adjusted data (...), the combined share of (...) euro legacy currencies held outside the 11 euro area countries in 1998 was practically identical to the share of the euro at the end of 1999”²⁴.

On average, there is no evidence of reallocation of foreign exchange reserves away from the euro

23. It should also be recalled that on 1 January 2001 the valuation of international reserves was affected by the adoption of a new valuation method for the special drawing rights (SDR). The SDR basket traditionally comprised five currencies of individual countries, including the Deutsche Mark and the French franc, and the weight of each currency in the basket was determined on the basis of the trade and financial data of these countries. At the start of Stage Three of EMU the Deutsche Mark and the French franc components were replaced by equivalent amounts of euro. However, the criteria for selecting component currencies and assigning weights continued to be based on individual country indicators. Consequently, the weight of the euro component in the SDR basket reflected only the economic weight of Germany and France. However, since 1 January 2001 the new weight of the euro in the SDR basket (29%) has been based on the importance of the euro area as a single economic entity. Similarly, on the same date the EURIBOR replaced the German and French national interest rates in the determination of the SDR’s interest rate. These modifications illustrate how the official international financial

The new weight of the euro in the SDR basket mirrors the importance of the euro area as a single economic entity

²³ With the introduction of the euro, the share of euro area currencies (i.e., the euro’s legacy currencies up to end-1998 and the euro afterwards) in foreign exchange reserves declined as a result of *two technical adjustments* attributable to the changeover to the euro. *First*, on 31 December 1998 the ESCB unwound into gold and US dollars the official ECUs that were issued to EU central banks through revolving swaps against the contribution of 20% of their gross gold holdings and US dollar reserves, for a total amount of EUR 60.9 billion. *Second*, with effect from 1 January 1999, the Eurosystem’s reserves previously denominated in former euro-area national currencies and private ECUs became domestic assets, for a total amount of EUR 19.3 billion. These two technical adjustments, which brought about a contraction in euro-denominated foreign reserves of EUR 80.2 billion, call for construction of EMU-adjusted time series on the use of the euro as a reserve currency.

²⁴ “Annual Report of the IMF Executive Board for the financial year ended April 30, 2000” (15 September 2000, page 111).

community is gradually adjusting to the new reality of the euro.

1.3.2 *The euro as an anchor currency*

24. As **Tables C.2 and C.3** describe in greater detail, 56 countries²⁵ outside the euro area currently involve the euro in their exchange rate regime. Solutions adopted range from very strict – or even full – links to the euro (e.g. formal entitlement to use the euro as legal tender, euroisation and currency boards) to looser forms of anchoring (e.g. peg arrangements, crawling fluctuation bands and managed floating). *56 countries outside the euro area currently involve the euro in their exchange rate regime*

Countries anchoring to the euro only (i.e. not to a basket of currencies including the euro) are all located in the Euro-time zone²⁶. This confirms that close trade and financial links with the euro area remain the main factor behind the choice of the euro as a reference for exchange rate policy.

In particular, of the 13 candidates for EU accession, only Romania, Lithuania and, as from 22 February 2001, Turkey do not link their currencies to the euro. The Bank of Lithuania, however, has announced its intention to switch, in the second half of 2001, from the US dollar to the euro as the currency on which its currency board is based.

The EU accession process is likely to have provided an additional impetus to adopt a euro-based exchange rate regime, although factors of a different nature have led to the adoption of fully-fledged free floating in Romania and Turkey.

25. Overall, the international use of the euro as an anchor currency may be seen as a sign of confidence in the stability-oriented monetary policy of the euro area. It should be stressed, however, that the choice of using the euro as an anchor currency is a unilateral decision which does not involve any commitment on the part of the Eurosystem. Moreover, it should be noted that the aggregate GDP of the 55 countries anchoring to the euro is very small (around 4% of world GDP, and 17% of euro area GDP). This means that the bearing of the anchoring to the euro on the transmission mechanism of euro area monetary policy is very limited (see Section 2.1). *The choice of unilaterally anchoring a currency to the euro does not involve any commitment on the part of the ECB*

²⁵ This number also includes the French territorial communities of Saint-Pierre-et-Miquelon and Mayotte, as well as Kosovo, Montenegro and the countries which peg either to the SDR or to a basket of currencies including the euro (see **Table C.2**).

²⁶ The US dollar therefore remains the only currency to which a number of countries (around ten countries) located outside its region (i.e. the Western Hemisphere) anchor their currency.

1.3.3 *The euro as an intervention currency*

26. While countries with currencies not pegged to the euro may also use it for intervention purposes other than as part of concerted intervention, the use of the euro as an intervention currency is mainly related to its function as an anchor currency.

Within the euro time zone, the countries for which evidence on euro-denominated intervention is available can be divided into two main groups.

The first group includes those EU Member States with a derogation (Greece until the end of 2000, and Denmark) which, as from 1 January 1999, began participating in the new exchange rate mechanism (ERM II) that linked their currencies to the euro on a bilateral and voluntary basis.

The second group of Euro-time zone countries that use the euro for intervention purposes comprises a number of countries which are official candidates for EU accession. In *Hungary*, where since March 1995 a disinflation strategy has been pursued by using a crawling peg regime with a +/-2.25 fluctuation band, the central bank has intervened against both the euro and the US dollar at the limits of the fluctuation band on a regular basis. In *Poland* the central bank conducted intervention against either the euro or the US dollar until the first half of 1999, although no quantitative evidence is available. On 7 June 1999 the daily exchange rate fixing in the local stock exchange was abolished. Since then the National Bank of Poland has refrained from direct intervention on the foreign exchange market, although the crawling peg system was not officially abolished until April 2000. However, in the present inflation targeting framework the National Bank of Poland maintains the right to intervene (including against the euro) whenever it deems it appropriate. In *Bulgaria* and *Estonia* – which have maintained a currency board vis-à-vis the Deutsche Mark/euro since 1997 and 1992, respectively – foreign exchange operations to ensure convertibility under the currency board are regularly conducted against euro, while small working balances denominated in US dollar are maintained. In *Latvia*, which pegs to the SDR with a very narrow fluctuation band (+/- 1%), the central bank conducts automatic interventions within the margins against the four currencies that are included in the SDR basket (i.e. US dollar, euro, yen and pound sterling). Between late 1999 and 21 February 2001, *Turkey* followed a crawling peg regime calculated on the basis of a basket of USD 1 and EUR 0.77. While there is some anecdotal evidence of intervention against the euro in this period, it should be taken into account that the bulk of intervention was against the US dollar. In particular, during the two Turkish crises in November/December 2000 and

Several countries in the euro time zone have conducted foreign exchange intervention against the euro

February 2001, the use of the US dollar for intervention purposes was largely predominant, although not exclusive. On 22 February 2001 the Central Bank of Turkey was forced to float the exchange rate of the Turkish lira. Finally, although quantitative evidence is not available, EU accession countries such as *Slovenia* and *Cyprus* are also likely to conduct intervention against the single currency as their exchange rates are moving very closely in line with the euro.

2. Policy assessment

27. Some countries have in the past tended to adopt an active stance with regard to the internationalisation of their currency, either by fostering or by hindering such a process. The promotion strategy was motivated by factors such as increased income from seigniorage, easier financing of balance of payment deficits, and improved efficiency of the domestic financial markets through positive network externalities and stronger competition. At the opposite end of the spectrum, there are examples of countries that resisted the internationalisation of their currency, in particular in view of increased uncertainties in the conduct of macroeconomic policies in general and monetary policy in particular.

The Eurosystem neither fosters nor hinders the international use of the euro

The Eurosystem does not pursue the internationalisation of the euro as an independent policy goal, which implies that it neither fosters nor hinders this process.

First, the potential advantages of the international use of a currency should not be overrated. The Eurosystem does not suffer from an insufficient level of seigniorage. Its financial independence is, therefore, not endangered. As for balance of payment financing, the international use of a currency may alleviate the external constraint for some time, but in the longer run it cannot free an economy from market discipline. Finally, the development of a domestic financial market in the euro area should be seen primarily as a precondition of the internationalisation of the euro rather than as its outcome, although of course these two processes tend to interact.

Second, the impact of the internationalisation of the euro on monetary policy should not be overemphasised. As is discussed in Section 2.1 below, the ECB's monetary policy strategy is sufficiently robust to take into account and accommodate potential implications of the

²⁷ An extensive discussion of the factors that may affect the international use of the euro in the future is provided in:

- ECB (1999): "*The International Role of the Euro*" - Monthly Bulletin (August);
- Detken, C. and Hartmann, P. (2000): "*The Euro and International Capital Markets*" – ECB Working Paper No. 19 (April).

international role of the euro.

Third, and more importantly, evidence described in Chapter 1 illustrates that the current international use of the euro is a *by-product* of market developments and policies inside and outside the euro area. In the future, developments affecting the internationalisation of the euro will be mainly *market-driven* since a prominent role is expected to be played by private agents' decisions on the use of the euro as an investment, financing and vehicle currency²⁷. Even if they wanted, policy makers could *not directly* affect such a process to a significant extent. This, of course, is not incompatible with the current efforts by European authorities to promote an efficient and fully integrated financial market for euro-denominated assets and liabilities, which, as mentioned above, may have the *indirect* effect of making the euro more attractive to international investors.

28. The neutral stance adopted by the Eurosystem with regard to the international use of the euro should not be interpreted as implying that possible further internationalisation of the euro would be broadly policy irrelevant. Indeed, there are at least two reasons for the Eurosystem to monitor the international use of the euro.

The Eurosystem monitors trends in the international use of the euro

The first reason is related to the “*domestic*” dimension of the activities of the Eurosystem. As discussed in Section 2.1, the potential growth of the international use of the euro might have, within the euro area, some impact on both the transmission mechanism of monetary policy and the information content of indicators under the monetary policy strategy.

The second reason involves the “*international*” activities of the Eurosystem: an increasing international role of the euro would have policy implications both at the multilateral and regional level, as shown in Section 2.2. It should be stressed that, apart from future trends in the internationalisation of the euro, the advent of the single currency represents a regime shift, which per se has already affected international co-operation in many ways.

2.1 Monetary policy issues

29. In the article published in the ECB Monthly Bulletin (“*The International Role of the Euro*”, August 1999), the monetary policy implications of the international role of the euro were explored at length. Since then, no major events have occurred to warrant changing the main thrust of the conclusions that were drawn in the report and published in the above article.

There is no clear evidence that the international use of the euro is significantly affecting the transmission mechanism of monetary policy in

Overall, it is still difficult to evaluate the size and direction of the impact of the international role of the euro on the transmission mechanism. While some channels in the monetary transmission mechanism may be strengthened, others may lose importance. For example, as the international role of the euro will enhance the role of financial markets in the transmission mechanism, their more rapid response to monetary policy compared with financial intermediaries might contribute to a reduction in the transmission mechanism lags. However, thus far, and in spite of the substantial growth of private debt markets denominated in euro, there is no clear evidence that this process is already significantly affecting the transmission mechanism in the euro area.

the euro area

30. International holdings of the euro complicate the statistical recording and, thus, the interpretation of monetary developments. The demand for banknotes outside the euro area after the cash changeover is difficult to predict, in particular in view of the current circulation of Deutsche Mark banknotes outside Germany.

Uncertainty about the holdings of Deutsche Mark/euro outside the euro area

31. Measurement problems show that a key issue is the availability of high quality statistics. It is particularly important to further develop monetary statistics in order to allow for a more detailed assessment of cross-border monetary holdings than can be provided within the existing framework of money and banking statistics. This must include monetary euro holdings of non-residents, but it should also include the holdings of deposits held by euro area residents abroad. In this respect, further efforts are needed to distinguish between resident and non-resident holdings of securities issues. In addition, the availability of international investment position statistics, which contain both the holdings of foreign assets (in particular deposits and other liquid assets) by euro area residents and the holdings of domestic assets by non-euro area residents, would also be of importance. Such statistics are important for the thorough analysis of monetary developments, which is needed in order to assess appropriately monetary developments with regard to the risks for price stability. Finally, in order to analyse the overall flow of funds, a closer link between money and banking statistics in the euro area and portfolio movements as reported in the balance of payments statistics has to be established. A thorough analysis of monetary aggregates can help to detect such measurement problems and take them into account when drawing conclusions from monetary developments.

Need to improve monetary statistics

32. More generally, the increasing importance of financial markets and of international capital flows may lead to greater difficulties in assessing the implications of monetary policy actions on output and prices. This notwithstanding, the ECB's monetary policy strategy, which eschews mechanical reactions to single indicators or forecasts, continues to be well prepared to cope with such uncertainties relating to the international use of the euro.

The ECB's monetary policy strategy continues to be well prepared to cope with uncertainties related to the international use of the euro

2.2 International policy issues

33. With regard to *multilateral* co-operation at the international level, the introduction of the euro implies fewer global players and a more balanced relationship among them. This tends to facilitate and make more efficient the process of co-operation, while at the same time strengthening the awareness of each player to take up its respective responsibility. In this context more effective peer pressure can be exerted, which can, at least in part, substitute for the lack of an enforcement mechanism at the international level.

At the multilateral level, the creation of the euro area tends to simplify and enhance co-operation ...

The enhanced role of the Eurosystem in the international co-operation is already visible in part. This should be seen as a safeguard, reducing the risk of both inappropriate foreign exchange action and fine-tuning macroeconomic policies, which could have adverse implications for medium term sustainability.

A major precondition for these improvements in multilateral international co-operation to be fully achieved is that the euro area as such is adequately and properly represented in international multilateral organisations (e.g. BIS, IMF and OECD) and fora (e.g. G7 and G20). With this aim in mind, a number of adjustments have been made over the past two and a half years to the rules and procedures on which international relations are based²⁸, since the previous framework was not tailored to the involvement of a monetary union as large as the euro area. Such adjustments have been largely based on pragmatism and, as such, are still likely to evolve over time. This is in line with the Conclusions of the European Council in Vienna in December 1998, according to which “a pragmatic approach might be the most successful which could minimise the adaptation of current rules and practices provided, of course, that such an approach resulted in an outcome which recognised properly the role of the euro”.

... provided that the euro area is adequately represented in the relevant organisations and fora

34. With regard to *regional integration* efforts, the fact that the second largest economy in the world, the euro area, has been created through a process of inter-governmental co-operation and economic convergence, is having clear-cut implications for further regional integration in the Euro-time zone. Four different groups of partner countries can be distinguished in this respect, on the basis of the intensity and nature of their trade, economic, financial and institutional links to the euro area. A *first* group is represented by Western European countries, including the three EU countries which have not yet adopted the euro as their currency (Denmark, United Kingdom and Sweden), as well as Norway,

At the regional level, the creation of the euro area has implications for regional integration in the euro time zone ...

²⁸ In particular, for a comprehensive description of the relations that the ECB has developed within the international community thus far, see the article entitled “*The ECB’s relations with international organisations and fora*” in the ECB Monthly Bulletin (January 2001).

Iceland and Switzerland. Relations are organised in the framework of a well-defined and long-standing institutional setting. A *second* group is made up of accession countries to EU membership. A *third* group consists of those countries which do not fall within either of the former groups and are using the euro as a nominal anchor for their exchange rate and monetary policy on the basis of unilateral arrangements (see Section 1.3.2 and Tables C.2 and C.3). A number of Western Balkan and African countries belong to this group (including the fourteen CFA franc zone countries plus the Comoros and Cape Verde). Finally, a *fourth* group is represented by several other countries in Europe, Africa and the Mediterranean area which maintain close trade and financial links to the euro area economy, as well as institutional relations with the European Union.

Of these four groups, the EU accession countries are currently of particular importance to the Eurosystem, although the significance of the other three groups should not be understated. The advent of the euro has changed the conditions under which these countries will converge prior to joining the EU. In particular, for many of these countries the euro has become the external anchor for further advancing the disinflationary process. In addition, once they become members of the EU, the accession countries are expected to join ERM II, thus linking their currencies to the euro. Accession countries are in the process of implementing the EMU-related “acquis communautaire” to ensure compliance with the requirements of the Treaty. Against this background, the involvement of the Eurosystem in the accession process is warranted.

... especially with regard to the process of EU accession

TABLES AND CHARTS

Index

Table I Functions of international currencies

A. *The international private use of the euro as a store of value*

- A.1 International bonds and notes, narrow measure, currency shares
- A.2 International bonds and notes, broad measure, currency shares
- A.3 International money market instruments, narrow measure, currency shares
- A.4 International money market instruments, broad measure, currency shares
- A.5 International debt securities, narrow measure, currency shares
- A.6 International debt securities, broad measure, currency shares
- A.7 International bank liabilities, currency shares
- A.8 International bank assets, currency shares
- A.9 Bond holdings, currency shares
- A.10 Equity holdings, by area

B. *The international private use of the euro as a medium of exchange and a unit of account*

- B.1 Average daily spot volume in EBS in major currency pairs
- B.2 Average spot foreign exchange bid-ask spreads in major currency pairs
- B.3 Share of the euro in international non-cash transactions of euro area firms
- B.4 Share of the euro in international non-cash transactions of euro area firms by Member States

C. *The international official use of the euro*

C.1: Share of national currencies in total identified official holdings of foreign exchange (IMF Annual Report 2000)

C.2: Exchange rate regimes involving a link to the euro

C.3: Countries involving the euro or its national denominations in their exchange rate regime

Table I

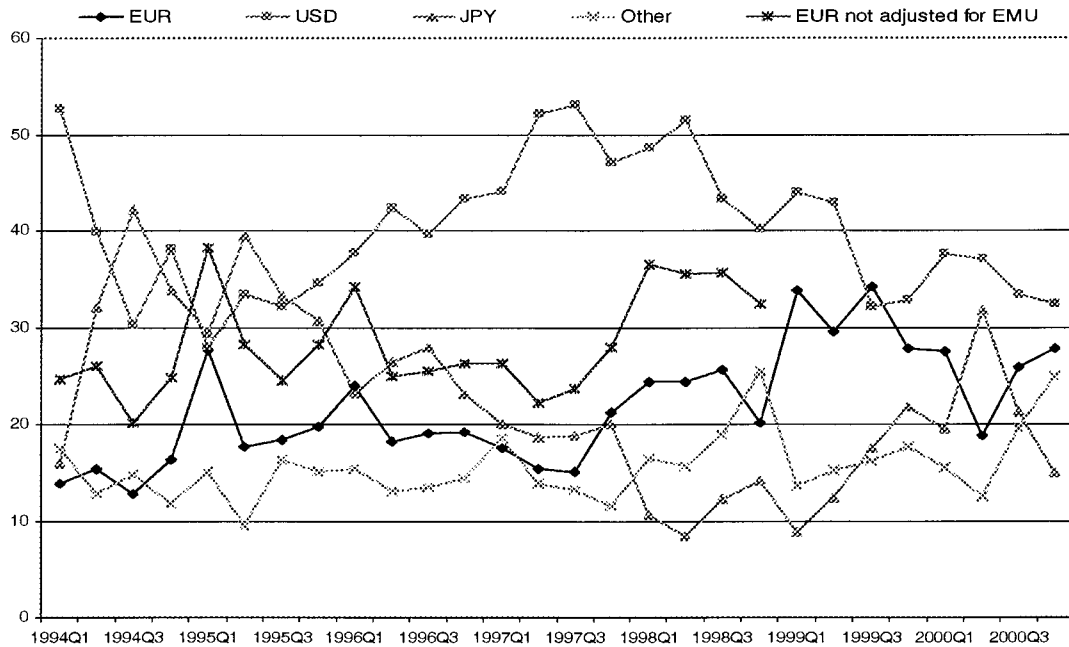
Functions of international currencies

<i>Functions of money</i>	Use by residents of a geographical area other than that in which the international currency is issued	
	Private use	Official use
<i>Store of value</i>	Investment and financing currency	Reserve currency
<i>Medium of exchange</i>	Payment/vehicle currency (i) in exchanges of goods and services (ii) in currency exchange	Intervention currency
<i>Unit of account</i>	Pricing/quotation currency	Pegging currency

**A. Tables and charts on the international private use
of the euro as a store of value**

Tables and Charts A

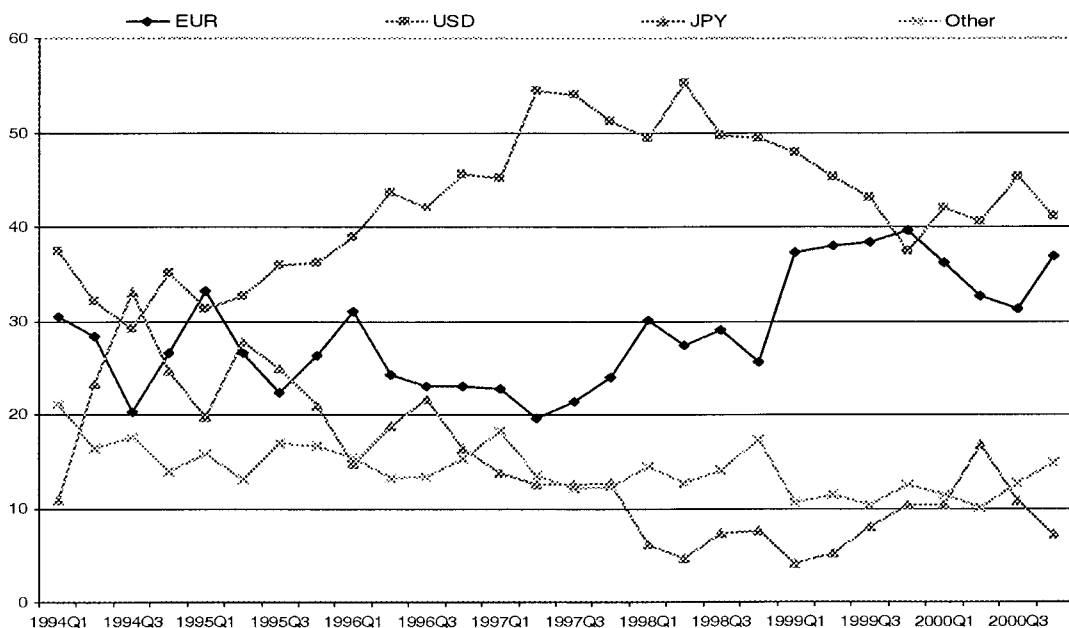
Chart A.1 International bonds and notes, narrow measure, currency shares
(announced issues, current exchange rates, as percentages of total, Q1 1994 - Q4 2000)



Sources: BIS, ECB staff calculations.

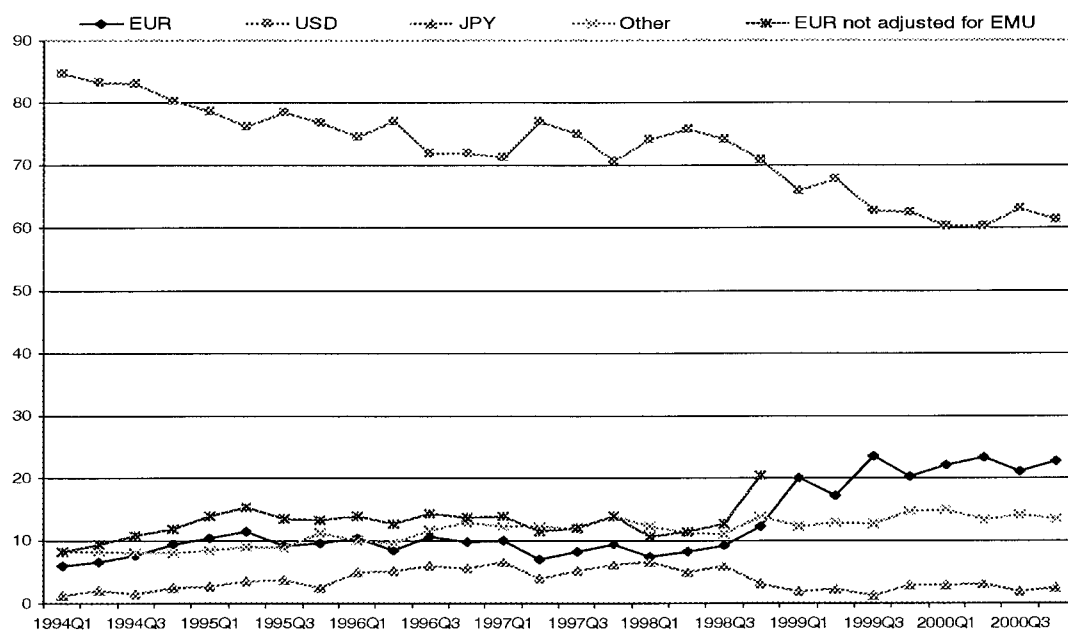
Note: Except for the "EUR not adjusted for EMU" series all data are derived by treating the whole euro area as domestic also prior to 1999.

Chart A.2 International bonds and notes, broad measure, currency shares
(announced issues, current exchange rates, as percentages of total, Q1 1994 - Q4 2000)



Sources: BIS, ECB staff calculations.

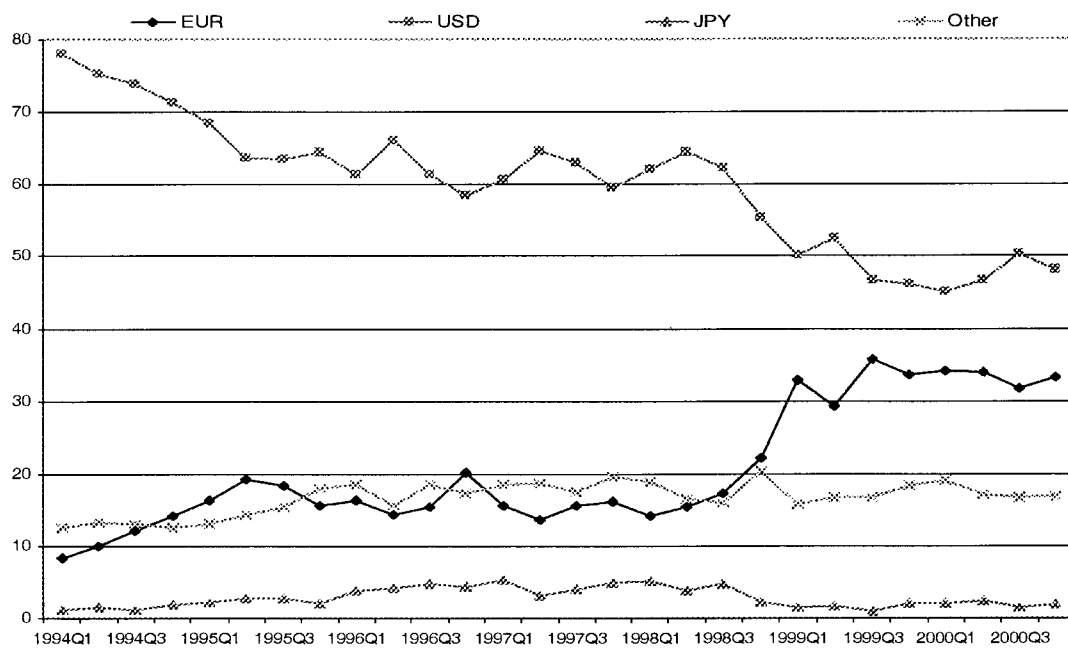
**Chart A.3 International money market instruments, narrow measure
currency shares**
(announced issues, current exchange rates, as percentages of total, Q1 1994 - Q4 2000)



Sources: BIS, ECB staff calculations.

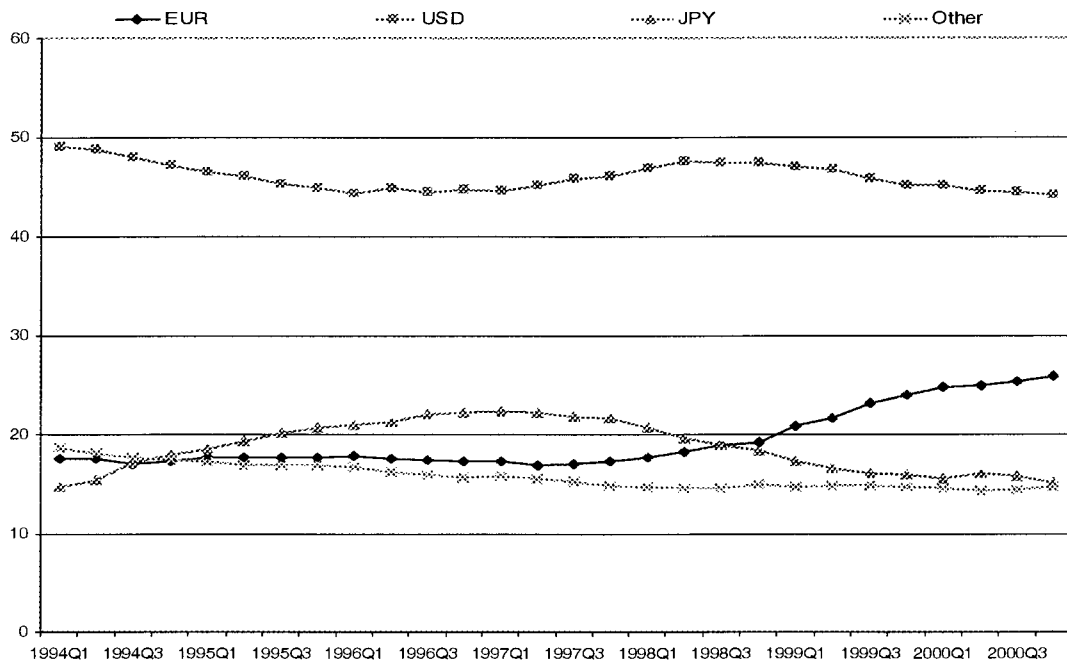
Note: Except for the "EUR not adjusted for EMU" series all data are derived by treating the whole euro area as domestic also prior to 1999.

**Chart A.4 International money market instruments, broad measure,
currency shares**
(announced issues, current exchange rates, as percentages of total, Q1 1994 - Q4 2000)



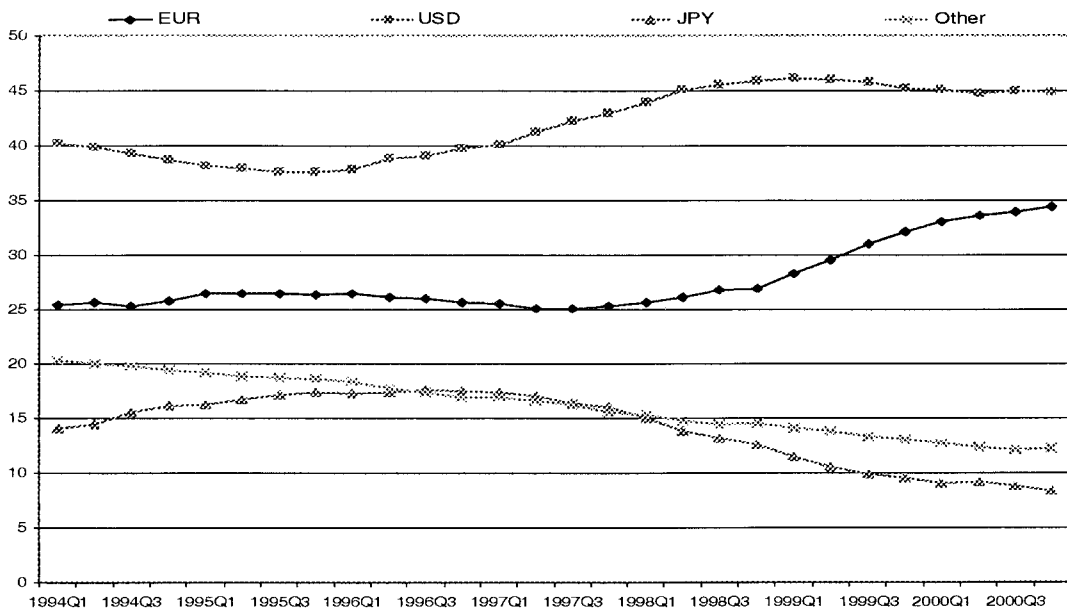
Sources: BIS, ECB staff calculations.

**Chart A.5 International debt securities, narrow measure, currency shares
(amounts outstanding, constant Q1 1994 exchange rates, as percentages of total,
Q1 1994 - Q4 2000)**



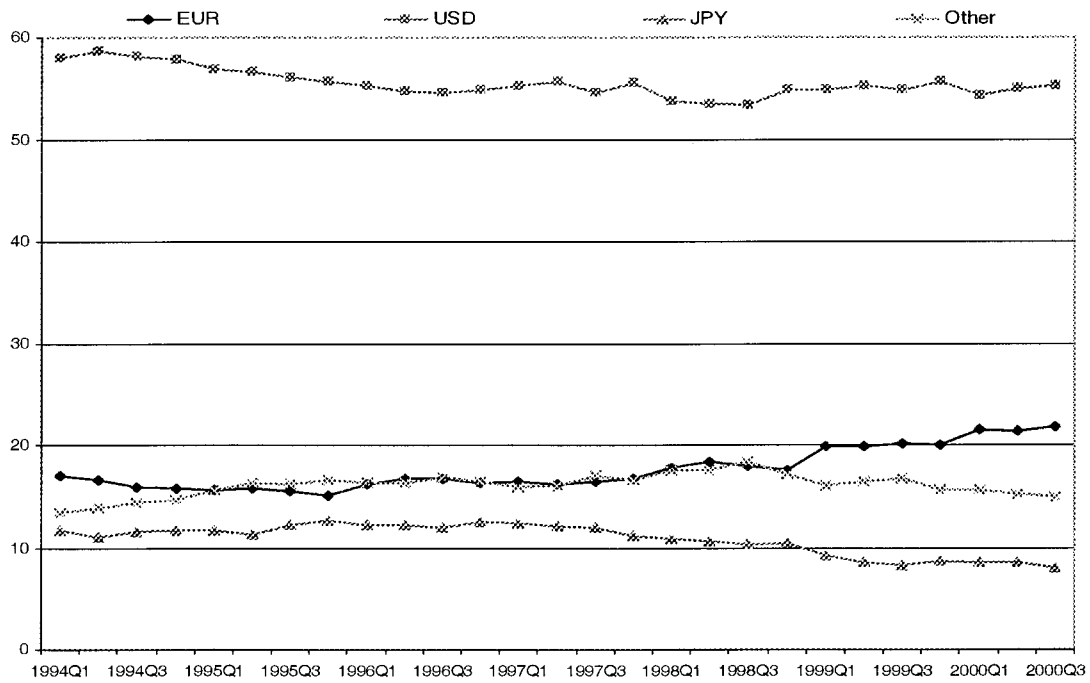
Sources: BIS, ECB staff calculations.

**Chart A.6 International debt securities, broad measure, currency shares
(amounts outstanding, constant Q1 1994 exchange rates, as percentages of total,
Q1 1994 - Q4 2000)**



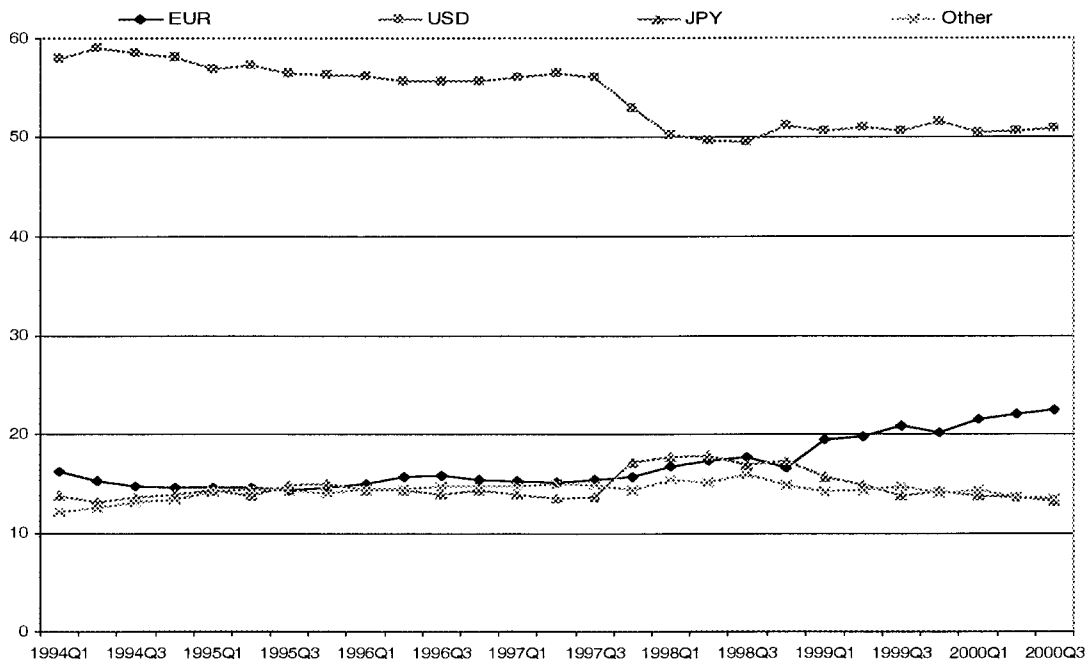
Sources: BIS, ECB staff calculations.

Chart A.7 International bank liabilities, currency shares
 (constant Q1 1994 exchange rates, as percentages of total, Q1 1994 - Q3 2000)



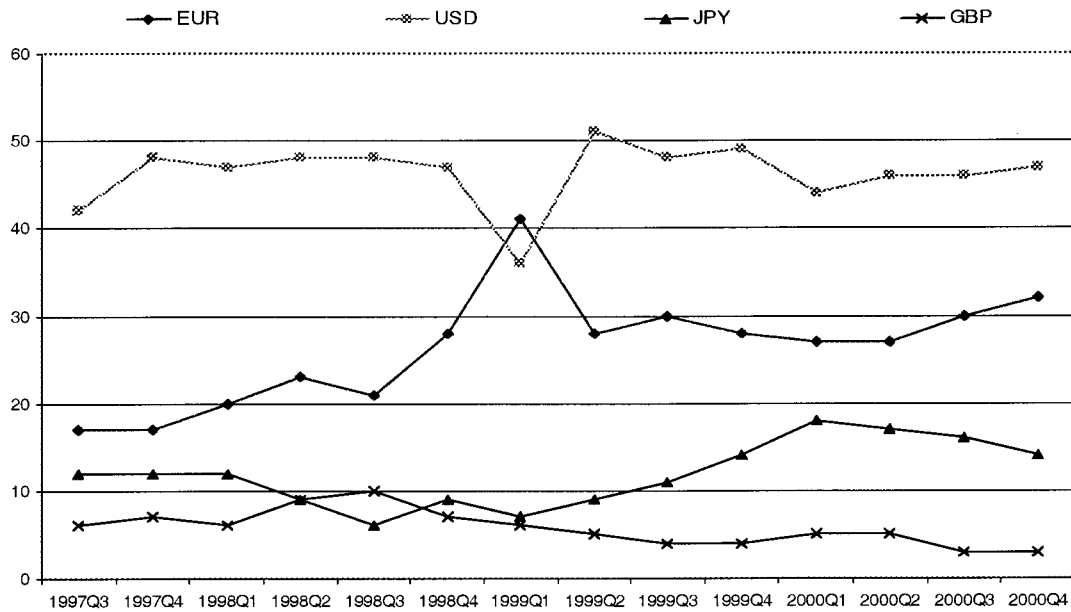
Sources: BIS, ECB staff calculations.

Chart A.8 International bank assets, currency shares
 (constant Q1 1994 exchange rates, as percentages of total, Q1 1994 - Q3 2000)



Sources: BIS, ECB staff calculations.

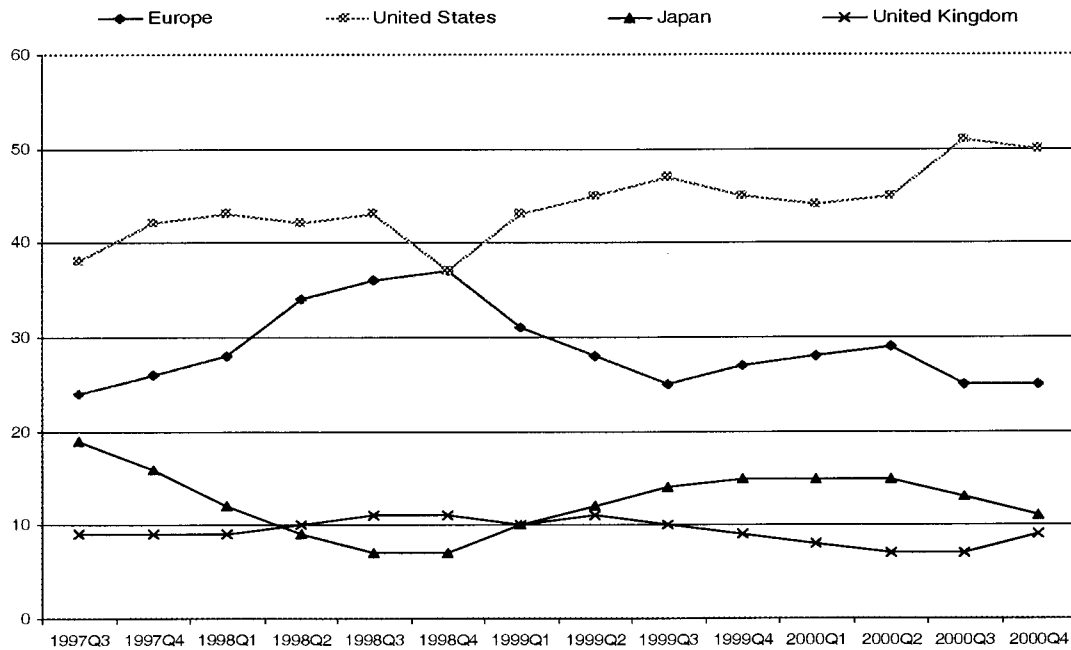
Chart A.9 Bond holdings, currency shares
 (portfolio poll of 8-9 large global fund managers, as percentages of total,
 Q3 1997 - Q4 2000)



Sources: The Economist, ECB staff calculations.

Note: EUR before Q4 1998 equals the sum of DEM and FRF. Note that these data are uncorrected for holdings in domestic currency, because of the global character of the institutions polled. Thus no correction for EMU effects prior to 1999 is undertaken either.

Chart A.10 Equity holdings, by area
 (portfolio poll of 8-9 large global fund managers, as percentages of total,
 Q3 1997 - Q4 2000)



Sources: The Economist, ECB staff calculations.

Note: Europe equals the sum of Germany, France and Other Europe. (See also Note to Chart A.9.)

B. Tables and charts on the international private use of the euro as a medium of exchange and a unit of account

Table B.1**Average daily spot volume in EBS in major currency pairs (USD billions)**

Currency pair	Jan.-Dec. 1998	Jan.-Aug. 1999	Percentage change
<i>Euro volumes (DEM prior to EMU)</i>			
EUR-DEM/USD	45.2	41.1	-9%
EUR-DEM/JPY	7.1	4.0	-44%
EUR-DEM/CHF	5.3	4.0	-25%
Total EUR volume	57.6	49.1	-14.7%
<i>Dollar volumes</i>			
USD/JPY	29.0	27.1	-7%
USD/CHF	3.3	6.7	+103%

Notes: Source Hau et al. (2000), table 2. EBS is one major electronic brokering system used in the spot foreign exchange market. However, levels across currency pairs might not be comparable since some pairs are also traded in Reuters Dealing 2000-2. GBP turnovers are missing since this currency is mainly traded in Reuters Dealing.

Table B.2

Average spot foreign exchange bid-ask spreads in major currency pairs (in basis points)

Currency pair	Apr. 89 ⁽¹⁾	Apr. 92 ⁽¹⁾	Jan.-Dec. 98 ⁽²⁾	Jan.-Aug. 99 ⁽²⁾	Sept. – Dec. 00	
					Mean	Median
<i>Euro spreads (DEM prior to EMU)</i>						
EUR-DEM/USD	4.06	4.56	3.76 (3.61)	5.26 (3.99)	4.75	5.31
EUR-DEM/JPY	n.a.	4.14	5.12 (4.11)	8.30 (4.89)	7.35	5.40
EUR-DEM/GBP	n.a.	4.14	3.12 (4.97)	9.20 (4.05)	8.80	8.29
EUR-DEM/CHF	n.a.	3.40	n.a. (5.85)	n.a. (6.12)	3.26	3.28
<i>Dollar spreads</i>						
USD/JPY	5.47	5.71	6.05	5.71	5.52	4.62
USD/GBP	4.71	4.62	5.37	4.89	4.49	3.54
USD/CHF	5.56	6.18	n.a.	n.a.	4.92	5.63

Notes: (1) Source: Hartmann (1998) using Reuters tick data; (2) Hau et al. (2000) using Reuters tick data, in parenthesis Detken and Hartmann (2000) using daily Bloomberg data.

Chart B.3

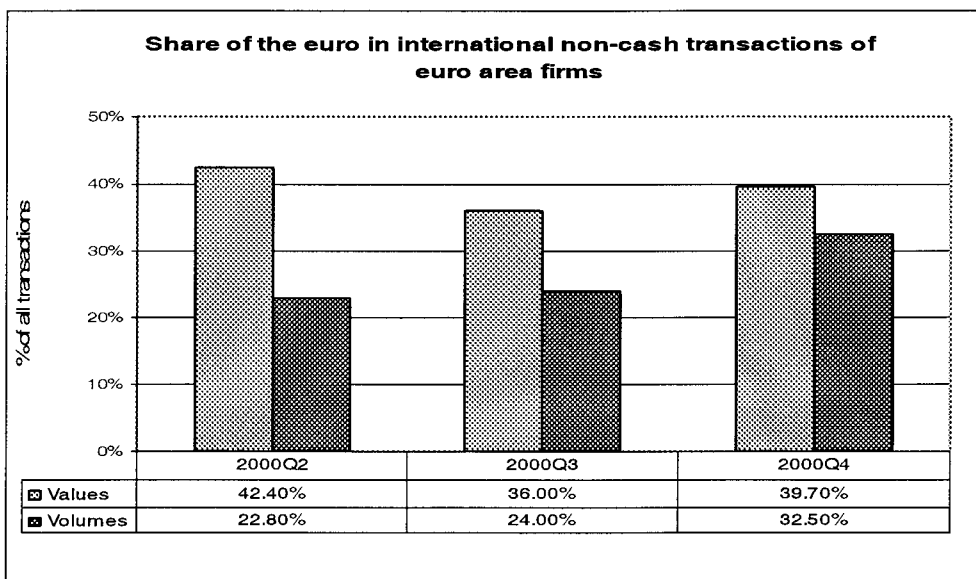
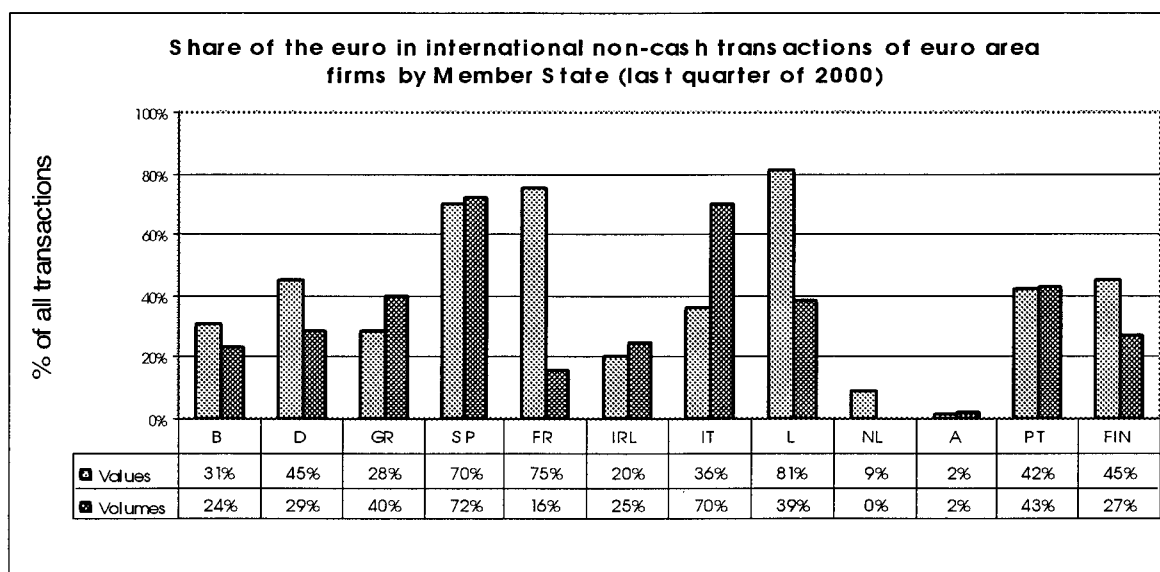


Chart B.4



Source: European Commission

C. Tables and charts on the international official use of the euro

Table C.1

Share of national currencies in total identified official holdings of foreign exchange										
<i>(end of year, as percentages)</i>										
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All Countries										
U.S. dollar	50.6	51.1	55.1	56.4	56.4	56.8	60.1	62.1	65.7	66.2
Euro										12.5
Japanese yen	8.0	8.5	7.5	7.6	7.8	6.8	6.0	5.3	5.3	5.1
Pound sterling	3.0	3.2	3.0	2.9	3.2	3.1	3.4	3.6	3.8	4.0
Swiss franc	1.2	1.2	1.0	1.1	0.9	0.8	0.8	0.7	0.7	0.7
Deutsche mark	16.8	15.1	13.0	13.4	14.0	13.5	12.8	12.6	12.1	-
French franc	2.4	2.9	2.5	2.2	2.3	2.2	1.7	1.3	1.3	-
Netherlands guilder	1.1	1.1	0.7	0.6	0.5	0.4	0.3	0.4	0.3	-
Ecu	9.7	10.2	9.7	8.2	7.7	6.8	5.9	5.0	0.8	-
Unspecified curriencies	7.1	6.9	7.4	7.4	7.1	9.6	9.0	9.0	9.9	11.6
Industrial countries										
U.S. dollar	45.5	43.6	48.8	50.2	50.8	51.8	56.1	57.9	66.7	68.3
Euro										11.0
Japanese yen	8.8	9.7	7.6	7.8	8.2	6.6	5.6	5.8	6.6	5.8
Pound sterling	1.7	1.8	2.4	2.2	2.3	2.1	2.0	1.9	2.2	2.3
Swiss franc	0.9	0.8	0.4	0.3	0.2	0.1	0.1	0.1	0.2	0.1
Deutsche mark	19.8	18.3	15.1	16.4	16.3	16.4	15.6	15.9	13.4	-
French franc	2.5	3.1	2.9	2.6	2.4	2.3	1.7	0.9	1.3	-
Netherlands guilder	1.1	1.1	0.4	0.4	0.3	0.2	0.2	0.2	0.2	-
Ecu	14.5	16.6	16.7	15.2	14.6	13.4	12.0	10.9	1.9	-
Unspecified curriencies	5.2	4.9	5.7	4.8	5.0	7.0	6.7	6.4	7.4	12.4
Developing countries										
U.S. dollar	61.1	62.8	63.9	63.8	62.7	61.9	64.0	65.8	65.0	64.6
Euro										13.6
Japanese yen	6.4	6.6	7.5	7.4	7.5	6.9	6.5	4.9	4.3	4.5
Pound sterling	5.7	5.3	3.8	3.8	4.3	4.2	4.7	5.0	5.1	5.2
Swiss franc	1.8	1.8	1.9	2.0	1.7	1.5	1.4	1.2	1.1	1.1
Deutsche mark	10.7	10.0	10.0	9.9	11.4	10.5	10.1	9.9	11.0	-
French franc	2.4	2.4	2.1	1.8	2.2	2.1	1.7	1.6	1.2	-
Netherlands guilder	0.9	1.0	1.0	0.9	0.8	0.6	0.5	0.5	0.5	-
Ecu										-
Unspecified curriencies	11.0	10.1	9.7	10.4	9.5	12.3	11.1	11.2	11.8	11.0

Source: IMF Annual Report 2000.

Table C.2

**Exchange rate regimes involving a link to the euro
(including its national denominations or a basket of currencies including the euro) (*)**

Exchange rate regime	Number of countries / territorial communities	Countries / territorial communities
Exchange rate arrangements with no separate legal tender (entitlement to use the euro as the official currency)	5 (2 French territorial communities)	French territorial communities of Saint-Pierre-et-Miquelon and Mayotte. The Republic of San Marino, the Vatican City and the Principality of Monaco are entitled to use the euro as their official currency following agreements with the European Union (see Table C.6).
Euroisation	3	Andorra, Kosovo, Montenegro
Currency board arrangements	3	Bosnia-Herzegovina, Bulgaria, Estonia
Peg arrangements (including pegging to the SDR and other currency baskets including the euro)	18	<u>Pegging only to the euro</u> : Cyprus, Denmark, 14 African countries of which the CFA franc is the legal tender, Cape Verde, Comoros
	9	<u>Pegging to the SDR(*)</u> : Latvia, Bahrain, Botswana, Jordan, Libyan Arab Jamahiriya, Myanmar, Qatar, Saudi Arabia, United Arab Emirates
	8	<u>Pegging to other currency baskets including the euro</u> : Iceland, Kuwait, Malta, Bangladesh, Botswana, Morocco, Seychelles, Vanuatu
Crawling fluctuation bands	3	Hungary, Israel (basket), Tunisia (basket)
Managed floating with the euro used as a reference currency	7	Burundi, Croatia, Czech Republic, FYR Macedonia, Poland, Slovak Republic, Slovenia
	Total: 56	(*) Since 1 January 2001 the euro accounts for 29% of the SDR basket, as a result of the quinquennial revision of the SDR basket.

(*) In addition to exchange rate regimes, the phenomenon of *direct currency substitution* also deserves a mention (see Table C.6, footnote 1).

COUNTRIES INVOLVING THE EURO OR ITS NATIONAL DENOMINATIONS IN THEIR EXCHANGE RATE REGIME

(as of 26 March 2001, unless otherwise indicated)

Country	Exchange rate regime	Peg against	Features of the arrangement	Remarks
1) European countries / territorial communities¹⁾				
Andorra	Euroisation			Having neither its own currency nor a monetary issuing authority, Andorra intends to use euro banknotes and coins in the same way as it currently uses French franc and Spanish peseta. Euro banknotes and coins will be brought into circulation via the banking system and will not have legal tender status.
Bosnia and Herzegovina	Currency board	EUR		Formally introduced on 20 June 1997.
Bulgaria	Currency board	EUR		Formally introduced on 1 July 1997.
Croatia	Managed floating (EUR/DEM used informally as reference currency)			The managed floating has been in place since the stabilisation plan was introduced in October 1993.
Czech Republic	Managed floating (EUR/DEM used informally as reference currency)			In May 1997 the peg with a $\pm 7.5\%$ fluctuation band to a currency basket (DEM (65%) and USD (35%)) that had been introduced in February 1996 was abandoned; the peg to a currency basket had been introduced in 1991.
Cyprus	Peg	EUR	$\pm 2.25\%$ fluctuation band	The Cypriot Pound (CYP) was pegged to the ECU between June 1992 and December 1998. The CYP has been pegged to the euro since 1 January 1999 with the same central parity previously adopted for the ECU.
Denmark	Peg within co-operative arrangement (ERM II)	EUR	$\pm 2.25\%$ fluctuation band	Participation in ERM II since 1 January 1999.
Estonia	Currency board	EUR		Introduced in June 1992.
Hungary	Crawling fluctuation band	EUR	$\pm 2.25\%$ preannounced crawling fluctuation band with a 0.3 % monthly depreciation rate	Since March 1995 Hungary has pursued its disinflation policy by using a crawling peg regime with a ± 2.25 fluctuation band. The rate of the crawl (currently 0.3% depreciation per month, 0.2% starting from April 2001) has been progressively reduced in the past few years, both reflecting and promoting a reduction in inflation. While the forint was initially pegged to a currency basket (70% EUR, 30% USD), the central parity of the crawling band is computed against the euro as of 1 January 2000.
Iceland	Peg	Trade-weighted currency basket including the euro	$\pm 9\%$ band (widened from $\pm 6\%$ on 14 February 2000)	Currency basket peg in effect since early 1992. The basket currently comprises nine currencies, including the euro.
Kosovo	Euroisation			In November 1999 the authorities of the UN Mission in Kosovo (UNMIK) recognised the Deutsche Mark/euro as preferred means of payment for official transactions in Kosovo. Accordingly, the Banking and Payments Authority of Kosovo maintains a stock of Deutsche Mark and Yugoslav dinar banknotes; and provides depository and payment services in Deutsche Mark/euro until sufficient capacity has been developed within the commercial banking system.
Latvia	Peg	SDR	$\pm 1\%$ band	De facto peg to the SDR since February 1994, formalised in 1997.
Macedonia	De facto peg	EUR		Monetary policy based on an exchange rate objective, with a de facto peg to the Deutsche Mark in force since early 1994.
Malta	Peg	Currency basket: EUR (56.8%) USD (21.6%) GBP (21.6%)	$\pm 0.25\%$ fluctuation band	Currency basket peg in effect since 1971. The euro was substituted for the ECU, with effect from 1 January 1999.
Mayotte (French territorial community)	Formally entitled to use the euro as legal tender in accordance with an EU Council Decision			EU Council Decision No. 99/95/EC.
Monaco (Principality of)	Formally entitled to use the euro as legal tender in accordance with an EU Council Decision			EU Council Decision No. 99/96/EC.
Montenegro	Euroisation			The law on the central bank which gives sole legal tender status to the DEM/euro, came into force on 13 November 2000, thus abolishing the Yugoslav Dinar as a parallel currency. The changeover was conducted smoothly since most of the banknotes and accounts were already denominated in Deutsche Mark/euro.
Poland	Managed floating (euro used informally as reference currency)			A currency basket peg was introduced in May 1991, with basket weights unchanged until 31 December 1998 (USD 45%, DEM 35%, GBP 10%, CHF 5%, FRF 5%). A crawling band around the peg was introduced in May 1995 and from 1 January 1999 onwards the basket comprised only the euro and the US dollar. On 12 April 2000 the peg to a currency basket was abandoned by adopting a floating exchange rate.
Saint-Pierre-et-Miquelon (French territorial community)	Formally entitled to use the euro as legal tender in accordance with an EU Council Decision			EU Council Decision No. 99/95/EC.
San Marino (Republic of)	Formally entitled to use the euro as legal tender in accordance with an EU Council Decision			EU Council Decision No. 99/97/EC. Terms and conditions of the use of the euro were agreed in November 2000 with the Italian authorities, which signed on behalf of the European Community.
Slovak Republic	Managed floating (euro used informally as reference currency)			Between 14 July 1994 and 1 October 1998 the Slovak crown (SKK) was pegged to a basket of two currencies (60% DEM and 40% US dollar). In 1996 the fluctuation band was widened from $\pm 1.5\%$ to $\pm 7\%$. On 2 October 1998 the system of pegging was abolished and replaced by managed floating; on 1 January 1999 the Deutsche Mark was replaced by the euro as reference currency.
Slovenia	Managed floating (euro used informally as reference currency)			Since 1992 the exchange rate has remained within an unannounced narrow band against the Deutsche Mark/euro.
Vatican City	Formally entitled to use the euro as legal tender in accordance with an EU Council Decision			EU Council Decision No. 99/98/EC. Terms and conditions of the use of the euro were agreed in December 2000 with the Italian authorities, which signed on behalf of the European Community.

¹⁾ In December 2000, the Central Bank of Lithuania confirmed its intention to switch the peg of the litas from the US dollar to the euro based on a currency board arrangement. It also announced that the timing of the switch would be made public in the second half of 2001, using the euro/dollar rate prevailing at the time of the switch. Other European countries not included in this list might intervene in the foreign exchange market against the euro on an ad hoc basis. In addition to exchange rate regimes, the phenomenon of direct currency substitution also deserves a mention. The use of DEM banknotes as a parallel currency is common, to differing degrees, to several Balkan countries, Russia and many Central and Eastern European economies, mostly alongside dollar banknotes.

Table C.3 (continuation)

2) Non-European countries		Exchange rate regime			Features of the arrangement		Remarks
Country	Exchange rate regime	Peg against	Peg against	Features of the arrangement	Remarks		
14 African countries of which the CFA franc is the legal tender	Peg	EUR	EUR	Fixed	The CFA franc is issued by the Central Bank of West African States and the Bank of Central African States. The first institution issues the currency for Benin, Burkina Faso, Ivory Coast, Guinea-Bissau, Mali, Niger, Senegal and Togo, and the second for Cameroon, Central African Republic, Chad, the Republic of Congo (Brazzaville), Equatorial Guinea and Gabon.		
Bahrain	Peg	SDR	SDR	± 7.25 % fluctuation band	The dinar is de jure pegged to the SDR, although, de facto, it closely follows the US dollar.		
Bangladesh	Peg	Basket of trading partners' currencies, including the euro					
Botswana	Peg	Basket of four currencies (euro, USD, SDR, GBP)					
Burundi	Managed floating	Basket of currencies of its major trading partners, including the euro					
Cape Verde	Peg	EUR	EUR	Fixed	The escudo was pegged to the Portuguese escudo until 31 December 1998.		
Comoros	Peg	EUR	EUR	Fixed	The Comorian franc was pegged to the French franc until 31 December 1998.		
Israel	Crawling fluctuation band	Basket (in terms of units of each currency in the basket): USD (0.6698) EUR (0.2493) GBP (0.0452) JPY (7.2411)		Crawling fluctuation band, which widens automatically and asymmetrically. Its current width is 44%	The number of units of each currency in the basket is determined according to its share in external trade during the previous calendar year and to international cross rates at the time the basket's composition is fixed. The euro replaced the Deutsche Mark and the French franc.		
Jordan	Peg	SDR	SDR		De facto peg to the US dollar		
Kuwait	Peg	Undisclosed adjustable basket, likely including the euro		± 1.5% fluctuation band	De facto peg to the US dollar.		
Libyan Arab Jamahiriya	Peg	SDR	SDR	Broad fluctuation band	De facto managed float with the US dollar as reference currency.		
Morocco	Peg	Undisclosed basket		The rate can fluctuate daily by 0.5% either way.	It is likely that the euro has replaced the US dollar as the most important currency in the basket.		
Myanmar	Peg	SDR	SDR	± 2% fluctuation band			
Qatar	Peg	SDR	SDR	± 7.25% fluctuation band	De facto peg to the US dollar.		
Saudi Arabia	Peg	SDR	SDR	Fixed	The riyal is officially pegged to the SDR, although de facto it follows the US dollar.		
Seychelles	Peg	Weighted basket including the euro					
United Arab Emirates	Peg	SDR	SDR	± 7.25% fluctuation band	De facto peg to the US dollar.		
Tunisia	Crawling fluctuation band	Undisclosed basket, where the euro is likely to be the most important currency			The exchange rate is co-moving very closely with the euro.		
Vanuatu	Peg	Undisclosed transaction-weighted currency basket			It is likely that the euro is included in the currency basket.		

Sources: ECB; IMF "Impact of EMU on Selected Country Groups, Background Material for Central European and Mediterranean Countries"; IMF Staff Reports and IMF Recent Economic Developments (various countries); IMF Exchange Arrangements and Exchange Restrict.