Practical issues arising from the € euro

June 2001

Bank of England

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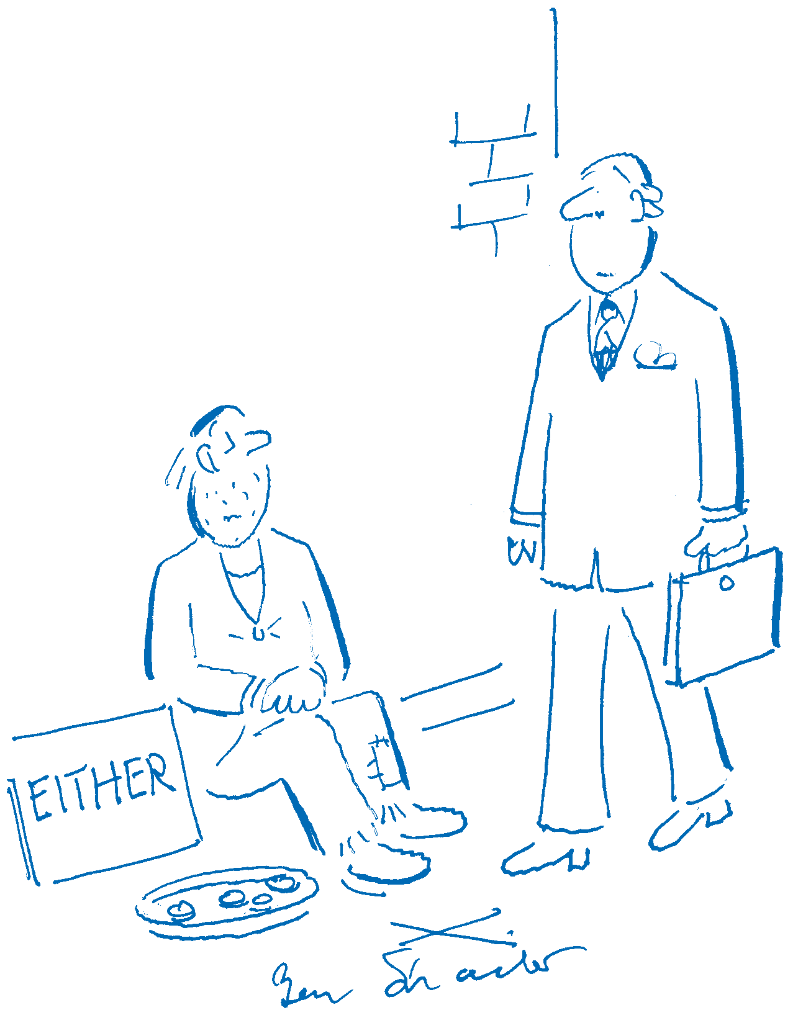
EITHER

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**Cartoons on frontispiece, pages 100 and 115 by Basil Hone;
and on page 119 by Pugh (reprinted by courtesy of The Times)**

FOREWORD

1 In this edition of *Practical Issues*, the fifteenth since we began in May 1996, the focus is on three areas: the continued evolution, from a London perspective, of the euro financial markets and their supporting infrastructure; the preparations for the imminent completion of the transition from the twelve former national currencies to the euro; and the continuing practical UK financial sector preparations for possible UK entry into EMU.

Euro markets and infrastructure

2 *First*, deep and liquid euro markets, in place of the narrower segmented previous national currency markets, are one of the potential benefits from the single currency. The weakness of the euro in the foreign exchange market has diverted attention from the accumulating evidence that such euro markets are materialising in practice (Chapter 1). The unsecured money market has been more or less fully integrated since the euro's launch. The secured (repo) market continues to grow, though it remains more segmented nationally. The euro debt capital markets are becoming more mature, with an increasing capacity to absorb jumbo corporate issues and to lengthen the maturity at which companies can raise debt. And an equity 'culture', more prevalent for some time in the US and the UK, is beginning to take hold across the euro area.

3 London has a great deal of expertise in the euro markets, enabling the Bank to monitor closely their development. To illustrate this, we have in Chapter 1 included contributions by eleven major international market firms, all with substantial operations in London: Citibank on the foreign exchange market; UBS Warburg on debt capital markets and the benchmark yield curve; Deutsche Bank on corporate bond issuance; BNP Paribas on the euro as competitor for the dollar in the corporate bond market; Barclays on syndicated loans; JPMorgan on credit derivatives; Goldman Sachs on equity financing; Morgan Stanley on M&A; CSFB on investment banking in the technology sector; Merrill Lynch Investment Managers on pension fund asset allocation; and HSBC on private banking. We are grateful to all these firms for their contributions, which typify the co-operative relationship that the Bank of England has traditionally enjoyed with market practitioners.

4 On the development of the financial infrastructure (Chapter 2), some changes are already under way but other plans and discussions have yet to bear fruit. This is true of payments, where significant changes are in hand (including NewCHAPS, DvP, $RTGS^{plus}$ and CLS Bank), but the Eurosystem is still considering how the construction of TARGET might be adapted in the medium-term. It is true of stock exchanges, where Deutsche Börse has already floated, and the London Stock Exchange and Euronext plan to do so, but where Euronext and virt-x remain the only examples to date of cross-border mergers. It remains true of clearing and settlement, where market practitioners are confident that considerable cost savings could be made through further consolidation of the numerous existing systems, but there is much less agreement how best to secure this. In particular, there are diverse views about horizontal versus vertical integration, with London being an example of a 'partnership' approach of independent entities, in contrast for example to Frankfurt which is closest to a vertical 'silo'.

And finally, it is true of the EU regulatory framework for securities, where the Lamfalussy Committee has recommended, and the Stockholm European Council endorsed, a process by which new measures can be adopted more quickly in future.

5 The most recent evidence on London's position as an international financial centre, including for the euro, is assessed in Chapter 3. It indicates that London's dominance in the European time zone remains unchallenged.

Completing the changeover from twelve currencies to the euro

6 Outside the financial markets, the euro remains little used, with the bulk of corporate and personal sector activity still in the old national currencies. But a great deal of work is under way to enable the euro to become a fully-fledged currency from the turn of the year. That is the *second* focus in this edition. During the remainder of this year, the euro will become increasingly used throughout the first-wave economies. The banking community has a central role to play, first in converting into euro all retail bank accounts, a process which in many cases will begin quite soon, although the timing, method and extent will differ between countries; and, second, in introducing euro banknotes and coin to replace the current national currency in circulation. Both exercises are immensely challenging and, as a result, are being meticulously planned. Chapter 4 compares and contrasts the approaches being taken by different euro-area countries in both cases. Their experience may be invaluable in drawing lessons for any future potential UK changeover scenario.

Preparations for possible UK entry

7 The *third* focus is on the continued practical preparations in the UK, concentrating on the financial sector, under the Government's 'prepare and decide' policy. Whilst the conversion to euro of the sterling financial markets could be completed with one year's preparation, the banks would need significantly longer to prepare to provide euro retail financial services. The implication is that retail euro services might not be fully available at entry, but the first-wave experience suggests that this should not matter. The Chancellor's Standing Committee has agreed that the evidence from the euro area suggests that the UK could plan on the basis of such a phased introduction of euro services. The City Euro Group has analysed the practical implications of this approach, to confirm that there would be no insuperable practical obstacles. A paper is included in Chapter 5, which also explains in broad terms the Bank of England's own approach to the necessary practical preparations.

8 The Bank welcomes comments on *Practical Issues*, or on its euro-related work more generally. They should be addressed to:

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Practical Issues is available on the Bank's website (www.bankofengland.co.uk); and hard copies may be obtained from the Bank's Public Enquiries Group (tel no: 020-7601 4012; fax: 020-7601 5460).

CHAPTER 1: EURO MARKETS

A EUROSYSTEM MONETARY POLICY OPERATIONS

- The ECB has continued to deploy weekly variable-rate tenders, which have secured euro short-term interest rates consistent with the Governing Council's decisions and avoided the technical problems of overbidding associated with earlier fixed-rate tenders.
- Since the previous *Practical Issues*, the market began to anticipate a fall in official rates but ran ahead of the ECB's intentions; this led banks to underbid the liquidity on offer, particularly in the February and April reserve maintenance periods, causing higher and more volatile overnight interest rates for a time.
- Nevertheless, the consensus market view remains that the current operational framework is appropriate to the ECB's needs.

Eurosystem refinancing operations

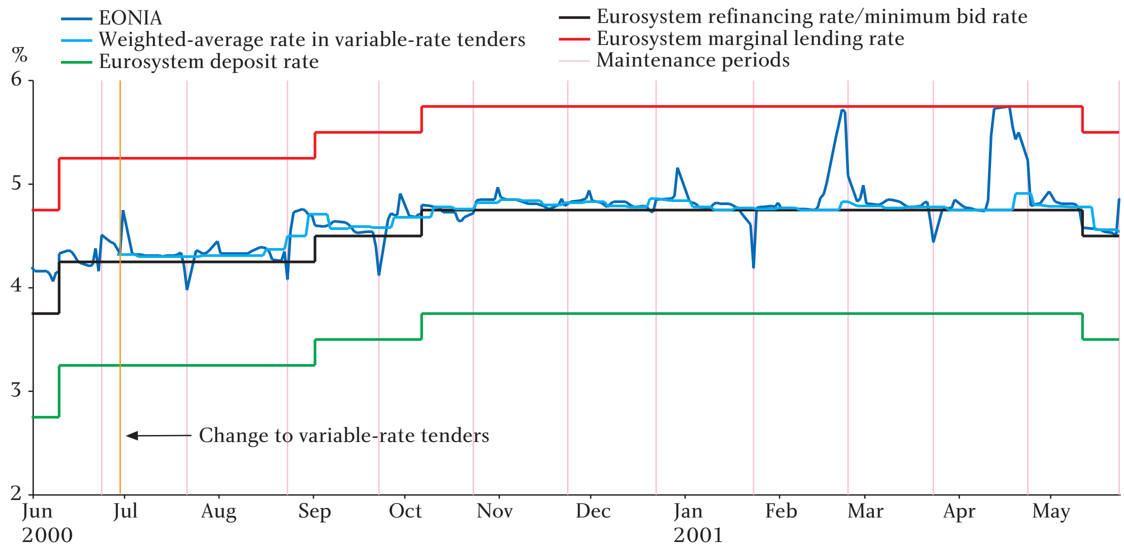
1 There have been no recent changes in the ECB's techniques for implementing monetary policy. Since mid-2000, the weekly main refinancing operations (MROs) have used variable-rate tenders (in which counterparties receive liquidity at the rates bid, down to the rate at which the tender is covered, where bids are pro-rated), subject to a minimum bid rate which signals the ECB's policy stance. The monthly longer-term refinancing operations have always used variable-rate tenders (of predetermined size and without a minimum bid rate).

2 In contrast to last year, the ECB has this year conducted its operations against market expectations of lower interest rates. At end-January, a 25 basis point reduction to 4.5% was expected by early spring (to judge from EONIA swap rates). When this did not materialise, and in the light of the market's interpretation of the ECB's policy stance and its pronouncements, the market had by early-May postponed the expected cut in rates until August. In the event, the Governing Council reduced official rates by 25 basis points on 10 May.

3 With interest rates expected to fall this year, in contrast to the rising rate environment last year, both marginal and weighted-average rates in the weekly tender have remained close to the ECB minimum bid rate. The average spread between minimum and marginal bid rates has been less than 2 basis points this year, compared with 8 basis points in the second half of 2000. EONIA has also remained generally close to the minimum bid rate, but it has been more volatile towards the end of maintenance periods (Chart A).

4 Upward spikes in EONIA have been most notable, with peaks of 5.72% on 21 February and 5.75% on 17 April (the first time EONIA reached the bounds of the corridor defined by the Eurosystem standing facilities rates). In both cases, the value of bids at the penultimate MRO of the maintenance period (on 14 February and 11 April respectively) was substantially lower than the ECB liquidity forecast, as counterparties scaled back their bids in the hope that they could obtain the necessary funds cheaper at the final tender of the maintenance period. And far fewer counterparties made bids.

CHART A: EUROSYSTEM RATES AND EONIA

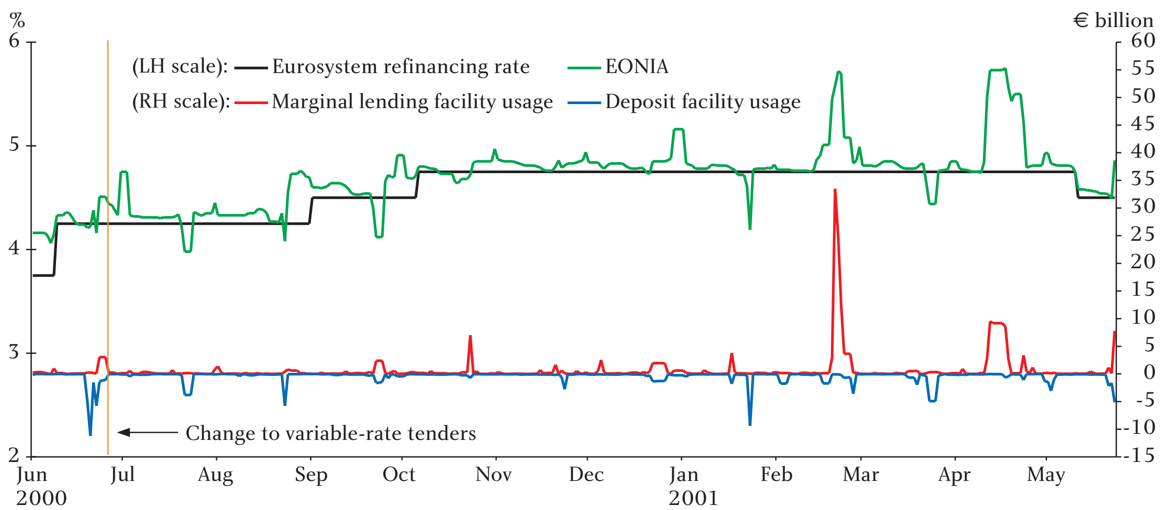


Source: ECB and EBF

5 Once underbidding had occurred, the ECB had a limited number of policy options: to allocate equivalent additional funds in the final MRO of the maintenance period; to execute a fine-tuning operation; or to force banks to obtain funds from the marginal lending facility.

6 In both February and April, the ECB decided to increase the size of the final MRO but not fully to compensate for the liquidity shortfall; and not to perform any fine-tuning operation. As a result, in the final MROs, weighted-average interest rates reached 4.83% and 4.91% (on 21 February and 19 April respectively). As banks sought to meet their average reserve balances by borrowing in the interbank market, interest rates rose sharply. And banks borrowed more under the marginal lending facility than at any previous time (Chart B) – €70 billion cumulatively during a three-day period in February and €55 billion cumulatively during the six-day Easter period in April. A small number of individual interbank deals were at rates above the marginal lending facility rate.

CHART B: OVERNIGHT RATES AND USE OF STANDING FACILITIES



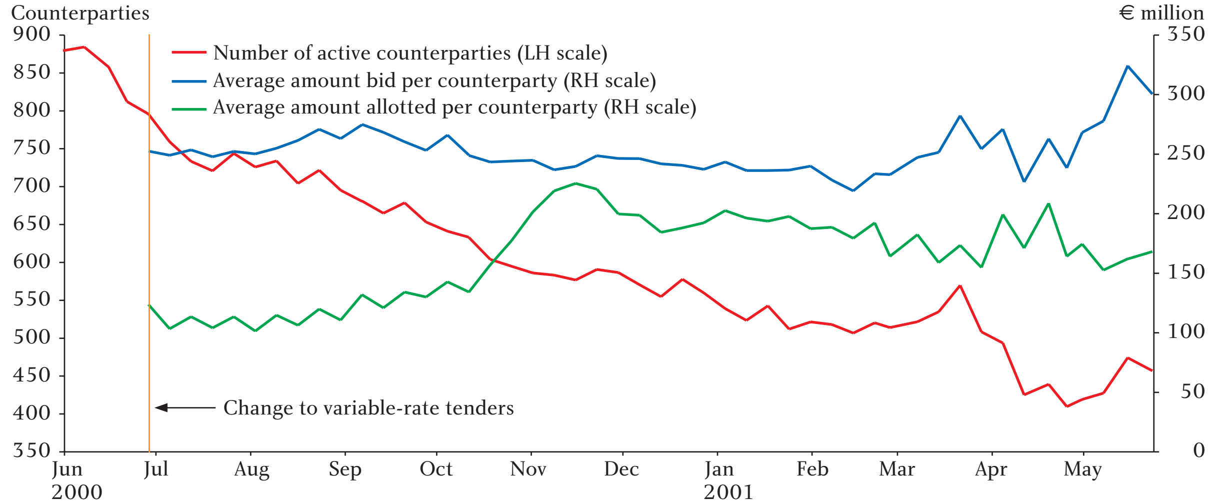
Source: ECB and EBF

7 Market practitioners generally understand these ECB decisions. The ECB wanted banks to know that, if they refused for whatever reason to take up fully the liquidity on offer, it would not subsequently alleviate the interest rate consequences. The banking system would therefore inevitably pay a collective price. However, it is not clear whether the prospect of a collective price can sufficiently influence the future bidding behaviour of individual banks.

Counterparties

8 Since the introduction of variable rate tenders, the number of active counterparties has fallen, from an average of 814 in the first half of 2000 to 640 in the second half, and to 487 so far this year (Chart C). The most recent decline is not surprising, since bidding in MROs is less attractive if counterparties believe there is a prospect of interest rates falling within the reserve maintenance period. But this effect may have been superimposed on a trend decline in active counterparty numbers, associated partly with banking consolidation (merged groups may well centralise their liquidity management for efficiency and better to control risk) and partly with the efficient nature of the euro money market (banks may obtain funds in the market place at rates very close to the ECB minimum MRO bid rate).

CHART C: NUMBER OF COUNTERPARTIES AND AVERAGE AMOUNTS BID AND ALLOTTED (ROLLING AVERAGE OF 5 MROs)



Source: ECB

9 The decline in the number of regular MRO counterparties illustrated in Chart C had not, until recently, been accompanied generally by an increase in the size of remaining bids. Instead, the allotment ratio had risen, making underbidding in principle rather more likely. The number of active counterparties nevertheless remains high when compared with monetary operations in other countries like Japan, the UK and the US (although the structure of their monetary operations is different).

Collateral

10 The nature of the ECB collateral framework, as well as the structural changes taking place within European financial markets, raises a number of issues to be addressed in future.

- Counterparties in some countries do not consider that there is a level playing-field for collateral across the euro area. They point to countries' different contributions to the Tier 1 list and the different size of their Tier 2 lists, as well as differences in the opportunity costs associated with the collateral (depending, for example, on whether or not a national repo market exists).
- A reduction in the volume of new government bond issues is reducing over time the amount of government assets available for use in Eurosystem operations. With this trend likely to continue, the Eurosystem may need to consider whether the range of assets accepted for collateralising credit operations is consistent with that development, or whether the range needs broadening.
- The ECB is in any event considering possible changes to the minimum credit standard required by the Eurosystem, which could make new asset types eligible and entail a change in risk control measures.
- The New Basel Capital Accord proposals may also affect Eurosystem policies for the use of external credit ratings and in-house credit risk assessments.

11 In the light of these influences, the Eurosystem collateral framework will remain under review. The two-tier system was originally conceived because of differences in the infrastructure and maturity of financial markets between euro-area countries. As these differences reduce, the Eurosystem will assess how the current framework might be changed.

B INTERNATIONAL USE OF THE EURO

12 Although the ECB does not consider promotion of the euro's international use to be part of its role, the latest available evidence is nevertheless of interest. Wherever possible, the focus here is on the euro's use outside, rather than inside, the euro area; and on the use of the euro in comparison with the dollar, sterling and the yen, not on the conversion into euro of the previous national currencies.

13 *Official reserves* The IMF estimates that 12.5% of the official foreign exchange reserves of its member countries were denominated in euro at the end of 1999. This compares with 66% for the dollar, 5% for the yen, 4% for sterling, 1% for the Swiss franc and 12% not specified by currency. The IMF calculates that the 'euro' proportion was unchanged from the end of 1998, implying no significant diversification into or out of the euro in its first year.

14 *Exchange rate links* Over 25 countries or territories outside the euro area have exchange rate regimes involving a link to the euro: Denmark is participating in ERM II; Monaco, San Marino and the Vatican use the euro as their official currency; Bosnia, Bulgaria and Estonia have currency boards linked to the euro; Cyprus and a number of African countries have pegged their exchange rates to the euro; and some central and eastern European countries have 'euroised'. In addition, the exchange rates of around 25 other countries are pegged to the SDR (a basket of currencies, of which the euro now represents 29%), to other currency baskets in which the euro is included, or are linked in some way to the euro as a reference currency.

15 *International trade* The dollar is much the most important vehicle currency in the foreign exchange market, and in the pricing of international commodities. It is estimated that the proportion of global international trade invoiced in euro in 2000 was around 16%.

16 *International banking* The BIS estimates that the euro represented 17% of international bank assets at the end of September 2000, compared with 62% for the dollar and 8% for the yen. The 'euro' proportion has fallen slightly since the euro's launch.

17 Some 29% of UK banks' international business (ie with non-residents) at the end of 2001 Q1 was denominated in euro, compared with 42% in dollars, 14% in sterling and 15% in other currencies. These proportions are broadly unchanged since the euro's launch.

18 *International capital markets* Capital DATA Bondware estimates that, in 2001 Q1, issuance of international (ie foreign currency) bonds was 37% in euro, as against 42% in dollars. The international proportion in euro was 26% in 2000 and 35% in 1999.

19 JPMorgan estimates that, in 2001 to date, 60% of its credit derivatives contracts relating to European-based companies have been denominated in euro, against 35% in dollars. This compares with 10% in Deutsche marks, 10% in sterling and 80% in dollars in 1998. However, the euro has made little or no progress in the market outside Europe.

20 *The Economist* poll of seven international fund managers indicates that, in 2001 Q1, they held 42% of their portfolios on average in bonds and 55% in equities. Their bond portfolios were invested 30% on average in euro-denominated bonds, compared with 50% in dollars, 14% in yen and 3% in sterling. Their equity portfolios were invested 23% in continental Europe, compared with 52% in the US, 12% in Japan and 11% in the UK.

21 *Conclusion* The available evidence above is not complete, and not all up-to-date. However, it is clear that the euro is the second most widely-used currency internationally, though a long way behind the dollar on most measures. On the evidence so far available, the euro's overall international use has not changed significantly since its launch, except in selected sectors of the market, in particular international bonds and credit derivatives.

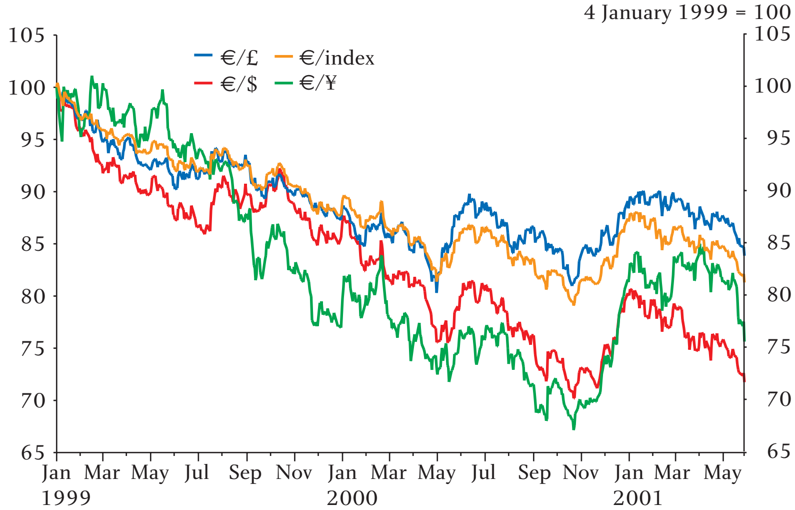
C FOREIGN EXCHANGE MARKET

The euro exchange rate

22 Between end-October 2000, when the previous *Practical Issues* was in preparation, and end-May, the euro was virtually unchanged on balance against the dollar and on a trade-weighted basis. Market attention has focused primarily on the euro's performance against the dollar. From its low point against the dollar near the end of last October, the euro rose by around 15% to a high of over 96 cents around the turn of the year, but subsequently fell back again.

23 These most recent changes need to be seen against the overall depreciation in the euro against the dollar since its launch (Chart D shows the euro's performance over this entire period against the dollar, yen, sterling, and an effective exchange rate index). Through the whole of the period up to last autumn, the remarkable strength and productivity growth of

CHART D: EURO EXCHANGE RATE



Source: Bank of England

the US economy was a dominant influence. The US economic performance and prospect produced massive capital inflows, originating particularly in the euro area, whose economic performance and prospect looked less favourable, and where the market regarded the business climate as less friendly than the US.

24 This explanation for the behaviour of the €:$ exchange rate seemed to carry extra conviction when the euro began to recover against the dollar late last year, once it became increasingly clear that the US was likely to experience a sharp slowdown, while the euro area was expected to continue growing close to its potential rate. But subsequently, the euro again drifted downwards against the dollar.

25 Market participants explain the euro's renewed weakness in different ways. Some argue that, while uncertainty over the extent of the economic slowdown in the US has persisted, they now expect the slowdown to be relatively short-lived and growth in the US to be robust in the medium term. And, at the same time, in the light of the most recent data for some euro-area countries, the market is beginning to question whether euro-area growth will be quite as strong this year as previously expected. Others argue that it is inevitably going to take time for the ECB to acquire fully the historic credibility of the Bundesbank; or that the communication of the ECB's monetary policy has not been as clear and transparent as they would have liked, even though they acknowledge that the ECB's interest rate decisions throughout its relatively short life have themselves been well founded. No single explanation is likely to suffice, and overall the euro's renewed weakness remains something of a puzzle.

Trading volumes, liquidity and volatility

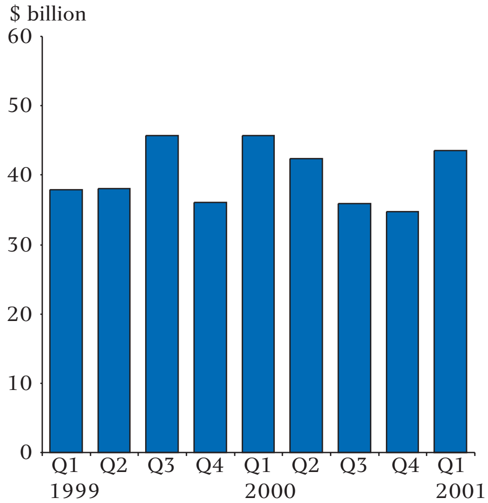
26 In the Box on page 14, Citibank analyses the impact of the introduction of the euro on the foreign exchange market.

- In the spot market, initial fears that the euro's introduction would substantially diminish liquidity have proved unfounded. Volumes dropped initially, but have recovered since. Both liquidity and spreads have remained stable over the past six months. Typically, €100 million can be transacted within 5 or 6 points under normal conditions, with the Electronic Broking System (EBS) remaining the primary channel of liquidity.

- In the forward market, there has been an overall decline in volumes compared to the period before the euro's launch of around 25%, but spreads are at least as tight as previous levels for the Deutsche mark.
- In the options market, there has been little major change in €:$ liquidity over the past six months. But the risk appetite of the market has been reduced and large orders move the market more easily than in the past.

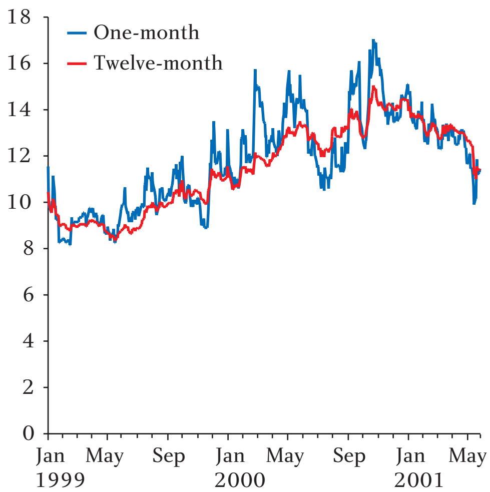
27 The average daily volume of €:$ trading on EBS last year was around $40 billion (Chart E): this was marginally higher in dollar terms, and 15% higher in euro terms, than in 1999. €:$ turnover in the first quarter this year was 5% lower than the first quarter of last year in dollar terms, and 3% higher in euro terms. Some large London firms indicate that they have seen growth in both the volume and value of transactions during this period, though it is not clear whether this represents a greater concentration of business in large market firms, or in London. Turnover in €:CHf and €:¥ rose by 8% and 13% respectively in dollar terms last year. While €:CHf turnover declined in the first quarter of this year, €:¥ turnover rose by nearly one-third: at over $6 billion daily, it was nearly back to 1998 levels.

CHART E: DAILY VOLUME OF €:$ TRADING



Source: EBS

CHART F: IMPLIED VOLATILITY FOR €:$



Source: RBS/Bank of America

28 Over the period since the previous *Practical Issues*, the implied volatility derived from both one-month and 12-month €:$ options contracts has fallen slightly (Chart F), implying that market participants expect the €:$ rate to be less volatile than in recent months. Nevertheless, volatility remains quite high compared with much of the previous two years. This may reflect current uncertainty about the world economic outlook, and in particular the outlook in the US.

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THE IMPACT OF THE EURO ON THE FOREIGN EXCHANGE MARKET

The euro's ongoing weakness has disappointed and puzzled most market analysts (Chart 1). Its weakness has concentrated market attention on the euro's exchange value, rather than the internal macroeconomic stability that the euro has provided. However, many proposed explanations for euro weakness have little or nothing to do with the creation of the single currency, reflecting big structural shifts abroad or structural concerns within the euro area. It had been widely anticipated that the euro would become a major asset in private and public portfolios, but its weakness thus far has reduced its attractiveness, leaving market participants with a perception of increased difficulty in adequately diversifying currency portfolios.

Initial fears that the euro's introduction would substantially diminish liquidity in the spot foreign exchange market have proved unfounded. While consolidation has continued to reduce the number of banks in the foreign exchange market, the effect of this in reducing liquidity has to a large extent been offset by greater efficiencies and the wider array of technological options that have become available to transactors in foreign exchange.

Liquidity and spreads The introduction of the euro initially led to substantial drops in both spot and forward market volumes. In the spot market volumes dropped by about 30% initially, but have recovered since. Whilst cross-border flows within the euro area have obviously diminished, following the abolition of previous national currencies, they have been replaced by an increase in investor and M&A related flows.

Both liquidity and spreads have remained stable over the last 6 months. Typically, €100 million can be transacted within 5 or 6 points under normal conditions. There is generally good two-way interest throughout the day, although after 4pm and before 7.30am London time liquidity is noticeably reduced. The Electronic Broking System (EBS) remains the primary channel of liquidity, as so many banks use it.

In the forward market euro volumes dropped by about 40% initially compared to previous volumes in the old national currencies. Subsequently, there has been a steady rise in euro volumes so that the overall decline in volumes compared to the period before the launch of the euro is now only around 25%. Initially, spreads in the euro market were wider than they had been in the Deutsche mark market, but quickly tightened up to previous levels – and sometimes narrower. More recently, with spreads below 1 basis point and approaching the limit of economic viability, there has been no further spread compression.

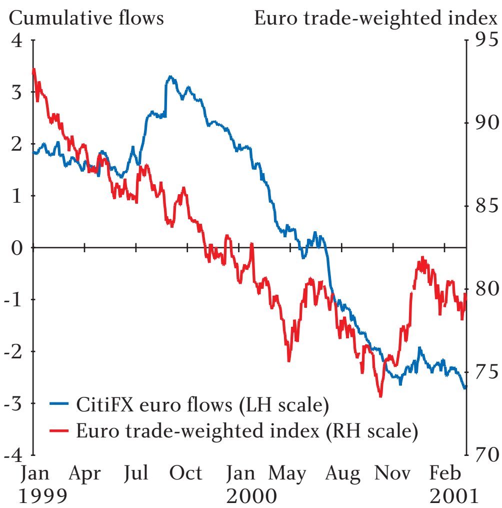
This narrowness of spreads has itself contributed to a decline in overall forward market liquidity. Small spreads and ongoing industry consolidation (which has reduced the number of major players) have reduced the incentive to provide liquidity in volatile markets, in particular for large transactions.

In the options market, there has been little major change in euro/dollar liquidity over the last 6 months. The merger between Chase and JPMorgan has reduced the number of liquidity providers, but Volbroker (an electronic options trading system for the interbank market) appears to have encouraged higher activity levels from smaller and intermediate-sized banks. The risk appetite of the market has been reduced and large orders move the market more easily than in the past. There is a risk that liquidity could dry up further if volatility increases, especially if the euro falls back towards its lows of October last year.

A new liquidity measure developed within Citibank compares the volume passing through the market relative to the move in exchange rates. In this way we are looking to measure the efficiency of the market in 'soaking up' volume. This work is still in progress, but has delivered some promising initial results. By this measure, liquidity tended to be relatively low late last year when the euro approached new price lows and around the year end. At the beginning of the year liquidity increased and has remained particularly stable at or above average levels.

Electronic platforms Over the last decade, foreign exchange markets have undergone a profound change and moved to an increasing level of automation and electronic delivery. This trend predates the introduction of the euro and is primarily driven by technology and efficiency concerns, as traditional foreign exchange markets have slowly been streamlined to take out unnecessary or inefficient manual processes. The EBS and Reuters dealing systems have revolutionised the spot market to such an extent that in some currencies up to 85% of interbank trading is transacted on one or other of these systems. These systems were originally delivered using dedicated networks and have helped to reduce spreads, increase liquidity and reduce trading costs. Delivery to a wider customer base is now being revolutionised by the internet, streamlining customer trade flows and price provision. Multi-bank price provision through net-based portals will probably grow exponentially over the next few years, further increasing transparency and straight-through-processing, but they are still at an early stage of development and market coverage.

CHART 1: GLOBAL CITIFX EURO FLOWS AND TRADE-WEIGHTED EURO INDEX



Note: Global CitiFX flows represent all client transactions in euro undertaken by Citibank. A declining slope indicates that the Citibank client base is in aggregate selling euro, and a rising slope that it is buying. Exact levels are proprietary.

Source: Citibank and Bank of England

D MONEY MARKET

- The unsecured euro money market remains more highly integrated than the secured money (repo) market, but turnover in euro repo has continued to grow, including in London.
- In the derivatives market, liquidity in EONIA swaps continues to deepen; and trading in EURIBOR futures contracts – which is now almost exclusively on LIFFE – has grown strongly.
- The growth in euro-denominated ECP is still constrained by regulatory and settlement-based obstacles, but this may change.

Unsecured money market

29 With the single monetary policy implemented by the ECB for the euro area, and TARGET providing an efficient wholesale real-time payment system cross-border, the unsecured euro money market has been highly integrated from the outset.

30 Most unsecured money market transactions are very short term. In 2001 Q1, 95% of unsecured transactions in e-MID (the Italian-based electronic interbank trading system) had an original maturity of one week or less. Market participants consider this proportion to be broadly representative of the market as a whole.

31 There are no data on the size of the unsecured euro interbank market. But in London, figures from the Wholesale Market Brokers' Association (WMBA) indicate that an increasing amount of unsecured overnight deposit business has been broked by its members. Overnight lending tends to be on an unsecured basis rather than through repo, partly because repo transactions are difficult to settle overnight; and the shorter exposure to credit risk makes this acceptable.

Secured money market

32 The euro repo market is divided into 'specials' and GC.

- In the '*specials*' market, the cash provider specifies the particular securities required as collateral. The securities in question are normally those in high demand, and hence attract a premium. They normally consist of those German Government bonds deliverable into the 2, 5 and 10-year futures contracts on Eurex, which are the main hedging contracts in the euro government bond market.
- In the *General Collateral (GC)* market, the cash provider only specifies general categories of acceptable collateral, and the cash taker decides the particular securities to be provided.

33 The euro repo market is not fully integrated. This is because it is still quicker and easier to deliver collateral domestically than cross-border. Market participants also consider that some legal frameworks and tax regimes discourage cross-border participation.

34 Nevertheless, turnover in the euro repo market has continued to grow, owing to:

- the opportunity that repo offers banks to manage their exposure to credit risk and reduce their capital requirements;
- the attraction of tri-party repo, in which a third party (such as Euroclear, Clearstream or a custodian bank) acts as agent between two other parties;
- the ease of using systems for electronic trading and central counterparty netting, where these have proved their effectiveness (eg in terms of trade anonymity, straight-through-processing capability and reduced capital requirements); and
- the widespread acceptance of the TBMA/ISMA (formerly PSA/ISMA) Global Master Repurchase Agreement (GMRA) for cross-border repo.

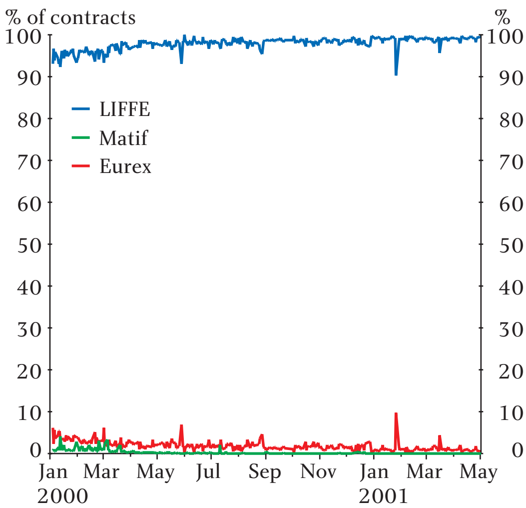
In London, RepoClear members' average daily volume rose from around €8 billion in October 2000 to around €41 billion in early-May this year; and the outstanding stock of euro repo held by banks in London increased by 49%, to €302 billion, over the six months to end-March.

Money market derivatives

35 Euro-denominated money market derivatives contracts primarily take the form of short-term interest rate futures contracts and EONIA swaps.

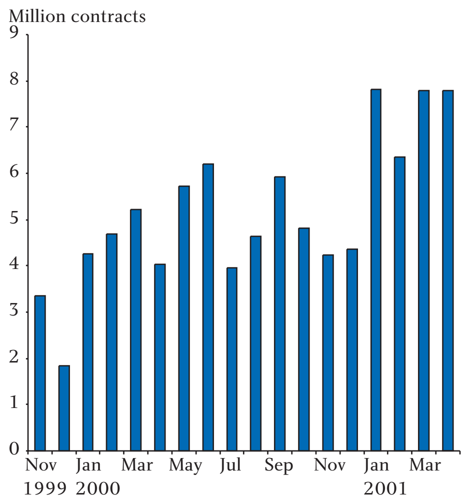
- *Short-term interest rate (STIR) futures contracts* traded on the main European futures exchanges are undertaken almost entirely (some 99%) in London, on LIFFE (Chart G). Moreover, the volume of EURIBOR futures contracts traded on LIFFE in the six months to end-April was 64% above the same period a year ago (Chart H).

CHART G: EURO STIR FUTURES



Source: LIFFE, Matif and Eurex

CHART H: LIFFE EURO STIR FUTURES



Source: LIFFE

- *EONIA swaps* are widely used, in maturities up to one year, because they offer a precise way of hedging short-term exposures and taking positions on changes in short-term interest rates. Market contacts estimate that the volume of EONIA swaps has continued to grow in the past 6-9 months, while the volume of Forward Rate Agreements (FRAs) has fallen. Liquidity in the market continues to deepen.

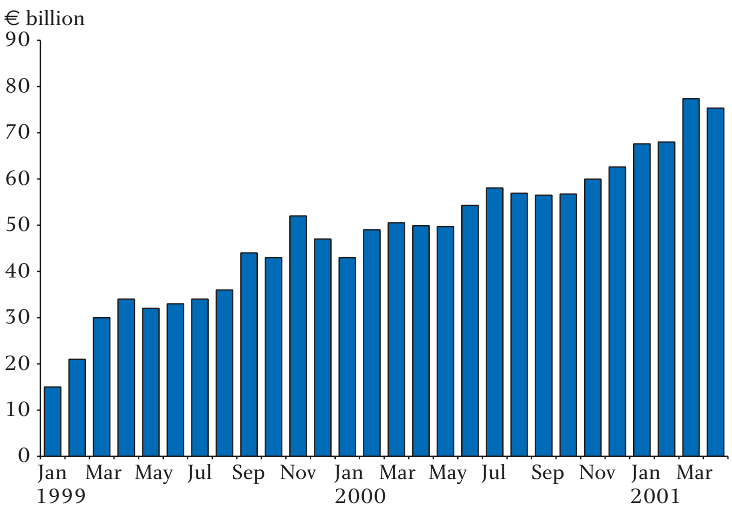
Bid-offer spreads for one to three-month EONIA swaps are reported to have fallen to $^1/_2$-1 basis point from $1^1/_2$ basis points six months ago. Much of the EONIA swaps market is within the euro area, but a major part is now also conducted in London. Activity remains concentrated amongst a small number of market firms; some five or six may account for around two-fifths of overall business.

Money market issuance

36 The nominal value of euro-denominated money market securities (including Treasury bills, CDs and commercial paper) outstanding at end-2000 was €579 billion, marginally lower than at end-1999. Some 40% was issued by euro-area governments (in the form of Treasury bills), a similar percentage by euro-area banks (both in the form of CDs and commercial paper), and most of the remainder by corporates. Gross issuance by corporates and banks was strong in the second half of last year.

37 Nearly half of total private sector money market securities issued in euro at end-2000 was in the form of commercial paper, either: domestic commercial paper, which has distinct legal, distribution, investor or tax features (an estimated €100 billion was outstanding at end-2000, of which over three-quarters was in France, held mainly by money market funds); or Euro Commercial Paper (ECP), which is broadly homogeneous, denominated in a number of different currencies, and normally cleared through Euroclear or Clearstream (Chart I).

CHART I: OUTSTANDING EURO-DENOMINATED ECP ISSUANCE



Source: Barclays Capital

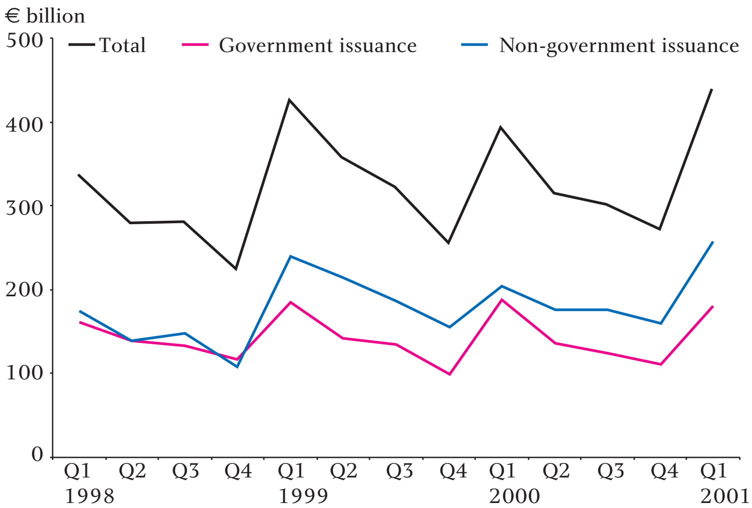
> **ECP MARKET: REGULATION AND SETTLEMENT**
>
> Despite the growth of euro-denominated ECP since the euro was introduced, the market continues to be small relative to the dollar CP market. However, some progress has been made in removing the regulatory and settlement-related obstacles to more rapid growth.
>
> *Regulation* The UCITS Directive limits investment by UCITS in unlisted securities, or securities which are not traded on a 'regulated market', to 10% of their assets. This affects ECP. But the position may change when two Directives amending the UCITS Directive are adopted, hopefully this autumn with implementation by early-2003.

Settlement The provision of efficient, same-day settlement in the ECP market would mean that issuers could obtain finance overnight, and investors could place funds overnight, as in the dollar CP market. This requires arrangements to generate security codes automatically, and to transmit them efficiently between ECP dealers, Issuing and Payment Agents and the ICSDs. That may be possible by end-2001.

E DEBT CAPITAL MARKETS

38 Euro-denominated bond issuance was higher in 2001 Q1, at €437 billion, than in any quarter since the launch of the euro. Gross euro-denominated bond issuance was €1,275 billion last year as a whole, slightly below the €1,358 billion level of issuance in 1999, but significantly higher than the €1,118 billion equivalent in 1998. Much of the underlying growth was in non-government issuance (Chart J).

CHART J: TOTAL EURO BOND ISSUANCE



Source: Barclays Capital, Capital DATA Bondware

Government bonds

39 The gross general government debt of the euro area has been declining as a proportion of GDP since 1996. In 2000, the decline accelerated, mainly as a result of stronger than expected proceeds from UMTS licence sales, notably in Germany. However, in contrast to the US and the UK, euro-area governments have in aggregate continued to be net issuers. And gross issuance in the euro area as a whole remains substantial, due to the refinancing of maturing debt (though the funding needs of some smaller member countries are very low or non-existent). Outside the euro area, the governments of a number of countries with strong euro-area trading links, such as Argentina, Brazil and the EU accession countries, have also issued euro bonds, though this is a small proportion of the total.

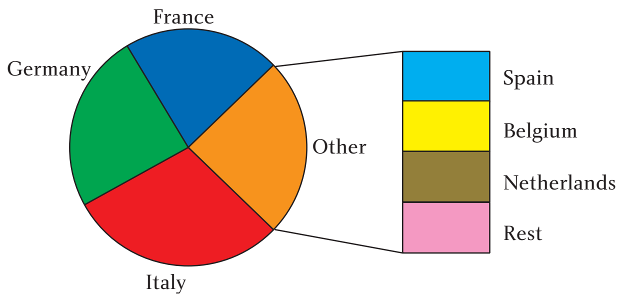
40 Following the substantial convergence of euro-area government bond yields ahead of EMU, a spread of up to 45 basis points has remained between the highest and lowest yields on 10-year bonds, for three main reasons.

- *Credit differentials* There is a yield spread between AAA and AA-rated euro-area governments. Since the beginning of last year, even though their credit ratings have not changed, this spread has widened, reflecting an increased focus on credit among investors (Chart K).
- *Liquidity premia* A number of euro-area government issuers have sought to increase liquidity by consolidating issuance into large benchmark bonds through exchange or repurchase offers, and a few have used syndicated issuance to widen their investor base. Issues of €5 billion or more also qualify for trading on EuroMTS, the electronic trading platform, and benefit from the increased liquidity which this provides. Smaller country debt managers have found it difficult to maintain the same liquidity as larger issuers, in view of the marked differences in the relative stock of their debt outstanding (Chart L) and low new issuance. Consequently, a liquidity premium persists, though it is not as high now as in the latter half of 1999.
- *German euro benchmark premium* German five and 10-year Government bonds have acquired euro benchmark status. They are frequently used for pricing and hedging euro-denominated non-government bonds, and also benefit from the leading position established by Eurex bund futures in hedging euro-area government bonds. As a result, they trade at the lowest yields in the euro area.

CHART K: EVOLUTION OF 10-YEAR YIELD SPREADS (AAA minus AA)

Source: Bloomberg

CHART L: EURO-AREA GOVERNMENT BONDS OUTSTANDING

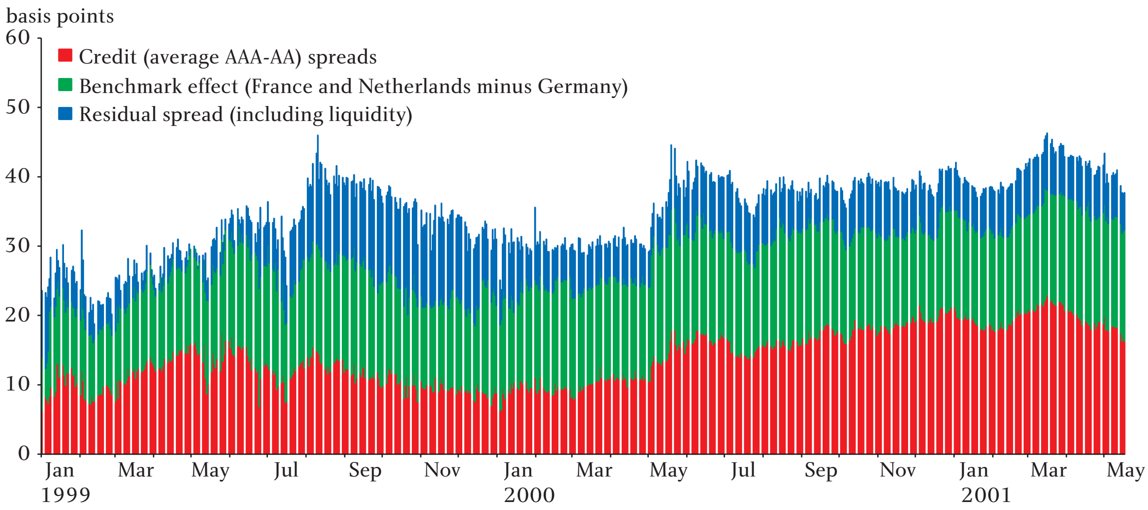


Note: data at end-2000
Source: Merrill Lynch

41 The impact on spreads of these three factors is quantified in Chart M, which estimates the composition of 10-year yield spreads since the introduction of the euro (a similar pattern is evident for five-year yield spreads). Credit differentials are represented by the average yield spread between AAA and AA-rated issuers. The difference between German Government bond yields and the average yield on the next two lowest yielding Government issuers (France and the Netherlands) is used to measure the German benchmark premium. The residual includes the impact on spreads of liquidity and other market-specific factors.

42 The difficulties in establishing a benchmark yield curve for euro-area government bonds, and the role of the swap curve in overcoming these difficulties, are examined by UBS

CHART M: DECOMPOSITION OF 10-YEAR YIELD SPREADS



Source: Bloomberg

Warburg in the Box on page 24. Following market distortions associated with the Eurex Bobl five-year futures contract in March, there has been renewed interest in how to prevent a recurrence, including through alternative hedging instruments such as a multi-issuer bond contract. But whilst this would increase the size of the deliverable basket, the liquidity of the contract would still mainly depend on the size of the bond which is cheapest to deliver.

43 LIFFE's Swapnotes, launched on 20 March, provide an alternative. Swapnote contracts, which have two, five and 10-year maturities, are based on the value of a notional forward swap contract and settled using ISDA benchmark swap rates at 10:00 London time on their last trading day. The close relationship between bonds and swaps means that the contract can be used in much the same way as a bond futures contract to hedge bond positions, as well as swap and credit exposures. And, being settled in cash, Swapnotes avoid the potential delivery problems associated with existing government bond contracts.

Non-government bonds

44 As the growth in euro-area government issuance has declined, a number of quasi-government issuers have established a position in the market. The European Investment Bank, the US Federal Home Loan Mortgage Corporation and Kreditanstalt für Wiederaufbau, all of which have AAA credit ratings, have each announced benchmark programmes of large and liquid issues (see Box). On occasion, they have issued at yields below some of the lower-rated euro-area governments.

45 Overall, the issuance of non-government bonds denominated in euro declined slightly in 2000, though there was a substantial increase in issuance in 2001 Q1 (Table 1). This reflected investor demand for higher-yielding fixed-rate bonds, against a background of falling government bond yields and weak equity prices, and significant financing requirements in the auto and telecoms sectors.

46 The financial sector still dominates non-government euro bond issuance, in part reflecting extensive bank intermediation in the bond market, particularly in Germany.

QUASI-GOVERNMENT BENCHMARK ISSUANCE PROGRAMMES

European Investment Bank The EIB launched its Euro Area Reference Notes (EARNs) programme in 1999, aiming to become a benchmark issuer in the euro bond market. A new €3 billion 10-year issue in October 2000 and re-openings of three existing bonds this year have brought outstandings to €34 billion. The 2004, 2006 and 2008 bonds are large enough to trade on EuroMTS, whilst smaller issues trade on a domestic MTS platform.

Federal Home Loan Mortgage Corporation In August 2000, FHLMC announced its intention to issue €20 billion of bonds each year, with issues of at least €5 billion each quarter. Its inaugural 10-year € Reference Note was launched in September 2000, followed by a 5-year in November 2000 and a 3-year in February, which brought outstandings to €15 billion.

Kreditanstalt für Wiederaufbau KfW is a regular issuer in euro, and its agreed merger with another German development bank has increased its annual funding needs to €40 billion. In March, KfW established a euro-benchmark programme with a €5 billion 10-year bond, and announced its intention to bring a similar-sized 5-year issue later this year.

TABLE 1: NON-GOVERNMENT EURO BOND ISSUANCE

		1997	1998	1999	2000	1999 Q1	2000 Q1	2001 Q1
Total	€ billion	363	569	796	715	240	204	258
% of which								
Financials		83	85	76	75	81	78	68
Corporates		6	7	18	17	13	14	21
Supranationals		7	4	2	1	2	1	2
Public sector		5	5	4	7	3	7	9

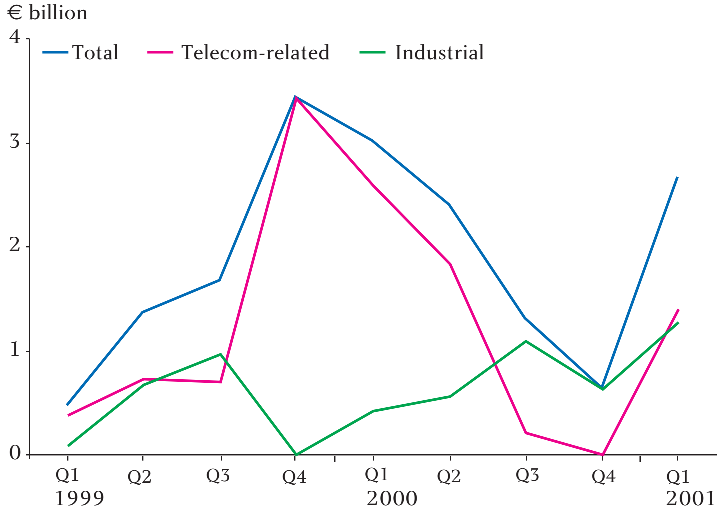
Source: Capital DATA Bondware

German banks have commonly refinanced loans by issuing bonds in the form of Pfandbriefe, using the loans as collateral. Although Pfandbrief-style markets have developed outside Germany (for example, in France, Luxembourg, Spain and soon in Ireland), the German market still accounts for around 90% of new issuance. Pfandbrief issuance fell in late-2000, in response to widening yield spreads and reduced availability of new eligible collateral, but new issuance rose again in 2001 Q1, as large-scale redemptions were refinanced.

47 However, euro bond issuance by non-financial corporates represents a growing share of the total. Although 2000 was a difficult year for many corporate issuers, with yields rising and spreads relative to governments increasing for much of the year, conditions improved in 2001 Q1. Sectors with heavy financing requirements, such as autos and telecoms, were able to bring substantial issues to the market. In doing so, most telecoms issuers have had to pay higher yields, and offer bondholder protection in the form of covenants in prospectuses (such as increases in coupons in the event of downgrades in their credit ratings).

48 In the high-yield sector of the corporate bond market, almost €6.5 billion was raised through 30 issues, mainly in the cable, media and telecoms sectors, during a six-month period in late-1999 and early-2000. The high-yield sector was affected in the second half of 2000 by a reversal in investor sentiment. But in 2001 Q1, a broader range of issuers was able to return to the market, meeting demand from a number of new high-yield bond funds (Chart N).

CHART N: HIGH-YIELD BOND ISSUANCE



Source: Schroder Salomon Smith Barney

49 The development of corporate euro bond issuance is described in more detail by Deutsche Bank in the Box on page 26, which demonstrates the market's increasing capacity to absorb jumbo corporate bond issuance and extend the maturity of issues. This is followed by the Box on page 28, in which BNP Paribas considers the extent to which euro issues in the corporate bond market have become competitive with dollar issues.

Syndicated bank lending

50 Although issuance of bonds has been growing, it remains a relatively small proportion of euro-denominated finance for companies in the euro area; bank lending still makes a much bigger contribution. Much of this takes the form of syndicated bank lending. When the euro was launched, it was widely expected that bond issuance would replace syndicated bank lending as a key source of financing for European corporate borrowers. But in practice, use of syndicated bank loans has grown substantially, particularly to finance corporate restructuring, as Barclays explains in the Box on page 30, as a result of its characteristics of confidentiality, certainty of funding, speed of execution and flexibility in structure and pricing.

Credit derivatives

51 In response to the wider range of corporate names traded in the euro-denominated bond and loan markets, there has been a significant improvement in the liquidity of the market for European credits in credit swaps. JPMorgan estimates (Box on page 32) that, whereas in 1998, 80% of its credit derivatives contracts on European-based company credits were denominated in dollars, this year the dollar's share has fallen to 35%, whilst 60% of contracts are denominated in euro.

UBS Warburg

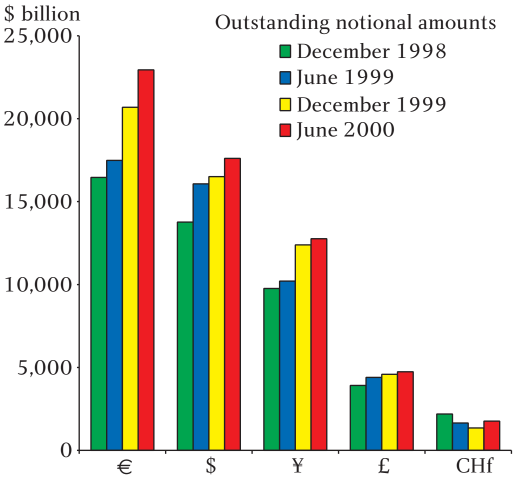
EURO DEBT CAPITAL MARKETS: THE BENCHMARK YIELD CURVE

Euro debt capital markets since the euro's introduction have shown growing importance in global terms. In terms of size, the Eurozone debt capital markets compete increasingly on equal terms with those of the US, both for issuers and investors. Yet the history of euro debt markets can be characterised as a continuing search for a meaningful benchmark yield curve.

Debt capital markets within the Eurozone – a giant gets bigger US Government repurchases of bonds continue to reduce the size of the Treasury market. In contrast, the government bond market of the Eurozone has continued to grow steadily. Euro-denominated government bonds have increased in importance within international fixed-income indices. Moreover, corporate restructuring initiated by the euro has encouraged growth in the depth and liquidity of the European corporate bond market and created new credit products for investors.

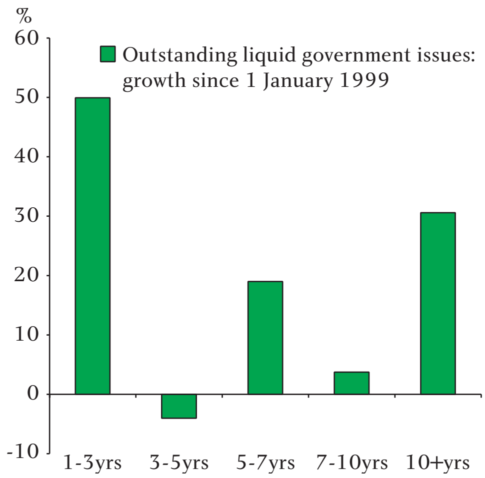
The growing importance of the Eurozone is not limited to government bonds. The euro swap curve has existed for just over 2 years. Yet in that time euro swaps have become one of the deepest and most liquid derivatives markets in the world.[1] Certainly, the Eurozone swap market has increased its share of the global market – apparently at the expense of local competitors in sterling and the Swiss franc (Chart 1).

CHART 1: GLOBAL OTC INTEREST RATE DERIVATIVE MARKETS



Source: BIS

CHART 2: GOVERNMENT ISSUANCE BY MATURITY



Source: Bloomberg

Prior to 1999, prospective single currency bond markets reflected widely differing fiscal and market circumstances among member countries. Since the introduction of the euro, yield differentials have been relatively stable on balance. A 5 basis point change in yield between government bonds of similar maturity is now considered a major move.

However, the debt issuance programmes of individual members continue at a national level. And resulting credit distinctions have continued between the member countries. For instance, Italian

1 An interest rate swap is an agreement between two parties to exchange cashflows on financial instruments. Typically, a 'swap' is made up from exchanging fixed rate cash flows for floating rate flows. The market is highly liquid in euro, and is referenced to the EURIBOR curve.

benchmark 5-year bonds trade at a yield premium of nearly 30 basis points over equivalent German benchmarks, representing a significantly higher cost to the Italian Treasury. The distinction is even higher for longer maturities such as 10-year bonds.

A yield premium exists for all non-German sovereign issuers and is often explained as a reflection of the credit rating of individual member countries. However, it is clear that for some of the smaller issuers the spread to German yields also reflects a liquidity premium. Curve fragmentation within the Eurozone yield curve emphasises the importance of the German debt market within the Eurozone. The German curve acts as a reference yield curve also through the only widely used exchange-traded bond derivatives – on the Eurex system. Such concentration has recently contributed to strains within the Eurozone debt markets.

Exchange-traded markets have suffered from focus on German curve For the exchange-traded markets, the current concentration on the German curve may be unsustainable. Certainly, German bond futures have recently shown signs of stress. The futures are used to hedge a wide spectrum of sovereign and corporate risk across the entire Eurozone – and beyond. However, the only bonds eligible for delivery are German Government bonds. The 'basis risk' between German deliverable bonds and many of the issues to be hedged has increased. Market participants now are frequently concerned about supply problems of deliverable German bonds and the difference in price between bonds contained within the deliverable basket and those not included. A squeeze on the 5-year Eurex Bobl contract in March illustrated the dangers of dependence on German deliverable bonds. The recent problems have increased the calls for bond futures to reflect the wider Eurozone bond market rather than a dwindling number of German issues.

Swap curve offers unified reference for euro debt markets The lack of a single government bond curve has also been a major factor in the development of the euro swap curve. The EURIBOR curve has created a common interest rate benchmark against which to measure the value of bonds of different credit. The yield spread between euro government bonds and the swap curve is now routinely quoted as an alternative to the convention of quoting against German bonds. The swap spread provides a useful substitute, given the lack of a common benchmark government curve. The development of the Pfandbrief market has further concentrated attention on the swap curve, as Pfandbrief issues trade on tight spreads to the swap curve.

Increasing co-ordination on issuance programmes The improvement in co-ordination between government debt agencies is already leading to a change of debt management practices among sovereign issuers. Benchmark issues have become the norm within the euro bond market – leading to adjustments in issuance procedures from countries such as Spain, Belgium, Austria and Holland. Benchmarking dictates issuance in highly liquid lines of stock focused at particular maturities. Sovereign bond issuance for all issuers is now often confined to benchmark maturities of the core markets of Germany and France (Chart 2). Thus issues are concentrated in the 2-year, 5-year, 10-year and 30-year sector. In addition, France has initiated a 15-year benchmark bond to fill the gap between 10 and 30 years.

Conclusion The Eurozone debt markets are now more integrated than they were, but still less than perfectly, as evidenced by the spreads between issuers and the recent difficulties in the futures markets. The continued disparity between government yield curves is likely to become a major factor in the future development of capital markets within the Eurozone.

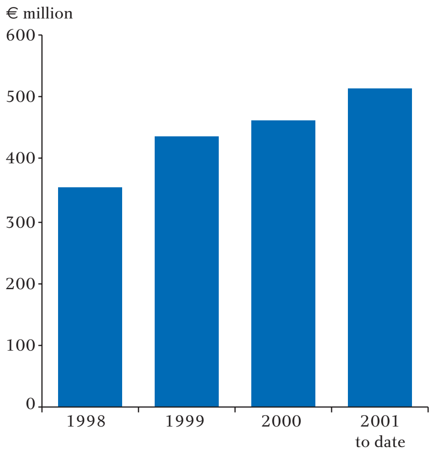
Deutsche Bank

CORPORATE EURO BOND ISSUANCE

The euro capital markets continue to astound observers, not only with their depth but also with the breadth of issuance absorbed by Euroland investors. Issuance of fixed and floating rate euro bonds rose 26.6% in the first quarter of 2001, compared with the first quarter of 2000[1]. Whilst the euro market does not yet match the structural complexity of the domestic US dollar market, the euro market's ability to absorb successive jumbo corporate financings and to extend its maturity profile represent impressive developments.

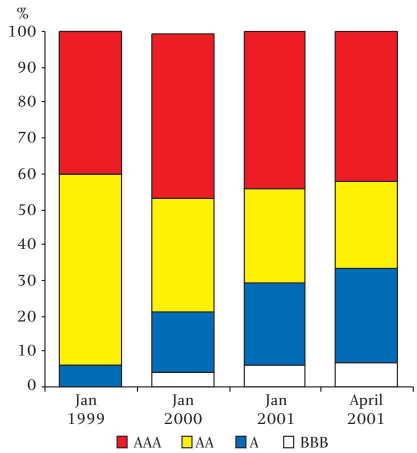
Breadth and depth of the euro credit curve With the overall volume of euro issuance increasing, the average size of fixed rate issues in the year to date has risen by nearly 12% compared to the average last year (Chart 1). Over the past several months, the corporate sector has gained the most in terms of market share. Retail investors are also becoming increasingly active in corporate bonds. Admittedly, several of the benchmark corporate issues, to ensure market access, have been priced somewhat generously, and have come with attractive covenants (eg an increase in coupon in the event of a change in the issuer's rating). Nonetheless, the level of investor interest in these issues is testament to the ever-improving liquidity that the euro sector enjoys. This is evident in the increasing appearance of lesser-rated credits compared to earlier years, with the BBB- and A-rated sectors growing fastest (Chart 2).

CHART 1: AVERAGE NEW EURO ISSUE SIZE



Source: Deutsche Bank Research

CHART 2: EURO CREDIT RATINGS



Source: Deutsche Bank Research

Interestingly, however, it was not until April this year, after two years of significant advances in the euro sector, that the corporate curve extended beyond 10 years. German utility RWE (Aa3/AA-) brought a €500 million 15-year issue to the market, with Deutsche Bank as joint bookrunner. The issue was over-subscribed in the order of three times. There are three major sources of potential demand for long-dated euro-denominated corporate issuance of this kind: the growth in pension fund assets (resulting from European pension fund reform); existing demand from investors with long-dated liabilities; and growing demand from UK credit investors (lacking significant choice in the sterling sector). The lengthening of the maturity spectrum is a sign of an increasingly mature market.

On another level, non-European investors have begun to focus on the euro sector, as the benchmark issuance programmes of Freddie Mac and KfW provide issues that can be traded at bid/offer spreads, and in sizes, previously available only in the US dollar bond market. Interestingly, the new KfW €5 billion 10-year benchmark now trades on a tighter spread to Bunds than selected peripheral

1 Source: Capital DATA Bondware.

Euroland government bonds. This marks a notable departure from earlier experience, as it reflects investors placing a premium value on the KfW Aaa/AAA credit versus lower-rated, smaller 'on-the-run' (ie current benchmark) peripheral government 10-year issues.

Research Increasingly sophisticated skills are required in credit analysis, as investors focus on name selection, with a more 'bottom-up' approach to investing. For example, last year spreads widened throughout the telecoms sector, owing to supply pressures. In the year to date, investors have differentiated between individual telecoms companies, resulting in a tiered market for telecom paper, more accurately reflecting investors' perceptions of the relative risks associated with each underlying company. This is another sign of a more mature market, with the level of differentiation approaching that seen in the equity markets.

Roadshows Against the backdrop of a more crowded euro sector, with 8.5 issues being launched per day in the first quarter of 2001 (against equivalent figures of 7.8 in the first quarter of 2000 and 5.8 in the first quarter of 1999[2]), roadshows are being undertaken by a growing array of issuers. These roadshows take the form of a series of meetings between issuer and potential investors in a number of different cities, and can last anywhere from one day to three weeks. The use of roadshows has become a normal part of the launch timetable for jumbo corporate financings. The growing attendance of middle-tier investors at roadshow presentations reflects their increased appetite for greater credit exposure. Deepening the global investor base for euro securities represents another key step in the development of the euro credit markets.

The pot system During the past 12 months, there has been increased use of the US-style pot system for euro financings. The pot system, whereby the lead managers share individual order data with each other and the issuer, is now almost standard practice for jumbo corporate deals and has even been selectively applied for syndicated euro government bonds. This procedure is aimed at increasing the transparency of the order book to improve the quality of final allocations made. Some issuers are becoming more involved in investor relations and directing their lead managers to allocate paper to suit the issuer's strategic distribution objectives. However, the pot system has met with resistance from some investors, who prefer to maintain discrete bilateral relationships with their preferred banks.

Electronic trading platforms Currently, the most successful electronic trading platforms are Deutsche Bank's proprietary Autobahn system and those which are co-mingled (ie joint-venture companies sponsored by two or more banks, providing investor access to multiple price sources for live, real-time trading) and offer trading in a commodity-like product such as government bonds. Whilst steps are being taken to increase electronic trading of corporate paper, the market infrastructure remains fragmented. Additionally, investors still prefer to rely on their relationship banks for voice trading for the bulk of their business. This is not surprising, owing to the increased sophistication and volatility of the corporate sector.

Electronic trading websites to support the new issuance process have become standard platforms at the leading underwriters. They are primarily used to enhance transparency between these firms and issuers. The investment in technology continues, but is being focused on middle and back-office applications. Interest in front-line electronic or internet-based trading increasingly depends on joint venture projects. Consolidation of the co-mingled platforms is expected, as funding sources decline and investment banks rein in development costs.

The next step? One key component missing from the structural development of the euro sector remains a *sizeable* non-European bid for euro paper, akin to non-US demand for US dollar securities. To date, Asian and North American investment has focused on core government debt and the jumbo liquid AAA offerings (ie Freddie Mac and KfW issues). The euro's limited appreciation during the past six months and recent retrenchment has again inhibited broad non-European buying of euro paper. Once the euro improves, more cross-border investment in high grade euro credit from the Asian and US regions is expected.

2 Source: Capital DATA Bondware: all fixed and floating rate euro bonds.

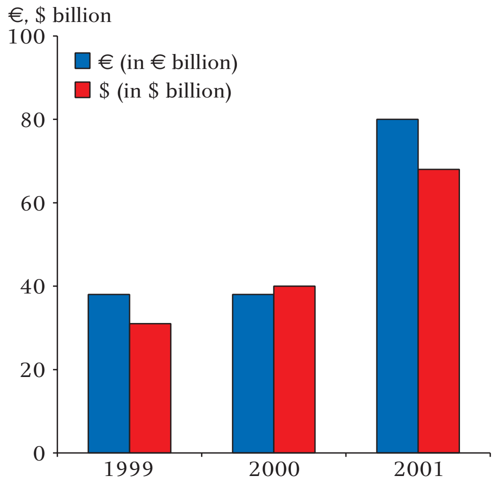
BNP PARIBAS

CORPORATE BONDS: THE EURO AS COMPETITOR FOR THE DOLLAR

Growth in the euro bond market, particularly in the corporate credit sector, continues to be impressive. 2000 was a year of consolidation, with issuance volumes roughly comparable to 1999. But the first quarter of 2001 saw a major surge of development, including 15 deals of €1 billion or over compared with around 35 for the whole of both 1999 and 2000 and only 3 in the old legacy currencies in 1998. The first quarter marked the emergence of the corporate euro market as a true competitor for the dollar market in many key areas.

Volumes Corporate supply in the period from the beginning of 2001 to 25 April was $68 billion in dollars and €80 billion in euro respectively, a significant increase compared even with the heavy calendar in 2000. This was particularly the case in euro, where the first quarter's figures were a record (Chart 1).

CHART 1: EQUIVALENT CORPORATE ISSUANCE IN EURO AND DOLLARS

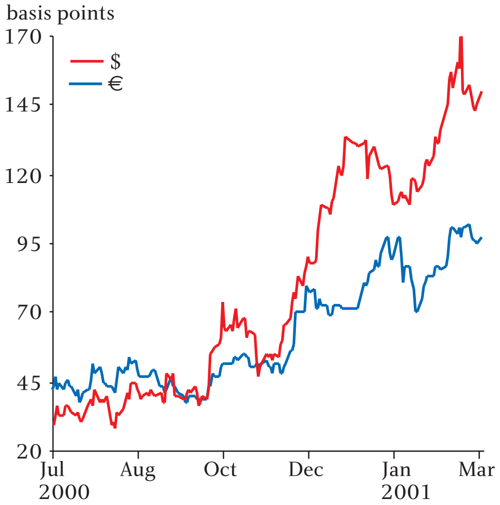


Note: comparing equivalent issuance from 1 January to 25 April
Source: BNP Paribas

Pricing Euro pricing has improved significantly relative to the dollar in recent months. This is evident both in the primary and secondary markets. In the primary market, a two year dollar FRN for France Telecom was priced at 125 basis points over LIBOR and a three year euro issue for the same borrower was priced at 120 basis points over EURIBOR. In the case of the secondary market, an illustration of the change in swap spreads in the case of a Deutsche Telekom issue in euro maturing in June 2005 and a dollar issue for the same borrower maturing in July 2005 is shown in Chart 2.

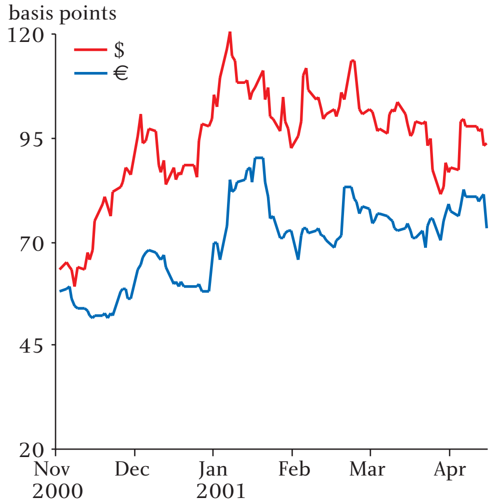
It is possible that the pricing advantage for European telecoms companies in euro can partly be explained by the nationality of the borrower, as they trade at wider spreads in the dollar market than their US counterparts. However, the pricing advantage in the euro market represents a change from last year, and has taken place despite the fact that telecoms supply has been heavier in euro in the past few months than in dollars. This is also the case in the auto sector where, for example, Ford has recently traded at tighter levels in euro than in dollars, despite being a US-based company (Chart 3).

CHART 2: DEUTSCHE TELEKOM 2005 SWAP SPREADS: EURO V. DOLLARS



Note: € bond due June 2005, $ bond due July 2005
Source: BNP Paribas

CHART 3: FORD 2005 SWAP SPREADS: EURO V. DOLLARS



Note: € bond due Sept 2005, $ bond due Aug 2005
Source: BNP Paribas

The telecoms and auto sectors have dominated issuance in both the euro and dollar bond markets in the first quarter of 2001, and are the two most widely traded sectors of the market, so they provide a fair analysis of relative value. In other, less well traded, sectors, there is greater evidence of a 'domestic' advantage. However, comparative data are limited.

Individual issue size The euro market has developed to the point where it can compete with the dollar market in terms of issue size as well as overall volume. For example, in June 2000 Deutsche Telekom raised $9 billion and €3 billion. By contrast, British Telecom raised $10 billion in late 2000 and €8 billion in January 2001, while France Telecom raised $9 billion and €7 billion in February 2001 in a deal which was intended primarily to be raised in dollars. Subsequently, Telecom Italia abandoned plans for a dollar issue and instead issued €6 billion. The issue was oversubscribed several times.

Other ways in which the corporate euro bond market is now developing into a competitor for the dollar market include:

- further growth in the acceptance of BBB credits in the first quarter of 2001;

- the sheer number of investors now involved in buying euro corporate credits. This has been the driver behind the growth in the size of issues. Last year, having 100 investors in a deal was regarded as a big book; now over 500 is increasingly common.

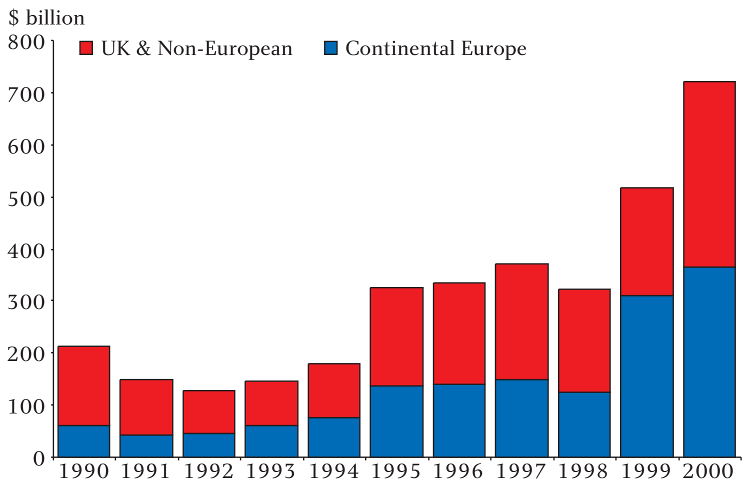
Time, and the ability to sustain a deep level of demand in difficult times, will eventually show whether the euro market can provide an alternative to the dollar market which is consistently available for a broad range of corporate issuers. However, the signs are positive. The dollar market is clearly still well ahead only in terms of its ability to provide long maturities (ie beyond 10 years), and even in this area there have been small but encouraging signs of development in euro.

BARCLAYS

SYNDICATED LOANS AND THE EURO

Some market participants originally expected that, following the introduction of the euro, syndicated lending would decline in significance and, in particular, that the capital markets would increasingly replace bank lending as a key source of financing for European corporate borrowers. Instead, Euroloans (ie international syndicated loans that can typically be drawn down in a variety of currencies) have undergone a period of spectacular growth since the introduction of the euro (Chart 1). This article highlights the reasons for this growth, outlines the changes taking place in the market and comments on the outlook.

CHART 1: EUROLOAN VOLUME



Source: Barclays Capital, Capital DATA Loanware

The steep increase in demand for syndicated loan facilities has been driven by a confluence of factors. Much of the increase in volume terms has involved continental European corporate borrowers. Historically, they made far less use of the syndicated loan market than their UK-based counterparts. Over the past two years, however, many have utilised the syndicated market for the first time, either replacing existing bilateral arrangements, or alternatively raising facilities of a size that could not be accommodated via traditional bilateral lending. The growth in funding requirements can be attributed largely to the need to finance M&A-led corporate restructuring, which reached record levels in Europe in 1999 and again in 2000. Syndicated loans have become the instrument of choice for effecting corporate change across Europe, due to the key features which they offer. These include: confidentiality; certainty of funding; speed of execution; and flexibility in structure and pricing.

Simultaneously, the scale of financing which is achievable in the Euroloan market has increased dramatically. In 1995, the largest loan facility raised in support of an acquisition was less than $5 billion, whereas last year two facilities of €30 billion each were successfully concluded, as were many more in the €5 billion to €15 billion range. Well over 50 banks have demonstrated their willingness to make individual commitments of €1.5 billion. Indeed in 2000, total commitments raised in support of a single financing operation breached the €100 billion threshold for the first time – for France Telecom's Orange acquisition financing. Even in the current uncertain economic environment, and despite the problems which have beset the telecommunications sector, the Euroloan market continues to provide financing on an unprecedented scale.

Paradoxically, these amounts have been raised during a period of market consolidation when the appetite of many major lenders to provide permanent term financing to their clients has been declining – propelled by a drive to improve returns on capital for shareholders from lending in particular, and to reduce the period of time in which they expect other business with their clients to develop. As such, it is hardly surprising that the maturity profile of facilities has shortened considerably over the past couple of years. Increasingly, many loans are serving as bridge financings to the Eurobond market, where longer term financing is available in size.

The new model approach to financing large acquisitions is: to lead with a syndicated loan which is raised by tapping a broad group of lenders on as fine terms as the required scale will permit; quickly to refinance through a range of capital market instruments; and finally, to follow up with a reduced loan facility – typically provided by existing core relationship banks on more favourable terms – to meet the combined entity's ongoing liquidity requirements, such as support for growing Eurocommercial paper issuance. As a result, major banks have been reorganising their products, so that loans can be delivered in conjunction with other capital market instruments.

The Euroloan market has also begun to change in other ways. With the introduction of the euro, and the increasing scale of transactions, there has been more of a transnational approach to financing. Local market benchmarks, in terms of pricing in particular, still play their part, and the market remains less homogeneous than, say, in the US. But pricing comparisons are more frequently made among borrowers of different nationalities that either exhibit similar credit characteristics or, crucially, afford similar opportunities for more profitable ancillary business, which does not tie up so much capital. Loans now also have to be priced with the spreads available to investors in comparable securities in mind.

Another important development in Europe is the growth of leveraged loans. Increasingly, buy-out and other equity funds are competing with corporate buyers in the M&A market. While still dominated by bank lenders, this market has also begun to attract institutional lenders, although on a smaller scale than the US. The size of transactions has also increased markedly, facilitated by a demand for yield. Although there are still regional elements to pricing in various European countries, a more homogeneous European market should develop, as the scale of facilities increases. While the lending associated with this flow of business is of longer maturity and more permanent in nature, loan structures usually incorporate an element of mezzanine (ie subordinated) or high-yield debt, the markets for which have also deepened and matured in parallel.

To provide the liquidity needed for market players to manage their loan portfolios efficiently, the secondary market for loans in Europe will need to develop further. $35 billion was traded last year. The growth in this market has so far been dominated by trading in large investment grade acquisition financings, but over time the market will undoubtedly shift to more of a sub-investment grade bias. The Loan Market Association (LMA), founded in 1996, has fostered an active secondary market in loans. It has developed documentation and trading practices that have become standards for the European markets, as well as working to break down various legal and regulatory barriers that previously hampered both secondary market transactions and the involvement of non-banks in the market. The LMA has also developed standard documentation for the primary loan market, which has become increasingly accepted for transactions executed under English law.

In summary, since the introduction of the euro, the Euroloan market has developed rapidly in terms of the scale, range and complexity of financings delivered, and has continuously outperformed expectations. Although lending is not currency-specific, the development of the euro capital markets generally, and the change in attitude and ambition on the part of lenders and borrowers alike, have both been fundamental to the emergence of the Euroloan market as the key financing market facilitating change in the European corporate landscape.

JPMorgan

THE EUROPEAN CREDIT DERIVATIVES MARKET

The European credit derivatives market has benefited from the introduction of the euro. The significant improvement in the liquidity of the market for European credits in credit swaps can, at least in part, be attributed to the greater transparency and wider range of names traded in the euro-denominated bond and loan markets. This has created a wider universe of issues and instruments which has in turn made it easier for dealers to calculate the price for a credit swap at a range of different maturities. Once this can be done dealers can develop a 'pricing curve' - a spread at which each issuer's credit swaps will trade for different maturities. Liquidity in the euro credit swap market is typically concentrated in the three and five year maturities, but some trading is seen in one, two and four years, and a little out as far as 10 years.

Before the introduction of the euro, credit instruments available for use by traders to calculate the prices of credit swaps would typically be denominated in more than one European currency, often including the national currency of the particular issuer. The prices of these various issues were often very different, and the credit spread prices of 'domestic', national currency issues in particular gave misleading price signals. For instance, French investors might operate under a mandate which required them to buy French credits denominated in French francs. The familiarity of the French investor base with its domestic credits ensured that, for example, Renault in French francs would trade far tighter than Renault in Deutsche marks. This arbitrage left many opportunities for the asset swap market, but made the generation of a credit swap pricing curve a sometimes fraught process.

Similarly, the range of currency denominations accepted as eligible for delivery into a credit swap contract required careful negotiation. Before the advent of the euro, credit swap trades might break down because the counterparty offering protection against the possible spread widening or default of a particular issuer, might be willing *only* to take delivery of bonds denominated in US dollars and Deutsche marks. If the buyer of credit protection was trying to hedge bonds denominated in Irish punts or Spanish pesetas, the limited universe of deliverable currencies would prevent the trade from being closed. Now the euro stands alongside the pound, dollar, yen, Canadian and Australian dollars as a deliverable currency.

The currency denominations of credit derivatives contracts entered into by JPMorgan provide a good measure of this concentration of liquidity on the euro. In 1998, 80% of the firm's credit derivatives contracts relating to European-based companies were denominated in dollars, 10% in sterling and 10% in Deutsche marks. In 2001 to date, the dollar's share has fallen to 35%, whilst 60% of contracts are denominated in euro. However, the euro has made little or no progress in the market outside Europe. The dollar reigns supreme for credit swaps referencing US and Asian-based companies, challenged only by the yen for Japanese reference credits.

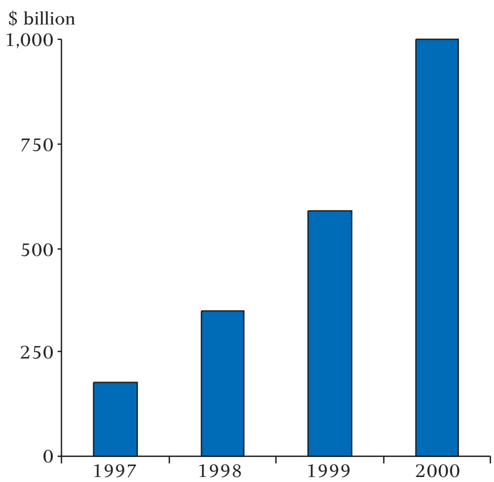
The increased liquidity in the euro-denominated credit swap market has facilitated the development of a range of new products. For example, take a European fund manager executing a portfolio reweighting out of European government bonds and into 'credit.' This portfolio manager will aim to buy a diversified portfolio of credits rather than particular names. It is easier to achieve this objective by selling a portfolio of credit swaps than by trying to buy a portfolio of bonds. (Interestingly, the language of the credit swap market is to 'sell' credit protection, which is the same as 'buying' bonds in the cash market.) This flow of European portfolio managers' funds into the credit market via the credit swap market has been a key driving force of the credit market this year.

The credit derivatives market faces many challenges and opportunities which are left unchanged by the arrival of the euro. For example, the debate continues around the definition of various legal terms included in the standard ISDA contract used in the credit swap market. And there is still uncertainty about how credit swap contracts behave when companies break-up. Will a contract written on British Telecommunications (BT) follow the fixed-line or the mobile business if BT follows through on its plans to break up?

Nevertheless, the ongoing impact of the euro will be to accelerate the growth of liquidity in the European credit derivatives market. This will give European participants in the market a stronger, clearer, more united voice in the global debate about how the credit derivatives market should develop. It will also ensure that the interests of European-based investors, issuers and credit managers will be addressed as the market continues to expand.

The euro and the European credit swap market have evolved together. Both of these developments have aided the emergence of a strong, liquid euro credit market, currently the biggest, most liquid and arguably the cheapest, market for capital available in the world today.

CHART 1: CREDIT DERIVATIVES: NOTIONAL AMOUNT OUTSTANDING



Source: BBA survey for 1997-99; JPMorgan estimate for 2000

F EQUITY CAPITAL MARKETS

52 In relative terms, the market capitalisation of listed companies in the euro area (75% of GDP) remains very significantly lower than in the US (124%) and the UK (180%). However, throughout the 1990s and especially since the introduction of the euro, European equity markets (not just in the UK, but also across the euro area) have become increasingly important in several ways: growing new issuance and secondary market trading; limited cross-border M&A activity so far, but with considerable scope to expand in future; greater access to venture capital (eg in the technology sector); and diversification of investment, not just across Europe, but globally. These themes are introduced below, and developed in more detail in the boxes that follow.

Equity issuance and trading

53 With equity prices falling late last year and early this, the scope for new equity issuance in Europe was limited. But the decline followed a long period of substantial growth throughout the 1990s, with new equity issuance reaching record levels in 1999 and again in 2000. Goldman Sachs (see Box on page 36) quotes estimates that new equity issuance grew from $109 billion in 1998 to $157 billion in 1999 and $200 billion in 2000.

- An increasing proportion of the total consisted of Initial Public Offerings (IPOs), though over half consisted of secondary offerings.
- An increasing proportion consisted of corporate issuance, though privatisations continued to represent a significant market share.
- Much of the increase in 1999 and 2000 consisted of cable, media and telecoms stocks.

Trading levels and liquidity in the secondary market have continued to be relatively buoyant, both in domestic and foreign equity transactions reported to the London Stock Exchange and other European stock exchanges.

54 Despite market fluctuations, there is evidence that an equity 'culture' has been growing, not just in the UK, but across the euro area.

- Part of the evidence consists of growth in private investment. Goldman Sachs estimates that the proportion of European stocks held by private investors has grown from 10% to nearer 40% over the past five years, with for example 18% of the German public currently holding investments in equities.
- Another part of the evidence consists of growth in private sector European pension funds, estimated at $2,750 billion, and an increasing proportion allocated to equities. Goldman Sachs estimates the equity proportion to have increased from 19% to 29% over the past four years, helped by the removal of some remaining restrictions on equity investment in the euro area.

Mergers and acquisitions (M&A)

55 The level of M&A involving European companies has grown appreciably over the past few years, though it has fallen back in the recent equity downturn. Morgan Stanley

considers (Box on page 38) that cross-border consolidation in Europe is still in its early stages.

- Last year, only about 24% of all European M&A involved cross-border transactions in Europe, compared with 35% taking the form of domestic transactions and 41% representing transactions with companies outside Europe altogether. A German company was more likely to buy a US company than a French one.
- Over the past five years, nearly 75% of transatlantic deals involved European companies buying US companies rather than the other way round.

56 There are a number of possible explanations. One is that buying a US company is more likely to give access to the entire market than buying a European company, as more European companies are locally based. Another is that local regulations appear still to make cross-border acquisitions within Europe more difficult than domestic acquisitions; investors continue to have a 'home country' bias; and shares in a French company are less easy to use than a German one in making a German share-for-share acquisition.

The technology sector

57 The growth in the European technology sector, despite the significant market correction which has occurred recently, illustrates the importance that European companies attach to expanding their 'domestic' market into a pan-European market in order to obtain the same advantages of scale as their US competitors. Unlike the US, the use of venture capital on a large scale to finance technology investment in Europe is relatively recent. Start-up technology companies in Europe used to be funded mainly by technology conglomerates. But CSFB estimates that European technology funds have grown in number from 48 in 1998, to 74 in 1999 and 127 last year. CSFB considers (Box on page 40) that venture capital has increasingly provided an alternative source of funding for newer technology companies, and also helped to finance the restructuring of the conglomerates themselves.

Diversification of investment

58 European pension funds have historically been 'overweight' in investments in their domestic markets: to match the domestic currency risk; to hedge their domestic liabilities against the domestic inflation rate; and, in some cases, because of regulations requiring them to invest in domestic markets. Morgan Stanley estimates that domestic equity holdings of mutual funds in the euro area still represent 31% of their portfolios, compared with 9-10% if their domestic holdings were benchmarked against euro-area equity indices.

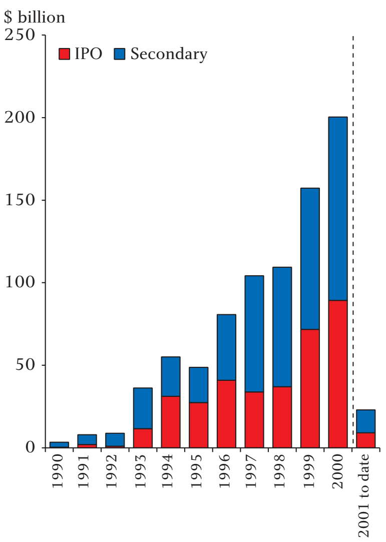
59 The question is whether this position is changing, and how quickly. Merrill Lynch Investment Managers consider (Box on page 42) that pension funds anticipated the introduction of the euro by beginning to diversify some time ago, and that many continental European pension funds plan to continue the process. But the reallocation of pension fund portfolios is also taking place in a wider, global context. Besides investment in the euro area, European pension funds are investing increasingly in other markets outside the euro area as well.

EUROPEAN EQUITY FINANCING

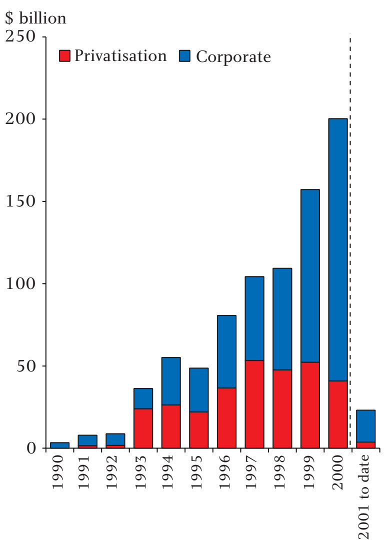
Over the past decade, the growth of European equity financing has been very significant. The most visible trend has been the large number of companies seeking public market listings through Initial Public Offerings (IPOs), particularly in growth sectors such as the telecoms, technology and financial sectors, where the public markets have been instrumental in supporting industry growth with equity funding. This has been accompanied by large secondary holdings being sold by corporates and governments as a result of liberalisation of markets and sectors, and corporate restructuring. The Charts below illustrate these points.

OVERVIEW OF HISTORIC NEW ISSUANCE

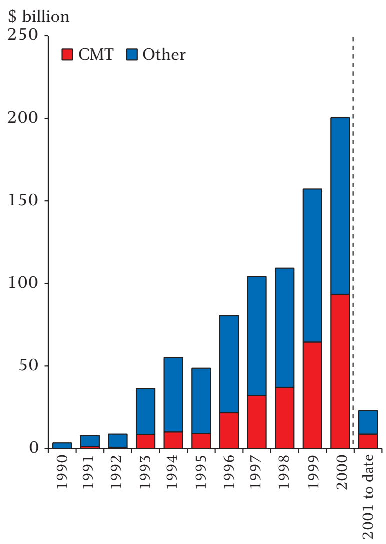
By product



By issuer



By sector



Note: Europe (including the UK)
Source: Capital DATA Bondware

The evolution of European equity markets is, of course, not only about capital raising: daily trading volumes and liquidity continue to rise steadily. And underlying these developments, there are a number of important influences. Some are driven by the advent of the euro and macroeconomic developments in Europe, some by corporate activity, and some by the development of the investor community.

Introduction of the euro The euro has already had the effect of transforming the nature of corporate finance in the Eurozone, creating a capital pool for corporate bonds, including high-yield bonds denominated in euro. Despite the global market slowdown in the first quarter of 2001, the euro has also made intra-European mergers and acquisitions more likely. There has been, and Goldman Sachs expects that there will continue to be, a sustained level of healthy M&A activity, both friendly and hostile. This in turn increases the need for acquisition finance, and continued issuance of equity to support these transactions.

Pan-European economic reform Extensive tax and pension reforms are taking effect in many countries. This is leading to increased personal savings and a growing private sector pension industry. Intersec Research estimates that European institutions in 1999 controlled approximately $2.75 trillion in pension funds, up from $1.68 trillion five years ago, and projects an increase to around $4 trillion in 2004. In addition, there has been a steady increase in the percentage of equities that funds hold. Goldman Sachs Research estimates the figure today to be approximately 29%, up from 19% in June 1997. The average equity proportion in the UK, where funded pensions are at a more advanced stage of development, is estimated to be approximately 70%. It is also important to bear in mind that, in some countries, several planned stages of deregulation are still to be carried out. German funds, for instance, are restricted to 30%, while in France funds are restricted to 25%. The EU's resolve in dismantling these regulations will leave a significant impact on the markets.

Emergence of the 'new economy' Advances in technology have been rapid. New business models are being developed and, when companies implement them, they often require significant amounts of financing. Although over the past six months the shine has worn off the technology and telecoms sectors, both sectors continue to drive a significant part of new issuance growth, representing 78.6% of new issues in 2000 ($70.7 billion) and 78.4% in the first quarter of 2001 ($7.1 billion).

Growing equity culture On the one side, companies have become more conscious of the importance of the capital markets, resulting in an increasing focus on shareholders. On the other side, public interest in equities has surged, as a result of increased awareness of equity markets through the media, the internet and their commercial banking relationships, and the increased use of equity markets by pension funds and fund managers. Together, these factors have led to a growing equity culture throughout Europe, often with government support. Five years ago, private investors held approximately 10% of European stocks; that figure today is nearer to 40%. For example, in Germany 18% of the population are currently estimated to be holders of shares. In the latest Deutsche Telekom stock offering in 2000, 69% of the shares (€8.8 billion) on offer were allocated to retail investors. Retail investors form a prized and often welcome shareholder base, particularly in the case of large privatisations, or significant international offerings by telecommunications or utilities companies with a retail customer focus. The Pan-European Retail Offering (PERO) is a structure used for the first time in 1999 in the Deutsche Telekom II offering. Another reason for retail interest in equities is the ease with which an individual can own and trade shares, either through phone-based broking or via the internet. According to Jupiter Strategic Planning Services, by the end of 2000 there were approximately 1.8 million online brokerage accounts in Europe, up 52% from the end of 1999. There is no doubt that online brokerage firms are well positioned to help investors carry out cross-border investment transactions.

Spin-offs/unwinding crossholdings In the European equity market, over the past few years, there has been an increased number of spin-offs, either in the form of straight equity offerings, block trades or exchangeable bonds. Issuers such as Infineon (Siemens spin-off), Terra Networks (Telefonica), FT Orange (France Telecom) are some of the entities that have been (partially) spun-off from their original holders. In addition, crossholdings, mostly held between financial institutions, are gradually being unwound as a result of fiscal reforms and the redeployment of corporate capital. This trend is likely to continue.

Morgan Stanley

THE EUROPEAN M&A MARKET AND THE EURO

One long-term benefit that should flow from the introduction of the euro is the fact that national borders should become much less relevant in determining the pattern of business activity in the Eurozone. Mergers and Acquisitions (M&A) activity will have a crucial role to play in transforming the Eurozone into a truly seamless economic area. In the Eurozone of the future, truly pan-European companies, organised according to the dictates of efficiency rather than nationality or local currency, will look ever more like the biggest US corporations in terms of their scale and scope.

In a well-functioning and truly seamless single market, the nationality of companies should be irrelevant to their participation in M&A activity. The only factor that should matter is whether or not the transaction adds shareholder value. In a US context, this means that a New York company would not be deterred from acquiring a company in Minnesota if the underlying rationale for the deal was strong. This is as it should be – what matters is not where the companies are located, but the shareholder value that will be added as a result of the transaction.

A comparison of cross-border M&A activity in the US and Europe shows that Europe is still far from being a single market for corporate control in this sense. In the US, over half of the deals recorded occur across state borders. Companies based in New York do not seem to care whether a potential target is in California, Texas or Minnesota. Now contrast the situation in Europe, where national boundaries seem to be an important influence in determining the pattern of M&A activity (Chart 1). In 2000, for example, only about a quarter of all European deals involved cross-border activity within Europe (eg a French company buying a German company).[1] Strikingly, the data suggest that a German company is much more likely to buy a US company than a French company – the percentage of deals involving a party outside Europe stands at almost 41%. And most surprising of all is the fact that domestic activity (eg a German company buying a German company) is a high 35% of all European M&A activity (compared to only 17% for same-state activity in the US).

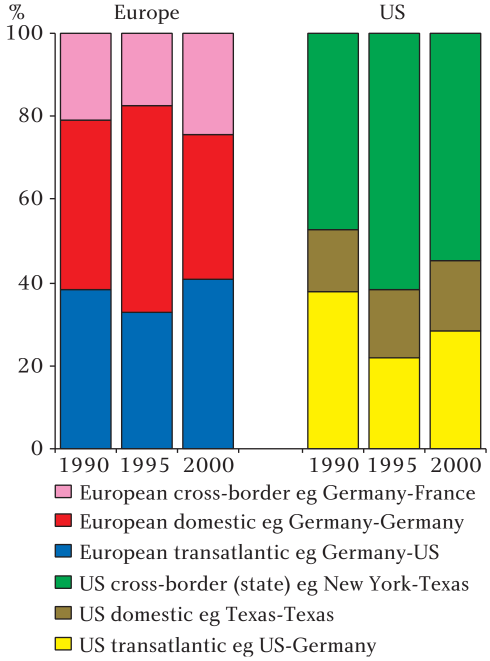
These data suggest that cross-border consolidation in Europe is still in its very early stages. This may be responsible for another imbalance revealed in the data. European companies have been on an acquisition binge in the US in the last few years compared with a relatively small flow in the opposite direction. Of the total $1,291 billion in the aggregate value of trans-Atlantic deals since 1995, fully $927 billion (nearly 75% of the total) represented European purchases of US companies. In the opposite direction, US companies only bought $363 billion worth of US companies, an imbalance that shows no sign of diminishing (Chart 2).

The lack of cross-border consolidation in Europe may reflect the fact that there is a dearth of truly pan-European corporate assets for US companies to buy. For US companies engaged in global expansion who want to complete the European piece of a global strategy, it is not clear how to choose between say a French, German, Italian or British company. There is no such problem in the US – because businesses tend to be larger and span the entire economic area, there is no shortage of candidates for a European company considering the purchase of a US company in order to complete its global reach.

All of this suggests that the Eurozone still lacks a truly ‘borderless’ market in corporate control. Some of the barriers to cross-border integration are undoubtedly cultural and linguistic. But this

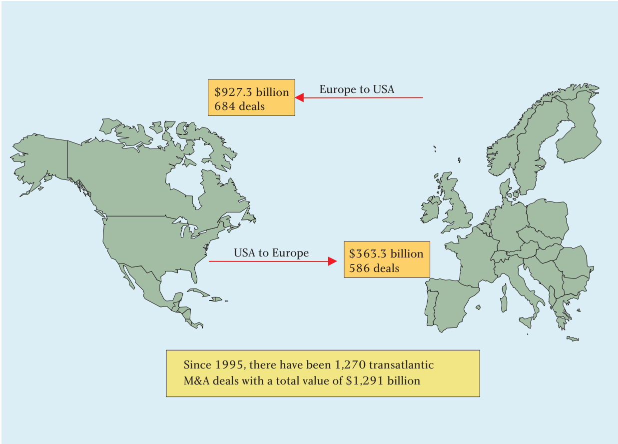
1 For this analysis, the UK is included as part of Europe, which makes the results even more striking given that the UK is the largest single source of both targets and acquirors within Europe.

CHART 1: REGIONAL BREAKDOWN OF ACTIVITY



Source: Thomson Financial Securities (April 2001)

CHART 2: TRANSATLANTIC M&A ACTIVITY: 1 JANUARY 1995 – 31 MARCH 2001



Note: includes announced transatlantic deals >$100 million

Source: Thomson Financial Securities (from 1 January 1995 to 31 March 2001)

cannot be the entire explanation, given European businesses' willingness to engage in M&A activity with non-European targets.

What could these other barriers be? One obvious barrier to cross-border M&A in the Eurozone might be regulations and laws that prevent cross-border consolidation. Although discouraging cross-border acquisitions is not allowed under the framework of the European Single Market, it may be that prospective acquirors are daunted by complex systems of local regulation that have the effect of favouring domestic incumbents. Breaking down these barriers will be a slow process as local regulations are tested for compatibility with Single Market legislation. And it will be acquirors and targets engaging in cross-border M&A activity who will test and challenge the compatibility of local laws, regulations and customs with the European Single Market.

Another barrier might be the slow development of the single European capital market itself. The emergence of a single European capital market should mean, for example, that shares in a French company should be as easy to use in making a German share-for-share acquisition as those of a German company. But the amount of time investment bankers spend on thinking about the 'flowback' of foreign shares into the home market after the acquisition of a foreign company suggests that this is still far from the case.

Patterns of European share ownership suggest that holdings of financial assets across Europe are still characterised by a 'home country' bias. Work by the Morgan Stanley Equity Research department confirms this. In a truly integrated pan-European capital market, the holdings of domestic equities for the average institutional investor should amount to approximately 9-10% (assuming all holdings were benchmarked to Eurozone equity indices). But our research suggests that for mutual funds in the Eurozone, domestic equity holdings stand at 31%, suggesting a still high degree of 'home country' bias.

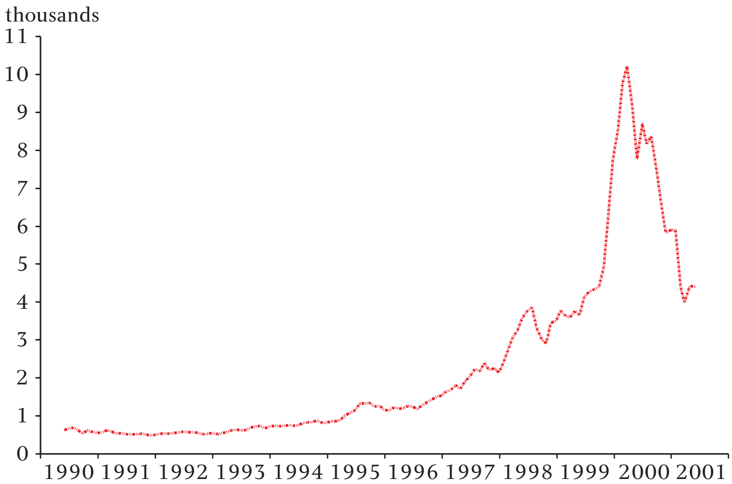
In sum, it is clear that the European market for M&A and corporate control still has some way to go before it matches the ideal of a truly unified market under a single currency. Cross-border M&A activity in Europe will have a crucial role to play in achieving this seamless European economic area.

CREDIT SUISSE | FIRST BOSTON

INVESTMENT BANKING IN THE TECHNOLOGY SECTOR IN EUROPE

It seems strange to be writing about the success of the European technology sector following a period when the Nasdaq has lost over 60% of its value and our own European technology index is down by some 67% from its high (Chart 1). But success is undoubtedly the way to describe the transformation of technology companies in Europe over the past ten years. The convergence of European economies, and the integration of the Single Market, stimulated by the launch of the euro, have played a major role in allowing technology companies to achieve this success. The creation of a large, increasingly homogeneous market, of a similar size to the US, has provided the scale of opportunity which technology companies need. Ten years ago, the European technology sector was made up of a number of national or regional champions, or government-funded institutions. Today, Europe is the home base for a significant number of global technology companies, such as Nokia, Alcatel, SAP, Ericsson, Philips and ST Microelectronics.

CHART 1: EUROPEAN TECHNOLOGY SECTOR – PRICE INDEX



Note: Europe (including the UK)
Source: Datastream

For most of these companies, competition comes mainly from North America. US companies have a major structural advantage, with a very large homogeneous home market to serve. This allows technology companies to achieve scale domestically before having to compete in international markets. Since research and development are critical for technology companies, the ability to defray these costs against a large customer base is essential.

European technology companies have had to expand their 'domestic' market to the whole of Europe so that they can obtain the same advantages of scale as their US competitors. For this strategy to succeed, European companies have needed ready access to capital to fund both organic growth and acquisitions. In this respect, investment banks have played a vital role.

To serve the needs of technology companies in Europe, an investment bank needs global, regional and national capabilities as well as deep industry knowledge. While an industry background has long been considered a useful attribute for an equity research analyst, it is only within the past five years that a similar approach has been adopted in investment banking. Corporate clients also require advice about local markets and country-specific trends.

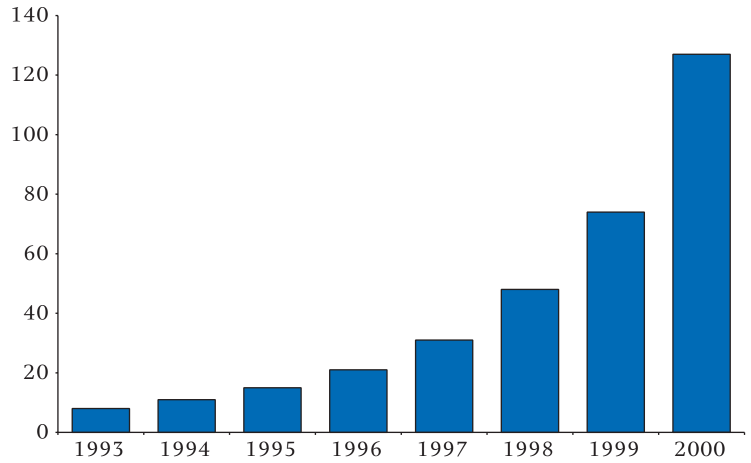
One of the key differences with the US is the development in Europe of technology conglomerates, such as Siemens, Philips, Alcatel and Marconi. Historically, this development was largely due to the weakness of venture capital markets in Europe. As start-up technology companies in Europe used to have great difficulties in finding finance to fund the expansion of their businesses, they often came under the control of these very large conglomerates.

Over the past few years, there has been a considerable increase in the availability of venture capital to fund companies through the early years of their development – though the interval between a company's formation and its flotation may have shortened, during 1999 and the first half of 2000, to an unhealthy degree. The establishment of strong venture capital fund managers in Europe should allow Europe's indigenous technology companies to continue to expand (Chart 2). A further by-product of the greater availability of venture capital has been the breaking down and refocusing of the conglomerates themselves. Siemens, Philips, Alcatel and Marconi have all undertaken major restructurings of their business, with both spin-offs and acquisitions.

One of the key differences between the technology sector and other market sectors in Europe is the speed with which technology companies are capable of growing into global market leaders. For example, at the beginning of 1993, Nokia was an unfocused conglomerate trading mainly in Scandinavia, with a market capitalisation of around ECU200 million. By the end of 2000, Nokia had become the world market leader in mobile telecommunications equipment, with a market capitalisation in excess of $100 billion. The financing required to fuel such growth is considerable: the role of a technology investment bank is to provide the range of financing products needed - debt, equity, convertibles and so on.

While the technology sector is going through a significant correction at present, the fundamental secular trends are well established. Technology will continue to play a major role in the evolution of both businesses and the domestic environment. As European economies continue to converge, and the Single Market becomes increasingly integrated, so European companies will have access to a domestic market on the scale previously only available to US companies. This should help them to compete globally and begin the process of redressing the current balance, under which 70% of the world's top technology companies are domiciled in the US. Investment banks will provide these European companies with the products and services they need to expand.

CHART 2: NUMBER OF EUROPEAN TECHNOLOGY FUNDS



Source: CSFB

Merrill Lynch Investment Managers

EUROPEAN PENSION FUND ASSET ALLOCATION

Two and a half years after it was introduced, the euro continues to have a major impact on the way in which European pension funds allocate their assets. But now markets beyond Europe are increasingly attracting their attention.

In the run-up to the introduction of the euro in January 1999, all kinds of dire predictions were made about its potential impact on UK equities and the subsequent shift of UK pension funds into continental Europe. But this has not happened - at least, not to the extent that some observers were predicting at the time.

True, many UK pension funds have gradually increased their allocation to continental European equities, but global equity investing is now their main preoccupation. And while continental European pension funds in Germany, the Netherlands and parts of Scandinavia made some bold moves out of their home market into euro-area equities, particularly in the early days of the euro, they too, along with their UK counterparts, appear to have become increasingly interested in the wider global market place.

Historically, pension funds have often been overweight in their domestic markets, citing a number of different reasons to justify this approach. The principal reason is usually that, by investing in the local market, they can negate any currency risk. The second reason is that, for pension funds with domestic liabilities, the local market is the best hedge against domestic inflation. The third reason is regulatory. Some governments still insist upon a certain percentage of a pension fund's assets being invested in its home market. Of course, there are other subsidiary reasons why pension funds invest in their domestic market, such as the use of domestic benchmarks to measure their performance and a preference for the familiar.

However, as companies become more global in their outlook, this domestic bias gradually diminishes. There are several reasons for this. First, as companies become increasingly global, their share prices are often subject as much or more to global influences as to local market or currency influences. Second, investors themselves become more aware of international opportunities. Third, currency risk becomes cheaper and easier to deal with for those funds that feel the need to hedge. And fourth, as in the case of Vodafone in the UK last year, there are increasing concerns that domestic indices are becoming too concentrated around a small number of large stocks, thus reducing their diversification benefits.

So what impact has the introduction of the single currency had? For those countries that have already joined the euro, their domestic market is now the euro area. And while much of the reallocation of assets took place in the run-up to the introduction of the euro, many continental European pension funds plan to increase their allocation to this asset class still further.

But there is currently most interest in global equities. In Germany, for example, where the institutional market is worth €1 trillion, international assets outside Europe are increasingly widely held in institutional portfolios. Indeed, according to a survey carried out last year by Watson Wyatt, the investment consulting firm, 47% of respondents among continental European pension funds indicated that they planned to increase their allocation to global investment in the near future; and 39% of respondents already investing in emerging markets said that they intended to increase their allocation still further (Table).

From a UK investor's perspective, meanwhile, continental Europe continues to be a non-domestic market, even though some companies in which UK pension funds invest, such as the Royal Dutch/Shell Group and Eurotunnel, are listed on both UK and continental European stock exchanges. Of course, if the UK were shortly to join the euro, this definition of 'domestic' would immediately change. But in the absence of an entry date, the response of many UK investors has been to diversify globally rather than increase the continental European element in their portfolios. In terms of MLIM's own clients, there has been a rapid shift in benchmarks to incorporate a larger global equity component over the last nine months. Last year, MLIM were involved in three times as many business presentations for global equity mandates as we were European.

TABLE: CONTINENTAL EUROPEAN PENSION FUNDS: FUTURE APPETITE FOR INVESTMENTS

5 most popular investment mandates in the survey	Current assets (€ billion)	Neutral* (%)	Higher* (%)	Lower* (%)
US equities	18.2	74	26	0
Pan-European equities	12.1	100	0	0
Euro equities	10.2	67	25	8
Global equities	8.8	53	47	0
Emerging markets	8.1	57	39	4

Note: *indicates the proportion of funds intending to leave unchanged, increase or decrease their allocation to this mandate

Source: Watson Wyatt Investment Consulting (May 2000)

To conclude, the reallocation of domestic equities across the euro area is undoubtedly continuing, albeit at a slower pace than before. But it is important to remember that this is taking place within a wider, global context. And European pension funds, whose principal responsibility is to obtain the best investment returns for their members, are increasingly looking at other markets outside the euro area as well.

G PAN-EUROPEAN FINANCIAL SERVICES

Introduction

60 This section assesses progress towards the provision of 'pan-European' financial services across the EU, both as a result of mergers between market firms in different countries and through growth in their activities across borders. Progress towards a pan-European market has been much greater in wholesale than in retail services, though wealth management for 'high net worth individuals' represents a growing pan-European opportunity.

Wholesale financial services

61 Investment banks providing wholesale financial services to corporate and institutional clients are largely operating already in a pan-European market, for which the euro has acted as a catalyst, but deregulation and new technology are also important contributory factors. Wholesale services include treasury, trading and risk management, corporate bond and equity issuance, research, advice on M&A and institutional fund management.

- Like other major banks, many investment banks have concentrated in one centre their European treasury, trading and risk management, so that risk can be centrally controlled where liquidity is greatest.
- Investment banks increasingly manage the issuance and sale of bonds and equity on behalf of corporate and institutional clients across the European market as a whole, rather than on a national basis.
- Their research analysts are increasingly organised on a pan-European basis by sector (and stock) rather than on a country basis.
- While most M&A transactions still take place within national boundaries, the proportion of cross-border transactions has increased, with Vodafone-Mannesmann the largest to date.
- And fund management of euro-area investments is increasingly measured against pan-European or euro-area benchmark indices rather than national indices.

62 The main limits on the development of a pan-European market in investment banking relate to the costs of completing cross-border securities transactions and the obstacles provided by remaining regulatory restrictions.

- Although transmitting wholesale euro payments is very cheap and efficient, the costs of clearing and settling securities transactions across borders in Europe are still much higher than in the US. Cross-border consolidation would help reduce costs, but there has been relatively slow progress to date. Market firms can in most cases trade from a single point, using remote access to financial infrastructure in a different location, though users still have had to bear the costs incurred in setting up separate national clearing and settlement systems. In addition, investment banks consider that there are still some national rules which effectively require them to maintain a local presence and use local trading or settlement systems.
- The Single Market in financial services is not yet complete. Investment banks do not yet have a single passport for securities business across the Single Market as a

whole. The existing patchwork of EU regulation falls short in several respects. The Lamfalussy Committee has recommended a process by which new measures can be adopted more quickly in future, and identified particular measures that should be given priority (see Chapter 2, pages 62-64).

63 To operate profitably across this pan-European market, most investment banks consider that they need to be among the market leaders, particularly in corporate bond and equity issuance and advice on M&A. These businesses are subject to the 'ebb and flow' of financial markets, though peaks and troughs in bond and equity market activity do not coincide. And they are all seen as businesses to which investment banks wish to commit resources for the medium term, because:

- the securities market is an increasingly efficient channel for financial flows between investors and users of capital across borders, particularly as liquidity increases and transactions costs fall;
- banks are seeking to economise on the need for capital by syndicating bank loans, securitising their assets rather than holding them to maturity, and developing off balance-sheet activities in other ways; and
- the flow of funds available to institutional investors (through pension funds, insurance companies and mutual funds) is continuing to grow.

64 These trends have tended to favour market firms with an established track record and reputation in the securities business, and of a sufficient size to undertake the large transactions their clients require. As a result, a relatively small number of investment banks have won an increasing market share in Europe. Clearly, the overall scale of activity is affected by the market's assessment of the economic outlook. But the relative position of the leading firms last year is illustrated by the following:

- the top three investment banks were involved on one side or the other in almost all European M&A transactions by value; and
- the share of the top five lead managers for international bond issues by European corporates increased from one-third to one-half.

65 Some investment banks have established a leading position in investment banking league tables in Europe without making acquisitions: particularly investment banks with a track record in the US. Some have merged (like BNP/Paribas), while others have bought complementary businesses (like Merrill Lynch/ Mercury Asset Management) or propose to do so (like Allianz/Dresdner).

66 In cases in which mergers involving investment banks have gone ahead, some have proved successful in generating combined profits greater than the merger partners separately. But in other cases, the financial benefits generated have not been as great as hoped. Mergers involving investment banks are also particularly vulnerable to the risk of culture clashes affecting the morale of key staff, whose retention is central to building up the combined group's franchise. So while mergers can be one way of achieving a leading market position, they do not always lead to this result.

67 Naturally, most market leaders are large firms. But there is still a role for niche players, who have built up their own client relationships and reputation in particular lines of business (eg M&A). Smaller firms can sometimes give a higher priority to smaller clients than large firms are willing to do. Smaller firms are also less likely to be subject to conflicts of interest which prevent them from acting on behalf of potential clients (eg in M&A transactions), on the grounds that they are already acting on the other side of a transaction or for a competitor. An additional issue that some integrated firms have had to face is how to maintain the confidence of institutional investors that the firms' research analysts are independent (ie on the 'sell' side), when they also become involved in transactions for corporate clients (ie on the 'buy' side). This issue may have become more acute over the past year as a result of the steep fall in TMT stocks, because of investor losses on these stocks, many of which were originally recommended by analysts.

68 It is not easy for an investment bank to be a market leader in Europe without having global operations, reflecting the similar reach of many of its clients. Recent mergers and changes in shareholding structure reflect the importance that investment banks attach to international coverage, including in particular the US.

- Much of the consolidation in investment banking in Europe has involved investment banks with extensive operations in the US (as in the mergers between Deutsche/Bankers Trust, Chase/JPMorgan/Robert Fleming, Salomon Smith Barney/Schroder and CSFB/DLJ).
- Investment banking shares are increasingly widely traded, in part because of multiple listings in different financial centres. In addition, Goldman Sachs has converted from a partnership into a limited company, and sold a proportion of its shares through flotation; and Cazenove has converted from a partnership into a 'plc', raised outside equity and is proposing to float in due course.

69 The pan-European (and increasingly global) focus of investment banks is reflected in the law, accountancy and management consulting firms that support both the investment banks themselves and their main corporate and institutional clients. This has been true of the leading accountancy and management consultancy practices for some time. But now a number of the leading law firms in London (like Freshfields) have merged with German law firms, or (like Linklaters) have formed wider European alliances, though others (like Slaughter & May) continue to work, case by case, with different law firms in different national markets in preference to merging.

Retail financial services

70 By contrast to wholesale services, retail financial services across Europe are still largely segmented along national lines rather than being provided on a pan-European basis. Mergers involving commercial banks have not so far changed this picture. While the pace of bank mergers in the EU is continuing to increase, from just over 300 in 1995 to around 500 in 1999, over 80% of these constitute domestic mergers between retail banks, and some involve 'conglomeration' between banks and insurance companies. So far, there have been few sizeable retail mergers across borders. The main examples include Fortis in 1990, Dexia in 1996, Nordea in 1998, and HSBC's acquisition of CCF in 2000.

71 The rationale for commercial banking mergers is nearly always to save costs, though sometimes also to reduce risk by diversifying revenue (eg through *bancassurance* or *Allfinanz*). These objectives are often thought to be less difficult to achieve within national boundaries than across borders. There are significant hurdles to overcome in cross-border mergers, both for the bidders, and for banks seeking to provide across borders the service they provide in their home market. These hurdles are:

- *cultural:* local customers identify more with local banks;
- *legal and regulatory:* there are differences between Member States in consumer and competition laws; and
- *financial:* the scope for cost savings in cross-border mergers is generally not as great as in the case of domestic mergers, where there is often an overlapping branch network; and domestic investors are sometimes less willing to accept shares (as opposed to cash) from foreign than domestic bidders.

In addition, some banks are still protected against takeover by being mutually owned, or by benefiting from state guarantees. The provision of state guarantees (eg to the Landesbanks in Germany) on commercial business is being opposed by the Commission, and is subject to a case in the European Court of Justice.

72 Despite these obstacles, a number of large international banks are planning to provide pan-European retail services, and more attention is also being given by banks to cross-border retail payment initiatives. In addition, there is competition between commercial and investment banks in the growing market for 'high net worth' individuals. In the Box on page 48, HSBC considers the implications for European private banking, and quotes estimates for European 'high net worth' individuals' financial assets, which have grown from around $5 trillion in 1997 to nearly $7 trillion in 1999, and are projected to grow to nearly $12 trillion by 2004.

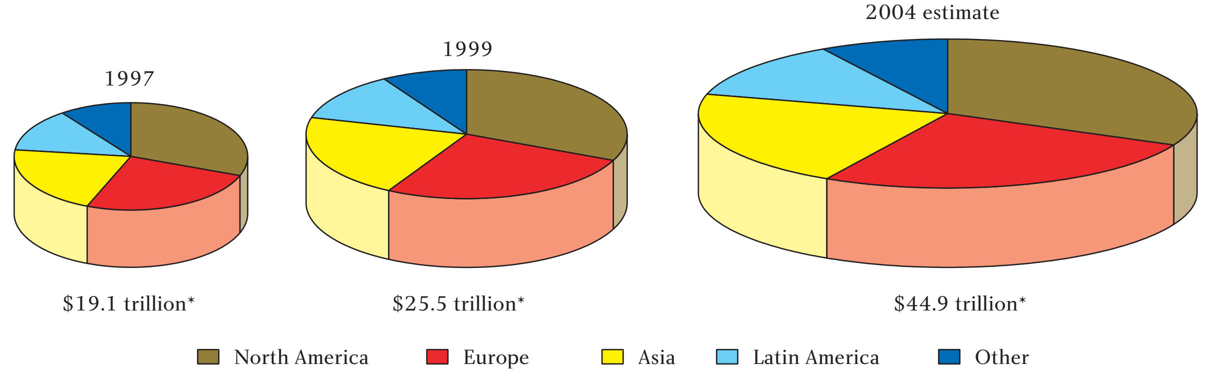
HSBC

EUROPEAN PRIVATE BANKING[1]

Private banking in Europe has recently undergone tremendous change and development, and the euro is expected to provide further stimulus to this process in the future. The traditional perception of secrecy and exclusivity is steadily giving way to a performance and product-driven approach. Macroeconomic developments, such as long-term economic growth, deregulation and privatisation, the development of the capital markets associated with the introduction of the euro, regulatory influences, trade liberalisation and technological advances have led to private wealth management becoming the focal point for banks, asset managers and brokers.

Nowhere has this been more striking than in Europe. The Charts below provide a good illustration of the size and growth of the global market for private banking, identifying Europe's market share.

HIGH NET WORTH INDIVIDUALS' FINANCIAL ASSETS



* Europe: $4.8 trillion in 1997; $6.7 trillion in 1999; and an estimated $11.8 trillion in 2004
Source: Merrill Lynch/Gemini Consulting *World Wealth Report 2000*

The outlook for Europe remains promising. Private banking is closely associated with the underlying economic and stock market growth and, although economists project a general slowdown, Europe is forecast to continue to grow, and faster than the US in the near term. It will particularly benefit from several key trends, which drive the development of wealth management.

- *Family businesses* Family businesses require a complex range of private banking services and the family office practices that banks have developed to assist with asset protection, tax advice, trust arrangement and other services will be a major source of growth.
- *Growth of equity culture* Traditionally, European investment has focused on low-risk savings products. However, the ageing demographics, unfunded pension liabilities and the historic returns of equity investments have challenged this approach, and there is now a more open attitude to equity investment. Correspondingly, private banking clients are becoming increasingly performance conscious. Tradition, secrecy and personal service no longer guarantee a continued private banking relationship. Investment management capability becomes crucial. Initial and secondary public offerings and venture capital funds form a regular part of the product offering, and private banks with strong asset management capabilities possess a competitive advantage.

1 HSBC's private banking business is conducted under the flagship brand of HSBC Republic, and the complementary brands of HSBC Guyerzeller, HSBC Trinkaus & Burkhardt and CCF.

- *New industries and markets* Technological and scientific advances will continue to fuel entrepreneurial success and the expansion of individual wealth. Newly-generated wealth, as opposed to inherited wealth, is emerging as the main source of growth. It has contributed to the evolution of a new investment category of ultra 'high net worth' individuals. A recent survey estimated that there were 55,000 people world-wide with $30 million in liquid financial assets.[2] In 1999, of 514 billionaires, 115 were European.
- *Growth of onshore business* Private banking is becoming increasingly international. Co-operation among leading banks and regulatory authorities is leading to harmonised money laundering prevention, 'know your client' and compliance policies. The traditional dividing line between offshore and onshore private banking may remain, owing to differences in tax regimes. But tighter offshore regulations, combined with onshore political and economic stability, are leading to growth in European private banking.

The euro is expected to add further impetus to the development of European private banking.

- Shareholder value is playing an increasing role across the Continent, resulting in corporate restructurings and rewards for outstanding individual performance. This is expected to generate demand for more sophisticated private banking products such as trusts, tax/estate/inheritance planning, corporate finance and capital market type services and an integrated approach to both onshore and offshore wealth management.
- Institutional investment decisions have for some time been moving away from country asset allocations in the Eurozone towards an industrial, pan-European sectoral, approach. The physical introduction of the euro and the disappearance of dual prices are likely to contribute to a similar approach by private banking clients.
- With the introduction of euro cash and euro pricing, investment appraisal and performance monitoring across the 12 participating countries will become more transparent. Whilst the changeover from legacy currencies to the euro is undeniably important from a technical point of view, it is the impact of euro cash and prices that is expected to have a galvanising effect on private client behaviour, and on product development and competition.

In addition to the opportunities, the euro will, no doubt, pose challenges as well. Price transparency will increase competition and put pressure on income and profitability. The completion of the changeover to the euro in the 'first wave' will be a complicated logistical task, and public support and confidence will be indispensable for the future success of the Eurozone. For HSBC, the immediate focus is on ensuring a successful euro conversion and building a high-quality private bank that is responsive to client needs and generates appropriate returns for its shareholders.

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2 Source: Merrill Lynch/Gemini Consulting *World Wealth Report 2000.*

CHAPTER 2: EURO INFRASTRUCTURE

A PAYMENT SYSTEMS

1 Over the past six months, there have been no significant changes in the major payment systems, nor in the way in which banks use the systems. But important developments in prospect are banks' handling of low-value commercial and retail payments, and the launch of CLS. Major developments beyond NewCHAPS and RTGS[plus] are not likely in the immediate future, though further ahead the introduction of a pan-European system for low-value ACH transactions, and the next stage of TARGET, are possible.

Usage and performance of different payment systems

2 Cross-border payment *volume* growth in Europe over the past six months has been a little higher than the growth of global payments traffic (as measured by SWIFT messages); and has been concentrated in the formal payment systems. EURO1 has grown fastest, at 24% per annum. The above-average growth in TARGET cross-border and EURO1 traffic has been mirrored by a reduction in correspondent banking volumes. In principle, there is still scope for more migration from correspondent banking – at present the 400 or so banks most active in cross-border business send on average some 100 payments cross-border through TARGET per day (the average is fewer than 10 per day for all TARGET participants). But correspondent banking may be more cost-effective for many of the very low-volume banks, and some large banks internalise the cross-border element of payments through their own systems and use of multiple access to domestic EU RTGS systems.

TABLE 1: VOLUME OF DOMESTIC AND CROSS-BORDER EURO PAYMENTS SENT

Number of payments (daily averages, 000s)	1999		2000				2001	
		% of total	H1	% of total	H2	% of total	Q1	% of total
RTGS								
TARGET cross-border	29	10	39	11	41	11	44	11
TARGET domestic	134	45	145	41	150	41	155	39
Total TARGET	163	54	184	52	191	52	198	50
Non-RTGS								
EURO1	68	23	94	27	99	27	109	28
EAF (Germany)	47	15	51	14	52	14	52	13
PNS (France)	20	7	20	5	24	6	32	8
Total	302	100	356	100	369	100	395	100

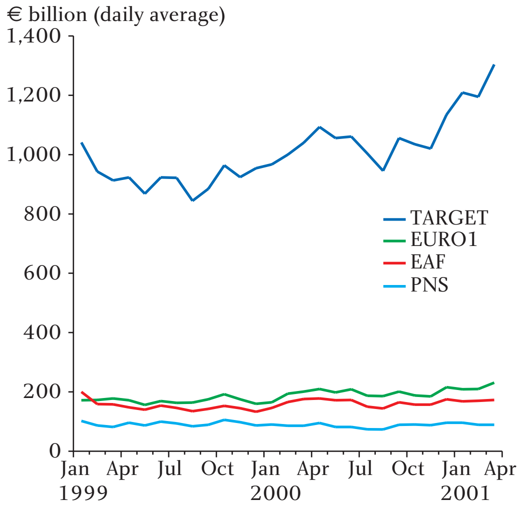
Source: ECB

3 Some foreign exchange-related payments currently channelled through EURO1 and other systems will switch to TARGET once CLS starts operating later this year; but there is considerable uncertainty about how many and how quickly they may migrate to CLS. There may well be a net reduction in foreign exchange-related payments in TARGET, but it is not yet clear whether CLS will slow the rate of growth, or lead to an actual reduction in the

volume, of wholesale transactions overall. Meanwhile, correspondent accounts will still be needed for cross-border low-value and paper-based payment systems.

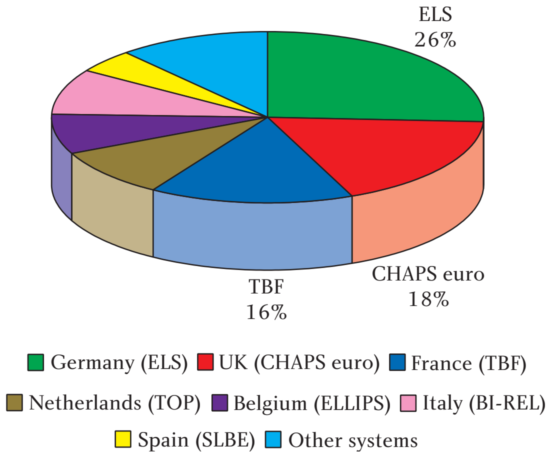
4 Chart A shows the *value* of payments through the major euro payment systems. Chart B shows the share by value of the individual systems in aggregate cross-border euro RTGS payments in 2001 Q1.

CHART A: USE OF EURO PAYMENT SYSTEMS BY VALUE



Source: ECB

CHART B: CROSS-BORDER EURO RTGS PAYMENT VALUES



Note: 2001 Q1
Source: ECB

5 Consistent with TARGET data, banks report that the bulk of the volume growth is in commercial and retail, rather than interbank, transactions, reflecting the slower migration of customer payments from correspondent banking routes. The CHAPS euro average of €15.5 million for a cross-border transaction is in line with the TARGET cross-border average for interbank payments, reflecting the nature of CHAPS euro business.

Outstanding wholesale payment issues

6 Banks are satisfied by and large with the operation of TARGET and EURO1. TARGET system availability has stabilised at around 99.8%; the rejection rate for individual TARGET payments is stable at around 0.3%.

- The ECB *TARGET Annual Report*, published on 15 May, shows that payments were on average being sent a little earlier in the day in 2000 than in 1999; but while some 75% of payments by volume had been sent by shortly after midday, the same percentage by value was not reached until nearly 16:00 CET. Some large late payments are liquidity transfers, but banks suggest a number represent interbank transactions which – on the basis of the EBF guidelines on late payment discipline – should have been made during the morning: some overnight loans may effectively be being used for intraday liquidity as well.
- The *European Interbank Compensation Guidelines* have been distributed to all European Credit Sector Associations (ECSAs) and entered into force on 2 April. Banks report that there are relatively few problems with late (after 17:00 CET) payments (though any such payments are often not pre-notified); and that most,

but not all, banks adhere to the compensation guidelines. Some banks are reportedly more reluctant to abide by the guidelines if EONIA spikes to an unusually high level. It is not entirely clear how the guidelines should apply if payments are delayed by a late closing of TARGET – such events are rare, but can generate many late transactions. Most banks do not seek compensation in such circumstances.

- A long-term calendar for TARGET holidays was published on 14 December 2000. From 2002 until further notice, TARGET will be closed on New Year's Day, Good Friday, Easter Monday, 1 May, Christmas Day and 26 December. All national euro RTGS systems will be closed on those days. This will apply to euro-denominated payments in NewCHAPS, but the system will be open for sterling payments unless there is also a Bank Holiday in the UK.
- Some banks consider that contingency arrangements in some RTGS systems are still unreliable, although overall performance of TARGET is accepted as good. The TARGET Information System (TIS) is viewed as a reasonable, and sufficiently sophisticated, indicator of the position when problems do occur. But since some back-office staff, and some smaller banks, cannot easily access the wire services where the information is displayed, the ECB is considering a website version of TIS.
- Cross-border collateral is still delivered primarily via the correspondent central banking model (CCBM), which in 2000 accounted for 13-18% of total collateral provided to the Eurosystem, against 2-3% using automated links (the majority of collateral is delivered domestically). In some countries, the CCBM and links are mostly used for monetary policy operations rather than intraday credit, because the process is slower than with domestic transactions. Wider use of the links is in some cases hampered by lack of delivery-versus-payment (DvP); but some banks fear the CCBM may not be able to cope with a higher volume of time-critical transactions, for example in connection with CLS. Italy and Germany are the two main sources of cross-border collateral; Luxembourg has replaced Belgium as the third largest provider. Overall, the amount of collateral used appears to be falling. This may be a result of growing familiarity with the payment systems, and less precautionary holding of collateral with national central banks post-Y2K.
- STEP1, the low-value cross-border payment system operated by the EBA, began on 20 November 2000. Over 100 banks, including the 71 members of EURO1, are members of STEP1 and a further 45 are expected before the end-2001 moratorium (when many banks will be focusing on the cash changeover). Turnover has risen to around 4,000 payments a day, with an average size of €7,500; net payments by STEP1 banks to settle their transactions are typically well under €0.5 million, and so make no material impact on EURO1's performance. EURO1 banks naturally tend to use STEP1 only to access non-EURO1 members, as it is quicker and cheaper to access EURO1 members directly through EURO1 itself.

SWIFT AND TARGET RELEASES

The MT103 (a message type for single, commercial payments), released in November 2000 as an upgrade to the MT100 (to be withdrawn in November 2003), already accounts for over one-quarter of European commercial payment messages. Country usage varies widely. Usage is higher in the EURO1 payment system, at some 50% of commercial messages; and across Europe, usage rates are still growing. On 18 May, the EBF issued 'best practice' MT103 guidelines.

This year's SWIFT release, due in November, will include the introduction of a debit timestamp (as already provided by most European RTGS systems, but more important globally with the introduction of CLS); and the introduction of an MT102+ (a multiple payment version of the MT103+), but only to user groups which already use the MT102. The MT102 will not be put on general release. The TARGET 2001 release will coincide with the SWIFT release.

The November 2002 SWIFT release is likely to include validation of international bank account numbers (IBANs - see below). IBANs will be mandatory for all MT103+ (and MT102+, where used) transfers within the EEA. That should encourage the wider use of IBANs, and so support straight-through-processing (STP) for commercial and retail payments.

Commercial and retail cross-border payments

7 Greater usage of IBANs and the MT103 over the next few years will allow commercial and retail payments to be handled more efficiently. But banks may need to pass on some of the cost savings to encourage customers to provide accurate and complete information electronically, as required for STP. Banks do not expect the improved handling of low-value cross-border transactions, or the availability of STEP1 and other such systems, in themselves to generate a high volume of business demand. Where there is demand (for example, in some border regions), a variety of practices has developed. These depend on the payment means used locally (whether cash, cheques, credit cards or giro transfers). Some banks may choose to specialise in cross-border transfers across the euro area, and so benefit from economies of scale; but for most banks a pan-European solution to a low-volume problem is simply uneconomic.

IBANs AND STP MIF

IBANs The efficiency and cost-effectiveness of cross-border customer payments should be improved by the dissemination and use of IBANs. ECSA guidelines, published on 18 May, recommend that IBANs and bank identifier codes (BICs) should be actively distributed by all EEA credit institutions to customers who are most likely to process cross-border transfers, and made available to all customers, by end-September.

Banks need to be proactive in encouraging customers to use IBANs. Some will encourage customers to include the appropriate IBAN and BIC on all invoices for goods and services: it may be easier to include them as standard than to do so only when a cross-border payment is expected, not least since suppliers may not know whether a payment will be made using domestic or cross-border systems. An electronic version of the international payment instruction (IPI) is being developed to support the accurate transfer of information from the beneficiary through the payment chain.

Not all banks have made the necessary system adjustments to send MT103s, or to validate IBANs internally; some domestic systems reportedly truncate IBANs (which are longer than domestic account numbers). In such cases, appropriate changes will need to be made before end-2001, in order to avoid the need for manual intervention.

STP MIF The ECSAs have submitted to the Commission a proposal for an STP MIF (multilateral interbank fee, which the beneficiary bank receives from the sending bank): this would standardise the fee for payments which meet the definition of STP (below the €12,500 balance of payments reporting threshold; MT102+ or MT103+; with the correct IBAN and BIC; and charges to be paid by the sender). If approved, this should be introduced from 1 January 2002. No agreement has yet been reached on the possibility of a non-STP MIF.

New payment system developments

8 *TARGET* The recent ECB *TARGET Annual Report* notes a divergence between the two largest systems (ELS and BI-REL), which account for two-thirds of transactions (domestic and cross-border taken together), and the four smallest, which together account for around 4% (rather fewer TARGET transactions than handled by some commercial banks). The report notes that the Eurosystem is discussing how TARGET should evolve in future, and that work is in hand to see how user requirements can best be met.

9 *NewCHAPS* With NewCHAPS, sterling payments will migrate onto the SWIFT FIN-Copy platform currently used for CHAPS euro. NewCHAPS will also provide basic payment scheduling capability in the central scheduler. Currently, there are 21 direct members and over 400 indirect participants of the two clearings. The new platform accommodates: the possibility that the UK might join EMU; DvP and CLS; STP; and will be more cost-effective than the old CHAPS sterling technology. Group testing commenced on schedule on 30 April, a key milestone on the project plan set some 15 months ago. The project is on schedule to go live on 27 August.

10 *Enquiry Link replacement project (EL)* The EL is an integral component of the NewCHAPS system, including the TARGET interface. It will allow members to track the status of payments and enquire about balances. EL will allow members to access the central scheduler in NewCHAPS (enabling those banks wishing to use the facility to manage payment flows and liquidity centrally). When DvP is implemented, EL will also be the mechanism by which banks transfer funds between their 'clean payments pot' and their 'securities payments pot' to achieve intraday liquidity efficiency. Migration to the new platform will commence during June, with completion expected well before NewCHAPS goes live.

11 *RTGS^plus^* The new German payment system, $\text{RTGS}^{\text{plus}}$, will ultimately replace EAF and ELS, the current net and gross systems. $\text{RTGS}^{\text{plus}}$ is scheduled to commence operation on 3 September, with some 58 members (a dozen EAF members will not join at the outset). EAF will be closed at the same time; but ELS will continue operating in parallel for three years, allowing its members (particularly the small savings and co-operative banks) time either to prepare for $\text{RTGS}^{\text{plus}}$ (including converting to SWIFT) or to arrange indirect access. The Bundesbank has indicated that maintaining both systems would be uneconomic.

12 *EURO1 and STEP1* The EBA is considering possible amendments to its admission criteria to allow more direct members of EURO1, without affecting the single obligation structure or risk profile of the system. Consideration is also being given to the use of debit transfers (TARGET and EURO1 currently only provide for credit transfers).

13 EBA is also exploring enhancements to the current STEP1 service (such as the introduction of low-value MT202 messages and the possibility of processing retail payments

on a same-day settlement basis). Separately, the EBA is exploring the business case for a 'STEP2' system (not reliant on EURO1), which would perform as an ACH and be able to process bulk files. This would help to overcome some of the fragmentation of the low-value payment systems for non paper-based transactions.

14 *CLS* CLS Bank (CLSB) plans to begin live operations at end-October, settling foreign exchange transactions in seven currencies, including the euro. A small number of settlement members will be involved initially, but it is envisaged that others will be able to participate before end-year. Settlement members have discussed possible tools and techniques to assist them in managing their intraday liquidity, to meet the requirements of the CLS pay-in schedules.

15 In particular, a type of transaction between settlement members known as an 'in/out' (I/O) swap may be useful, especially early in CLSB's life. I/O swaps will be foreign exchange transactions undertaken between midnight and 06:30 CET for same-day value, one leg of which will settle through CLSB and the other outside, in order to reduce the amounts the settlement members are due to pay into CLSB. CLSB could act as a clearing house for information on which banks have long and short positions, to facilitate swaps. Some banks argue that if I/O swaps are to be a temporary measure, as regulators would prefer, central banks should facilitate alternative means of obtaining intraday liquidity, perhaps through a global collateral pool, using a CCBM-type arrangement.

16 A few banks are concerned that the existing compensation guidelines will not cope well with CLS: though they may function adequately while systems are viewed in isolation, the interconnection brought about by CLS means that, at least for CLS purposes, the various guidelines may need to be harmonised. A working group is studying this question.

17 The ECB published on 21 February recommendations for CLS payments in euro. These suggest that banks should pay in well ahead of the deadlines to reduce the risk of system delays, and also make contingency arrangements.

18 *Project bunching* A large number of important projects affecting banks and other financial intermediaries will reach a critical phase in the second half of this year. These include work related to the end of the euro changeover, but also to individual payment systems (NewCHAPS and RTGS^{plus}), CLS and DvP. Pressure on resources means that there is little scope for overruns. Some banks stress the importance of those involved being open with each other, so that any potential problems can be identified as soon as possible.

B TRADING, CLEARING AND SETTLEMENT SYSTEMS

19 As European markets become more integrated, with the help of new electronic trading platforms, market participants consider that consolidation of the supporting infrastructure is needed to increase efficiency and reduce costs. The unresolved question is whether consolidation should involve vertical integration ('silos') or horizontal integration. Some market participants have suggested an 'hour-glass' model, where trades on a range of platforms could all be cleared through a single European central counterparty (CCP), but settled in a small number of different central securities depositories (CSDs).

Trading systems

20 There has been substantial growth recently in both the number and use of electronic trading platforms in Europe. Some have replaced floor-based trading; others provide competition to existing electronic platforms, or have taken over from telephone markets. The key factor in their development has been the increased power and reduced cost of telephone and computer technology. But the introduction of the euro has also helped to provide a business case, by making more homogeneous the supply of products traded, by enabling payment to be made in a single currency, and by broadening the investor base.

21 Electronic trading platforms differ in:

- legal status, from Recognised Investment Exchanges (RIEs), with Single Market passport rights and subject to market regulation, to Electronic Communication Networks (ECNs);
- product range, covering foreign exchange, interbank deposits, bonds, equities and derivatives;
- market structure (eg order or quote-driven, or price-taking);
- access, ranging from those targeted at a small number of large firms, to others aiming at SMEs and the retail market; and
- the existence or otherwise of STP links to the rest of the transaction chain (trade reporting, clearing and settlement).

22 The trend appears to be for new electronic exchanges (in foreign exchange, interbank deposits and government bonds) to replace bilateral OTC markets, rather than to challenge established exchanges for the same products or target the same investors. In the case of established electronic exchanges (in equities and derivatives), there have been some mergers or links, and new platforms with a pan-European, or even global, reach are being developed.

- In the foreign exchange market, the two wholesale platforms (EBS and Reuters) have become dominant, accounting for some 85% of turnover, over the past three years. Retail platforms are also being developed (Fxall started trading in May, and Atriax is scheduled to start in June: both are UK-authorised).
- The integration of the interbank market has provided the opportunity for e-MID, which facilitates the trading of interbank deposits, to broaden its membership from Italy across Europe.
- Futures trading is concentrated, in the case of STIR trading on LIFFE, and in the case of bond futures on Eurex (for the 2, 5 and 10-year contracts) and Matif (for the 10-year 'notionnel'). One reason for concentration may be that all outstanding trades in a given contract are netted through the central counterparty (eg LCH for LIFFE).
- In the euro-area government bond markets, two platforms (BrokerTec and EuroMTS) offer trading in most securities, both cash and repo, to members across Europe.
- European stock exchanges, which have been operating on an electronic basis for some time, are responding to market pressures for pan-European capability through: flotation (Deutsche Börse has already floated, and the flotation of both

the London Stock Exchange and Euronext is in prospect); cross-border merger (in the case of Euronext); marketing and wider use of remote access; and the creation of new, pan-European exchanges, such as virt-x and Jiway.

RECENT DEVELOPMENTS IN TRADING SYSTEMS

Money and bond trading systems

e-MID and e-MIDER The Italian-based electronic trading platform for unsecured interbank deposits, e-MID, has 18 remote and around 170 domestic (including some non-Italian) bank participants. Consideration is being given to allowing non-bank members. e-MIDER started operations in November last year, trading EONIA swaps. It currently has 38 members, of which 12 are non-Italian.

EuroMTS Daily average turnover in the MTS group reached €50 billion in March, split evenly between cash and repo trades. The network has some 400 connections across Europe; approval is being sought to set up screens in the US. Greek government bonds started trading on EuroMTS on 30 January; three Greek bonds currently meet the €5 billion threshold. MTS Germany was launched on 2 April, as a subset of EuroMTS; the full range of bunds, previously tradable on MTS Italy, is included. MTS Spain is expected to start trading in 2001 Q3, after regulatory approval. In addition, the possibility is being explored of bringing into EuroMTS dealer members (who could hit quotes posted by market-making members, but not post quotes themselves) in order to broaden access. MTS Italy already operates with a two-tier membership. Separately, a multi-dealer to client internet-based platform, BondVision (merging with BondClick), is expected to go live this summer.

BrokerTec In December 2000, BrokerTec launched a fully electronic 'specials repo' trading system in European government bonds. Average daily volumes are now nearly €20 billion. General collateral repo and Pfandbrief repo products were added on 11 April; volume has reached €3-4 billion per day. BrokerTec is now in the start-up phase for Italian Government cash and repo; it already trades cash and repo for Austrian, Belgian, Dutch, French, and German Government bonds; Spanish bonds (cash only); and US Government bonds, as well as agencies, supranationals and Pfandbriefe.

Equities

London Stock Exchange The central counterparty service went live on 26 February (see next Box), making available post-trade anonymity. It is hoped this will increase liquidity and tighten spreads. Three further initiatives went live at end-April, with the common aims of enhancing international scope (in parallel with greater promotion of AIM and techMARK in Europe), and increasing the importance of the order book as the trading mechanism.

- *'SEAQ crosses'* replace the current SEAQ auctions that have been operating on a pilot basis for the 80 most liquid stocks for under a year. All FTSE 250 stocks are included; trades are cleared through the central counterparty service.
- *International Order Book* (IOB) is a SETS-based service to provide order book trading on the most liquid emerging market depository receipts from SEAQI. The IOB does not use the central counterparty service; settlement is typically in DTCC or Euroclear.
- *International Retail Service* (IRS) offers retail brokers the opportunity to trade over 100 European and US stocks; the list of stocks is to be increased substantially over the coming year. Securities are priced in sterling; settlement is in CREST; and settlement costs are the same as for equivalent domestic trades.

On 24 May, the London Stock Exchange announced its intention to move to a full listing by end-July. This will involve removal of the current 4.9% limit on shareholdings.

Deutsche Börse Deutsche Börse group's IPO in February, which at the issue price valued the group at €3.4 billion, raised nearly €1 billion in cash. A number of potential future developments include: the launch of an equity central counterparty (Eurex Clearing) from 2002, to bring Deutsche Börse's service into line with Euronext and the London Stock Exchange; and, subject to regulatory approval, an ECN for repo trading later this year.

Euronext The Paris and Brussels Exchanges have migrated to a common platform, with a common rule book and trading fees; Amsterdam will follow in September. Euronext is planning an IPO this year. Euronext is also involved with the NYSE and the Tokyo Stock Exchange, as part of the GEM alliance (to offer global trading of blue chip stocks); and, with AMEX and the Singapore Exchange, in establishing a global exchange-traded funds (ETF) market.

Nasdaq Europe Nasdaq has taken a controlling share in Easdaq. Now re-named Nasdaq Europe, it aims to be a European IPO centre, and to consolidate European trading of Nasdaq-listed stocks. The first phase, from 8 June, offers a dealer market using Easdaq's technology; a hybrid, cleared market – supported by DTCC – will be introduced by end-year.

virt-x This UK exchange, formed from SWX and Tradepoint, is due to go live on 25 June. It will trade pan-European stocks under a single rule-book and a single (UK) regulatory regime. Investors will choose between settlement in CREST, SIS and Euroclear. virt-x is seeking to extend Tradepoint's current SEC exemption to enable it to offer direct access to US fund managers.

Derivatives

LIFFE Since the previous *Practical Issues*, LIFFE has launched two new types of contract: Universal Stock Futures, based on individual equities; and Swapnotes contracts referenced against the swap curve. The distribution of LIFFE Connect, the Exchange's electronic trading system, has increased; it can now be accessed from over 400 sites in 24 countries, including the US.

LIFFE has completed its restructuring into two subsidiaries. LIFFE Market Solutions is developing and marketing Connect. LIFFE is to form a partnership with Nasdaq to provide a wholly-electronic platform for single stock futures for the US market; trading should start from 21 December (legislative change is required before single stock futures can be traded in the US). Additionally, Old Mutual Financial Services will use the Connect system for its Market Touch venture (an electronic share-trading system for retail stockbrokers, to be launched later this year).

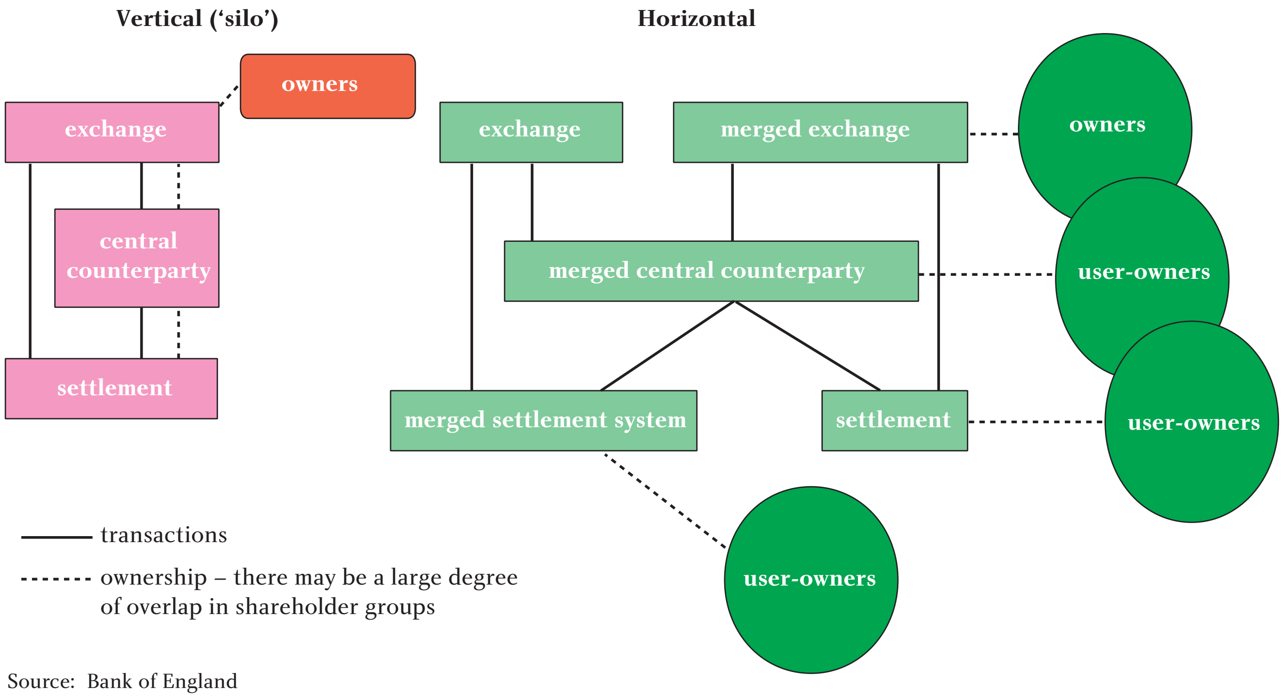
Other Exchanges MEFF, the Spanish futures and options exchange, announced in March a partnership with the Lisbon and Porto Exchange (BVLP), allowing members to trade futures and options contracts on both exchanges, supported by their local CCP. In April, MEFF announced agreement with AIAF, a private fixed-income market, and SENAF, which facilitates trading in public and private sector fixed-income products, to integrate under a joint holding company.

Relationship between trading, clearing and settlement systems

23 *Principles* The integration of markets across Europe has led to pressure for integration of the supporting infrastructure, so as to increase efficiency and reduce costs. The implication is that the number of infrastructure providers will fall over time through consolidation. The European Securities Forum (ESF), in particular, is pressing for consolidation of the European clearing and settlement infrastructure, and trying to quantify the potential savings involved.

24 The unresolved question is whether the process of consolidation should involve vertical integration ('silos') or horizontal integration. In the first case the exchange, which may also be the listing authority, typically owns and has management control of the other tiers in the transaction chain (clearing house/CCP and settlement/CSD), with the expectation that this will make it easier for technical integration and STP. The vertical model sometimes involves an element of exclusivity (eg securities traded on the exchange must settle on the group's CSD). By contrast, the horizontal model involves independent provision of each of the different functions, avoiding vertical ownership or management control, and allows users to 'mix and match', choosing the provider of each function which best suits their needs.

CHART C: VERTICAL VERSUS HORIZONTAL INTEGRATION



Source: Bank of England

25 Many market participants argue that trading platforms should be run on a competitive, 'for profit' basis, with different platforms (eg quote-versus-order driven, or wholesale-versus-retail) co-existing in a complementary way to serve the needs of different users. (This points, implicitly, to a separation between the national listing function and management of the exchange, since listing is viewed as a natural monopoly.) By contrast, it is often suggested that clearing and settlement should be run on a 'not for profit' basis, and be owned and managed by users, as quasi-utilities.

26 If trading platforms compete, and only one platform owns clearing and settlement systems (as in the vertical model), there must be a risk that competing platforms may not obtain fair and equal access to the clearing and settlement services, thus distorting competition. In the horizontal model, there are no controlling interests, and infrastructure providers deal with each other on a commercial basis, 'at arm's length'. Consequently, the horizontal approach encourages more open systems and allows the market to choose which system or systems it prefers for each function, rather than making the choice of one tier (whether exchange, clearing or settlement) effectively a choice of all three. The ESF argues that 'future developments of securities trading systems make vertical ownership structures … inappropriate for a pan-European capital market'. The Commission is looking closely at these structures, and the potential anti-competitive or exclusive nature of vertical arrangements.

27 In principle, 'connectivity' (ie linking the infrastructure tiers together to make trading and settlement easier and reduce costs to users) and STP are as feasible under the horizontal model as in vertical silos. Economies of scale in one function (say, clearing) can be achieved without waiting for exchange and settlement systems to consolidate. Indeed, some market participants have suggested an 'hour-glass' model, where trades on a range of platforms could all be cleared through a single European CCP, but settled in a (small) number of different CSDs: clearing house integration would proceed more quickly than with exchanges and CSDs, and would be on the basis of an open platform. Ten clearing houses, including the DTCC, agreed (following a recent conference in London) to explore the potential for closer co-operation between them.

28 *Practice* The infrastructure in Germany is closest to the vertical model, with Deutsche Börse, which is the listing authority as well as the exchange, owning or part-owning Eurex and Eurex Bonds, Eurex Clearing, and Clearstream. London has, by contrast, a 'partnership' approach, where the trading platforms (LSE, LIFFE, virt-x, BrokerTec, and EuroMTS), the clearing house (LCH), and the settlement system (CREST) are all independent entities, but co-operate both with each other and with other infrastructure providers across Europe.

29 Recent changes in the European infrastructure have tended to be towards a horizontal rather than a vertical structure, though this is not always clear-cut; while there are examples of horizontal merger, there are only a few cases of vertical control being given up.

30 In the Euronext merger, three exchanges have come under common ownership, and will merge platforms. All three were in a form of vertical integration, each exchange owning its own clearing house and CSD. The central counterparty for Euronext (Clearnet) is still owned by the exchange; but Euroclear (user-owned and governed) has an option to buy 20% of Clearnet, and Euronext is additionally open to bringing in users of the service as new shareholders. The settlement systems (Sicovam – now Euroclear France – CIK and Necigef) are being merged with Euroclear, ultimately to provide a unified system. (User-shareholders of the former Sicovam now have a 17% share in Euroclear's ownership.) Management is separate, and both Euronext and Euroclear say they are open to working with other systems.

31 Other significant mergers have also been horizontal: these include SWX and Tradepoint, to form virt-x; BVLP in Portugal, merging the equity and derivatives exchanges; CAT and Monte Titoli in Italy, bringing Italian bond and equity settlement together;

prospectively CADE and SCLV in Spain, also bringing together bond and equity settlement; and arguably Cedel and Deutsche Börse Clearing, to form Clearstream (the technical merger will take some time), though this does not appear to have weakened Deutsche Börse's links with settlement of German equities.

RECENT DEVELOPMENTS IN CLEARING AND SETTLEMENT SYSTEMS

Central counterparties

LCH A central counterparty service for the London Stock Exchange, clearing trades on SETS and SEAQ crosses for settlement in CREST, went live on 26 February. LCH plans to introduce an optional netting facility early in 2002.

- *LCH Repoclear* has expanded coverage to include Austrian, Belgian, Dutch and German Government repo and cash bonds, and from January added jumbo Pfandbriefe. 24 international banks participate. Turnover increased strongly with the launch of repo trading on BrokerTec last December.
- *LCH SwapClear* currently has 18 participants. There has been a sharp increase in swap values cleared following the launch in October 2000 of OTCDerivNet as a partner to LCH in swap clearing. SwapClear offers multilateral netting for swaps up to 10 years' maturity, in the G4 currencies.

Clearnet Since legal merger on1 February, Clearnet has been the sole CCP for all products traded on Euronext, though migration to its C21 platform will not be complete until 2002. Clearnet will be jointly supervised by Belgian, Dutch and French supervisors.

Securities settlement

CREST On 5 February, CREST settlement moved from T+5 to T+3 for all UK and Irish equities. A CREST discussion paper in February invited comments on the introduction of a settlement netting process to the central counterparty (where substantial cost savings could be made). Two 'free of payment' links between CREST and Euroclear are being assessed by the ECB for approval for use in ESCB operations. In addition to these links, which have been operational for some time, a DvP link from Euroclear to CREST was successfully launched on 17 April.

Clearstream Clearstream Banking's Creation platform took over the clearing, settlement and custody functions for international securities for German market participants on 26 February. The next step in Clearstream's integration project will be the gradual transfer of German domestic bonds, shares and other instruments onto the Creation platform. The value of securities held in custody at end-2000 was €7.4 trillion.

Euroclear Euroclear Bank took over the operating and banking roles of the Euroclear system from JPMorgan on 31 December 2000. JPMorgan will retain a seat on Euroclear's Board of Directors.

The merger of Sicovam and Euroclear Bank became effective on 10 January; Sicovam has been renamed 'Euroclear France'. Euroclear believes that the merger will provide the market with savings of about €300 million through the sharing of expertise, knowledge and technology. Estimated combined turnover (value of securities settled) in 2000 was about €100 trillion. The value of securities held in custody at end-2000 was €7.4 trillion, but with a more international focus than Clearstream. The merger between Euroclear Bank and the Belgian and Dutch CSDs, CIK and Necigef, is proceeding as planned. Full platform merger is expected to take two years.

Clearstream International/Euroclear Bank bridge On 29 November 2000, Clearstream International and Euroclear Bank announced an agreement to supplement the existing overnight bridge with a new daytime transaction processing capability between the two systems. This link, for multiple, intraday exchanges of securities and cash deliveries, will operate manually until an automated solution is available in early-2002. Increased efficiency and liquidity, and the potential to distribute new issues of securities on a same-day basis, will be the main benefits of the daytime link.

Monte Titoli Last December, the Banca d'Italia passed its role as Government bond depository to Monte Titoli, and auctioned its 44% share in the Italian CSD. Shares are widely held by exchanges and commercial banks; Clearstream is the only CSD with a (7%) stake.

C REGULATORY ISSUES

The Committee of Wise Men

32 The Committee of Wise Men chaired by Baron Lamfalussy published on 15 February its final report on the regulation of European securities markets. The report was endorsed by a Resolution of the Stockholm European Council on 23 March.

33 The Wise Men's report says that the EU needs faster and more flexible regulatory procedures to remain competitive in global financial markets. Part of the problem arises from gaps in regulatory coverage at European level, but the main problem is the way in which EU legislation is decided and implemented. The current system, which does not distinguish between major legislative changes and minor amendments, requires the Commission to make a proposal to the Council of Ministers and the European Parliament for co-decision. The average time taken for co-decision is generally over two years – and in financial services, the average time is longer. In addition, because of the importance attached to subsidiarity, the Commission has generally proposed legislation in the form of Directives, rather than Regulations which are directly applicable in the Member States. National transposition takes at least a further 18 months, and is often uneven, putting more pressure on the Commission to enforce proper implementation.

34 *The legislative process* The European Council's Resolution, based on the Wise Men's report, proposes a four-level process for ensuring that securities market regulation reflects expert input and is sufficiently flexible to be able to respond promptly to market developments; and that the process should take the form of Regulations in preference to Directives when this would be both legally possible and would help speed up the legislative process.

- *Level 1* Framework principles for Regulations or Directives should be decided by normal EU legislative procedures (ie a proposal by the Commission to the Council of Ministers and the European Parliament for co-decision).
- *Level 2* The Commission, together with two new committees, should define, propose and decide on the detailed implementing measures under framework (Level 1) legislation.

- *Level 3* There should be enhanced co-operation and networking among EU securities regulators to ensure consistent and equivalent transposition of Level 1 and 2 legislation.
- *Level 4* Enforcement should be strengthened, notably with more vigorous action by the Commission to enforce Community law.

The split between framework principles (Level 1) and implementing measures (Level 2) should be determined on a case-by-case basis.

35 Two new committees should be established: a European Securities Committee (ESC) and a Committee of European Securities Regulators (CESR).

- The *ESC* would be chaired by the Commission and comprise high-level officials from each Member State, with the chairman of the CESR as an observer. In its *advisory* role, it would assist the Commission on Level 1 legislation and Level 2 mandates for the CESR; in its *regulatory* role, it would vote on Level 2 regulatory proposals from the Commission, normally within three months. The ESC's role as a regulatory committee requires co-decision, and is therefore subject to approval by the European Parliament as well as the Council.
- The *CESR*, which would consist of a senior representative from each national regulatory agency responsible for securities and be chaired by one of them (as in the case of FESCO), would be an independent body with an advisory role, assisting the Commission in preparing draft implementing measures (Level 2), after consulting market practitioners, consumers and end-users. The CESR would also work with national regulators at Level 3, with the objective of ensuring the consistent and timely implementation of Community rules, by securing more effective co-operation between supervisory authorities, carrying out peer group reviews and promoting best practice. The CESR would decide for itself its membership and working methods, including location.

36 *Legislative priorities* The Wise Men's report recommends six priorities to be adopted and brought into effect by the end of 2003, at the latest:

- a single prospectus for issuers of securities, with a mandatory shelf registration system;
- modernisation of the requirements for admission to listing, and the introduction of a clear distinction between listing and admission to trading;
- acceptance of the principle of mutual recognition across wholesale markets, including a clear definition of the professional investor;
- updated investment rules for mutual funds and pension funds;
- the adoption of International Accounting Standards; and
- a single passport for recognised stock markets.

37 *Next steps* The Council Resolution says that the new regulatory structure for securities markets should be operational from the beginning of 2002, and should be reviewed in 2004 to see how well it is working. On 30 May, the Commission presented proposals for framework (Level 1) Directives on market manipulation and on prospectuses. Their

adoption, by co-decision, will establish the ESC's regulatory role. Commission decisions to establish the ESC and the CESR in their advisory roles are expected in early-June. The CESR's Level 2 work will run in parallel with the Level 1 legislative process for the two proposed Directives, so that implementing measures may be adopted as soon as possible.

The European Commission's *Financial Services Action Plan* (FSAP)

38 The Stockholm European Council in March endorsed the thrust of the FSAP, prioritising those measures which are intended to speed up the integration of EU securities markets. A *Fourth Progress Report* is imminent.

- In the securities sector, since the previous *Practical Issues*, the Commission has: adopted a proposal on cross-border collateral arrangements; issued a Regulation on International Accounting Standards for listed companies; and presented proposals for Directives on market manipulation and on prospectuses. It is preparing a proposal for a revision of the ISD, to be finalised by end-2001. A Commission Communication is scheduled for the end of this year on clearing and settlement.
- The Commission has also come forward with consultative papers on the EU implementation of the Basel Capital Accord; and Directives on the supervision of financial conglomerates and insurance intermediaries.

D TAX AND LEGAL ISSUES

39 *Taxation* Agreement was reached on 1 March on an amended 'grandfathering' clause for the Savings Directive, giving different treatment to corporate and sovereign bonds. All taps/re-openings will be grandfathered for a one-year period from 1 March. But from 1 March 2002, re-openings of sovereign (and related) debt will bring the whole issue under the scope of the Directive, while subsequent taps of corporate debt will only affect the new tranche.

40 *Legal* The EBF announced on 1 January that the European Master Agreement (EMA) is now fully ready for use by the European banking industry: it is intended to be used primarily within the euro area. ISMA announced on 6 April that new legal opinions have been obtained covering both the TBMA/ISMA Global Master Repurchase Agreement (GMRA 2000), and the previous version (GMRA 1995).

CHAPTER 3: THE CITY'S POSITION AS A EURO CENTRE

1 Since the launch of the euro, the City of London's dominance as the major international financial centre in the European time zone has remained unchallenged. This Chapter assesses the City's main strengths as a financial centre.

Critical mass

2 Most international market firms base in London their euro activities in the wholesale markets because of the critical mass of skills in financial services and legal, accounting and other professional advice already located here. Critical mass is important for international market firms because: key staff add more value if they are concentrated in one location close to colleagues, clients and competitors in other market firms; markets themselves are deeper and more liquid; and the depth and quality of support services is greater.

3 As they already have the critical mass of their wholesale market activities in London, many international market firms have centralised their euro treasury operations here as well. Besides the advantage of deep and liquid markets, this helps limit risk by making it easier to control. And firms have in many cases also brought together in London a high proportion of their other investment banking staff involved in revenue generation in Europe, because bringing them together promotes innovation by encouraging the exchange of ideas. In these cases, firms rely on their network of offices, and frequent travel by staff, to keep in touch with their international corporate and institutional clients. By contrast to front-office staff, for whom revenue generation is the key to profitability, cost control is the main influence on the location of back-office staff. Back offices are therefore in many cases located out of London, except for complex processing, where this needs to be carried out in close proximity to the dealing room.

4 Market firms in London consider their euro business, not in isolation, but as part of their international activities as a whole, in whatever currency they are denominated. London is very much an international centre: indeed, most large international market firms in London are now foreign owned. Since the launch of the euro, the number of foreign banks in London has declined, because of mergers and the return home of a number of Japanese and Russian banks which had London offices, but the size and scope of the activities of large international market firms in London has increased.

5 In one sense, London competes with other financial centres in Europe, such as Frankfurt and Paris. But in another – more general – sense, the critical mass of euro business in London has also increased the efficiency of wholesale financial services across Europe, by improving liquidity, reducing margins and introducing new ideas. This may have helped to stimulate financial activity in Frankfurt and Paris, rather than the reverse, and there are good prospects for this trend to continue, as their domestic markets grow. Direct competition between London and New York is still limited, because they are located in different time-zones, though the importance of separate time-zones may eventually diminish, as wholesale operations become increasingly global in scope. The internet may also provide

a competitive challenge to traditional financial centres in the longer term, as well as providing an opportunity for market firms to increase efficiency and reduce costs. But none of these potential influences has had an adverse impact on London's position to date.

Skills

6 London benefits from the large pool of financial talent available, with around 300,000 employed in financial services, and almost 600,000 more in supporting services. Access to a large pool of financial talent is of critical importance for market firms, both because they are offering such a wide range of sophisticated financial services, and because they need to innovate to survive. Some business has disappeared as a result of the launch of the euro (eg foreign exchange pairs in the previous national currencies), or is declining in importance (eg correspondent banking), whereas there are a number of new business opportunities for which the euro has acted as a catalyst (eg the development of the corporate bond market in Europe) though not the only factor (eg in the case of the growth of credit derivatives).

7 While salary costs in London are regarded as high in European terms (though not in relation to New York), market firms consider they are necessary to attract the right talent. However, direct staff costs are partly linked to profitability, and higher direct costs are offset by indirect costs, which are lower in the UK than across the euro area. Given that personal tax rates are also comparatively low, the level of net earnings has made London attractive for professional staff, without imposing an undue burden on the market firms that employ them.

8 A very important factor for market firms in London is the flexibility to 'hire and fire'. Market firms are more likely to take on staff, if they know that they can lay them off, when necessary. This means that in a market downturn, staff numbers in London fall. Some layoffs have been reported in the past few months. Staffing in London is likely to be more affected, proportionately, by a downturn than continental European financial centres, because laying off staff is less difficult. This flexibility is one of the attractions to market firms in taking on staff in London in the first place, and more generally in locating in London, and is beneficial in the longer run.

Infrastructure

9 So much euro business is done in London that access to an efficient financial infrastructure in euro is essential. But given the increased importance of cross-border activity, including electronic trading, the infrastructure which market firms use from London does not all have to be physically located here. What market firms need is cheap and unrestricted access to payment, trading and settlement systems across the EU, in conformity with the Single Market. The link between CHAPS euro and TARGET, and availability of EURO1, have provided a cheap and efficient route for wholesale euro payments across borders. Cross-border securities settlement is still much more expensive throughout the EU than within the US. This has disadvantaged the EU as a whole rather than London in particular. And there are still a few national restrictions requiring physical location in the euro area to access national trading or settlement systems effectively.

10 Besides providing an efficient financial infrastructure, London's physical infrastructure as a financial centre must also meet the needs of market firms and their staff. London has

always provided sufficient office space in aggregate terms, but international market firms have been looking for sites – and in particular trading floors – on a scale that the Square Mile has found it difficult to accommodate. Canary Wharf and other locations elsewhere in London have filled the gap. International transport links (including from City Airport and via Eurostar) from London have improved. But traffic congestion within London is still regarded as a problem.

Regulation

11 London provides a sound legal framework, a low-tax corporate environment and a level playing field for international market firms, so that they are welcome in London, regardless of the nationality of their ownership. International market firms can also rely on a regulatory framework which is fair, light rather than intrusive, quick to adapt to market innovation, and involving direct costs which are internationally competitive. In addition to international market firms, a wide range of new trading systems (including, for example, BrokerTec, EuroMTS, EBS, Fxall and Atriax) and two exchanges (Jiway and virt-x) have chosen to be incorporated and authorised in London, so that their platforms are governed by UK regulation, and they have the UK as their legal jurisdiction.

12 There has for a long time been a stable regulatory framework providing international 'best practice' in London. What has changed recently is the method of implementing it. The FSA has brought together the prudential supervision of different financial activities under one roof, so that a market firm involved in banking, securities and insurance has a single supervisor. This model was innovative when it was originally introduced. But more recently, some other countries within the EU have begun to follow suit.

Language, law and culture

13 The use of English as the language of international finance benefits all financial centres, but is of particular advantage to London. It is less widely known that English law has increasingly been chosen for international financial transactions. London is of course a cosmopolitan city, with a diversity of cultures. And the quality of life it can provide means that many international staff of market firms, and their families, see it as an attractive place to live.

Conclusion

14 The common thread running through each of these themes – critical mass, skills, infrastructure, regulation, language, law and culture – is the importance of international competitiveness. So far, since the launch of the euro, London has continued to remain competitive as an international financial centre. But this is not something that can ever be taken for granted. London will continue in future to be internationally competitive only if the environment it provides for financial business remains attractive and consistent with international 'best practice'.

THE CITY'S MARKET SHARE

Banking

- *Bank representation* London has more foreign bank branches, subsidiaries and representative offices than any other financial centre (478 in April 2001). Mergers between foreign banks, and the withdrawal of some Japanese and Russian banks from London, have contributed to a reduction of 58 since the beginning of 1999, though the size and scope of large international market firms' activities in London has increased. The number of foreign banking institutions in Paris is estimated to have risen to 214 in March 2001 from 209 at the beginning of 1999, and the number in Frankfurt is estimated to have risen to 276 in 2000 from 267 in 1999.
- *Proportion of UK banks' business in euro* UK banks' business with non-residents is denominated 29% in euro, compared with 42% in dollars, 14% in sterling and 15% in other currencies. These figures, which relate to the end of March 2001, are broadly unchanged since the launch of the euro.
- *Bank lending* The BIS estimates that London originated 20% of cross-border international bank lending outstanding at the end of the third quarter of 2000, compared with 6% for France and 9% for Germany. These proportions are broadly unchanged since the launch of the euro.
- *Payments* CHAPS euro, the wholesale payment system in London, accounts for 18% by value of cross-border payment flows in TARGET, the pan-European payment system: an increase from 15% when the euro was launched. This is a very high figure, considering that banks in the UK are also heavy users of other euro payment systems (such as the EBA's EURO1 system), and reflects the depth of euro financial market activity in London. The UK now accounts for more cross-border payment flows in euro than any other country, except Germany.

Foreign exchange

- London's global market share of foreign exchange turnover was estimated by the previous BIS survey in 1998 at a third, over three times the level of Germany and France combined. Preliminary results from the next BIS survey will be available in October 2001.

Derivatives

- *Over-the-counter derivatives* London's global market share of over-the-counter derivatives is estimated at over one third, twice the level of Germany and France combined.
- *Exchange-traded derivatives* In the case of exchange-traded derivatives, 99% of the euro short-term interest rate (STIR) contracts on the three major European derivatives exchanges are now traded on LIFFE. The notional *value* of interest rate (STIR and bond together) and equity index contracts is much higher on LIFFE than on both Eurex and Euronext. Eurex has been the largest derivatives

exchange by *volume* since the repatriation of the Bund contract to Frankfurt in 1998, though Bund futures are extensively traded remotely from London.

Bonds

- *New bond issuance* London's market share of underwritten euro-denominated Eurobond issuance in Q1 2001 was 60%, compared with 49% in Q1 2000 and 48% in Q1 1999. These figures exclude domestic issuance and use the location of the bookrunner as a proxy for the centre from which bonds are issued.
- *Bond trading* London is estimated by International Financial Services, London to have a global market share of secondary trading in the Eurobond market of around 70%, which has remained unchanged recently.

Equities

- *Equity market capitalisation* The market capitalisation of companies listed on the London Stock Exchange was €2,698 billion at the end of April 2001, according to Federation of European Securities Exchanges' statistics, compared with €2,352 billion for Euronext and €1,319 billion for Deutsche Börse.
- *Foreign listings* More foreign companies are currently listed on the London Stock Exchange than on any other exchange (500 in January 2001, compared with 522 at end-1998). 52% of global foreign equity turnover is reported to the London Stock Exchange by London market firms, and foreign equity turnover grew by 45% in 2000.
- *Equity turnover* In Q1 2001, just over 40% of equity trades reported to the London Stock Exchange by market firms were denominated in euro. The proportion of trades reported in euro is much the same as at the beginning of 1999, but on significantly higher turnover.

Fund management

- London is the largest global centre for the fund management of institutional holdings of equities, with $2,461 billion of institutional equities under management at end-1999: more than Zurich, Paris, Amsterdam and Frankfurt combined.

Insurance

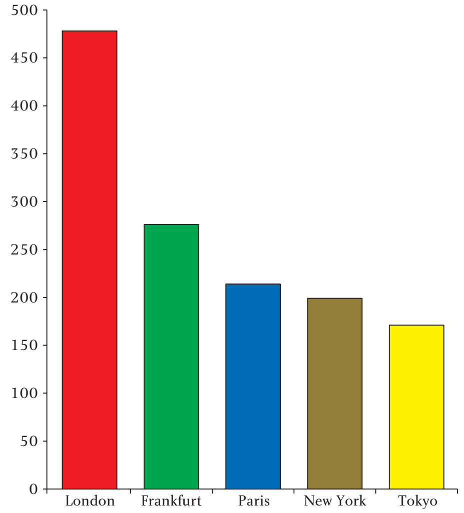
- London is one of the largest centres for insurance business, with 19% of world marine insurance and 28% of aviation insurance business.

Overseas earnings

- Net overseas earnings by financial institutions in the UK amounted to a record £31.2 billion in 1999, compared with £30.0 billion in 1998.

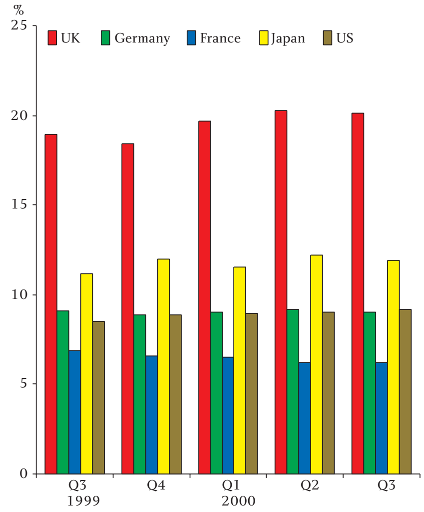
LONDON AS AN INTERNATIONAL FINANCIAL CENTRE

NUMBER OF FOREIGN BANKING INSTITUTIONS



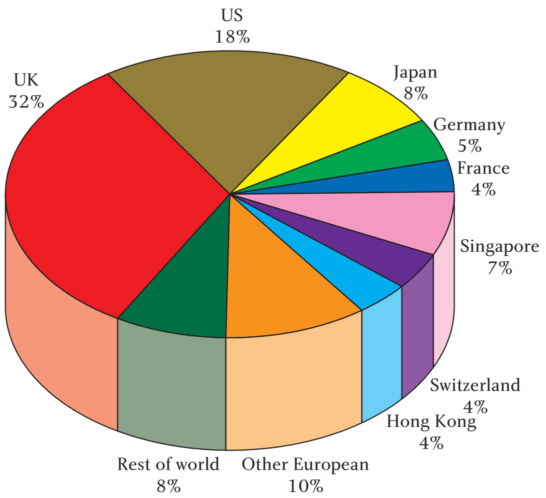
Note: London, April 2001; Paris and New York, March 2001; Frankfurt, December 2000 (preliminary estimate); and Tokyo, September 2000
Source: local, various

MARKET SHARE OF CROSS-BORDER BANK LENDING



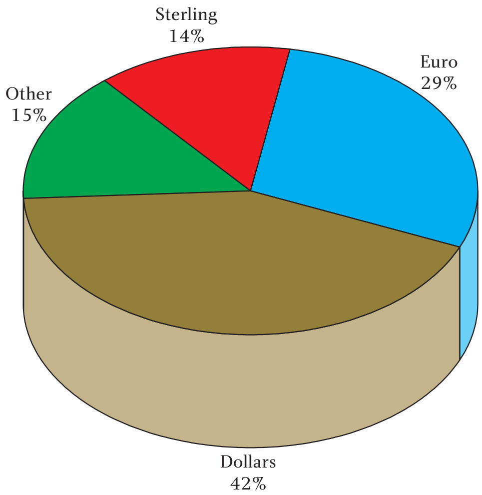
Source: Bank for International Settlements Quarterly Review (International Banking Market Developments)

MARKET SHARE OF GLOBAL FOREIGN EXCHANGE TURNOVER



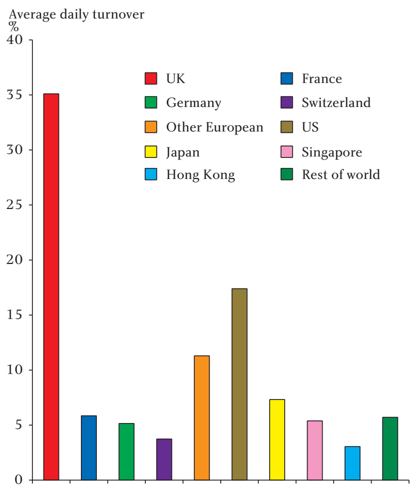
Source: Bank for International Settlements, Triennial Survey (April 1998)

UK BANKS' BUSINESS WITH NON-RESIDENTS



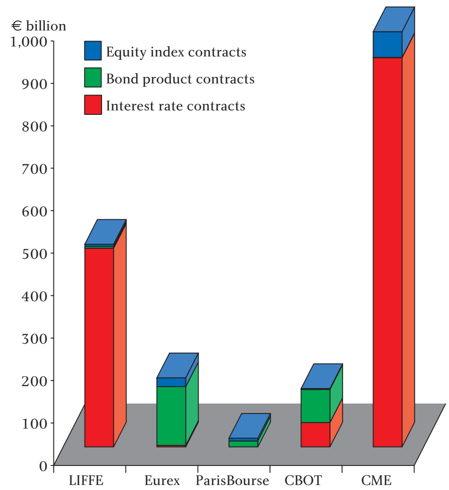
Source: Bank of England (end-March 2001)

SELECTED OTC DERIVATIVES MARKET ACTIVITY: COUNTRY SHARES



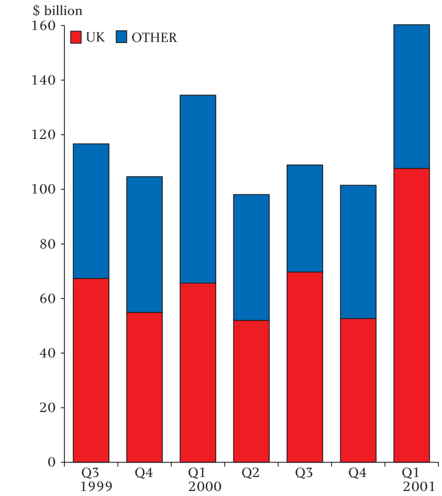
Source: Bank for International Settlements, Triennial Survey (April 1998)

AVERAGE DAILY NOTIONAL VALUE OF TURNOVER FOR INTEREST RATE, BOND PRODUCT & EQUITY INDEX DERIVATIVES CONTRACTS



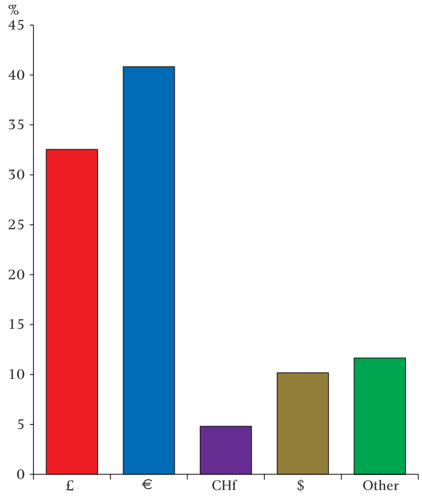
Note: excludes commodities contracts, and contracts on individual equity futures and options
Source: Bank of England (October 2000-April 2001 inclusive)

EURO-DENOMINATED EUROBOND ISSUANCE



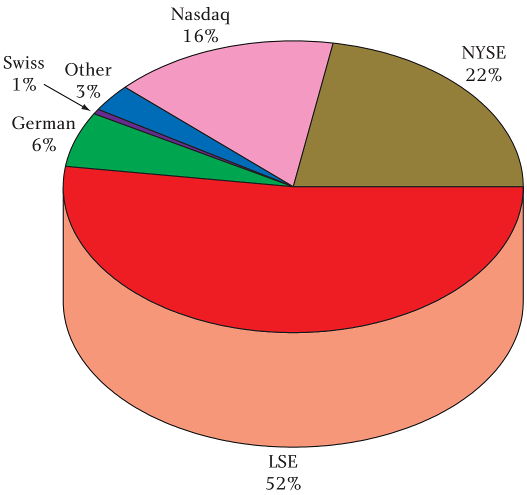
Note: approximation based on bookrunner location
Source: Capital DATA Bondware

TRADING VALUES BY CURRENCY
ON LONDON STOCK EXCHANGE



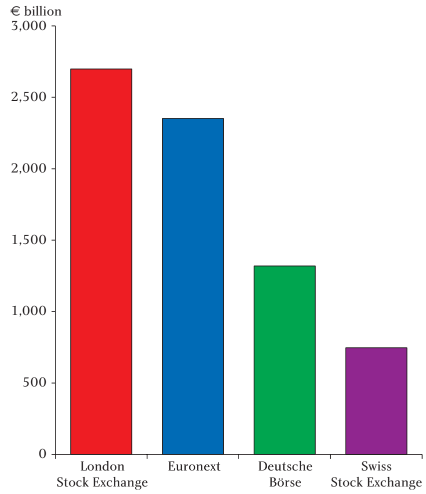
Source: London Stock Exchange (2001 Q1)

MARKET SHARE OF FOREIGN EQUITY TURNOVER
ON EXCHANGES



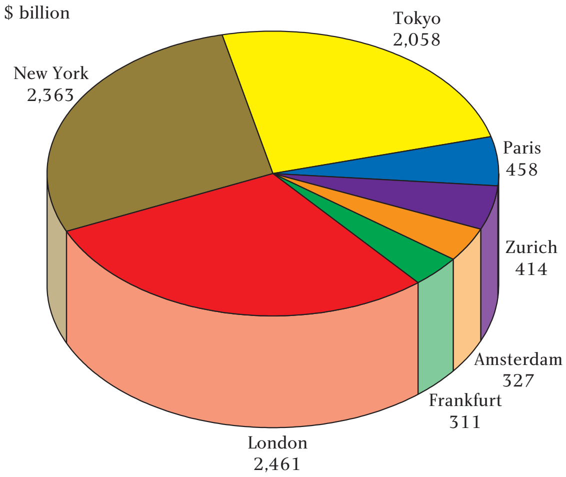
Source: London Stock Exchange (end-2000)

MARKET CAPITALISATION ON SELECTED
EUROPEAN EXCHANGES



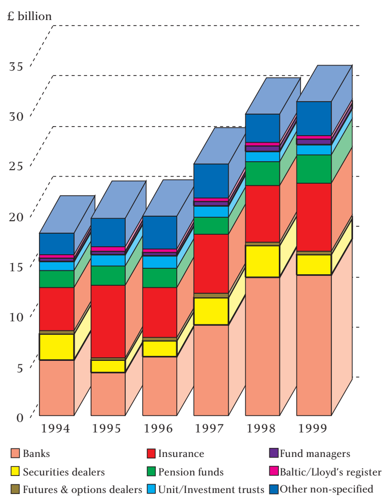
Source: Federation of European Securities Exchanges
(end-April 2001)

HOLDINGS OF INSTITUTIONAL EQUITIES
IN LEADING FINANCIAL CENTRES



Source: Thomson Financial 'International Target Cities Report'
(1999)

NET OVERSEAS EARNINGS OF
UK FINANCIAL INSTITUTIONS



Source: British Invisibles' 'City Table'

CHAPTER 4: COMPLETING THE CHANGEOVER TO THE EURO

INTRODUCTION

1 The end of the three-year transition to the euro from the previous national currencies is approaching. From 1 January next, the previous national currencies will no longer be used for non-cash payments. And euro cash will start circulating, with the aim of replacing within two weeks most of the present national cash in circulation. Although the preparations for the final changeover are well under way, a great deal of work remains to be completed. This Chapter concentrates on issues facing the financial sector, and compares and contrasts the approaches in different euro-area countries: the Bank is grateful for the information provided by central banks, commercial banks and other financial institutions across the euro area. The implications for the UK financial sector of the transition end are also set out.

2 Euro-area banks must: convert to euro internal (accounting and related) systems; prepare external accounts in euro; convert to euro customers' bank accounts and related products; replace cheque books, giro forms etc; convert to euro point-of-sale (POS) terminals (where bank-owned); train bank staff; inform customers about the final changeover; and prepare to introduce euro notes and coin and to withdraw old national currency cash.

3 By trying to understand the different ways in which the changeover is being planned in euro-area countries, the UK may learn valuable lessons for its own prospective changeover, in the event of EMU entry.

- Section A deals with the final changeover to the euro in retail banking, but also refers to some specific end-of-transition period issues.
- Section B discusses the introduction of euro notes and coin.
- Section C describes the effect of the transition end on the UK.

A THE FINAL EURO CHANGEOVER IN RETAIL BANKING

- Over the past six months, a number of countries have joined France and Belgium in advocating that the conversion into euro of bank accounts and retail payments should not be delayed until the last moment.
- Many, particularly larger, banks will now effect an early conversion, later this summer or autumn; personal accounts can be converted in bulk automatically, whereas corporate accounts will require more customised treatment.
- All POS terminals require adaptation, but they may be unlikely to be used much in euro mode until the introduction of euro cash.
- Payment-orders (like cheques) in previous national currency initiated before end-December will continue to be accepted for a period in early-2002.

USE OF THE EURO INSIDE THE EURO AREA

On the basis of anecdote and the limited statistical data available, use of the euro remains generally low across the euro area, especially for individuals. The Commission's most recent quarterly review, published in May (based on survey results and the Commission's own small sample of banks), confirms that use of the euro by bank customers continues to be low. The report highlights the following.

- Opening of new euro bank accounts in the euro area appears in general to be on a rising trend, although from a low base and less so for individuals (the rate of growth varies between countries). The percentage of accounts held by individuals in euro at euro-area banks is still only 2.1% of the total.
- On the basis of survey evidence, 61% of SMEs are reported to have started quoting prices in euro (an increase from 52% reported in February), and 16% systematically invoicing in euro (but these figures are hard to interpret, because they probably include activities in both denominations).
- In those countries (Belgium, France, Netherlands) where data have become available recently, the trend in the use of the euro in public administrations has been clearly upwards (in particular in VAT payments and export declarations, in both volume and value terms).
- To date, the bulk of euro-denominated Visa payments has come from French motorway tolls. These apart, more euro Visa payments originate in the UK than any other country, which the Commission suggests results primarily from the scale of UK internet payments.

Background

4 While the wholesale financial markets moved to the euro at the start of 1999, most of the changeover in retail financial services is still to occur. It had been hoped that, during the three-year transition period, companies and the general public would gradually increase their use of the euro in retail transactions and payments, but this has not in practice happened. For example, the Commission estimates that only 2% of personal accounts are denominated in euro even now.

5 European guidelines for the changeover have been established, although the detailed plans are determined nationally, under subsidiarity.

6 *European Commission recommendations* In the light of concerns about inadequate preparations, particularly in the corporate sector, the Commission published last October a Recommendation on *Measures to Facilitate the Preparations of Economic Operators for the Changeover of the Euro*. This does not have binding force in Member States, but it has nevertheless had a significant influence in a number of countries. It includes the following recommendations for the retail banking changeover.

- Banks should inform their customers of the practical consequences of the end of the transition, particularly that after 31 December they will no longer be able to keep bank accounts or make non-cash payments in the old national currencies.
- Bank accounts and non-cash payments (cheques, transfer forms and cards) should, unless the customer expressly requests otherwise, change over to euro from end-June. Bank statements should show equivalent national currency amounts.
- All electronic point-of-sale (POS) terminals should be able to process transactions in euro from end-June.

7 The Recommendation also includes advice on the timing of dual pricing in shops ('from the third quarter of 2001 at the latest'); the payment of employees' wages and salaries in euro by public administrations and businesses ('as early as possible in 2001'); the payment of pensions ('also as early as possible in 2001 in euro'); and pricing and invoicing by public administrations, insurance companies and utility companies ('in euro during the third quarter of 2001'). In a subsequent Communication in April, the Commission noted that an early account changeover had initially only been envisaged by banks in Belgium and France, but was now also planned in many other euro-area countries.

8 *European banking guidelines* In March, the European Credit Sector Associations (ECSAs) published three sets of guidelines on end-of-transition issues. These guidelines are summarised in the Box below; the full text is on the European Banking Federation website.

9 *SSIs and account management* The ECSA guidelines recommend that banks communicate to SWIFT any new euro SSIs (amending BICs and routing instructions as appropriate) before end-June. (New euro SSIs issued before 1 September will be updated in the TARGET directory in, and be effective from, December.) If not converted, previous national currency accounts and related SSIs will be read as euro. If a bank takes no action, then a dozen or more SSIs, all read as euro, could direct euro payments to a range of different accounts across the euro area. While misdirection of existing national currency business would be an

EUROPEAN BANKING GUIDELINES ON END-OF-TRANSITION ISSUES: A SUMMARY

Customer and nostro legacy conversion

1 The internal planning and strategy of each bank should have been completed, and the implications of the end of transition communicated to customers, by 31 March at the latest.

2 During 2001 Q1 and Q2, regular bulletins should be broadcast to SWIFT users worldwide about the need to provide their nostro agent with conversion instructions.

3 Customer accounts should be converted by 30 September at the latest, unless country-specific initiatives have been agreed locally, or customers select a later conversion date.

4 Reasonable steps should be taken to obtain customer (including vostro bank) instructions. Where none has been received by 30 September, banks may proactively convert customer (and vostro bank) accounts, provided one month's notice is given in writing.

5 Where accounts are closed, nostro agents should encourage vostro banks to issue new SSIs to avoid manual redirection of incoming payments. Vostro banks should issue new euro SSIs by 30 June at the latest. Newly-amended SSIs must be advised to SWIFT, using the new template.

Cross-border cheques in legacy currency

6 No cheque should be issued in legacy currency after 31 December.

7 The first receiving bank should continue until Friday, 15 February 2002, to accept and clear, within a cross-border cash letter service, legacy currency cheques issued before 1 January 2002. The paying bank will continue to accept these cheques until 28 February 2002. This allows intermediary banks nine working days to accept and forward these cheques to the paying bank. After 15 February 2002, such cheques may be processed on a collection basis. Banks are encouraged to take all means possible to raise customers' awareness of these arrangements.

8 Banks are encouraged to make euro cheque books available to their customers: to business customers by 1 July; and to personal customers by 1 September. Drawee banks should endeavour to specify their country or ISO country code on any euro-denominated cheque form.

9 Banks should advise customers from now on: to specify the denomination of any cross-border cheque where it is not separately shown; and not to substitute on a cheque form any other denomination for the printed denomination.

Travellers cheques

10 Sellers and issuers of travellers cheques should encourage the use of euro-denominated travellers cheques from 1 April, and strongly discourage the sale of legacy currency travellers cheques after 1 September. Banks accepting travellers cheques are strongly recommended to accept euro-denominated travellers cheques from now on.

11 Banks accepting legacy currency travellers cheques should present them to the issuer or the bank representing the issuer by Friday, 15 February 2002, through the normal clearing. They will be paid and cleared in the euro equivalent by 28 February 2002, following the normal procedure. Travellers cheque issuers will inform their selling agents in 2001 of the procedures to be followed for the payment of their legacy currency travellers cheques after 15 February 2002.

12 No travellers cheques in legacy currency must be sold after 31 December this year. Travellers cheque issuers will inform their selling agents this year of the procedure to be followed for the destruction of unused stocks of legacy currency travellers cheques.

inconvenience rather than a liquidity management issue (because the value of such payments tends to be small), wholesale euro payments could also be caught by old SSIs read as euro, and cause a repetition of the problems experienced at the start of 1999.

10 Banks may want to maintain previous national currency accounts at least during the early months of 2002 to cope with any outstanding transactions, and because it is in any case useful to have an account in each national system in order to handle paper-based transactions; but many will amend or cancel the related SSIs. Most banks say that the process is well in hand. There are indications that account rationalisation is continuing, as previous national currency accounts are not all being replaced with euro accounts.

I The changeover in retail banking

Differences in national approaches to the retail banking changeover

11 The organisation and implementation of the final retail banking changeover remains essentially national, under subsidiarity. Last year, clear differences in approach were evident. In France and Belgium, the authorities and banking community had already agreed a co-ordinated and early changeover of bank accounts and payments, in order to avoid a concentration of work at end-December this year. By contrast, other countries preferred to leave the timing of the non-cash changeover to individual banks, and most planned to leave the account conversion to the final days of 2001. But more recently, there has been some convergence in approach, particularly at individual bank level.

Current differences in national approaches

12 The authorities and banking associations in Spain, Portugal and, to a lesser extent, Italy, have modified their approach.

- In Spain, banks have agreed to carry out automatically the conversion of all bank accounts from mid-September, unless clients specifically request otherwise (a memorandum of understanding (MOU) to this effect was signed in January by the Ministry of Economy, the Banco de España and the Spanish banking associations). The banks plan to use the two weekends before end-September simultaneously to convert all customer contracts such as mortgages and other loans. Such a concentrated changeover will, it is hoped, help to familiarise the Spanish public with the euro. However, the MOU neither obliges banks to convert all accounts by end-September, nor prescribes a particular methodology. Banks may have to postpone the account conversion for some of their customers until end-2001. The Spanish Government intends to sign similar MOUs with other sectors, including utilities (to agree to bill in euro from 15 September) and business organisations (so large companies and the public sector itself will pay salaries in euro from September).
- In Portugal, a law adopted in April allows banks at their own initiative to convert bank accounts to euro from 1 October, so long as they give their customers one month's prior notice: no explicit customer permission will be necessary. The Banco de Portugal is holding regular bilateral talks with banks, and expects that most of them will indeed convert accounts well before end-2001.

- In Italy, banks now also favour a gradual increase this year in the use of the euro in payments, and an earlier conversion of bank accounts. Such an approach has been supported by the national authorities. However, the National Changeover Plan published by the Euro Committee earlier this year does not go as far as the French and Belgian approach. The plan includes measures which are aimed at promoting the use of the euro from mid-year (including encouragement to use euro cheques; expression of salaries in euro; dual pricing; and a switch to euro in tariffs and bills for public services and utilities). But, on the bank account changeover itself, the plan is not prescriptive: 'In the second half of 2001, bank accounts and other non-cash payment instruments (cheques, payment orders and magnetic cards) can be redenominated in euro with the express consent of customers.' Thus, although banks will try to persuade their corporate and personal customers to change their accounts early, they will not in practice make the change without their explicit prior permission. Neither the authorities (the Italian Government or the Banca d'Italia) nor the Italian banking association intend to put any further pressure on banks, companies or the general public to convert early; it will be left to individual banks to decide how to plan the account conversion.

13 The policies of the authorities and banking communities in other countries remain largely as they were six months ago.

- In Belgium and France, the official approach continues to be to spread out the work as much as possible, in a co-ordinated way. The mass bank account conversion is planned from early-July.
- In Germany, the Bundesbank believes that the account conversion should be left to individual banks to decide, without the need for strong co-ordination.
- In the Netherlands, as in many other countries, the Nederlandsche Bank is closely monitoring banks' preparation for the final changeover, but individual banks are free to decide the timetable for themselves. More generally, the Dutch authorities and banking community have always advocated a changeover in distinct phases, with the wholesale markets operating in euro from 1 January 1999, while SMEs and the general public have not been encouraged to use the euro in retail payments ahead of the introduction of notes and coin.
- In Ireland, the Central Bank is monitoring banks' state of preparedness for the euro changeover and there is an agreement with the Irish banks on the work they need to implement. It is expected that the majority of Irish banks will convert customer accounts to euro in a 'big bang' at end-December. As 31 December will be a non-value day, this will provide four days for banks to complete their changeover work.
- The authorities in Austria, Finland, Greece and Luxembourg are also leaving to individual banks the precise timing of the account changeover.

14 The reasons for these continuing differences in approach between the authorities in euro-area countries seem to be as follows.

- There are still different views on how best to achieve an orderly changeover. In some countries, there is a strong preference for the non-cash changeover to build up gradually rather than to be delayed until the last moment. By converting bank accounts early, and by promoting the use of the euro in retail payments ahead of end-2001, the changeover work for banks and companies will be spread out over a number of months, instead of being concentrated around end-year; early conversion may also help the general public to become used to the euro in a more gradual way. By contrast, the authorities in other countries see little benefit in confronting the general public with the euro in retail payments ahead of the arrival of euro cash on 1 January 2002. They fear that an early changeover of bank accounts and other measures to promote the use of the euro (including salary payments and utility invoices in euro) could give rise to public confusion and create problems for those smaller companies which are not ready for the euro before end-year.

- The scale of the bank account conversion varies between countries. Especially in the larger countries, many individual banks have to convert so many accounts that a 'big bang' conversion at end-2001 would be too risky or simply impossible in the time available. In some cases, old bank branch accounting systems may also complicate the conversion work and make a more gradual process necessary.
- There also seem to be more general differences in style in handling large projects. In for example Belgium, France, Italy and Spain, the authorities prefer to co-ordinate projects of this kind which affect many institutions simultaneously. By contrast, in Finland, Germany, Ireland and to a lesser extent the Netherlands, the authorities prefer a less prescriptive and more informal approach, leaving it more to individual participants how to tackle their projects (although overarching issues are co-ordinated nationally). These differences were also evident ahead of the launch of the euro and for Y2K.
- Italy is the only country where banks at present intend to seek express customer agreement for the account changeover; in all other countries, banks planning to convert accounts early will assume customers agree unless they explicitly object.

Differences between individual banks

15 Many banks across the euro area are now planning an early account conversion, although this will vary widely in timing, method and extent.

16 On the one hand, even in some countries where the aim of the authorities is to convert gradually to euro from the middle of this year, many banks will not complete their account changeover until later in, or at the end of, 2001; the bulk of non-cash payments in most countries is also likely to remain in previous national currencies until the very end of this year.

- In Belgium, in line with the national approach directed towards a gradual non-cash changeover, banks indeed plan to convert private sector accounts early, although the timing differs from bank to bank. The bulk of personal and corporate bank accounts are expected to be switched to euro during the period from July to November. However, most public administration accounts will remain in Belgian francs until 31 December. Other factors will deter a gradual build-up in use of the euro: utility companies will only start issuing invoices in euro from October, as compared with the original plan to do so from 1 July; most companies' salary slips will remain largely in Belgian francs until end-2001; and while the goal is to have all POS terminals adapted for euro usage by end-July, most retailers are expected to delay switching the actual payments to euro until end-2001.

- In France, the original aim was for banks to encourage companies to convert their bank accounts and internal systems between 1 January and 1 July (or 1 October at the latest), while personal accounts would then be converted at the banks' initiative before end-September. According to the French Banking Commission's most recent data, the percentage of corporate accounts converted in early-2001 was lower than hoped; and spontaneous demand for conversion by individuals has been negligible. Consistent with the prior plan, however, banks are about to start massive conversions at their own initiative, with a view to completing the bulk of the process by end-October (more than 95% in the case of personal accounts). Overall, financial institutions expect 90% of corporate accounts to be converted to euro by end-October. The bank accounts of local and regional public administrations will remain in French francs until end-year, but their operations will increasingly be denominated in euro, and public sector wages will also be paid in euro from July. The national electricity company (EDF) converted into euro in January all its billing, and France Telecom will do likewise in July.
- In Italy, although the national changeover plan includes a recommendation to convert bank accounts to euro from the middle of this year, the extent to which this will happen in practice is not yet clear, as banks are obliged to require explicit customer consent. For example, Banca Nazionale del Lavoro (BNL) is currently actively promoting an early changeover in accounts among its customers. Its aim is to have converted well before end-year some 60% of personal accounts, and an even higher percentage of corporate accounts. However, as they are dependent on the explicit permission of their customers, a large part may in practice be converted at end-2001, even though BNL would consider this unwise from its customers' point of view. The situation might well be similar for other Italian banks, in which case the conversion for the majority of bank accounts would take place at end-2001, notwithstanding the intentions expressed in the National Plan.
- In Spain, although the bulk of bank accounts are expected to convert by end-September, banks are likely to make exceptions for those large companies and SMEs which would prefer conversion at end-year.

17 On the other hand, many banks in countries which are not explicitly encouraging an early changeover nevertheless plan to convert at least some accounts ahead of the end of this year, as in Germany, Luxembourg and the Netherlands.

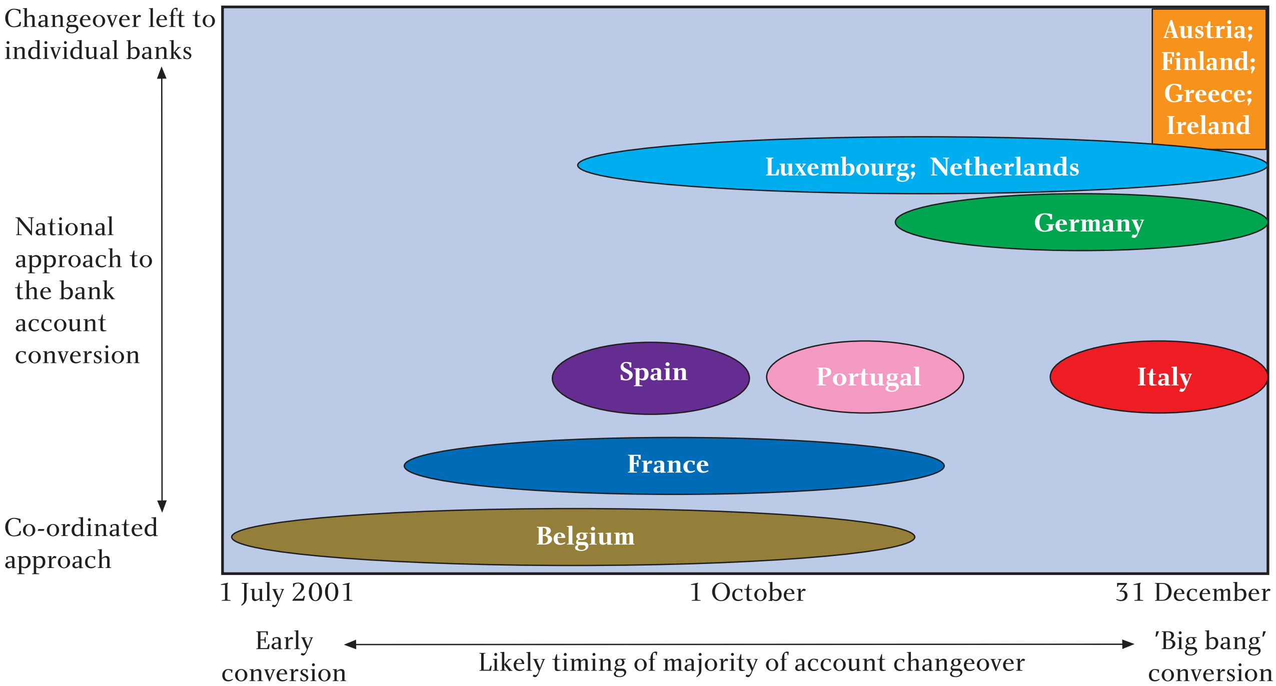
- In Germany, most big commercial banks are planning a gradual conversion of bank accounts during the second half of 2001, consistent with a recommendation from their banking association. For example, one of them plans to convert all its private sector accounts in four weekends during November. However, the bulk of bank accounts in Germany are held at savings and co-operative banks, most of which are currently not planning to convert until the very end of December.
- In the Netherlands, where there is also not a formal co-ordinated approach, a number of large banks will convert at least some of their accounts and products early. For example, ABN AMRO will follow a client-by-client conversion, starting with SMEs and other selected corporates in early September, followed by personal

customers in a five-week period between mid-October and mid-November; large companies, which do not convert at their own initiative, will be converted in late-2001. ABN AMRO expects that by end-November over 95% of personal customers, 80-90% of SMEs and 50% of large companies, will have been converted to euro. However, while some other banks are planning to convert certain products such as mortgages, consumer loans and savings accounts well ahead of end-year or (like ING Bank) have already done so, the bulk of current accounts in the Netherlands is expected to remain in guilders until end-2001.

- In Luxembourg, major banks aim to finish the account conversion by end-September, but others may leave it later.

18 Chart A illustrates the differences in approach between euro-area countries.

CHART A: ILLUSTRATION OF DIFFERENT COUNTRY APPROACHES TO THE BANK ACCOUNT CONVERSION TO EURO



Source: Bank of England

Common problems related to the account changeover

19 A common element across countries is that those banks keen to bring forward the account conversion will concentrate particularly on the accounts of personal customers, as these are more numerous and straightforward than company accounts. For *personal accounts*, the conversion should have little practical effect on the customer. National currency information, for example on bank statements, will still be provided after conversion (in many cases, until February or March 2002). And it will remain possible to receive and pay in national currency during the remainder of 2001. In consequence, bank account conversion may not assist familiarity with the euro very much.

20 For *company accounts*, a more customised approach is necessary. In particular, for companies with complex internal systems and automated links to their bank accounts, the

timing of the bank account conversion may well be significant. Many such companies plan to continue operating internally in former national currency until end-2001 (which may coincide with the end of their financial year), and an earlier bank account conversion could thus cause reconciliation problems (because of rounding differences). Whilst many banks would prefer companies to convert their internal systems early, in order to facilitate an early bank account conversion, this may simply not be possible in many cases.

II Changeover of the retail payment infrastructure, and handling of previous national currency payments after 1 January 2002

21 The most common forms of making (non-cash) payments have been possible in both previous national currency and euro since the start of 1999 in all euro-area countries. Such dual functionality required a large investment by the banking sector in the run-up to EMU, but little further work is now needed for the end of the transition. The main remaining issues for the retail payment infrastructure concern the euro adaptation of POS and ATM terminals, and the handling of any remaining previous national currency payments after 1 January next.

POS and ATM terminals

22 Between now and end-2001, individual POS terminals (used for electronic credit and debit card payments in shops) and ATMs (for payment of bills in countries where ATMs provide this functionality) have to be adapted to enable payment in euro. In all cases, this involves software changes, and sometimes the terminals themselves need to be replaced. The work is now under way, although progress differs between euro-area countries. The Commission has recommended that all POS terminals should be able to process transactions in euro from the beginning of 2001 Q3. In some countries, some or all terminals are owned by individual retailers (rather than banks), which makes a co-ordinated and timely adjustment much more difficult. Nevertheless, Belgium, France and Spain aim to have all terminals converted to euro use by late summer, although in practice the process may take somewhat longer. Elsewhere, all terminals may not be adapted until the very end of 2001.

23 Even if the terminals have been made technically ready for euro use, this does not imply that payments will actually be made in euro ahead of 1 January 2002. In Austria, Ireland, Luxembourg and the Netherlands, POS payments can only be made in previous national currency until end-2001; the switch to euro will take place at midnight on 31 December. In other countries, a choice can currently be made between paying in previous national currency or euro, when terminals have been adapted. But, in practice the euro option has not been much used so far. In some countries, retailers choose the denomination, and they are unlikely to make much use of the euro while their bank accounts remain in previous national currency. In any case, as long as the bank accounts of retailers and their customers have not been converted, payments on POS/ATM terminals in euro will have little visible effect, since the amounts will be credited and debited in previous national currency. Even where bank accounts have been converted to euro, the large-scale use of the euro option for POS/ATM payments may be unlikely until the introduction of euro notes and coin.

Treatment of remaining former national payments after 1 January 2002

24 All non-cash payments will be in euro only from 1 January 2002, as the previous national currencies will no longer be legally valid. However, there will be some payment orders denominated in previous national currencies to be settled after 31 December: mainly cheques and other paper-based payments (eg giro forms) written in late-2001 but not cleared before the beginning of 2002.

25 In a number of countries, banks will move to issuing euro cheque books from the middle of this year, and provide previous national currency cheque books only on request. For example, Spanish banks will stop issuing peseta cheque books from end-June. Such an approach will help to reduce the number of uncleared previous national currency cheques to be handled early next year. Everywhere, customers will be informed that it will no longer be possible to use previous national currency cheques or other paper-based payment forms after 1 January 2002, as they will no longer be legal instruments. Cheques in previous national currency dated after 31 December (including post-dated cheques common in some Mediterranean countries) will not be accepted; instead, recipients will be expected to seek replacement euro cheques from the issuers.

26 The payment infrastructure in all euro-area countries will be able to deal with outstanding payment orders in early-2002, although in different ways, partly depending on the clearing method. Three different methods which are currently used for handling euro and old national currency payments in the retail payment infrastructure were described in the November 2000 *Practical Issues* (pages 67-72). In all cases, the previous national currency clearing will continue for a time into early 2002, before being discontinued. Table 1 (final column) summarises current plans. After the specified dates, individual banks will decide whether and under what conditions (including fees) to deal with such outstanding previous national currency payment orders.

- *Countries using method 1 (dual currency, single system)* In Germany, the Bundesbank and the banking community have agreed that individual banks may in exceptional circumstances continue to accept DM payment orders beyond 1 January 2002, if they so choose. The Bundesbank will tolerate DM payments until 28 February. Any such DM payments will have to be converted to euro by the initiating bank and both amounts input (in separate fields) in the payment message: both denominations will, as now, be carried through the interbank clearing system. The agreement covers all non-cash payment forms (credit transfers, direct debits, cheques and POS payments). The Bundesbank has made clear that the agreement should not be interpreted as an extension of the transition period in Germany. In Luxembourg, the electronic netting system will also accept payment instructions in previous national currency until 28 February 2002.
- *Countries using method 2 (a single currency system with conversions from one denomination into the other at both ends)* The base currency of the interbank payment system has been in euro in Belgium (since 1 January 1999) and in the Netherlands (since mid-February this year). Previous national currency payments thus have to be converted to euro before entering the system, and back again to previous national currency if the recipient accounts are still in previous national currency. This process will continue for some time into 2002. In Belgium, any remaining cheques

TABLE 1: EURO AND FORMER NATIONAL CURRENCY PAYMENTS IN THE RETAIL PAYMENT INFRASTRUCTURE: 1999 – EARLY 2002				
	Method used to deal with two denominations[1]	**Base currency of system since 1 January 1999**[1]	**Date of base currency conversion to euro**[2]	**Central clearing of remaining legacy payments until:**
Austria	Method 3	Parallel euro and schilling	Not applicable	28 February 2002
Belgium	Method 2	Euro	In euro since 1 January 1999	Early-July 2002
Finland	Method 2	Markka	1 January 2002	28 February 2002
France	Method 2 (method 3 for cheques until mid-2001)	Franc	Mid-February 2002	28 February 2002
Germany	Method 1	Euro and Deutsche mark	Not applicable	28 February 2002
Greece (from 2001)	Method 3 (method 2 for some cheques)	Parallel euro and drachma	Not applicable	28 February 2002
Ireland	Method 3	Parallel euro and punt	Not applicable	30 June 2002[3]
Italy	Method 3	Parallel euro and lira	Not applicable	28 February 2002
Luxembourg	Method 1	Euro and franc	Not applicable	28 February 2002
Netherlands	Method 2	Guilder	Mid-February	1 April 2002[4]
Portugal	Method 3	Parallel euro and escudo	Not applicable	28 February 2002
Spain	Method 3	Parallel euro and peseta	Not applicable	28 February 2002

Notes: 1 methods 1, 2 and 3 are defined in the text
2 only relevant in case of method 2
3 with strong encouragement to lodge punt cheques by 9 February
4 only for paper payment orders and giro collection forms

and paper credit transfer forms in Belgian francs will be processed until early-July 2002. From 1 January 2002, all payment orders (paper payment orders, files and electronic payments) should be in euro only, though banks may provide special arrangements for some of their clients on a bilateral basis, if necessary. In the Netherlands, giro collection forms and paper payment orders in guilders will still be processed centrally until 1 April 2002. Dutch banks will circulate euro giro collection forms from 1 December for payments due in 2002 (cheques will be phased out completely by end-2001, and will not be made available in euro). By contrast, in Finland and France the base currency of the interbank payment system is still in previous national currency. This will be changed to euro on 1 January 2002 in Finland; express transfers in markkas can be initiated and cleared until 28 February 2002. In France, the change of base currency will take place in mid-February 2002. Only the Paris clearing house will continue to clear French franc cheques from 1 January until 1 March 2002, after which any French francs will have to be cleared manually, possibly with higher charges.

- *Countries using method 3 (separate or parallel clearing)* The separate former national currency clearing will continue for some time in 2002 to deal with outstanding payment orders. For example in Italy, lira cheques written before end-2001 will be electronically cleared until end-February, and if necessary manually after that date. In Spain, the separate clearing for peseta cheques will also be switched off on 28 February 2002, although banks will be able to continue clearing any remaining peseta cheques under a 'miscellaneous' section of the clearing system. There is no specific time limit for accepting such cheques, and individual banks will decide whether to accept them on a case-by-case basis (cheques are rarely used in Spain). In Portugal, only escudo cheques written before 1 January 2002 will be allowed to be processed in the clearing system (until 28 February). In Greece, the drachma clearing will close on 28 February.

Clearing of euro cheques and other paper instruments from 1 January 2002

27 *Euro cheques* From 1 January 2002, cheques will be denominated exclusively in euro rather than previous national currencies; but cheque clearing systems will still operate on a national basis. Where cheques have to cross different clearing systems (ie are handled on a collection basis rather using a clearing system), the time-delay and costs will be higher than for those clearing within a single system. Banks, inside and outside the euro area, may want to inform customers that cheque clearing has not been simplified. Previously, the national currencies clearly identified the country of origin, but this will no longer be the case with euro cheques. So banks will need to ensure that cheques clearly identify their country of origin. The European banking guidelines on cross-border cheques include the recommendation that drawee banks should specify their country or ISO country code on any euro-denominated cheque form.

28 *Travellers cheques* Unlike national currency travellers cheques, which have different formats and are cleared nationally, euro-denominated travellers cheques will have a common (French) standard and be cleared in Paris. This may have implications for customer charges for cheques from countries other than France.

29 *Bankers' drafts* These must be in euro from 1 January 2002; and, in order to avoid payee charges, must be drawn on a bank in the country where they are to be presented.

III Other end-of-transition period issues

30 The November 2000 *Practical Issues* (pages 73-74) identified a number of outstanding technical questions, relating to the end of the first-wave transition, on which guidance was sought by market practitioners. Some of these questions, which relate to the conversion of bank accounts and processing of payments, have been discussed earlier in this Chapter. The remaining questions relate to the redenomination of debt instruments and share capital expressed in previous national currency at the end of the transition period; accounting conventions for companies from 1 January 2002 onwards; the treatment of historic information; and external reporting.

31 The Commission, assisted by Member States, has provided answers in a paper dated 29 January, available on the Bank of England website. Some further relevant information is included in the annex to the Commission's *Report on the Preparations for the Introduction of Euro Notes and Coins*, published in April. The Commission will shortly provide an update of the original document, which the Bank will again post on its website. The questions and responses are summarised in Tables 2 and 3.

Redenomination of debt instruments and share capital

32 *Bonds* Article 14 of Council Regulation 974/98 states that bonds remaining denominated in previous national currency at the end of the transition period should be 'read as euro'. But does this mean the securities should formally be redenominated to euro at the end of this year, or may the nominal values be left in the previous national currency? The Commission has confirmed that such securities do not formally have to be redenominated into euro, since Article 14 implies that the legal status of such securities is unaffected by their continuing expression in historic monetary units. The Commission has similarly confirmed that Article 14 does not require all monetary amounts physically to be rewritten in euro. National responses are consistent with this principle. In Spain, any bonds still denominated in former national currency at the end of 2001 will automatically be expressed in euro from 1 January 2002 by the depository systems in which these are held.

TABLE 2: END-OF-TRANSITION QUESTIONS RELATING TO REDENOMINATION OF SECURITIES

	Will bonds still denominated in former national currency at the end of the transition period have to be formally redenominated to euro?	**Do bonds still denominated in former national currency post-31 December need to be deemed as redenominated for the purpose of calculating payments after 31 December?**	**Will all share capital have to be formally redenominated to euro by end 31 December?**
European Commission on the general situation	**No** 'Shall be read as euro' (Regulation 974/98). No need physically to rewrite in euro, but early physical redenomination may be desirable.	**Yes** Interest rate must be applied to the redenominated euro amount, rather than the old national currency amount with subsequent conversion to euro. The redenomination method (at level of investor/bond level; 1cent/1euro minimum value) is determined by national law.	**No** The situation is the same as for bonds: share capital still expressed in former national currencies is to be 'read as euro', but redenomination will have to take place as soon as a change in share capital occurs on any date after 31 December.
Qualifications to the Commission's view in individual countries		**Belgium** - the authorities recommend that current calculation terms should not be modified (coupon amounts calculated in old national currency and then converted to euro) as coupon amounts have already been calculated and printed in old national currency on the bond (no additional calculations necessary). **Greece** - payments due will be calculated as before in drachmas and reported to the central bank, which will subsequently credit banks, custodians or institutions with the euro equivalent according to the fixed conversion rate. **Euroclear** and **Clearstream** – coupon amounts and capital repayments will continue to be calculated on the basis of the individual participants' securities holdings expressed in former national currency; only the final net proceeds will be converted into euro (as currently).	**Belgium** - no obligation, but a simplified and less expensive procedure is available during the transition period. **Luxembourg** - if no decision by a company to convert, redenomination will take place automatically on 1 January 2002. **Spain** - redenomination will take place automatically on 1 January 2002. **Italy** - from 1 January 2002 adoption of the euro is compulsory.

33 *Coupon payments* How should payments of interest and repayments of principal in euro after 31 December be calculated, where bonds have not by then formally been redenominated? In particular, should calculations be made on the basis of the bond being deemed to have been redenominated first (ie for interest payments, applying the interest rate to the nominal value of the bond in euro); and, if so, what method of redenomination should be used? The Commission has stated that, in such a case, the interest rate should be applied to the redenominated euro amount, and that national laws should determine the method of redenomination. Table 2 shows that some countries will adopt a different approach to that set out by the Commission. In these countries, interest payments will be calculated by applying the interest rate to the bond's nominal value expressed in previous national currency, and subsequently converting the amount payable into euro at the fixed conversion rate. In practice, the difference between the results of the different calculation methods will be small, but market practitioners should note the different national conventions.

34 Of the two ICSDs, Euroclear has recently issued to members a newsletter on this and other end-of-transition period issues. From early-November, it will no longer use previous national currency cash balances. Securities that have not been redenominated by end-year (at the request of the issuer) will not be redenominated by Euroclear, but will remain in previous national currency after 1 January 2002 and be read as euro until they mature (or redenominated at the request of the issuer, as this will still be possible after 1 January 2002). Coupon amounts and capital repayments on non-redenominated securities will continue to be calculated on the basis of each individual participant's securities holdings expressed in previous national currency; only the amount of the final net proceeds will, as now, be converted into euro. Euroclear will thus not follow the recommendation by the Commission, as it would be too complicated and costly (its systems would have to be changed), without having any clear benefit since the differences would be insignificant. Clearstream is expected to follow the same approach as Euroclear.

35 *Share capital* Are companies whose share capital is still denominated in previous national currency obliged formally to redenominate this to euro by the end of the transition period? The Commission has stated that the situation is the same as for bonds: Article 14 implies that such share capital will be read as euro and there is no need for formal redenomination. However, the Commission has also made clear that the method by which nominal share capital values are converted to euro is determined by national legislation, and that any change in the nominal fixed capital in a company's statute after 31 December would have to be expressed in euro. The summary of national responses set out in Table 2 shows that, in a few euro-area countries, all share capital will automatically be redenominated at the end of the transition period.

Company accounts, historic information and external reporting

36 *Company accounts* How should companies file accounts after the end of the transition period, in respect of an accounting period ending before then, and are such accounts required to be in euro or may they be denominated in previous national currency? The Commission has indicated that such accounts may be filed in either previous national currency or euro, recognising that individual countries may restrict the options by national law. Table 3 shows that in practice only a small number of countries appear to have imposed

TABLE 3: END-OF-TRANSITION QUESTIONS RELATING TO COMPANY ACCOUNTS, HISTORIC INFORMATION AND EXTERNAL REPORTING

	Will companies filing accounts after 31 December, which relate to an accounting period ending on or before 31 December, have to denominate these in euro?	Do all companies' internal accounts, systems, historic data and records have to have been converted to, and be kept in, euro after 1 January 2002?	When companies report information externally after 1 January 2002, will this have to be in euro?
European Commission on the general situation	**No, but subject to national law** Accounts filed in 2002 or thereafter with respect to accounting periods ending before 1 January 2002 can be in either old national currency or euro, as far as euro Regulations are concerned. Member States may restrict the options by virtue of national law.	**Yes, if national law requires use of national currency** The Commission services have expressed a view in a letter of 24 May 2000 to the Federation of European Accountants. From 1 January 2002, where the law requires the use of the national currency, the euro should be used.	**Yes** It follows from the meaning of 'read as euro' that the information must be given in euro. This is part of the euro Regulations; there are no alternatives for national legislation.
Qualifications to the Commission's view in individual countries	**Spain** – companies are advised to file them in euro, but this is not compulsory. **Greece** – companies filing accounts from 1 January 2002, in respect of an accounting period ending before 1 January 2002, will have to denominate them in euro. **France** – in 2002, company accounts for 2001 have to be drawn up in euro.	**Austria** - there is no obligation to convert internal accounts and records from before 1 January 2002 into euro. **Belgium** - no obligation to convert internal databases. **Ireland** - historic data and records do not have to be converted to euro, apart from comparative figures to be used in company accounts covering periods ending on or after 1 January 2002. **Netherlands** - there is no legal prohibition on companies continuing to keep their internal books in old national currency. **Spain** - historic data do not have to be converted apart from comparative data used in company accounts filed in euro. **France** - there is no obligation to convert historic data into euro.	**None**

more restrictive rules on companies and require company accounts for periods ending on or before 31 December to be denominated in euro.

37 *Historic information* Can companies' internal accounts and systems, and historic records, be kept in previous national currency after the end of the transition period? The Commission indicated in a letter in May 2000 to the Federation of European Accountants that, for companies' internal accounting, the euro will have to replace the national currency units in those Member States where the law requires the use of the national currency. Six countries have explicitly stated that they will not require internal accounts and/or historic data to be converted to euro from 1 January 2002. But clearly, all financial institutions need to consider carefully whether any changes are necessary or desirable.

38 *External reporting* Can any information (such as the nominal values of bonds which have not been redenominated) still be reported externally in previous national currency, or must it first be converted to euro? The answer is clear: information must be reported in euro, without exception, since this is determined by the euro Regulations.

39 *31 December 2001* TARGET will be closed on 31 December (a special TARGET holiday). All national RTGS systems in euro across the EU will be similarly closed. This also affects related euro payment and securities settlement systems. 31 December will generally not be a Bank Holiday, and many banks in the euro area will be open to the public, although opening hours and banking services may be limited; in others, banks will remain closed to the public, but staff will be working on the changeover. Owing to the closure of TARGET, euro payments (wholesale or retail) cannot be settled on that day.

B THE INTRODUCTION OF EURO NOTES AND COIN

40 The introduction of euro notes and coin to replace the current national cash will be an enormous exercise, posing considerable logistical challenges. The euro-area authorities understand the importance of a smooth cash changeover, and have been actively engaged for some time to achieve this. This section compares and contrasts the main elements in the national cash changeover scenarios, focusing mainly on financial sector issues.

- All euro-area countries now have comprehensive cash changeover plans, which differ in their details, but which are set within a common European framework.
- Some $14^1/_4$ billion euro notes are being printed and some 50 billion coin minted, weighing perhaps 250,000 tonnes: similar amounts of old national notes and coin will be withdrawn.
- By common agreement, the exchange itself will be concentrated into a short period, during the first two months of next year, so as to minimise the costs falling particularly on retailers and banks; the aim is for the vast bulk of cash transactions to be paid in euro by mid-January.
- The scale and complexity of the logistics, together with the decision to complete the exchange in a short time-period, make it essential to have the notes and coin widely pre-distributed to banks and retailers later this year, for widespread use immediately from 1 January next.
- This pre-distribution, or 'frontloading' of banks and 'sub-frontloading' of retailers, will be organised differently in each country, taking into account a range of national characteristics, and will in some countries commence at different dates; the process will take longer for coin, because of its bulk, and so will generally begin earlier.
- The frontloading and subsequent introduction of euro cash is more predictable, since it is largely under the authorities' control, than the withdrawal of old national notes and coin, which is much less determined by the authorities and much more by individuals' own behaviour.

Background

41 National cash changeover plans are set within an overall European framework. On 8 November 1999, ECOFIN established four principles to guide the changeover, as follows.

- Member States will endeavour to ensure that the bulk of cash transactions can be made in euro by the end of the first fortnight of 2002.
- Financial institutions, and other key players, can be provided with euro notes and coin ahead of 1 January 2002 to facilitate the changeover. This must not lead to euro entering into circulation before that date.
- Small kits of euro coin can be made available to the public in the Member States, during the second half of December, to enable them – and particularly the vulnerable groups – to become familiar with the new coin.
- The period of dual circulation of the former national currencies and the euro should last between four weeks and two months, though Member States may facilitate the exchange of old notes and coin after this time.

42 The ECOFIN statement has since been supplemented by the ECB and Commission. On 3 August 2000, the ECB announced details of the timing of frontloading and the associated financial arrangements (these were formalised in an ECB guideline on 10 January).

- The earliest date for frontloading of euro cash to credit institutions, and for sub-frontloading to cash-in-transit companies, the vending machine industry and retailers, is 1 September.
- Credit institutions will not be debited this year for any euro notes and coin supplied to them. Instead, the value of this cash will be debited in three equal amounts early next year, on 2, 23 and 30 January, which are all settlement dates for ECB main refinancing operations.
- Frontloading of credit institutions will not require collateralisation before 1 January 2002, where ownership of the euro cash will remain with the relevant central bank. Credit institutions will be required to deliver collateral by the end of the last business day of 2001 (28 December), for the value of frontloaded cash delivered before 31 December. Credit institutions carry the risk of any frontloaded cash which is destroyed or stolen.
- Where credit institutions sub-frontload to other entities, collateral should be provided to the central bank at the time that sub-frontloading takes place.

43 On 11 October 2000, the Commission proposed further measures to smooth the changeover process; these include the following.

- During the dual circulation period, bank customers should be able to exchange notes and coin free of charge in unlimited quantities (subject to a notice period for large quantities), and non-customers should be able to exchange notes and coin free of charge but subject to ceilings.
- Arrangements should be made to enable citizens to exchange their national notes and coin for euro at banks for some time after the end of the dual circulation period.

- Arrangements should be made for coin to be exchanged at official institutions after the end of the dual circulation period for long enough to allow holders of coin living abroad to return them.
- To facilitate the giving of change, sufficient quantities of small notes should be made available in cash dispensers from the early days of 2002.
- Retailers should be encouraged to give change exclusively in euro from the beginning of January 2002.

44 The Commission provided on 9 April further, more detailed, guidance reflecting 'good practices' in Member States' national plans. It continues to monitor the implementation of cash changeover plans and to report regularly to the Eurogroup of Finance Ministers. The ECB is co-ordinating and overseeing the euro note production process; and has also recently established a Eurosystem Cash Changeover Co-ordination Committee (CASHCO) to monitor the preparations for, and implementation of, the introduction of euro notes and coin.

45 The ECB is also undertaking an information campaign to inform the general public about the new notes and coin. It launched the first part of this in March under the slogan 'the Euro, our money'; the campaign will intensify later this year, and from September will publicise the detailed euro note designs, including their security features. There will also be extensive and intensive national information campaigns.

I Preparations for the introduction of euro notes and coin on 1 January 2002

46 Although euro notes and coin may only be used by the general public for cash transactions from 1 January 2002, massive 'behind the scenes' logistical preparations must be completed before then to allow this.

Production of euro notes and coin

47 The ECB plans for $14^1/_4$ billion banknotes, with a value of €642 billion, to be printed by end-2001, including logistical stocks of over 4 billion notes. The ECB has said that production is on schedule to meet this target. In addition, around 10% more notes will be printed as an extra central reserve, in order to contribute to a smooth cash changeover. The production of notes is decentralised (Table 4), with each euro-area country deploying its normal arrangements. Most, but not all, countries have their own note printing capacity, generally owned by the central banks, and these printing works are printing the bulk of their euro banknote requirement. But some countries have chosen to outsource the printing of particular denominations (mainly €200 and €500 notes, which are only required in small volumes); and a small number of countries, including Greece which has obviously had less time to prepare, are using other sources to supplement their own production. The ECB is monitoring closely this decentralised production process, including by comparing monthly production data against national targets. Member States are responsible for coin production, and it is estimated that around 50 billion euro coins will be minted by end-2001, with a value of close to €16 billion. Each mint is responsible for the quality of its own coin, but the ECB serves as an independent assessor.

TABLE 4: PRODUCTION OF EURO NOTES AND COIN BEFORE 1 JANUARY 2002*		
	Number of notes to be printed (million)	Number of coin to be minted (billion)
Austria	550	1.5
Belgium	530	2.0
Finland	225	1.1
France	2,240	7.5
Germany	4,342	17.0
Greece	597	1.3
Ireland	222	0.9
Italy	2,380	7.2
Luxembourg	46	0.1
Netherlands	659	2.8
Portugal	536	1.3
Spain	1,924	7.1
Euro-area total	**14,251**	**49.8**

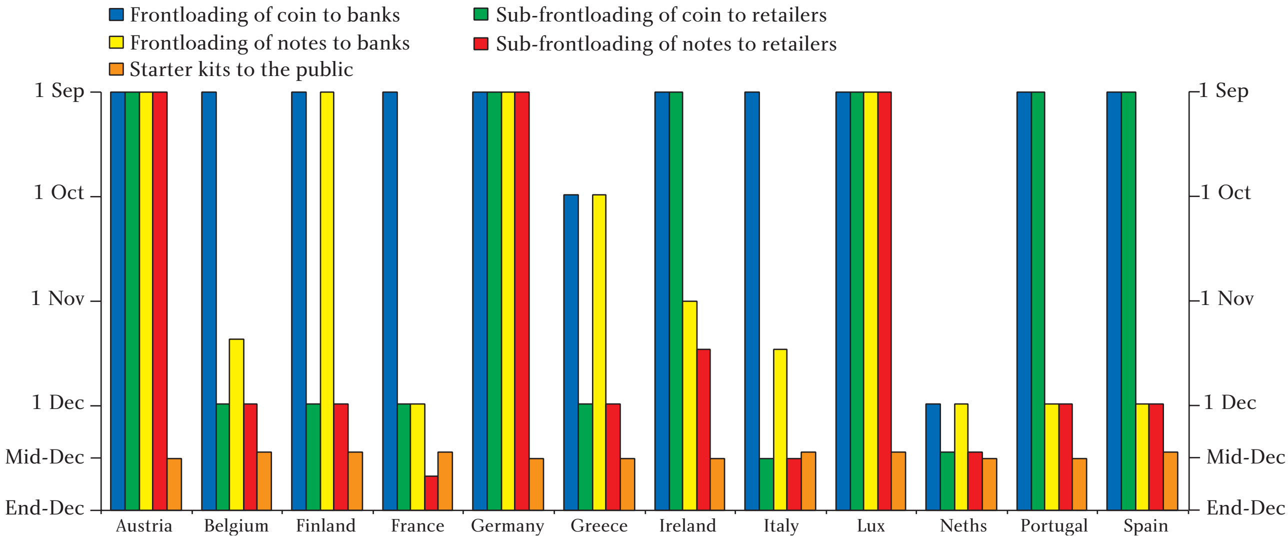
*not including additional contingency stocks
Source: ECB

Frontloading and sub-frontloading

48 To ensure that sufficient euro notes and coin are available for circulation from the start of next year, large quantities will be distributed to banks and retailers this year. The process of frontloading (to banks) and sub-frontloading (to retailers and other businesses that handle cash) is being co-ordinated by national authorities, consistent with the above principles set out by ECOFIN, the ECB and the Commission. Chart B shows when frontloading will begin in each country. The different timings reflect many influences, including the size and geography of countries, the extent of the central bank branch network and therefore its direct involvement in distribution, the capacity of cash-in-transit companies, and the storage facilities available in bank branches. More general differences in the approach to the changeover may also be a factor (for example, the Netherlands will start late because it sees merit in a concentrated process and believes it can achieve this).

49 To organise the frontloading, banks have been asked to place orders with their national central bank for the amount of euro cash they wish to receive, including the amounts needed for sub-frontloading customers. All central banks have received initial estimates from banks, and in many countries firm orders have now been placed. Around one-quarter of the euro notes and perhaps one-third of the coin are expected to be frontloaded, although the proportions vary significantly across different countries (in part because of the different periods which the frontloaded currency is intended to cover, and the extent to which small denomination notes will be involved).

CHART B: TIMING OF FRONTLOADING IN DIFFERENT COUNTRIES



Source: relevant Member State authorities

Distribution of frontloaded euro notes and coin

50 In most euro-area countries, the central bank is responsible for distributing notes and coin. The bulk and weight of coin makes their distribution and storage an especially demanding exercise. Coin will be transported in standard packs of different sizes. For example, in Spain the 'standard unit of supply' weighs over 150kg and is worth €9,525 in various denominations, although very small kits of about €30 will also be made available, for use particularly by smaller retailers. The logistics of note distribution are relatively less problematic, but the higher value of banknotes means that security must be a major concern.

51 The different approaches taken to distribution partly relate to the infrastructure that each country has available, such as the number of central bank branches and cash centres. This number varies considerably from country to country, with one central bank branch in Ireland and Luxembourg, and over 200 in France. Some countries, such as Spain, have negotiated the use of regional warehouses for additional storage facilities.

Financial aspects of frontloading and sub-frontloading

52 All countries will apply the debiting model as intended by the ECB. It involves formal compensation to the banks, and is intended to defray some of the extra costs arising during the withdrawal period. In addition, a few countries are introducing additional schemes to compensate the banks (see below).

53 Within the ECB framework, the collateral arrangements applied by central banks will differ in practice. Some central banks will not retain ownership of frontloaded currency, and thus require credit institutions to collateralise all notes and coin with which they are frontloaded from the date they receive them. In other cases, such as the Netherlands, credit institutions will be required to collateralise all frontloaded currency, even where the central bank does retain ownership of the currency, on the basis that this will be simpler to

implement, because it avoids the central bank having to monitor daily the amount of sub-frontloading by banks to retailers in order to adjust the collateral requirements.

54 In all countries, the precise arrangements for banks' sub-frontloading of retailers will be negotiated between individual banks and retailers, taking into account *inter alia* credit risk and the commercial relationships involved. Some banks may be content to bear the full risks associated with sub-frontloaded cash, until the retailer pays for it at the beginning of January 2002; others will request collateral or some form of guarantee, or require retailers to pay when they receive the cash. In some countries, banks may debit retailers immediately for the amounts sub-frontloaded, but with a value date of 2 January 2002, to defray some of the retailers' costs but exposing themselves to credit risk.

55 Ensuring sufficient sub-frontloaded cash is distributed to the right, and right number of, retail outlets poses a significant challenge. Because of the storage and other costs involved, retailers would rationally only want to receive notes at the last moment, immediately before 1 January. But clearly this is logistically impossible for all. So banks have to agree a schedule, which will involve some retailers bearing significant costs. Some of them may seek to receive part of the bank compensation involved in the debiting model. Equally, all retailers know that it is in their own interests to have sufficient euro cash available for change from 1 January, so they may accept the costs involved in recognition of their significant role in a smooth changeover.

'Starter kits' for the public

56 In addition to 'starter kits' for retailers, euro-area countries will all make euro coin available to the general public from mid-December (either 15 or 17 December). The coin will be provided in standard 'starter kits', for general purchase at the face value of the coins (on average €12) through a wide range of outlets, including central banks, commercial banks, post offices and retailers. Some countries have found it difficult to negotiate with the most obvious channels to sell the kits, but all now believe they have sufficient outlets. In Belgium, to complete the authorities' desired distribution, employers are being encouraged to give free starter kits to their employees as a (non-taxable) gift, which will also be tax deductible for the company.

57 The starter kits are intended to familiarise the general public with the new coin ahead of 1 January, but they should also ensure a sufficiently widespread distribution of coin to use in change in early-January. Only in the Netherlands will an additional 'euro-kit' be given free to the public in a presentation wallet, which is likely to be kept as a souvenir.

Other measures to prepare for the changeover

58 Many other measures aimed at achieving a smooth changeover will be implemented later this year.

- *Collection of hoarded coin* All countries will run schemes to encourage the public to return old national currency notes and coin which they may have hoarded 'under the mattress'. The aim is to avoid as far as possible such hoards being exchanged during the changeover period itself. For example, in Belgium there will be a 'piggy bank operation' between 15 October and 15 November, when the public will be encouraged to bring hoarded notes and coin to banks for payment into their accounts; plastic containers to hold such coin will be distributed free of charge.

- *Low-denomination national currency banknotes late in 2001* In some countries, such as Germany and Spain, banks will be encouraged to distribute old national currency notes in low-denominations, both via ATMs and bank counters, late this year. This is intended to minimise the amount of euro change which retailers will be required to provide early next year.
- *Education and communication* All euro-area countries are planning major information campaigns throughout this year and into next, to familiarise the public with the new currency. The campaigns are being co-ordinated to some extent by the ECB and the Commission. Information will be communicated through the mass media, and through literature provided by, for example, banking, retailer and other trade associations. Messages will be kept as simple as possible, and there will be a particular focus on certain vulnerable groups.
- *Dual pricing* A key element in increasing the public's awareness of the cash changeover is dual pricing, whereby retailers display prices in both previous national currency and euro. With support from the Commission, representatives of consumers, traders and SMEs issued a joint statement on 2 April in Brussels, advocating that euro prices should be more prominently displayed than previous national currency prices from September.
- *External recommendations* The Commission's *Report on the Preparations for the Introduction of Euro Notes and Coin*, dated 6 April, includes ten examples of useful measures that can be taken before 1 January 2002, such as information campaigns and distributing national banknotes in late-December in smaller denominations.

II Dual circulation period

- Euro notes and coin will begin to enter circulation on 1 January 2002, and for a period of no more than two months (and for some countries less) the national currency notes and coin will continue to be legally accepted.
- If, as ECOFIN intends, some three-quarters or more of cash transactions are to be in euro by mid-January 2002, this will require retailers to provide, and consumers readily to accept, only euro in change from 1 January.
- Rather than adopt a laissez-faire approach to the pace of change, some countries will try proactively to accelerate it.
- A key aspect will be the ability of ATMs to dispense euro notes instead of national currency notes immediately from 1 January.

59 In order to minimise costs on retailers and banks, the dual circulation period was shortened by ECOFIN in 1999 from six months to a maximum of two months. Most countries will use the maximum; but in the Netherlands dual circulation will end at end-January, in Ireland on 9 February, and in France on 17 February 2002. National currency will retain legal tender status through the dual currency period, except in Germany where the Deutsche mark will cease to be legal tender on 31 December, but this date is not expected to have any practical significance.

60 All countries will aim to convert to euro the majority of cash transactions by mid-January 2002, and some countries much earlier (for example the Netherlands, where the authorities hope 75% of cash payments will be in euro by the end of the first week of next year, consistent with completing the dual circulation period by end-January 2002). All the preparations described in the previous section are designed to achieve a smooth and orderly changeover in such a concentrated period. Whilst the authorities are planning intensively with this in mind, ultimately the pace of change will be determined by the behaviour of retailers and the general public. It is hoped that a short dual circulation period will instil a sense of urgency amongst the public, and encourage them to begin using the euro immediately, knowing that national currencies will disappear rapidly from circulation.

61 In a number of countries, further encouragement to a rapid changeover will be given. This will take many forms, including increasing the distribution of small denomination notes to reduce the amount of euro needed in change, and suggesting that consumers offer the exact money in euro for cash purchases. In a number of countries, banks' opening hours will be extended in the first few days or weeks of next year, to assist both retailers and the general public. Formal agreements to this effect have been reached in a number of countries, including Germany, Luxembourg and the Netherlands, where banks have agreed to open for at least a few hours on 1 January 2002 (for a limited range of cash-related services). In addition, some banking associations will actively promote the use of electronic forms of payment, including debit cards, to facilitate consumers' purchases in euro.

62 ATMs will naturally play a key role in the cash changeover, since they provide the major route through which cash enters circulation. Software changes are required to allow ATMs to dispense euro notes, and in every country these are in hand. Nevertheless, the speed at which ATMs will be able to dispense euro notes early next year will vary slightly from country to country. Different types of ATM exist, and those countries where four-drawer machines predominate have a distinct advantage (two drawers may be filled with euro prior to 1 January 2002, while the other two drawers continue to dispense national currency; and the active drawers can be switched over remotely at midnight on 31 December). Moreover, the number of ATMs, their geographical dispersion, the proportion of on-site as opposed to off-site machines, and the ownership and management of ATM networks, all vary between countries. Clearly, a quicker conversion of ATMs is likely to promote a faster cash changeover. Table 5 identifies the national differences in the pace of likely ATM conversion, and the policy for ATMs whilst they remain unconverted.

63 A quick changeover will also be assisted where ATMs dispense small denomination notes, but they do not lend themselves to this because of the need frequently to restock. In addition, in some countries, physical limitations of the machines mean that the €5 notes are too small for the cartridges used. Nevertheless, at least in Belgium, Germany and Spain, it is planned that normal-size withdrawals will be dispensed through small denominations.

TABLE 5: CONVERSION OF ATMs				
	Targeted % of ATMs to be converted on 1 January	**Period until all ATMs dispense euro**	**Policy for ATMs not converted**	**Denominations distributed by ATMs in early 2002**
Austria	100%	Overnight	Withdrawn from use	Generally €10 & €100[1]
Belgium	100%	Overnight	Withdrawn from use	Mainly €20 and €50 with €5 from some banks
Finland	About 38%	About two weeks	Continue to provide markka	€20 and €50
France	At least 65%	Two weeks	Will not be reloaded with French francs	Mainly €10 and €20 plus some €50
Germany	Almost 100%	One day	Withdrawn from use	€5, €10, €20 and €50[2]
Greece	90%	Two weeks	Continue to provide drachmas but withdrawn after 15 January	€10, €20 and €50
Ireland	About 80%	Three working days	Withdrawn from use	Mainly €10 and €20 with €5 from some ATMs
Italy	At least 90%	Two weeks	Withdrawn from use	€10 and either €20 or €50
Luxembourg	100%	One day	Withdrawn from use	€5, €10, €20, and €50
Netherlands	Virtually 100%	One day	Withdrawn from use	Around half will provide €5. Otherwise €10, €20 & €50
Portugal	About 20%	One week	Continue to provide escudos	€5, €10, €20 and €50
Spain	Around 90%	One week	Continue to provide pesetas	Mainly €20 and €50 plus €10 where possible

Notes: 1 cash dispensers in banks will also provide €20 and €50

2 €5 and €20, only where ATMs have four cassettes

Source: relevant Member State authorities, European Commission and ECB

III After the dual circulation period

64 Once the dual circulation period ends, all previous national notes and coin will have ceased to be legal tender, and in principle, the only outlet for them will be banks and central banks. Many banks are likely to continue to exchange the old national notes and coin after the end of the dual circulation period, although not all will offer this service free of charge and may do so only for their customers. Some national authorities have already co-ordinated an approach to exchanging cash after the dual circulation period, and have agreed with banks the conditions under which they will do this. However, in many countries this will be left to individual banks, and in others the situation has not yet been finalised (and it may not be until next year or indeed until close to the end of the dual circulation period). The current situation in euro-area countries is set out in Table 6. In all countries, national central banks (and mints in some countries) will continue exchanging old national notes and coin for extended periods.

TABLE 6: EXCHANGE OF PREVIOUS NATIONAL CURRENCY NOTES AND COIN AFTER DUAL CIRCULATION PERIOD

	Banks/post offices	Central banks/mints
Austria	Individual banks decide; non-customer charges likely	Indefinitely
Belgium	Until end-2002	Notes: indefinitely Coin: until end-2004
Finland	To be decided individually by banks; charges likely	10 years
France	Until 30 June 2002	Notes: 10 years Coin: 3 years
Germany	To be decided individually by banks	Indefinitely
Greece	Under discussion	Notes: 10 years Coin: 2 years
Ireland	For a period still to be decided	Indefinitely
Italy	To be decided individually by banks	10 years
Luxembourg	Until 30 June 2002; some banks may continue until end-2002	Notes: indefinitely Coin: until end-2004
Netherlands	Until end-2002; free of charge to customers until 1 April 2002	Notes: 30 years Coin: 5 years
Portugal	Banks until 30 June 2002	Notes: 20 years Coin: to end-2002
Spain	Until 30 June 2002	Indefinitely

Source: relevant Member State authorities

IV Risks and contingency planning

65 There are obviously numerous potential risks to a smooth cash changeover, but each country has devoted considerable resources to identifying events which may disrupt the process and to devising contingency plans. Whilst some circumstances are more difficult to plan for than others, the authorities are confident of being able to complete the cash changeover successfully.

Possible risks to the changeover process

66 The main risks and threats to the distribution process are common to all 12 countries.

- *Storage* Once euro cash starts being frontloaded, banks and retailers will require far more storage space than normally needed for notes and coin. In particular, retailers generally do not have much secure (load-bearing) capacity. Since they will carry the risk of theft or destruction, they may also need increased insurance for this period, and that is a further cost for them to bear.
- *Security* Some countries' capacity to distribute the required quantities of coin to all locations using secure vehicles is only just sufficient. In some countries, the army may be used. Additional security personnel may be required to man the vehicles.

- *Bad weather* Contingency plans against the possibility that extreme weather conditions might disrupt the frontloading process have been drawn up in some countries, but they may not offer complete protection.
- *Industrial action* If there were to be any industrial action, particularly by the work force of transport companies or banks, this could potentially disrupt the process.

Counterfeiting and money laundering regulations

67 The huge volumes of cash likely to be exchanged during a short period of time, and general unfamiliarity with the new euro notes and coin, mean that there will be a greater than normal risk of criminal activity. Both European and national authorities are aware of these risks and implementing measures to address them.

68 The ECB will co-ordinate anti-counterfeiting measures, which include setting up separate central analysis centres for notes (at the ECB) and coin (in Paris). In addition, in each country, National Analysis Centres will be established to collate and exchange information on counterfeits. The euro banknotes will, by design, incorporate a very large number of security features, more than many of the national notes which they are replacing. The security features will be made known to bank staff, retailers and the general public later this year.

69 To combat money laundering and financial crime, Europol (the EU's police co-ordination office) will have a central role as an early warning system, sharing information and arranging joint operations between national police forces.

70 In all euro-area countries, anti-money laundering laws will remain in place. These impose limits on the amount of cash that individuals can exchange at banks at any one time. For amounts above these limits, a day's notice must be given and the relevant authorities informed. Nevertheless, given the much increased workload during the cash changeover period, there is a risk that money laundering may be detected less than normally. This is a particular concern at the borders of the euro area. For example, Germany and Greece both have large borders with eastern European countries, where the Deutsche mark and drachma currently circulate.

71 In France, there will be a temporary relaxation (for six months) in the laws governing the information disclosure requirements when paying into a bank more than Ff50,000. However, this relaxation only affects cases where customers are exchanging francs for euro, rather than paying money into an account, and only relates to fiscal fraud (money laundering requirements will not be relaxed).

V Cost compensation

72 There are no reliable estimates of the costs of the cash (or non-cash) changeover. Nevertheless, they will clearly be significant. Not surprisingly, there have been widespread calls for financial compensation, but only a few countries have acceded to such requests, and then only in relatively modest amounts. The general principles, established by ECOFIN last autumn, are that the costs should be borne where they arise and that governments should not provide compensation.

73 The most significant costs will be faced by euro-area banks. However, compensation beyond the ECB debiting model for frontloading will for the most part not be available. Exceptions are the Netherlands, where some €55 million has been set aside to compensate banks and retailers for their costs of storing and exchanging coin (to be measured by the weight of guilder coins that each firm takes out of circulation); Belgium, where the authorities will provide roughly €20-25 million to cover mainly frontloading transportation costs; Ireland, where banks will receive a lodgement fee (estimated to be worth in total around €7 million) based on the value of national currency repatriated to the central bank, to compensate partly for not charging retailers for providing euro cash and exchanging old national currency; and Germany, where the Bundesbank has *inter alia* devised a bonus system related to the timing of frontloaded note receipts (the earlier that banks are frontloaded, the bigger the bonus received).

C IMPLICATIONS OF THE EURO CHANGEOVER FOR THE UK

74 Although the euro is a foreign currency in the UK, the end of the transition period and the introduction of euro notes and coin in the euro area will also affect UK banks, other financial institutions and their customers.

I Issues for the UK arising from the final changeover to the euro in retail banking

75 UK banks represented on the ECSAs have subscribed to their guidelines on the account changeover and treatment of previous national currency cheques, as described above. APACS and the BBA circulated in May a note to members on this subject, explaining how these European banking industry guidelines can be implemented in the UK (see BBA website). This includes the following.

76 *Bank accounts in former national currencies* APACS data show that there are currently still some 40,000 UK businesses with one or more old national currency accounts. With reference to the European banking industry guidelines, APACS/BBA note:

- *Nostro accounts* Nostro agents in the participating Member States are already seeking instructions regarding outstanding old national currency accounts. Their aim is to convert all such accounts to euro by end-September. If no instructions are received by that date, nostro agents may give one month's notice and proceed to convert.
- *Standard Settlement Instructions (SSIs)* UK banks may well wish to review their correspondent bank relationships for euro and their SSIs. SWIFT has proposed a new broadcast template for euro SSIs relating to correspondent bank changes designed specifically to highlight its significance to market participants and this should be used, if appropriate, by 30 June.
- *Customer accounts* UK banks may wish to follow the practice recommended for banks in the euro area: with appropriate notice and unless the customer instructs otherwise, accounts will be converted to euro from September onwards, and in any case on 31 December. Banks will need to seek customer instructions regarding consolidation of multiple euro accounts arising from these conversions.

77 *Previous national currency payments* APACS/BBA recommend that UK banks and their customers take into account the following.

- From 1 January 2002, all payments that used to be made in former national currency must be made in euro. From August, SWIFT will reject all settlement messages in a former national currency with a value date beyond 31 December.
- Outstanding payments in old national currency originated on or before 31 December, will be applied to euro accounts in euro from the start of next year.
- Every effort should be made to discourage customers from using old national currency after end-2001.
- Customers should be encouraged to lodge any old national currency cheques received by 1 February 2002.
- Banks are expected to accept former national currency cheques after 28 February 2002 only on a collection basis.

78 *Old national currency transactions* APACS/BBA advise UK banks and their customers to be aware of the following.

- All new transactions (deposits, loans, swaps etc) which mature or may continue after 31 December should be denominated in euro, using euro market conventions.
- Former national currency transactions already on the books which mature or continue after 31 December will have to be 'read as euro'. This means that any references to a former national currency are to be replaced by references to the euro (using the fixed conversion rate). That can be achieved by simple redenomination, but a question remains about reconventioning, in particular the business days to be used for fixings, if this affects the economics of the transaction. It is desirable that parties to transactions should agree to full redenomination, including reconventioning, to avoid any future requirements for exception processing. But such action should not be taken unilaterally.
- It is expected that syndicated loans with, for example, three or six-month rollovers which have been drawn and remain in a former national currency will be redenominated in euro on the last rollover date in 2001.
- The BBA intends to cease publication of its old national currency LIBOR rates after 31 December, designating euro BBA LIBOR as the successor rate.
- Where, despite the above, an amount of old national currency falls due for payment on or after 1 January 2002, the equivalent euro amount should be made, using the counterparty's euro SSI.

79 *Travellers cheques* With reference to the European banking guidelines, APACS/BBA note that travellers cheques are now available in euro, and UK banks should be prepared to accept them. Issuers and euro-area banks recommend that euro travellers cheques should be used in preference to former national currency travellers cheques from now on, and that former national currency travellers cheques should not be sold after 1 September. Banks which currently sell old national currency travellers cheques should make contact with their supplying issuer to obtain further details.

80 *Euro payments in the UK* Payments in euro in the UK can currently be made through CHAPS or BACS. And euro cheques drawn on UK banks can be cleared through the euro cheque clearing. Cheques drawn on euro accounts with banks in other countries, including those in the euro area, have to be treated as foreign cheques, due to the differences in national clearing arrangements. Customers should be made aware that euro cheques drawn on UK banks used to make payments outside the UK are likely to involve collection charges for the recipient.

81 *31 December 2001/1 January 2002* Monday, 31 December will be a normal sterling day in the UK (NewCHAPS will be closed for euro payments, but open for sterling). Tuesday, 1 January 2002 will be a TARGET and Bank Holiday throughout the euro area and the UK.

82 *English companies with former national currency shares* English-incorporated companies with existing shares denominated in old national currencies need to plan ahead for the final changeover to euro at end-2001. Although the legal framework for the introduction of the euro (laid down by Council Regulation 974/98) does not apply directly to the UK, the monetary provisions in the Regulation are expected to be recognised by English courts under the principles of private international law. So old national currency share capital of an English company is expected to be treated as converted to euro, and references to old national currency in a company's memorandum and articles of association are likely to be read as references to euro at the fixed conversion rate, from 1 January 2002. Dividends and other amounts should be paid on such shares in euro from that date. If such a company increases the relevant class of its share capital, or issues new shares of the same class, on or after 1 January 2002, the increased capital or the new shares should be expressed in euro.

83 The above Regulation leaves it to the national legislation of each participating Member State to determine what method should be used when redenominating to euro the share capital of companies incorporated in that Member State. There is no UK legislation specifically on this question, since the UK is not a participating Member State. As a result, it is not entirely clear how former national currency shares of English companies will be redenominated and to what extent the rounding rules will apply. In addition, although it should not affect share trading, which is conducted by reference to the number of shares being sold and not their nominal value, the redenomination of share capital from old national currency to euro will invariably result in the par value of the shares being restated to several decimal places.

84 When a monetary amount is paid or accounted for after conversion from a former national currency to euro, the mandatory rounding rules in Council Regulation 1103/97 are directly applicable in the UK and will come into play. So, for instance, if a dividend is paid or capital is returned to shareholders, then rounding will apply to the amount to be paid. It is thought that rounding will apply to the total amount payable to each shareholder and not to the amount referable to each individual share.

85 Although they are not specifically obliged to do so by English law, companies – particularly public companies – may prefer formally to redenominate their former national currency shares by converting to euro at the fixed conversion rate and, if necessary, renominalise their share capital by capitalising reserves to the extent required to achieve round par values. Changes to a company's memorandum and articles of association could

usefully be made at the same time, in order to alter references from former national currency to euro and to round to convenient figures. These steps will, in any event, probably be unavoidable if and when a company wishes to increase its capital or issue new shares after 1 January 2002. A company will need to take professional advice on the most appropriate method of carrying out this reorganisation. In order to save costs, it is sensible for a company to combine the resolutions required for this purpose with other business at its next Annual General Meeting rather than holding an Extraordinary General Meeting. Similar considerations will apply to companies incorporated in Scotland and Northern Ireland.

86 *Remaining old national currency debt instruments issued by UK companies.* As in the euro area, UK companies' bonds still denominated in previous national currency at end-December will be 'read as euro' and do not have formally to be redenominated into euro.

87 *Vendor systems* UK companies also need to ensure that any in-house, or external-vendor, systems that carry old national currency codes or use old national currency logic for payment routing are amended in time.

II Issues for the UK arising from the introduction of euro notes and coin

88 The euro cash changeover has some implications in the UK for the authorities, the institutions that provide foreign exchange services and the general public.

89 *Testing of euro notes* Testing of the new euro banknotes by machine manufacturers, service suppliers (ie companies that install/maintain the machines) and banks will be organised this year by the euro-area central banks. In addition, with ECB agreement, the Bank will also establish a test site at its Printing Works, for those organisations which have a legitimate need to test euro notes, subject to a confidentiality agreement.

90 *Counterfeiting* The UK is required, under the proposed Council Regulation on a new anti-counterfeiting regime for the euro, to establish a National Analysis Centre (NAC) for counterfeit euro notes in the UK. This will be at the Bank of England Printing Works. Also, a Coin National Analysis Centre (CNAC) will be established by the NCIS. It will also be necessary to have laws and regulations in place in the UK (in so far as such provisions are not already directly applicable under EC legislation) that will oblige banks, and other professional cash-handlers (such as bureaux de change), to withdraw euro notes and coin which they 'know or have sufficient reason to believe' to be counterfeit, and to hand those counterfeits over to the relevant UK authorities (the NAC and CNAC). This requirement is similar to the current arrangements for sterling notes and coin.

91 *Frontloading of notes in the UK* To ensure that credit institutions outside the euro area can participate in the euro note pre-distribution, the ECB set out on 14 December 2000 how frontloading may extend beyond the euro area, including to the UK.

- Any distribution of frontloaded euro banknotes outside the euro area may not commence before 1 December.
- Credit institutions located within the euro area will be allowed to distribute frontloaded euro banknotes to their branches or headquarters located outside the euro area, where these are part of the same legal entity. This will be subject to the

frontloading conditions which will apply within the euro area. Any such UK institutions would not therefore be required to provide collateral against the notes received.

- Credit institutions with their main place of business inside the euro area will be allowed to sub-frontload euro banknotes to their subsidiaries which are also credit institutions and are located outside the euro area, or to other credit institutions which have neither their registered, nor their head, office inside the euro area. In this case, the delivery of euro notes would be to a separate legal entity and would technically be sub-frontloading. So any such UK institutions would be required to provide collateral.
- All credit institutions outside the euro area that receive frontloaded banknotes may not further sub-frontload euro banknotes to third parties.

92 Under these principles, UK credit institutions may obtain euro banknotes during December in order to meet customer demand from 1 January 2002. UK institutions are currently seeking to identify sources of sufficient frontloaded notes.

93 *Information to UK banks' retail customers* UK banks will inform their customers about the euro cash changeover and its implications, including that previous national currency notes will not be accepted after the end of the dual circulation period. APACS and the BBA have published a leaflet, *You and the Euro – Notes and Coin,* to provide advice for personal customers.

94 *Exchange of previous national currency notes and coin* Unlike euro-area banks, UK banks are not obliged to exchange previous national currency notes and coin for euro free of charge during the dual circulation period. While it is expected that most UK banks offering foreign exchange services will facilitate such exchanges, each will take a commercial decision on the services they offer and the fees to be charged.

95 *Training of staff to deal with new currency and implications of counterfeiting regulations* Staff of UK banks need to be well informed about the practical implications of the cash changeover in the UK so they can advise customers accordingly. In addition, a small number of employees at UK banks will need to be trained to identify counterfeit euro banknotes to enable these to be passed to the relevant authorities. The Bank is considering an ECB request to help train cash-handlers in UK-based organisations in detecting euro counterfeits.

SOMEHOW IT SEEMS LESS THREATENING IN EUROS

BOX : USE OF THE EURO IN THE UK BEYOND THE CITY

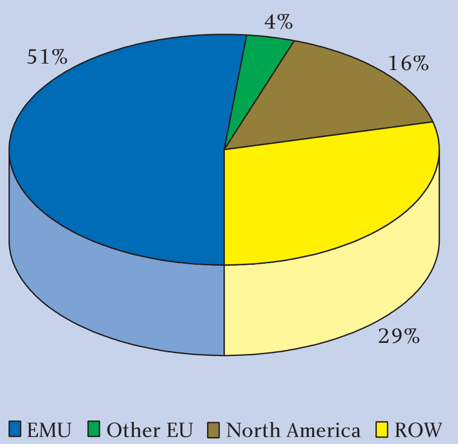
Monitoring the use of the euro by business outside the financial sector is important, in part to discover the extent to which the euro might be displacing other currencies, such as the US dollar or sterling, for example in UK companies' foreign trade invoicing.

Customs and Excise sample data

Customs and Excise estimate, on the basis of a new sampling exercise, that some 60% of UK imports and nearly 50% of UK exports in 1999 were invoiced in foreign currencies (a higher proportion than in 1988). Of these currencies, the US dollar was the most widely used, accounting for some 30% of UK imports and 27% of UK exports. EMU currencies (taking together former national currencies and the euro) were used to invoice 23% of UK imports and 19% of exports; the euro alone accounted for 5% and 6% of imports and exports respectively.

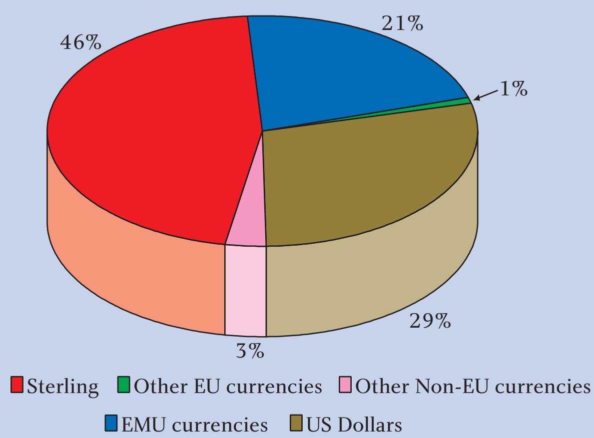
The charts below compare the origin by broad region of UK goods imports and destination of UK goods exports with the currencies used for invoicing. The bulk of UK visible trade is clearly with the EMU area (average of 51% for imports and exports together), but the US dollar remains the most widely-used foreign currency in invoicing. Customs and Excise will in future publish annual analyses (available on its website).

CHART A: COMBINED IMPORTS AND EXPORTS ORIGIN/DESTINATION



Source: Customs and Excise

CHART B: CURRENCIES USED ON AVERAGE IN IMPORTS AND EXPORTS



Source: Customs and Excise

Bank of England exercise

The Bank's regional Agents have continued to monitor UK corporate use of the euro (in exports, imports and in domestic transactions) through their regular contacts with business. Results from a small sample over the past six months show the following.

- Some 12% of firms' purchases, and 10% of their sales, were invoiced in euro and the old national currencies taken together. These figures are, naturally, lower than the Customs and Excise data reported above, since they relate to firms' total business rather than only to their international trade.

- Some 60% of firms now expect to increase (to just under 20%) the proportion of their purchases and sales invoiced in euro, displacing sterling and other foreign currencies. Some companies report that this will occur by end-2001; more expect the change later, by end-2002.
- In relation to just UK-based suppliers and customers, those contacted still expect up to 15% of invoices to be in euro.

UK retail payment volumes in euro

Although slowly rising, the volume of retail payments made in euro within the UK remains small, both in absolute terms and in relation to sterling. The vast majority of the euro retail payments are business related.

TABLE: UK RETAIL PAYMENTS

	Euro		Sterling	
	Value	**Number**	**Value**	**Number**
Cheques	€180 million	20,000	£113 billion	145 million
BACS (direct credits)	€61 million	700	£140 billion	95 million

Source: APACS

APACS survey results for March show that nearly 60,000 UK businesses have euro accounts with UK banks, similar to a year ago, and also a similar level to the number of accounts in US dollars. Nearly 40,000 UK businesses still have at least one old national currency account: some of these businesses already have euro accounts, but many do not.

The number of euro accounts at UK banks continues slowly to increase: at end-March, there were some 91,500. The number will obviously increase as remaining old national currency accounts are converted to euro later this year, although a one-for-one replacement process is unlikely, as smaller numbers of euro than previous national currency accounts might be required.

CHAPTER 5: PREPARATIONS FOR POSSIBLE UK ENTRY

INTRODUCTION

1 This Chapter describes the continuing practical preparations for possible UK entry; and, in broad terms, the Bank of England's own approach to preparing.

A PRACTICAL PREPARATIONS

2 Government policy on possible UK entry to EMU remains unchanged. The Government is committed to ensuring that the UK has a genuine option to join the euro early in the lifetime of the new Parliament, if that is what the Government, Parliament and the people decide. The Government has said that the five economic tests will be assessed within two years of the start of the new Parliament. If the assessment proves positive, a Referendum will be held about four months later.

3 Since the Government's second outline National Changeover Plan (NCP) was published in March 2000, the Chancellor's Standing Committee has met on a number of occasions, with the Governor representing the Bank, and with broad representation from the national economy.

- At its meeting in January, the Committee agreed that the evidence from the euro area suggested that the UK could plan on the basis of a phased introduction of euro services.
- At the same meeting, the Economic Secretary reported to the Committee on progress in public sector preparations for possible UK entry, including ongoing targeted investment to build in euro compatibility to the modernisation of public sector systems, inter-departmental planning work and the completion of a limited NHS planning exercise.

4 At working level, the Project Management Group (PMG), chaired by HM Treasury, has also met at regular intervals.

- In learning lessons from the first wave, the Euro Preparations Unit in HM Treasury has focused on lessons relating to communicating information to the public about the changeover, and on different countries' organisation of the changeover (eg whether led directly by government, or indirectly through the equivalent of a changeover board).
- The PMG has also been considering the issues which, in the event of UK entry, would be influential in determining an optimal approach to the legal end of the transition and the introduction of UK euro notes and coin. The first-wave experience later this year will be relevant.

5 Within the overall project structure, and as set out in the second NCP, the Bank has responsibility for co-ordinating preparations, where necessary, in the City. The Bank does this through the City Euro Group (CEG), a City body with broad representation, which currently meets three times a year, most recently in May.

- The CEG has been learning from the first wave about technical aspects of the retail banking changeover and the introduction of euro notes and coin, and has encouraged the Bank to act as a clearing house for lessons learned from the first wave by City institutions and market associations. The Bank makes relevant information available on its website, including questions and answers on technical wholesale market issues. The website is updated and expanded as further information becomes available.
- Individual financial institutions have made presentations to the CEG about their own plans and preparations for possible UK entry.
- Last autumn, the CEG set up a small sub-group of representatives from the clearing banks to consider the main technical issues which would arise under a phased approach, in which the wholesale financial markets would operate from entry in euro, while retail financial services would continue for a time to operate in sterling. Subsequently, when financial institutions' retail preparations were complete, full retail financial services in euro would become available. The CEG has endorsed the paper which resulted from the work of the sub-group.

B WHOLESALE/RETAIL INTERDEPENDENCIES: TECHNICAL ISSUES

6 The report is printed in full at the end of this Chapter.

- It concludes that it should be possible for most wholesale/retail interdependencies to be handled without difficulty, even in the period under a phased approach before banks' retail preparations would be complete. For example, although it is expected that the Bank of England's Registrar's Department would make gilt-edged payments from entry in euro, the banks consider that there would be sufficient capacity from entry to convert these for the credit of their retail customers' accounts in sterling.
- However, the banks would not have the capacity, until their retail preparations were complete, to convert from euro to sterling a large volume of share dividend payments to retail customers. Until that time, the CEG recommends that company registrars should continue paying dividends in sterling, as the banks would be able to convert into euro the limited volume of dividend payments for their institutional customers. In addition, and irrespective of a phased approach, companies would need to use a method for redenominating their share capital which left unchanged the number of shares held by each shareholder, in order to avoid corporate actions for all shareholders.
- The CEG believes that it would be helpful if banks, registrars and representatives of issuing companies were to draw up market guidelines for issuing companies to follow, both with respect to dividend payments and share capital redenomination.
- The report also refers to interest day-count conventions. The banks' current presumption is that, during and after the transition period following UK entry, interest rates would be quoted with actual/365 for products that were not explicitly market-linked and actual/360 for market-linked rates, with appropriate annotation where the presumption did not apply. In the event of UK entry, all financial institutions would have to consider the day-count basis to be used for retail

products and services and the implications for their treasury management of any differences with the wholesale markets. The BBA would be interested to learn of specific situations where clarity would be helpful.

C PREPARING THE BANK OF ENGLAND FOR POSSIBLE UK ENTRY

7 The Bank has been planning for possible UK entry into EMU, under the Government's policy of 'prepare and decide'. If the UK were to join, the Bank would become a full member of the Eurosystem, and a number of issues would need to be addressed in preparing it for such a change.

Changes to the Bank

8 As well as amendments to the Bank's finances, balance-sheet and Statute, the following changes would be needed.

9 *Monetary policy operations* The Bank would need to change the way in which it would conduct monetary policy operations, in order to comply with the operational framework of the Eurosystem. This would also involve significant changes to the Bank's front, middle and back-offices.

- All credit institutions in the UK (ie some 500 banks and building societies) would be required to hold reserves, either directly at the Bank on a reserve account, or indirectly through another bank. The Bank would pay interest on minimum reserves at the ECB repo rate. Each bank or building society would need to meet its reserve requirement on average over a (monthly) maintenance period, and the balance on its reserve account must never become negative. To implement reserve requirements, new Bank systems would be required; and banks and building societies would also need a real-time enquiry link, in order to identify their account balances during the day, and to make the necessary adjustments to meet the average level required.
- Banks and building societies would be eligible to have access to the Eurosystem marginal lending facility and deposit facility to be established at the Bank, at rates determined by the ECB Governing Council, provided that they fulfilled certain prudential and operational criteria; and, subject to the same criteria, they would also be eligible to apply to the Bank to become counterparties in Eurosystem open market operations. The Bank would receive bids for liquidity at the weekly and monthly ECB tenders, send the results in a timely way to the ECB and allocate the relevant amounts to the successful counterparties. By set times each day, the Bank would also provide to the ECB estimates of the Bank's own balance-sheet, and a forecast of the liquidity position of the UK money market for the rest of the maintenance period (up to 25 business days ahead).

10 *Payment infrastructure* In addition, the payment infrastructure would need to change, and so would the Bank's interface with it. In particular, implementing the changes required in monetary policy operations would partly depend on the delivery of NewCHAPS and DvP.

- *NewCHAPS* A high volume wholesale domestic system for making euro payments would be needed, if the UK were to join EMU. The NewCHAPS project, which has been under way for some time and is due to go live on 27 August, will provide this. The project is designed to replace the current outdated technology for making sterling payments with the more modern platform used now for CHAPS euro, allowing enhanced functionality. But it would also have the incidental benefit of enabling a single high-volume euro payment system to be readily established, if the UK were to join EMU.

- *DvP* Similarly, a project is also under way to enhance DvP, by introducing settlement of securities in CREST against payment of central bank funds in real time in CHAPS. This project is planned to go live at the end of November, and will therefore meet the ECB requirement that, by 2002, only systems of this kind will be eligible for use in extending intraday credit in TARGET, as well as for Eurosystem monetary operations.

11 *Other changes* EMU entry would require a number of other changes to the Bank.

- *Accounting systems* On entry, the Bank would need to adopt Eurosystem accounting conventions, which differ in some respects from accounting conventions under UK GAAP. The Bank would also need to ensure that it could meet ECB reporting requirements on time and in the format required.
- *Statistical requirements* The ECB requires summary monthly balance of payments figures. The UK has been supplying these to the ECB since December 1999, but some additional work would be needed for UK entry. The ECB also requires monthly and quarterly returns on the consolidated balance-sheet of the 'monetary and financial institution' (MFI) sector. In April 2000, the Bank issued the forms that MFIs would need to complete from entry to meet the ECB's requirements. Most of the preparatory work in this area would fall on MFIs rather than the Bank. But some additional work to collect data on MFI interest rates is likely to be required.
- *Registrar's Department* The main tasks of the Bank's Registrar's Department would be: on entry, to handle the redenomination of gilts, using the method determined by the Government; and from entry, to handle the registration of euro-denominated gilts (and other registered stock), and generate dividend and redemption payments for them.
- *Banknotes* Finally, the Bank would also have to plan for the introduction, at the appropriate time, of UK euro banknotes in place of sterling banknotes.

Project implemention

12 Having identified all of its activities that would be affected, the Bank has proceeded with the (particularly IT) projects which are needed anyway, irrespective of UK entry. These include some projects with long lead-times, such as NewCHAPS and DvP. The Bank is also upgrading its banking systems, to make them as up-to-date as possible. Implementation of these projects means that the Bank will then be in a much better position to prepare specifically for the euro, should the need arise.

13 The Bank remains confident that most of the necessary changes could be completed within 12 months, and that intensive internal planning reduces the lead-times for the implementation of EMU-specific projects.

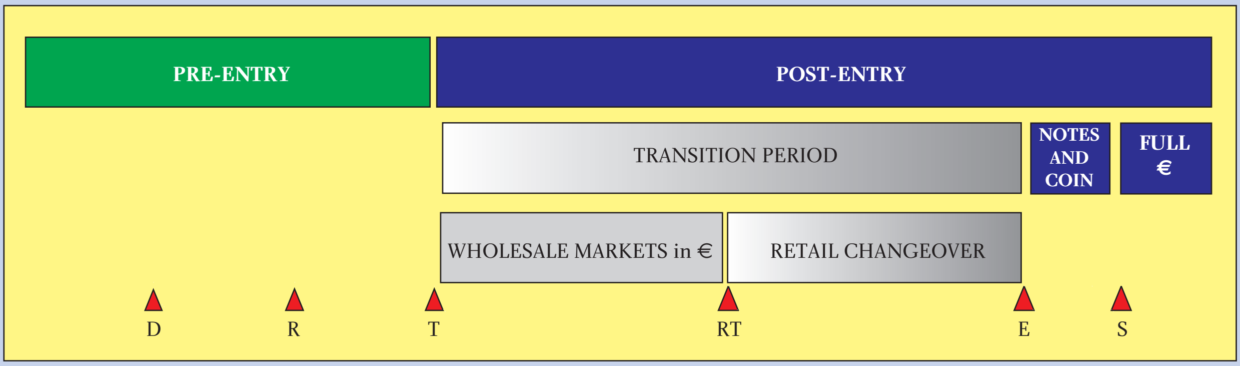
WHOLESALE/RETAIL INTERDEPENDENCIES: TECHNICAL ISSUES

INTRODUCTION

1 In the event that the UK were to join EMU, and a phased approach were adopted for the changeover from sterling to euro (as indicated in the second outline National Changeover Plan), sterling *wholesale financial markets* would operate in *euro* immediately from the entry date, whereas *retail financial services* would remain largely in *sterling* until later in the transition period after entry. The changeover is illustrated in Chart A.

- If preparations for possible UK entry were to begin to be implemented in earnest around a year in advance of entry, wholesale preparations would be complete by entry, but retail preparations could not be completed within the same timescale. The main retail services in euro that banks would currently expect to be available on entry, and once retail preparations were complete, are shown in Annex 1.
- Banks and other financial institutions expect that, in accordance with experience in the first wave, the vast majority of their retail customers would wish to continue using sterling rather than euro until late in the transition period, and so would not need to use euro accounts or euro services on a substantial scale until after banks' retail preparations were complete.

CHART A: A PHASED APPROACH TO THE CHANGEOVER



Notes: D = Government decision to join; R = Referendum; T = UK entry: fixed conversion rate; RT = full-scale retail payment and transaction processing infrastructure and services available; E = end-of-transition period; euro notes and coin introduced as legal tender in the UK; S = end of legal tender for sterling notes and coin

2 However, there are a number of technical issues that would arise from interdependencies between transactions in wholesale markets in euro and retail transactions in sterling. They are addressed in this paper in two separate parts, as follows.

- Part I addresses technical issues which would arise in the period after entry before the completion of banks' retail preparations, as a result of a phased approach, and assuming that banks' retail customers would expect to continue using sterling until late in the transition period.
- Part II addresses other technical issues which would arise from wholesale/retail interdependencies during the transition period, irrespective of whether or not a phased approach were adopted.

I ISSUES BEFORE THE COMPLETION OF BANKS' RETAIL PREPARATIONS

3 From entry, it is assumed that:

- in the wholesale markets, gilts would be redenominated during a 'conversion weekend' at entry, and would thereafter be quoted, traded and settled in euro; and UK equities would also be quoted, traded and settled in euro;
- retail investors would in general continue to expect to receive financial prices, and settle trades, in sterling until towards the end of the transition period.

The paper concentrates on gilts and equities, because these are the securities held most widely by retail investors.

4 Financial institutions operating in the wholesale markets in euro would need to meet the continuing demand for sterling-denominated services from their retail customers. In doing so, a number of technical issues would arise, particularly for banks, brokers and registrars, in the period between entry and when banks' retail preparations were complete. Assuming that changes in the financial infrastructure in the period before entry, including changes currently planned, did not have a significant impact on wholesale/retail interdependencies, the main technical issues to be resolved would be the following.

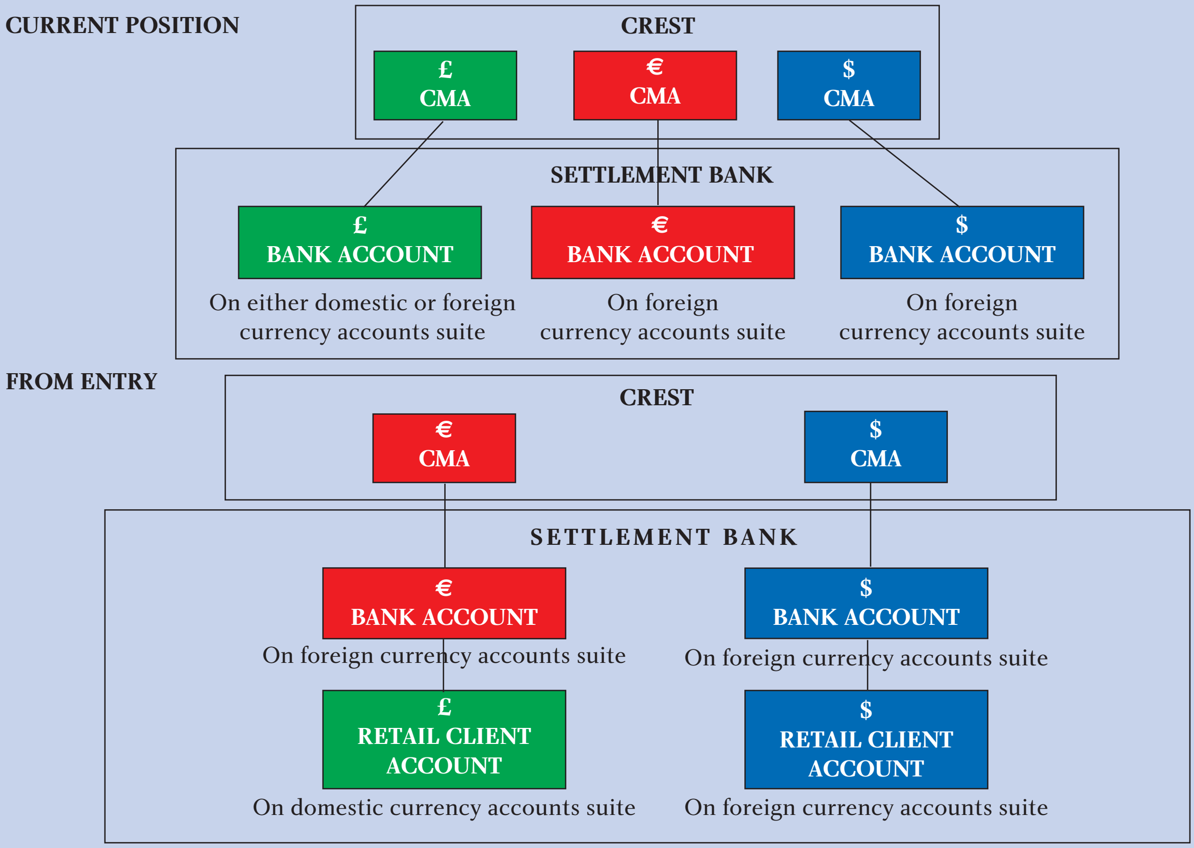
Gilt and equity transactions

5 At present, market makers in gilts and UK equities trade and settle in CREST in sterling. Retail brokers deal with both market makers and their retail clients in sterling. (Retail brokers are required to keep client money in a separate account.) CREST participants hold in CREST cash memorandum accounts (CMAs) in sterling. Sterling CMAs are linked to brokers' sterling bank accounts, most of which are held on banks' (high-capacity) domestic suites of accounts, but some of which are held on banks' (relatively low-capacity) foreign currency suites of accounts.

6 From entry, market makers in gilts and UK equities would trade and settle in CREST in euro (though it is possible that, even before entry, some UK equities could trade in euro). Gilt trades outstanding in sterling at entry would be converted by CREST into euro. In the case of debt instruments not redenominated on entry, and equities, CREST has proposed that transactions outstanding at entry should settle in sterling for a period of 25 business days thereafter. At the end of the 25-day period, CREST would either convert all the outstanding transactions into euro, or request the market participants concerned to delete their sterling transactions and re-input them in euro. All CREST participants would need to have established euro CMAs prior to entry (most have already done so). All euro CMAs are linked to euro accounts held on banks' foreign currency account suites.

7 From entry, market makers would expect to operate in wholesale financial markets in euro only, and it is assumed that they would each have only one euro CMA. Retail brokers would deal with market makers either in euro or in sterling, and with their retail clients predominantly in sterling. In the case of each broker, the broker's bank would need to link a CMA-related account in euro to a retail client money account in sterling (Chart B). Both banks and brokers would prefer this approach, in the period before banks' retail preparations were complete. This is because the broker could use the sterling account to make payments to and from retail clients, whereas the broker's bank would need only to convert the total value of sterling payments between the broker's euro and sterling accounts (Chart C), thus reducing to a manageable level the number of conversions banks would need to perform.

CHART B: LINKAGES BETWEEN CREST CASH MEMORANDUM ACCOUNTS (CMAs) AND BANK ACCOUNTS



Gilt coupons and redemptions

8 Once gilts were redenominated at entry, the Bank of England Registrar's Department would expect to pay gilt coupons and redemptions in euro. Institutional investors would hold euro accounts and expect to receive payments in euro, while retail investors would continue to hold sterling accounts and generally expect to receive payments in sterling. Banks would therefore need to credit their retail client accounts in sterling. The banks consider that there would be sufficient capacity from entry to cope with the current level of 1 million BACS payments and 600,000 cheques in euro each year, including both interest and redemption payments, provided that there would not be any major claims on available capacity from other euro retail payments (eg from dividend or salary payments).

Share dividends

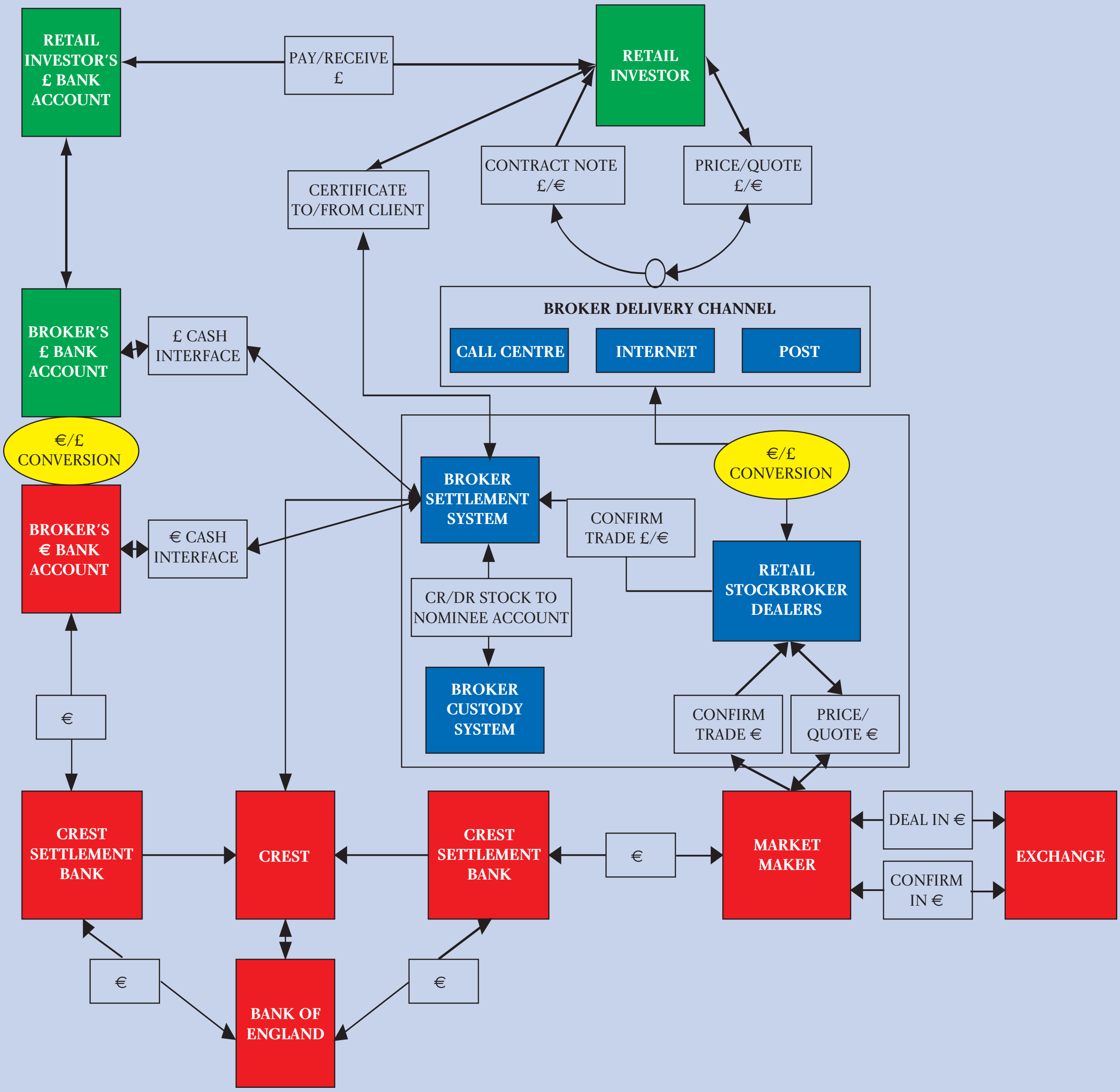
9 Over 60 million share dividend payments are currently made by registrars on behalf of UK companies each year, one-third via BACS and two-thirds by cheque. From entry, institutional investors would expect to receive dividend payments in euro, while retail investors would generally expect to continue receiving them in sterling. It would not be feasible for registrars to offer all shareholders the option of receiving payment in the denomination in which they would prefer (ie sterling or euro). In the case of each company, they would normally expect to pay all shareholders in one denomination only, either sterling or euro.

- If the main company registrars were to pay shareholders in euro, banks would not have the capacity before their retail preparations were complete to convert to sterling the high volume of dividend payments for their retail customers. Making dividend payments in euro early in the transition period might also create unnecessary confusion among retail investors, and their questions would put an additional burden on financial institutions and on the issuing companies themselves.

- The alternative would be for registrars to make all dividend payments in sterling, for a period after entry, as banks would have the capacity to convert to euro the relatively low volume of payments for their institutional customers.

10 The decision when to start paying dividends in euro rather than sterling would be a matter for the board of the company concerned. It is expected that most companies would continue to pay their dividends in sterling until they redenominated their share capital, and that their registrars would advise them to continue making payments in sterling at least until banks' retail preparations were complete. Banks, registrars and representatives of issuing companies might consider drawing up, in advance, market guidelines for issuing companies to follow.

CHART C: INTER-RELATIONSHIP BETWEEN RETAIL BROKERS AND WHOLESALE MARKETS



Source: Barclays Stockbrokers

Subscriptions and refunds

11 In the case of new issues of gilts, the number of subscriptions by retail investors is generally very small. If retail investors continued to subscribe in sterling, the Bank of England would convert the amounts into euro, and the Bank's Registrar's Department would pay any refunds in euro, with the receiving bank crediting the customer's account in sterling at the conversion rate.

12 In the case of equities, around 20 million cheques are currently received and generated by registrars in a typical year in respect of subscriptions and refunds. In the period before banks' retail preparations were complete, and during which retail investors would be expected to continue to use sterling, subscriptions and refunds might be handled as follows.

- *Subscriptions* After entry, in the case of rights issues and new issues of shares, the issue price might be quoted in euro and issuing companies might expect to receive payment in euro. But retail investors would expect to continue to subscribe in sterling. If the prospectus made clear the precise allotments for subscription in euro, with the countervalue in sterling, this should reduce the risk of applications being rejected because of errors by subscribers. In the case of retail investors, the sterling cheques accompanying their applications would be paid into sterling accounts set up by the issuer's agent. On completion, the issuer's agent would aggregate the separate amounts in sterling, convert the total amount to euro and transfer this to the issuer in euro, as agreed between them. CREST subscriptions would continue to operate under existing procedures, and it is expected that applications would be denominated in euro.
- *Refunds* In the event that applications needed to be scaled back, it is expected that the prospectus would outline how this would be done (eg refunds to euro subscribers would be made in euro, and refunds to sterling subscribers in sterling). It is expected that refunds to CREST participants would be denominated in euro, as in the case of subscriptions.

Unit trusts and OEICs

13 Pricing and accounting information for unit trusts and OEICs after entry would be expected to be denominated in the base currency of the collective investment scheme concerned, whether sterling or euro. The timing of the change in base currency from sterling to euro (and the change in pricing) would be at the discretion of the fund manager.

Tax-incentivised saving schemes

14 While the underlying gilt or equity investments held in tax-incentivised saving schemes (eg ISAs) would be likely to be priced, traded and settled by fund managers in euro from entry, unit prices and individual subscriptions would generally remain in sterling until later in the transition period.

- *ISAs* In the period before banks' retail preparations were complete, contributions to, and income on, ISAs would need to be collected in, and paid in, sterling. It is assumed that official limits would therefore continue to be expressed in sterling.
- *SAYE* Contributions to existing SAYE schemes would be likely to continue to be collected in sterling until company payrolls changed to euro, which in most cases would be unlikely to occur until late in the transition period (after the banks' retail preparations were complete). It is assumed that official limits would continue to be expressed in sterling until banks' retail preparations were complete. However, it is possible that some new SAYE schemes after entry would be launched in euro, with companies making deductions from payrolls in sterling and converting them to euro.

II OTHER WHOLESALE/RETAIL INTERDEPENDENCIES

15 Besides these technical issues arising as a result of a phased approach to the changeover, a number of other technical issues would arise during the transition period as a result of wholesale/retail interdependencies, irrespective of a phased approach.

Share redenomination

16 After the start of the UK transition period, a company would have the choice of either voluntarily redenominating its share capital from sterling to euro during the transition period or waiting until it ended. The par values of shares in most UK companies are currently denominated in sterling in round amounts (eg 1p, 5p, 10p, 25p, 50p or £1). If companies were to redenominate their share capital from sterling to euro, this would almost inevitably produce par values with odd amounts in euro (eg £1 may hypothetically become €1.55949). There are limited means under current law by which companies could redenominate their shares to euro and renominalise them to achieve round par values. These existing procedures would be relatively cumbersome to use and would require shareholder and (in some cases) court approval. The corporate actions involved would mean that financial institutions engaged in securities administration and custody would have to notify individual clients of detailed changes to their holdings and issue new documentation (including, where appropriate, new share certificates). It would clearly be desirable to avoid unnecessary corporate actions, so minimising the cost and administrative burden involved as well as the potential for confusion.

17 Changes to UK company law would be required to facilitate share capital redenomination. It is expected that the procedure for voluntary redenomination would be based on the proposals announced by the DTI in September 1998 for the following framework of statutory rules.

- Companies would be required to adopt a top-down method of conversion, by converting at the level of the total nominal amount of each class of shares (rather than at the level of each individual share) and rounding that amount to the nearest euro cent. This minor rounding would not trigger any requirement for court or shareholder approval. Companies would derive individual par values by dividing converted share capital by the number of shares in issue, leaving that figure stated to several decimal places if they so wish.
- A directors' resolution would suffice where the company was redenominating its shares into euro during the UK transition period, subject to a shareholders' power of veto.
- Companies would be permitted to adjust the resulting par value of each share to a more convenient round figure in euro, subject to shareholder approval but without the need for court approval. There would be no requirement for companies to issue new share certificates following redenomination. Any change in the total nominal share capital would be combined with a corresponding adjustment to the company's reserves.
- Companies would be permitted to resolve that references in any document to share capital denominated in sterling would be read as a reference to the equivalent amount in euro.

In order to avoid confusion, the legislation could possibly also provide for automatic conversion of share capital from sterling to euro at the end of the UK transition period and state the method of conversion to be used.

18 Another method of avoiding the problems otherwise arising on redenomination, would be for the legislation to allow 'no par value' (NPV) shares. Instead of individual shares having a fixed nominal value, each NPV share would represent a proportion of a company's total share capital. The number of shares in issue could remain the same; there would be no par value to

redenominate; no resulting decimal figures to round or renominalise; and changes to registers and certificates would be minimal. It would also avoid the need to cash out any awkward fractional interests which might arise when shares are redenominated and renominalised. There would be two main options.

- First, to allow 'real' or 'true' NPV shares, which would not have any monetary relationship to a company's share capital, and would simply represent a fractional share in the company's total net worth. However, in the case of public companies, this type of NPV share, which is commonly used in the US, would not appear to be compatible with the Second EC Company Law Directive in its present form.
- Second, to allow 'notional' NPV shares with an 'accountable par'. They would be given an arithmetical or notional par value, calculated by reference to the total amount in the company's capital account (less reserves) divided by the number of shares in issue. This type of NPV share is used in a number of countries in the euro area, and is compatible with the Second EC Company Law Directive. However, shares with an 'accountable par' would not abolish par values altogether, and so would be less attractive to UK companies than 'true' NPV shares.

19 Whichever method is used, it would be important that the number of shares held by each investor remains unchanged, as in the illustration in the Box (which would be subject to a change in company law), in order to avoid unnecessary corporate actions. Market guidelines might be drawn up for issuing companies to follow.

BOX : REDENOMINATION OF COMPANY SHARE CAPITAL

A possible method for companies to use to redenominate their share capital to euro, and renominalise by rounding down to the nearest euro cent, without affecting the number of shares held by any investors, would be as follows.

(1) Convert authorised share capital from sterling to euro at the fixed conversion rate.
(2) Find the nominal value of each share by dividing the result at (1) by the number of authorised shares.
(3) Round down the result of (2) to an even number of whole cents (eg 0.05 etc).
(4) Calculate the aggregate reduction in respect of shares issued by multiplying the issued share capital by the amount that the nominal par value of each share has been reduced at (3). The result of this calculation is transferred into a reserve of the company.
(5) The company balance-sheet will show the issued (redenominated) share capital and the amount in the reserve. There will be no change to the underlying number of shares in issue.

Example:

- Authorised share capital £100,000 (100,000 £1 shares)
- Issued share capital £75,000 (75,000 £1 shares)
- Assume a conversion rate of €1 = £0.641234
- Authorised share capital £100,000 converted to euro @ 0.641234 = €155,949.31 ((1) above)
- Nominal value of each £1 share = €1.5594931 ((2) above)
- Round to an even number of cents by reducing nominal par value of each share by €0.0094931 ((3) above)
- Multiply this amount (€0.0094931) by the number of shares in issue (75,000) – (4) above – to give €711.98: this amount is transferred into a reserve

Authorised share capital would be €155,000
The company balance-sheet would show:
Issued share capital of 75,000 shares @ €1.55 each = €116,250
Reserve €711.98
Total (issued share capital and reserve) €116,961.98
At the assumed conversion rate (0.641234), this would equal £75,000

Interest day-count conventions

20 While interest on money market instruments denominated in *euro* is conventionally quoted and calculated using a day-count convention of actual/360, the day-count convention used by banks for both money market and retail transactions in *sterling* is actual/365. For periods shorter than one year, the resulting amounts of interest payable differ for the same nominal rate. Day-count conventions determine how a quoted interest rate is to be interpreted where the fraction is not explicitly stated.

21 In the event of UK entry, the wholesale money market would operate on the basis of actual/360 rather than actual/365, and financial institutions would need to consider the implications for their treasury management of any differences. In addition, a number of technical questions would need to be addressed by financial institutions in relation to their retail customers. In this context, retail transactions would be those where the rate of interest was not explicitly linked to a money market rate, and might include some transactions with large customers and counterparties. The technical questions would include the following.

- How would financial institutions deal with the relationship between two different day-count conventions? Would the nominal interest rate offered be different, reflecting the difference in the calculation of the day count (eg 5% under actual/360 would be adjusted to 5.0694444% under actual/365)?
- How should financial institutions explain the difference between the two day-count conventions to their customers? Would the current requirements for the annual equivalent rate of interest (AER) adequately address this issue? And how would financial institutions ensure that it was clear on which basis an interest rate was being quoted?

22 The banks' current view is that, during and after the transition period following UK entry, the presumption would be that rates would be quoted with actual/365 for products that were not explicitly market-linked, and actual/360 for market-linked rates, with appropriate annotation where the presumption did not apply. Their view is set out in more detail in Annex 2.

CONCLUSION

23 After entry, when wholesale markets were already operating in euro, but retail investors continued to use sterling, it should be possible for most wholesale/retail interdependencies to be handled without difficulty, even in the period under a phased approach before banks' retail preparations were complete.

- *Gilt and equity transactions* If banks linked brokers' CMA-related accounts in euro to their sterling retail client money accounts, brokers could use their sterling accounts to make payments to and from retail clients, whereas banks would need only to convert the total value of sterling payments between brokers' euro and sterling accounts. This approach would also meet CREST's requirements.
- *Gilt coupons and redemptions* Although the Bank of England Registrar's Department would be expected to make payments from entry in euro, the banks consider that there would be sufficient capacity from entry to convert these for the credit of their retail customers' accounts in sterling.
- *Subscriptions and refunds* Subscriptions to new issues of gilts and equities by retail investors in sterling, and any refunds payable to them, could also be handled without undue difficulty.

24 The most difficult areas would be the following.

- *Dividend payments* First, under a phased approach, banks would not have the capacity until their retail preparations were complete to convert from euro to sterling a large volume of dividend payments to retail customers. So, for a period after entry, and in accordance with a phased approach, company registrars should continue paying dividends in sterling. The banks would be able to convert into euro the limited volume of dividend payments for their institutional customers.

- *Redenomination of share capital* Second, irrespective of a phased approach, companies would need to use a method for redenominating their share capital which left unchanged the number of shares held by each shareholder, in order to avoid corporate actions for all shareholders. Given the large number of retail shareholders, financial institutions would not be able to handle them all, and there would be a risk of confusion.

25 The City Euro Group believes it would be helpful if banks, registrars and representatives of issuing companies were to draw up market guidelines for issuing companies to follow.

ANNEX 1: RETAIL BANKING SERVICES IN EURO UNDER A PHASED APPROACH

Retail banking services expected to be available in euro *on entry*

In describing the retail banking services in euro that would be available on entry under a phased approach, there is a distinction between the payment services infrastructure and other individual bank services. This is because the provision of payment services is dependent on all members of the relevant payment system being able to receive payments, whereas the availability of services, such as offering euro accounts and originating euro payments for customers, is a matter for individual banks to decide.

Payment services infrastructure

- *NewCHAPS* will (from August) settle same-day, high-value euro payments without any practical capacity constraint. From entry, settlement in CHAPS would take place only in euro, but bank customers would still be able to send and receive payments in sterling. Banks would need, and would have the capacity, to convert sterling to euro, and *vice versa*, on their customers' behalf.
- *BACS* (electronic payments) There would be limited capacity available for euro direct credits, and no euro direct debits.
- *Cheque and Credit Clearing* (paper-based payments) There would, as now, be limited capacity for euro cheque clearing (some 5% of typical sterling volumes); but no euro interbank paper credit clearing service would be available.
- Euro and sterling payments in BACS and Cheque and Credit Clearing would be processed and cleared in separate streams in parallel. Consequently, banks would not have to perform conversions when sending payments. Conversions in banks' internal systems would only be necessary at the end of the process when, for example, a euro payment was made to a customer with a sterling account. As the process would not involve any reconversions, rounding differences would be kept to a minimum.

Individual bank services

- Some banks would not offer euro accounts. Others would, but these euro accounts would have limited functionality. Euro cheque books would be available, though from some banks only on request. They would be physically distinct from sterling cheque books. Banks offering them would continue to hold their customers' euro accounts in their (limited-capacity) foreign currency account suites.
- Euro payments could also be accepted on sterling accounts (eg when a customer with a sterling account received a euro cheque or credit transfer), though each bank's capacity to make the necessary conversions would be limited.
- Customers would not be able to make other kinds of euro transactions using standard sterling accounts. In particular, it would not be possible to write euro cheques from them.

- Banks would not be able to convert the base currency (the currency used internally for bank accounting purposes) of their retail customers' accounts from sterling to euro. Customers could open a separate euro account, but this would have a separate account number, and its functionality would be limited compared to sterling retail accounts.

The infrastructure available to support retail banking services on entry, including the parallel clearing process, is assumed to be the same as now, except that settlement would take place only in euro at the Bank of England. And, as now, the retail services in euro provided by individual banks in the early post-entry period would be limited, though there would be minor changes from the services currently available.

Retail banking services in euro *after completion of banks' retail preparations*

Once banks' retail preparations were complete, the retail banking services they would be able to provide would be as follows, separating again the payment services infrastructure from other individual bank services.

Payment services infrastructure

- *BACS* It would become possible to make direct debits and standing orders in euro from both sterling and euro accounts, and direct credits in euro to both sterling and euro accounts, in volume without practical limit.
- *Cheque and Credit Clearing* The capacity for clearing euro cheques would have increased to a level comparable to that currently for sterling volumes; and an interbank paper credit service in euro would become available.

Individual bank services

- Euro accounts would become more widely available for customers.
- Banks would be able to convert large volumes of payments between euro and sterling, as these would be automated.
- The euro functionality of sterling accounts would no longer be limited. Euro direct credits, direct debits and standing orders could be drawn on them. Some banks might also offer euro cheques on sterling accounts, which would mean customers would no longer need separate euro and sterling accounts, but others might postpone this until shortly before the end of the transition period.
- The timing and method of the conversion from sterling to euro accounts would be determined by each individual bank. On conversion, account numbers would remain unchanged.

ANNEX 2: INTEREST DAY-COUNT CONVENTIONS

The banks and building societies first considered in 1997 the question of what day-count basis to use if sterling joined the euro, and have subsequently discussed with the Irish Bankers' Federation the practical implications in the light of the Irish experience.

It is not clear that actual/360 could or should be extended from the wholesale markets to retail accounts and there are considerable practical and legal difficulties in so doing. The banks' current view is therefore that, during and after any transition period following UK entry:

- rates would be quoted with actual/365 as the presumption for products that were not explicitly market-linked;
- rates would be quoted with actual/360 as the presumption for market-linked rates;
- there would be appropriate annotation where the presumption did not apply (at minimum – banks would be free to annotate all rates);
- APRs[1] and AERs[2] would be calculated on an actual/365 basis;

1 Annual Percentage Rate of charge is the rate which has to be quoted in advertisements and quotations for credit regulated by the Consumer Credit Act 1974.

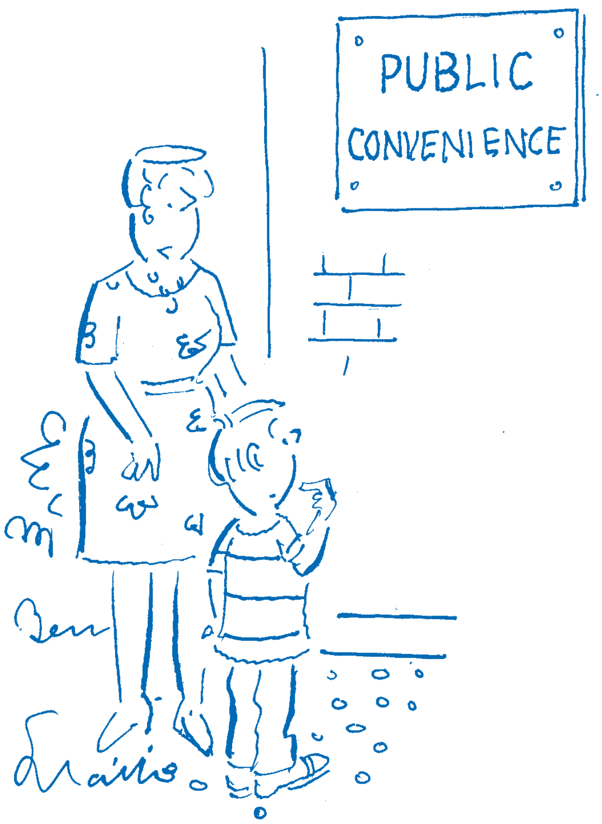
2 Annual Equivalent Rate is defined in the Code of Conduct for the Advertising of Interest Bearing Accounts published by the BBA and the Building Societies Association.

- there would be no constraint on individual banks' use of either basis of calculation but the AER/APR would have to reflect the basis used appropriately.

This position is consistent with that adopted in Ireland, where actual/360 rates have in practice been made available only to those customers who have direct access to bank dealers or where rates are explicitly linked to EURIBOR.

The banks have not considered the question of calculation of interest in non-banking transactions, for example under *The Late Payment of Commercial Debts (Interest) Act, 1998*, which does not specify a day-count basis. In this example, the prescribed rate is 8% above the Bank of England's official dealing rate per annum, and the number of days for which interest is payable is clearly set out, but the actual calculation is not prescribed.

All financial institutions will have to consider the day-count basis to be used for retail products and services and the implications for their treasury management of any differences with the wholesale markets. The BBA would be interested to learn of specific situations where clarity would be helpful.



PLEASE DECIDE WHETHER YOU WANT TO SPEND A PENNY OR A EURO