Practical Issues Arising from the Introduction of the Euro

204 business days to go before January 1999

Issue No 7 *12 March 1998*

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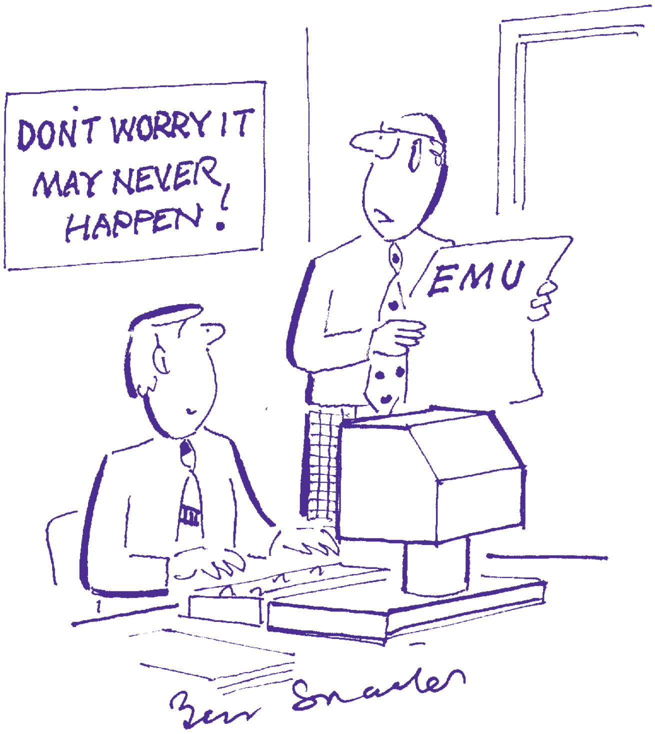


"ISN'T IT ABOUT TIME YOU TOOK THAT DOWN?"

PRACTICAL ISSUES ARISING FROM THE INTRODUCTION OF THE EURO **ISSUE NO 7**

12 MARCH 1998

Cartoons by Basil Hone.

CHAPTER 1: INTRODUCTION

UK Presidency of the European Union

1 The United Kingdom assumed the Presidency of the EU on 1 January for the standard six-month period. During this time the initial membership of EMU will be decided.

2 At the end of February the key economic data for calendar 1997, against which Heads of State or Government had already decided the Maastricht convergence criteria would be assessed, were published. Although decisions on which Member States will initially form EMU await the 'May weekend', it is now virtually certain that EMU will begin on 1 January 1999. The UK Presidency is committed to ensuring that the necessary decisions are taken as efficiently and smoothly as possible.

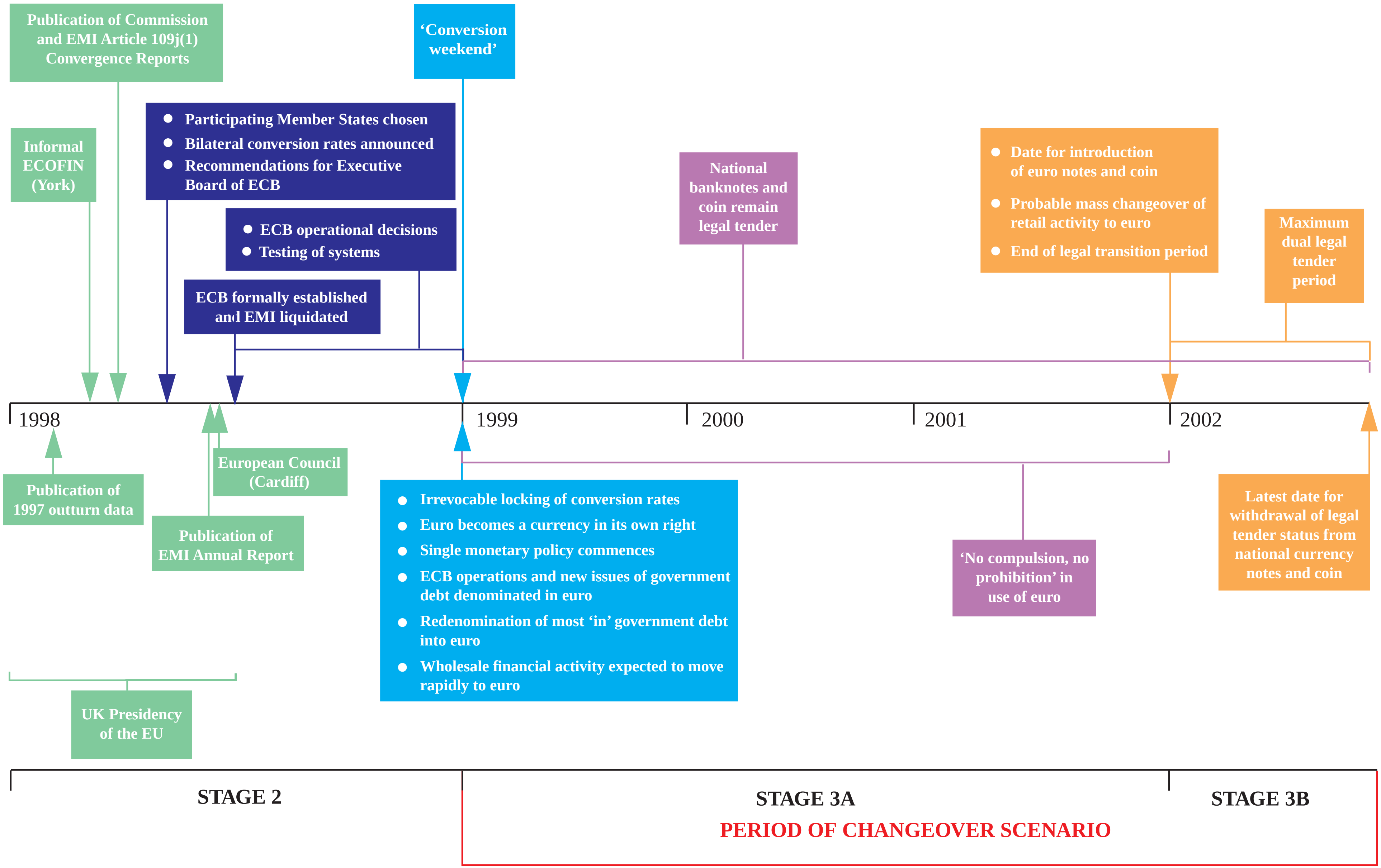
Planned timetable for the introduction of the euro

3 The key events during the UK Presidency are set out below, whilst Chart A covers the planned timetable for the introduction of the euro through to 2002.

20-22 March	Informal ECOFIN in York.
25 March	Publication of both Commission and EMI Convergence Reports.
	Recommendations by the Commission on those Member States which fulfil the necessary conditions to adopt the single currency.
During April	Consideration of Convergence Reports by European Parliament and National Parliaments.
1 May (evening)	ECOFIN considers Commission recommendations on EMU membership; and makes its own recommendations.
2 May (morning)	Extraordinary meeting of European Parliament to consider the ECOFIN recommendations.
2 May (afternoon)	Heads of State or Government meet to decide membership, on the basis of ECOFIN recommendations.
2 May (evening)/ 3 May (morning)	ECOFIN reconvenes to:
	- announce bilateral conversion rates between participating currencies;
	- recommend ECB Executive Board membership; and
	- adopt the Article 109l(4) Regulation on the legal framework for the use of the euro.
	Only the participating Member States will vote on these decisions.
11-15 May	European Parliament confirmation of ECB Executive Board.
15-16 June	European Council in Cardiff.

PLANNED TIMETABLE FOR THE INTRODUCTION OF THE EURO IN FIRST WAVE

CHART A



By end-June	Heads of State or Government approve ECB Executive Board membership, and the ECB is thereby established.
30 June	Formal inauguration of the ECB.

4 May

4 One feature of the 'May weekend' is that Monday 4 May is a Bank Holiday in the UK, unlike elsewhere in Europe where the corresponding Bank Holiday is on 1 May. In view of the important decisions to be taken that weekend, LIFFE has decided to open on 4 May, although its margining arrangements have yet to be decided. It is not expected that the London Stock Exchange (LSE) or the gilt-edged market will formally open; but off-exchange trading may still take place (as it does, for example, on General Election nights), including in the foreign exchange market. The CHAPS payment system will be closed.

Bank of England's symposium on London as the international financial centre for the euro

5 On 20 January the Bank held a second symposium on the euro. The main themes were that the preparation of the UK wholesale financial sector for the euro will be complete by the end of this year, on schedule, and that London will be the international financial centre for the euro. Sir Nigel Wicks opened the symposium by setting out the priorities for the UK Presidency and providing the context within which the City's euro preparations are being undertaken. During the day, the technical preparations were explained, primarily by private sector experts, to an invited audience of some 150 senior executives from major firms active in London, under the chairmanship of the Deputy Governor. There were separate sessions on the payments infrastructure; the securities settlement infrastructure; the conversion weekend; the money and foreign exchange markets; the debt capital markets; fund management and equity capital markets; the derivatives markets; and the range of professional services.

6 In a final session, chaired by the Governor and addressed by the Chancellor of the Exchequer, the Chairmen and Chief Executives of the leading financial institutions operating in London heard the main outcome of the day's proceedings presented by rapporteurs from each session. The Chancellor emphasised the need for preparation, in business as well as the financial sector (the various initiatives set in motion by the Government are summarised in Chapter 6). The Governor concluded with the following statement:

"I would like you to take away from today six messages.

> First, London needs to be ready for the introduction of the euro, even though the UK will initially be 'out', and London *will* be ready. The Bank will continue to help the practical preparations where it can, and I invite you - through John Townend - to bring any outstanding concerns to our attention.
>
> Second, City firms are not complacent. They are fully aware of what needs to be done and are actively engaged in making it happen. On that basis we can all feel reasonably confident that London will continue to be competitive, and I was encouraged by the confidence that many of you expressed today.

Third, it will be possible to trade and settle the full range of euro financial instruments in London from the outset, and there are a variety of ways to make wholesale euro payments in London, and between London and the rest of the EU.

Fourth, as is obvious from the range of financial institutions represented here today, there is a critical mass in London of the strongest financial businesses from all around the world. That mass continues to grow, and has very little to do with the currency used here or on the Continent.

Fifth, provided we are prepared, as we will be, the introduction of the euro is an opportunity for London, not a threat. London thrives on liquid markets regardless of currency, and it will thrive on the euro even while we remain on the outside. London can become the *international* financial centre for the euro - or, for the time being, the Euro-euro market, just as it is for the Euro-dollar, Euro-yen, or Euro-DM markets now.

And sixth, what is good for London is good for Europe as a whole. Just as the introduction of the euro is not a threat to London but an opportunity, so London is not a threat to other financial centres across Europe. What is involved is a positive-sum game from which we all stand to gain, not a game in which there has to be a loser for every winner. In this sense London is not just a national asset, but a European asset - it is in fact an important part of this country's special contribution to the EU."

A summary record of the symposium proceedings is provided towards the end of this edition of *Practical Issues*.

7 Following the symposium, the Deputy Governor led a series of international 'roadshows', to New York, Zurich, Tokyo, Hong Kong and Singapore, to explain that London will be ready for the euro. A senior representative of the private sector also contributed in each location; Sir David Walker, Chairman Morgan Stanley International Inc, in New York; Brian Quinn, Chairman Nomura Bank International plc, in Tokyo; Win Bischoff, Chairman Schroders plc, in Hong Kong and Singapore; and David Mulford, Vice-Chairman Credit Suisse First Boston (Europe), in Zurich. A six-page brochure prepared for the roadshows may be obtained from the Bank: see inside of back cover of this edition of *Practical Issues* for details.

Anticipating the euro in London's markets

8 The shadow of the euro can already be seen in practical ways in the London markets, as explained in previous editions of *Practical Issues*. Two further concrete examples illustrate the point. First, HM Government has converted the denomination of its ECU Note Programme into euro (see Chapter 4). Second, last month GEC (a UK company) became the first company to raise euro in the syndicated loan market. The revolving credit facility arranged, for €6 billion, was signed in London by a group of European (UK, French, German and Italian) and US banks.

LONDON AS A GLOBAL FINANCIAL CENTRE

The December 1997 *Practical Issues* included data on London's pre-eminence as an international financial centre, set out London's main strengths, and explained why EMU represents an opportunity for London rather than a threat. Earlier this month, British Invisibles published a Report, *Securities Dealing*, which confirmed the Bank's message and provided some updated data.

- In 1997 record trading levels were experienced in all the major UK securities markets. Amongst the major contributors and beneficiaries were the range of foreign-incorporated investment banks and securities houses with securities operations in London.
- The market value of equities issued by over 2,200 UK companies listed on the LSE was £1,257 billion at end-1997.
- Turnover in UK equities on the LSE was £1,013 billion in 1997, some 30 times the 1980 level, and 36% up on 1996.
- The LSE remains the world's largest centre for trading foreign equities, accounting for some 65% of global turnover in 1997.
- Cross-border trading in foreign equities reached £1,443 billion in 1997, a 39% increase on the previous year. International comparisons show that London accounted for an estimated 60% of all cross-border trading, twice that of New York and Nasdaq combined.
- London has a very strong position in international bond trading in the Eurobond market and in bonds issued by European governments. Euromarket trading in international bonds rose 45% in 1997 to reach £8,450 billion. An estimated 70% of this trading was based in London.

The Bank's role in the preparations for the euro

9 The Bank's role remains as follows.

- To ensure that the necessary infrastructure is developed to permit the use of the euro in the UK in wholesale payments and across the financial markets from the first day of EMU. Our attention thus remains focused primarily on the wholesale financial sector.
- To help the financial community in the UK, irrespective of the nationality of ownership of individual firms, to prepare for the introduction of the euro by: explaining, as widely as possible, the relevant issues and how they are progressing; identifying areas for co-ordinated activity and cross-fertilisation; stimulating work, where necessary, within the private sector; and identifying and, where appropriate, filling gaps in the preparations.
- To promote discussion between the European Monetary Institute (EMI) and national central banks (NCBs) with market participants across Europe about practical issues on which the market is seeking a degree of consistency and co-ordination, but on which no single authority has the sole power to take decisions.

10 To ensure that sufficient priority is attached to its work preparing for the euro, the Bank announced in January that it had formally established a Euro Preparation Division.

Particular points to note in this edition

11 Particular points to note in this edition of *Practical Issues* are as follows.

- The development of CHAPS euro is proceeding on schedule, and CHAPS is now actively marketing its service. There has been progress on technical and legal aspects of TARGET. But the resolution of outstanding policy issues awaits the establishment of the ECB.
- The conversion weekend in London will be as complex as in the euro area because of London's international role. Planning for the conversion weekend is important for *all* major financial market firms in London, not just those active so far in the planning process.
- LIFFE has set out its euro market strategy, and the LSE has put forward a proposal to cope with demand for euro trading in UK equities, when it emerges.
- The fund management and insurance industries are making progress in addressing the practical issues arising from the introduction of the euro which will affect them.
- The Business Advisory Group Report has been published by HM Treasury; and there are a number of legal, tax and regulatory developments to note.
- This edition also contains an embryo chapter on some of the preparations which would be needed in the UK if it were to join EMU later.

Euro website

12 The Bank has now established a website page dedicated to euro-related publications, at: http://www.bankofengland.co.uk/euro.htm It includes all editions of *Practical Issues*. The site may also be accessed through the Bank's main Internet address at: http://www.bankofengland.co.uk

Circulation and comments

13 We continue to welcome assistance in circulating our series of *Practical Issues* booklets as widely as possible. Copies may be obtained from the Bank's Public Enquiries Group (tel no: 0171 601 4012; fax no: 0171 601 5460). We are prepared to make copies available to institutions for them to supply to their overseas offices. We reserve the right to charge for supplies in bulk.

14 Comments are welcome on the practical preparations for the introduction of the euro, both in relation to the work which is already under way, and any potential gaps. Comments, and requests for information and assistance, should be addressed to John Townend, Deputy Director, Bank of England, Threadneedle Street, London EC2R 8AH (tel no: 0171 601 4541; fax no: 0171 601 5637). We plan to publish the eighth edition in this broadly quarterly series in June.

CHAPTER 2: ARRANGEMENTS FOR WHOLESALE EURO PAYMENTS AND SECURITIES SETTLEMENT

A WHOLESALE EURO PAYMENTS

1 In the UK, the CHAPS Clearing Company has continued to develop the CHAPS euro system and has begun discussions with the Bank about the pricing policy for the CHAPS euro service. Detailed discussions have also continued with the CHAPS banks about the way in which the domestic system and cross-border TARGET payments would be processed if the ECB Governing Council decides to restrict 'out' NCBs' access to liquidity in the TARGET system.

2 Since the December 1997 *Practical Issues*, there has been further progress at the EMI and in NCBs on the legal and technical framework for TARGET. Particular progress has been made on the legal framework; the EMI has also prepared a service level document, to be distributed shortly to potential participants in TARGET, which draws together a description of the main elements of the TARGET service. On the technical and policy side, the EMI has made some progress in a number of areas including access to TARGET, the calendar of operating days, and the way in which banks might charge each other and their customers, as well as on a number of organisational issues internal to the ESCB. The EMI is now turning its attention to the question of how it should market the TARGET service. For its part, the Bank has continued to play a leading role in the testing of the TARGET components, including the Interlinking system.

CHAPS euro

3 The technical work on CHAPS euro has been proceeding smoothly. The CHAPS banks have completed their internal testing and certification. Group testing has just begun, on schedule. Initially the testing is only between the euro settlement banks, and does not involve the Bank; but the Bank's RTGS processor will be included in the testing from the end of March, again on schedule. The CHAPS Company has now received letters of intent from six major banks to join the Company, in order to use the CHAPS euro service from its inauguration in January 1999. They will be included in the testing from mid-summer. The Company continues to have discussions with many more institutions and expects a further group of banks to join in April 1999. The Company has begun marketing its service: its brochure is reproduced below.

4 Discussions have begun about the likely pricing policy for the service. No firm decisions have yet been taken, but the Company will seek to charge a competitive price broadly comparable with the other high-volume systems. So CHAPS will be competitive on price but, equally, will promote itself as a premium service, having established an excellent track record in running an efficient and reliable high-volume RTGS service in sterling. That system has proved to be highly resilient, processing without hitch an average of some 60,000 payments a day, valued around £150 billion. Peak activity, amounting to 135,000 transactions worth £240 billion, has been comfortably accommodated.

5 The scale of the euro service will naturally be rather small at the outset. Plans for the CHAPS euro service are based on expected initial daily volumes of some 15,000 items, but substantial growth is expected after 1999. The system will be capable of coping with such further expansion, responding flexibly to users' requirements over time, and also to facilitate a

substantial increase in volumes if and when the UK joins EMU, as sterling and euro payment flows would ultimately be consolidated.

CHAPS euro

A brochure produced by the CHAPS Company

CHAPS - the same day payment system of choice

Every major financial centre must have at its core a means by which urgent payments can be made quickly, reliably and with confidence. Within London, that function is provided by the CHAPS payment system.

CHAPS, which was developed in 1984, is one of the largest same-day payment systems in the world. CHAPS offers its Members and Participants an efficient, risk-free, reliable, same-day payment mechanism for sterling-denominated payments.

CHAPS aims to secure its role as the premier same-day payment system in Europe and one of the leading global systems by providing a high-quality, cost-effective service for euro - CHAPS euro.

CHAPS euro - key features

- Access via S.W.I.F.T.
- Remote access encouraged.
- Immediate payment finality.
- No settlement risk.
- Rapid payment transmission.
- Secure, efficient and robust.
- Connection to TARGET.
- Low membership cost.
- Member owned and controlled.
- Long opening hours: 7am - 6pm CET.*

Finsbury Square, London

CHAPS euro and EMU

With the advent of Economic and Monetary Union, CHAPS will provide same-day payment services in both sterling and euro to its Members and Participants. This will make CHAPS the first multi-currency same-day payment mechanism in the world.

London is the major European financial centre and will dominate trading in euro-denominated assets from the beginning of EMU. All major banks have a significant presence in the London market which provides the depth of liquidity that is required. CHAPS euro will provide banks, wherever they are based, with the opportunity to settle their euro denominated transactions in a cost-effective, secure, risk-free fashion in London where the vast majority of trading is carried out.

CHAPS euro is a new service being developed by the CHAPS Company, in partnership with the Bank of England, to handle the real-time transmission of euro-denominated payments. Using the same settlement mechanisms as CHAPS sterling, CHAPS euro will provide its Members and Participants with a robust, secure

* These are the hours for direct participants; customers will have a service from 7am - 5pm.

means of making same-day payments in euro, with Real-Time Gross Settlement (RTGS) at the Bank of England. These can be domestic payments to other banks in the UK or cross-border payments to any other bank connected to TARGET.

While both the sterling and euro services are part of the same overall payment system, access is available to each individually. Membership of CHAPS for access to CHAPS euro alone is proving to be an attractive proposition for banks who see the benefits of settling financial market transactions in London.

CHAPS - a high volume, secure, efficient payment system

CHAPS is an electronic transfer system for sending same-day value payments from one Member settlement bank to another.

Every CHAPS payment, whether in sterling or euro, is settled in real-time across Bank of England accounts before being forwarded to the receiving bank, achieving true intra-day finality. On receipt they are already settled and cannot be recalled.

CHAPS sterling currently processes some 135,000 items on a peak day, with a peak daily value of £240 billion. By 1999, CHAPS sterling and CHAPS euro are expected to process a total of 23 million items a year.

CHAPS' payment processing is controlled by a series of service level codes covering both technical and operational performance. These ensure that the central processing times for payments between Members are extremely low, including real-time settlement, and that delays within the system, for any reason, are minimal.

With its 400 Settlement Members and Participants, CHAPS offers direct access to all the world's major banks for payments in either sterling or euro. Through TARGET, CHAPS euro will provide access to 5,000 banks across the European Union.

CHAPS payments are provided on an end-to-end basis with the receiving bank giving full value to its customer that day.

CHAPS - a market-driven organisation

Unlike most payment systems, CHAPS is owned by its Members and is responsive to both central systems integrity requirements and the commercial requirements of the marketplace. This ensures that CHAPS provides commercial banks with the service they require as well as a secure payment system.

Mercury House

A full technical and operational service is provided for Members during business hours to ensure that payment flow is maintained in a smooth, efficient fashion. Project management for major system changes is provided with a high-quality delivery record. In addition, CHAPS offers a central market research facility relating to the users of same-day payments and their requirements.

CHAPS is part of the UK payments industry body, APACS. APACS provides the main fora for progressing payment and settlement issues related to the major UK cash and securities markets. Access to these fora, and other payments industry activity, is automatically available to CHAPS Members.

CHAPS has developed rules and procedures for both sterling and euro services, covering Members' legal obligations to each other and their operational requirements. These ensure that, as well as handling normal everyday situations efficiently, exceptional circumstances and contingency scenarios are catered for equally efficiently.

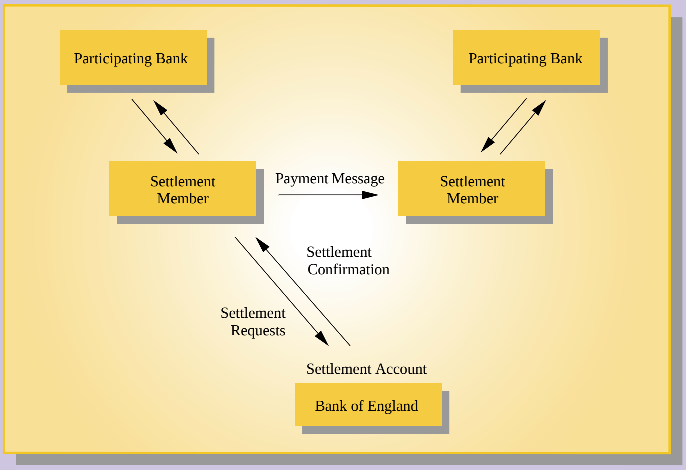
CHAPS - the same day sterling system

CHAPS sterling is CHAPS existing payment system service, offering a same-day payment service for sterling payments.

CHAPS sterling is based on proprietary software and hardware for Members. Each Member uses CHAPS Gateway software to interface to the system.

To send a payment message, the Member transmits it to its Gateway, which then forwards a subset of the message to the Bank of England for settlement. Once settlement has been achieved, a confirmation is returned to the sender's Gateway and the entire message is then forwarded to the receiving bank which, therefore, receives a pre-settled payment.

CHAPS sterling



CHAPS - the same day euro system

CHAPS euro will allow connection by S.W.I.F.T. so that the Members can use the same interface for their international messaging traffic and their CHAPS euro traffic. This much reduces the capital costs of joining the system and allows Members to achieve a high level of internal synergy within their systems.

CHAPS euro will be connected to TARGET so that CHAPS euro users will be able to make payments to any other bank across Europe within the TARGET system. TARGET offers RTGS between payment systems within the European Union.

How does CHAPS euro work?

For domestic payments in euro, a CHAPS euro payment message is generated by a Member bank which will send a S.W.I.F.T. message to the intended receiving Member. Before that message is forwarded to the receiving Member, part of it is sent to the Bank of England for settlement.

On receipt of the settlement request, the Bank of England posts the debit and credit to the relevant accounts and returns a confirmation, at which point the entire message is forwarded to the receiving Member. For the receiver, the payment is already settled, with funds on its account at the Bank of England. This eliminates all settlement risk between the Members of the system and provides the receiver with true intra-day finality.

Triton Court

CHAPS euro offers end-to-end finality - the receiving Member is required to give same-day value to its customer. In addition, CHAPS euro will incorporate a full set of rules for daily operation, contingency and exceptional situations such as the return of unapplied payments. It offers a complete real-time same-day value payment system with high levels of reliability, robustness, security and contingency.

TARGET cross-border payments are made in a similar fashion with the payment being addressed in the first instance to the Bank of England for onward transmission across TARGET.

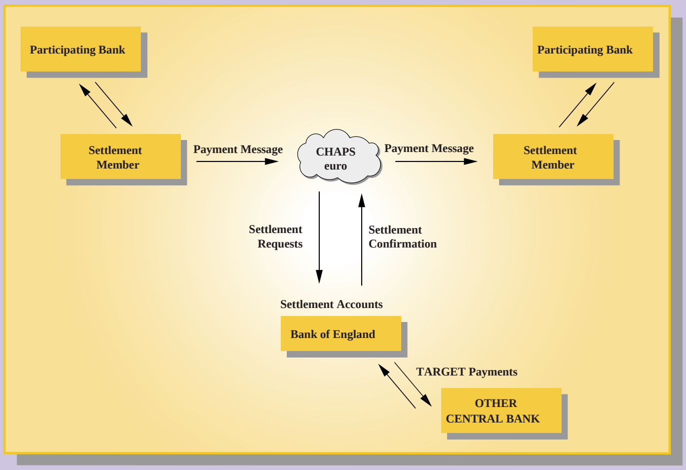
CHAPS will provide the same high level of operational and technical expertise to its Members for CHAPS euro as it does for CHAPS sterling, ensuring that the system operates smoothly and efficiently.

Members and Participants

CHAPS offers a two-tier membership structure, with direct Settlement Members, and Participants who access the system via Settlement Members. This structure allows banks to choose their own level of membership based upon their business needs. Both Settlement Members and Participants are able to use CHAPS to offer same-day payment services to their customers.

CHAPS currently has 17 Members and some 400 Participants including all the world's major banks. It is expected that a number of banks will join CHAPS as Members in order to gain direct access to CHAPS euro, which they can do without connecting to CHAPS sterling.

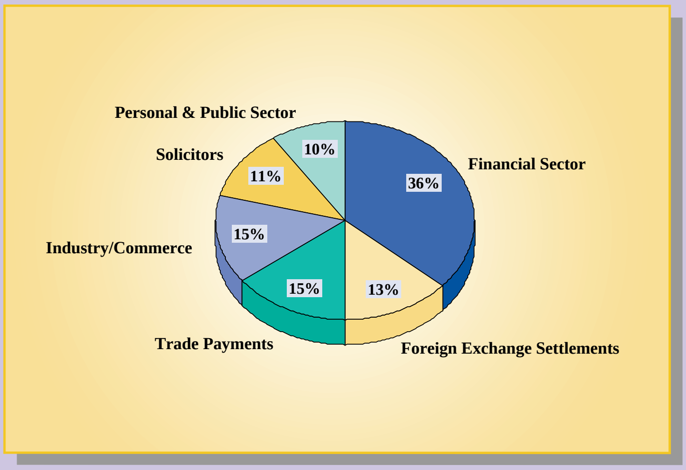
CHAPS euro



Use of CHAPS

As a commercially-owned organisation, CHAPS carries out periodic market research into the uses of the system and market requirements, to assist in the development of its Members' own strategies. CHAPS has a very broad usage base, from an international financial markets system to a domestic urgent payment system. This allows CHAPS to achieve benefits of scale and also means that it is less affected by developments elsewhere, such as the proposed CLS Bank which will have a relatively minor impact on CHAPS volumes.

Usage of CHAPS sterling (by volume)



Initially, it is expected that CHAPS euro will be used by banks to settle financial market traffic. However, within a short timescale it is likely that significant amounts of commercial and retail traffic will use the system. This is because users can directly access several hundred banks via CHAPS euro alone and a further 5,000 via TARGET. This connectability will mean that a Member of CHAPS euro can use one reliable high-volume same-day payment system to reach all its significant counterparties.

For further information please contact:

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6 The Bank has continued to work closely with the CHAPS Company and member banks, and in particular has been exploring the options for dealing with any restrictions on the provision of intra-day credit by the ECB in TARGET. These options were set out in the December 1997 *Practical Issues*. They amount to minimising the need for credit by making outgoing payments only after sufficient incoming payments have been received; individual participants managing their credit throughout Europe and transferring any balances needed to the CHAPS euro system; or the Bank of England itself providing the necessary liquidity from its own euro resources.

7 The payment and treasury experts of UK commercial banks have been addressing this issue as part of the wider question of managing euro liquidity as a whole. The existence of a large number of euro payment and settlement systems throughout Europe will mean that large institutions in particular will have a number of separate pots of liquidity and collateral. Most large institutions will seek to manage those separate pots of liquidity collectively, typically from treasury operations based in London, in order to minimise the cost and inconvenience caused by imbalances between them. Several UK-based institutions have therefore decided provisionally to pool their liquidity and to use TARGET, provided it operates efficiently, to move the liquidity to where it is needed. Some institutions with smaller activities in the rest of Europe have indicated that they will simply manage their activities solely within the CHAPS euro system, making any cross-border payments as and when they have the liquidity to do so. And the Bank has discussed with the banks the mechanics of the Bank itself providing intra-day credit, which the CHAPS euro system is being built technically to accommodate. The large banks may well have sufficient access to credit in any event, from commercial and official sources through their existing operations, without Bank assistance, but some institutions with smaller existing operations might favour such support. The Bank's decisions will be announced as quickly as possible after the ECB agrees the rules for TARGET.

8 The issue of intra-day credit is most relevant to the scheduling of cross-border payments. Transfers between two counterparties within CHAPS euro need not involve any credit being granted by the 'in' NCBs to the Bank of England. The CHAPS Company currently expects a significant proportion of transfers to be such domestic payments, a tendency which will naturally be reinforced the bigger its membership. But, as with all other systems, it is very hard to make accurate forecasts of likely market shares and volumes. And the competition between the different payment systems is not a zero-sum game. The competitiveness of the industry is driving down costs and making all operators focus on the need to provide a good, reliable service. This is itself likely to generate more payment activity.

9 The outcome will be greatly influenced by the expected efficiency (and subsequent actual experience) of individual systems. It is likely that standard settlement methods will develop for different kinds of payments. For example, trade payments might typically be settled in netting arrangements such as the EBA. Financial market payments covering high-value money market or securities transfers could be settled in RTGS systems, taking advantage of the cross-border functionality of TARGET. Counterparties will also develop conventions about which account they wish to have credited; for example, UK-based participants may require payments to be made to their RTGS accounts at the Bank of England, via CHAPS euro. Perhaps the biggest uncertainty is how the euro leg of high-value foreign exchange transactions will typically be settled. If TARGET is efficient, these may be settled largely in RTGS systems, but most banks are still awaiting further evidence of the outlook for the EU's payment infrastructure from the

beginning of Stage 3 before committing themselves. The ECB's early decisions on TARGET could have an important influence on that outcome.

TARGET

Legal framework

10 The TARGET legal framework relates largely to the relationships between NCBs and the ECB. It seeks to deal with the complexities of different national legislation, practices and authorities. Its centrepiece is an ECB Guideline - an instrument to be adopted by the ECB and applying only to the 'in' NCBs. The provisions of this Guideline, amended as necessary, are extended to 'out' NCBs through a contractual arrangement called the TARGET Agreement. Large sections of the Guideline and the Agreement have been finalised, but the documentation cannot be completed until decisions on unresolved issues (including the terms and conditions for the provision of intra-day credit) have been made by the ECB. Although the documents address only the legal rights and obligations of central banks arising from the operation of the TARGET system, they establish the basis on which the TARGET service can be provided to participants.

11 The Guideline and Agreement set out formally the arrangements which central banks have agreed amongst themselves for the operation of TARGET. They give details of the understandings reached on minimum common features of national RTGS systems, such as: which types of institution may be granted access; pricing policy; operating days and hours; and provisions aiming to ensure clarity about the timing and nature of finality through the series of payment messages making up a TARGET payment. There are some tentative draft provisions relating to intra-day credit, but these will require substantial revision and development once the ECB's decisions have been made. The documents also deal at some length with the procedures which central banks will follow amongst themselves to ensure that the Interlinking operates reliably and that there is a clear chain of responsibility for processing a payment and dealing with any operating difficulties.

12 Similarly, the documents deal with internal issues about the governance of the system. As so much of the documents deal with internal central bank and house-keeping matters, they will not themselves be published. The parts that are directly relevant to the operational service offered to participants are covered in public documents, including past *TARGET Progress Reports* and technical annexes and, shortly, a service level document. These will be updated from time to time as further decisions are taken by the EMI or the ECB. It is intended to publish a further and final *TARGET Progress Report* in the autumn.

Service level document

13 A document describing the service level will be published shortly. It provides a summary description of the service that will be provided by the TARGET system. The document covers only cross-border payments; national RTGS systems may provide different or additional local services. The document summarises the service that will be available in normal circumstances, and also how abnormal circumstances will be addressed. It covers: operating hours and operating days; the intention to provide a high degree of system availability; rules for irrevocability and other arrangements to ensure the highest practicable level of finality in the system; speed of processing and capacity; procedures to ensure the integrity of the TARGET

service through high-security features; and other practical issues such as end-of-day procedures. Arrangements to be followed in abnormal circumstances are also summarised; for example, where there may be a delay to the closing procedure or some other contingency or emergency to be dealt with. The document makes clear that the participants themselves must meet their responsibilities to ensure that the system as a whole can operate efficiently. Finally it also describes the arrangements for making changes to the TARGET service level.

14 The document is a summary only of the TARGET service; those directly involved in payment processing will need to read it in conjunction with the technical documents already published with the *TARGET Progress Reports* in August 1996 and September 1997.

Further technical work

15 The EMI and NCBs have continued to refine detailed technical and policy questions about the operation of TARGET. The EMI is, for example, preparing an operating days calendar to show which national RTGS systems will operate on particular days. As has already been widely publicised, there are likely to be only two common public holidays in the euro area - Christmas Day and New Year's Day. TARGET will be available on all other weekdays, but Member States are not obliged to open domestic RTGS systems on national public holidays. Most (but not all) NCBs, however, are expected to follow the practice of the larger EU financial centres and open their euro RTGS systems on every TARGET business day. In the UK, banks have accepted as inevitable that the UK system will open on all these days, although the formal decision will be taken by the CHAPS Board when the full details of the CHAPS euro service are finalised later this year.

16 The EMI has been working further on detailed questions about access to national RTGS systems by specific non-bank counterparties and also access by them to intra-day credit in those systems. On the latter issue, it has already been agreed that credit institutions which are direct members of an RTGS system should be eligible for intra-day credit against suitable collateral; but there is a question whether access to that facility should be extended to certain non-banks such as public entities, investment firms or clearing houses. This is primarily a matter of interest to other countries which provide such facilities in their existing domestic systems. There is an argument for public sector, or appropriately supervised private sector, institutions which are active in payment systems, to have such facilities to enable them to operate efficiently. Access would be dependent on sufficient reassurance that credit would be repaid by the end of the day in order to avoid spillover (ie unauthorised overnight overdrafts). It would, for example, be a contravention of the Maastricht Treaty to provide overnight credit to a public sector institution (because it would breach the no monetary financing provisions of Article 104). The Bank's position is that the risk of spillover could be adequately addressed, just as it could be in relation to 'out' NCBs, through technical measures such as penal overnight rates and relatively early customer cut-off times for making payments.

17 The question of remote access has also been revisited and a decision - taken by the EMI Council in December 1996 - reconfirmed that, for the time being, and therefore at least at the start of Stage 3, EEA-based remote participants in euro-area RTGS systems should not have access to intra-day liquidity (or to monetary policy operations).

Costs and prices

18 The EMI has initiated discussions with commercial banks about the way that banks will charge customers for TARGET payments. Central banks accept that customer charges should be a matter of competition between individual banks, but have argued for transparency in those charges. In particular, central banks are urging participant banks to show the full value of a TARGET payment when credited to a customer's account and to impose any transfer charges separately. This would have the benefit both of making apparent the size of charges for the money transmission service and would also facilitate the reconciliation and audit trail in respect of cross-border payments.

19 The question of the price to participant banks of the TARGET service will also need to be addressed by the ECB. There is a general obligation to ensure that the pricing of payments in TARGET satisfies the full cost recovery principle. And there has been further discussion between central banks as to how to apply this principle in practice.

20 Previously the EMI has suggested that the ECB should consider setting a uniform cross-border price in the range €1.5-3.0 per transaction. The appropriateness of that price, however, depends on the prices of competing services as they will influence the volume of transactions in TARGET. In recent months it has become apparent that some competing systems are likely to charge lower prices than previously expected. Amongst netting schemes, the EBA, which had previously indicated that it was likely to charge a price between €0.5-0.8, is now expected to charge a price closer to €0.25. In addition, the German netting scheme, EAF2, is now also likely to charge a price comparable to that of the EBA. It is to be expected that netting schemes would charge lower prices than RTGS systems as they offer a lower degree of intra-day finality, less certainty about the precise time of execution of payments, and therefore less flexibility in re-using funds. But TARGET will also be in competition with domestic RTGS systems. The euro service being developed by the German RTGS system, EIL-ZV, is also now expected to charge around €0.25 for standard payments. Other domestic RTGS systems have yet to indicate their likely prices. The ECB will therefore need to consider what price will generate an economic level of traffic in TARGET and to assess whether the EMI's proposed €1.5-3.0 range is still realistic.

21 Price, however, is only one dimension of the competition between the various euro payment systems. Users will be equally interested in other features of the service, such as its speed and robustness. In principle, TARGET should be able to compete effectively in these areas, but the testing process throughout this year will be critical to ensuring the success of the project.

Eligible collateral

22 It was decided at an early stage in the TARGET preparations that the list of eligible collateral for intra-day credit would be the same as that for monetary policy operations (a list of eligibility criteria is set out in the EMI's publication, *The Single Monetary Policy in Stage Three: General Documentation on ECB monetary policy instruments and procedures*, September 1997). This makes it convenient for 'ins' who wish to extend intra-day credit for overnight or longer-term lending as part of the ECB's monetary policy facilities. Discussions are beginning on the application of collateral requirements to 'out' NCBs where they extend intra-day credit to participants in their euro RTGS systems. The Bank's view is that 'out' NCBs should be free to

accept their own domestic assets (ie securities denominated in local currency and located in a local settlement system), even if these are not included on the list of eligible securities that is being prepared by the ‘in’ NCBs. The purpose of the collateral is to protect ‘out’ NCBs from default risk, and there is no question of the lending being extended overnight, so there is no need for the list to be the same as for monetary policy operations.

Testing

23 The UK has played a prominent role in the testing of the TARGET system. With the central banks of Finland, Italy and Spain, the Bank of England has formed the initial testing group for multilateral group testing. This process began at the beginning of February and is proceeding on schedule. The speed of message turn-round has been encouraging and the experience gained in refining the operating procedure will prove invaluable to those involved in the subsequent waves of testing. Full multilateral simulation is scheduled to begin in June and to continue through the autumn. It is clearly important that all components of the TARGET service should be thoroughly tested in time to make, and test, any necessary amendments before the service goes live at the beginning of next year.

24 The UK has also been contributing to the development of a critical path analysis (as described in the December 1997 *Practical Issues*), which is intended to ensure that the inter-relationship between the various parts of the development and testing schedule are fully recognised. Testing of TARGET is particularly complex because of the decentralised nature of the system and the separate control of the national components. But the critical path tool has now been developed to the point where it is beginning to produce useful results in monitoring the project.

Marketing

25 To date there has been very little direct marketing of the TARGET service; but EU central banks are now beginning to discuss what kind of marketing should be undertaken over the next few months. The service level document will in effect form part of the promotional strategy; but the failure to resolve some key operational questions for TARGET, such as the provision of intra-day credit throughout the TARGET system and the risk that any limitations on this may damage the operation of TARGET as a whole, may undermine the efforts to promote TARGET.

26 The Bank has argued that TARGET has the potential to be the system of first choice for high-value euro transactions throughout Europe, provided it can achieve the right combination of price, speed and robustness. That is why the Bank has contributed so much to the development and testing of the system, has argued for supportive policy decisions - such as the unrestricted availability of intra-day credit throughout the system against suitable collateral - and advocated preparing for TARGET to become a high-volume as well as high-value system. The Bank strongly supports RTGS systems, because of their systemic risk-reducing characteristics, and so in principle would wish to support a promotional effort to attract high-value payments. As part of this approach, we are also determined to ensure that CHAPS euro will be a highly efficient system within the overall TARGET arrangements.

B SECURITIES SETTLEMENT IN THE UK

27 As reported in the December 1997 *Practical Issues*, the Bank has been consulting gilt and money market participants on the likely demand for euro settlement facilities after 1 January 1999. The conclusions from these consultations are reflected in two papers, entitled *CGO and the Euro - Plans for the Service from 1 January 1999* and *CMO and the Euro - II*, which were sent to members of the CGO and CMO respectively in January 1998, and are summarised below. It is clear that there is a demand for euro settlement services, which CGO and CMO intend to meet.

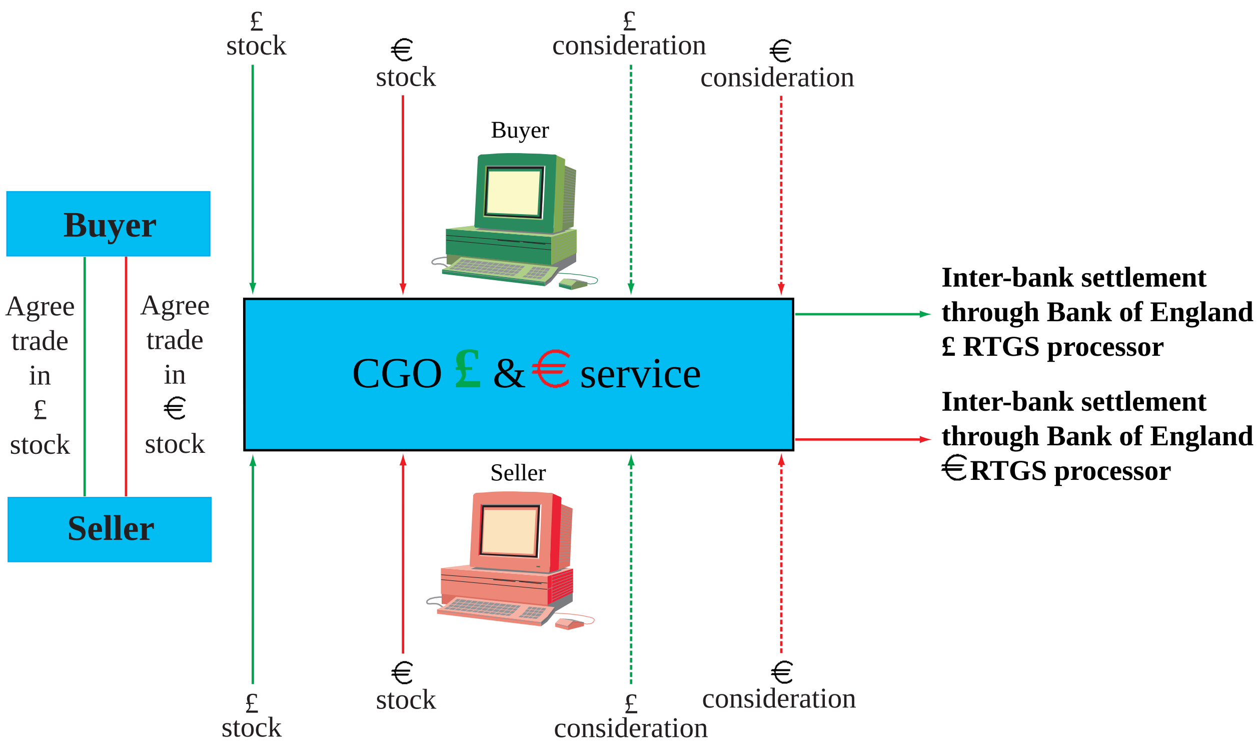
28 Separately, the Bank is conducting a consultation exercise on the future development of UK securities settlement systems generally. Proposals under consideration include a merger of CREST and CGO, as well as the introduction of a DVP mechanism for CMO.

CGO

29 For the period between the start of EMU and a future UK entry, the CGO will operate as a dual-currency system using the multi-currency functionality available in the upgraded service. This will allow members to settle transactions against either sterling or euro consideration. Moreover, it will also be possible for the system to handle trades involving securities denominated in either sterling or euro. This will give members a great deal of flexibility in settling transactions in registered debt securities. The dual-currency CGO service is illustrated in Chart B.

30 No provision will be made for the CGO to provide settlement facilities for securities of a type not settled currently in the service. If demand for settlement in London of other types of fungible euro instruments should emerge, CGO will consider with CRESTCo where this facility might best be provided. The close contact with CRESTCo established during the CGO upgrade project will continue as both services are developed to accommodate the euro.

SECURITIES SETTLEMENT IN CGO **CHART B**



31 In determining the extent of EMU enhancements to be made, the CGO has sought both to minimise IT changes and to ensure continuity in the transition from the current, pre-EMU, position to an environment where the euro exists, and then to eventual UK membership. The aim has been to produce a package of changes which best fits the requirements of members within the constraints on time and resources which face the entire market. Therefore, the package of EMU changes for CGO has been split into two phases, the first of which will be implemented by 1 January 1999, and the second later that year.

32 Phase 1 will include activating the multi-currency functionality of the upgraded CGO, thus enabling the CGO to operate as a dual-currency system. The CGO will then produce two net payment schedules for settlement banks at the end of each day, one in sterling and one in euro, for settlement across UK RTGS. Members will need to agree with their settlement banks the currency or currencies in which they will meet their net payment obligations arising from each day's transactions.

33 Members wishing to use the system's dual-currency functionality will require a euro Cash Memorandum Account (CMA), as well as their current sterling CMA. The debit cap system operated in CGO allows settlement banks to control their exposure to CGO clients. The debit cap represents the maximum net debit which the member's settlement bank will be prepared to allow the member to undertake at any time. Members may have several accounts (and, therefore, CMAs) linked to the same debit cap. Under dual-currency functionality, members will be able to link sterling and euro CMAs under the same debit cap to maximise their debit headroom.

34 It is planned that dividend and redemption payments should, in due course, be paid through the CGO system. It is the current intention to make these payments in the currency of the security involved (ie dividend and redemption payments on sterling securities will be made to the sterling CMA and euro securities to the euro CMA). Therefore, even a member using only euro considerations in their trades would need to have a sterling CMA.

35 The CGO will hold an exchange rate which will be used whenever it is necessary to perform conversions to and from sterling and euro - for example, when assembling a 'delivery by value' (DBV) of sterling stocks for euro consideration. The exchange rate will follow the market convention of quoting the euro on a 'certain for uncertain' basis (ie €1=£x). Members will be able to view the current rate on the system and, as with CREST currently, it will be updated daily at close of business and used throughout the following day.

36 Euro securities are expected to be priced in terms of €x per €100 nominal and this will be the basis for the reference prices in the CGO. Members will be able to identify the stock by its ISIN and will know the market convention for price quotation in that stock.

37 CGO intends to conduct trialling of the initial dual-currency functionality of the service with members during September to November. The system will go live at the beginning of December, but settlement in euro will be prevented until the first working day of EMU by the creation of euro bank holidays in the system in the interim period. This will eliminate the need for both the Bank and members to activate the enhancements to the service during the conversion weekend, thus minimising the workload during this critical and extremely busy period.

38 Phase 2 will include additional functionality to enable the members and settlement banks to manage the potential foreign exchange risk arising from the settlement in one system of securities denominated in two currencies. It is unlikely that large volumes of euro securities will be issued into the CGO in the early part of 1999 and so it is proposed to release a further batch of software during 1999.

39 If and when the UK enters EMU, the relationship between sterling and euro would become fixed. From that point on, the CGO would become a euro system and no longer accept input of transactions against sterling consideration, although the system would continue to be able to settle securities denominated in either sterling or euro. Transactions against sterling consideration input into the system before the date of entry and awaiting settlement would also be converted. Reports of all such transactions, including the original consideration, details of the calculation and the corresponding new euro consideration, would be supplied to members immediately after the conversion, to allow them to perform a full reconciliation. Thereafter, the CGO would not differentiate in any way between trades which were originally entered into the system in sterling and those entered into the system in euro.

CMO

40 As noted in previous editions of *Practical Issues*, the CMO does not have multi-currency functionality. However, clear demand for settlement facilities for non-fungible money market instruments (MMIs) has emerged during the course of its consultations with the market (from both issuers of paper and investors in both the primary and secondary markets). The consultations support the CMO's proposal to offer a settlement facility for euro-denominated MMIs, and a euro 'clone' of the existing sterling CMO service - the euro CMO - is therefore under development. This will run in parallel to, but be discrete from, the existing sterling service, as illustrated in Chart C. The development now of a euro CMO service will ensure that, when the UK eventually joins EMU, a dedicated euro CMO will already be operational, thus paving the way for a seamless transition to euro-only MMIs.

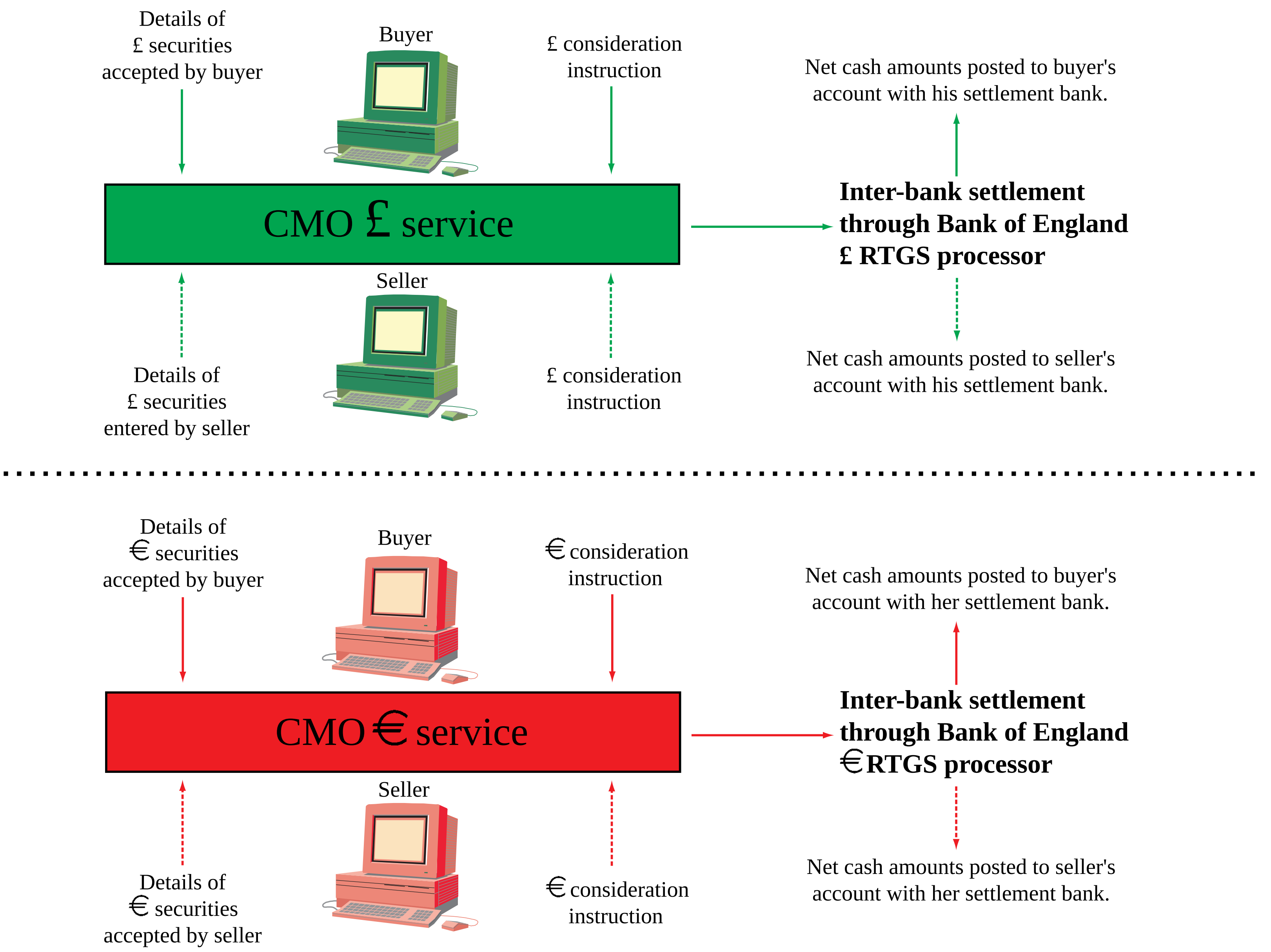
41 The euro CMO will be identical to the sterling service, except that all amounts in the system will be in euro. There will also be several visual distinctions between the sterling and euro services. The CMO screens will be set to different colours for each service and the words sterling or euro will appear in the screen header. These are the key ways in which users will easily be able to distinguish between the two systems, which will otherwise be identical in terms of functionality and screen layout, although there will additionally be distinctions made through the systems' automatic numbering facilities.

42 CMO does not, at the moment, anticipate any new instrument types being settled in either the sterling or euro CMO.

43 While there is no new functionality being introduced in the euro CMO, it is proposed that CMO members undertake a short period of trialling to test and prove all facets of both the euro and sterling CMO services, thereby giving them and the CMO confidence in those services and the opportunity to test internal procedures. In order to do this, it will be necessary to trial both the new euro CMO and the existing sterling CMO, because this is being amended to make the services readily distinguishable from each other.

SECURITIES SETTLEMENT IN CMO

CHART C



44 In scheduling the workload, from design to testing and internal and external participant trialling, the CMO has had to consider other projects which will be relying on the same resources for their success. The scope to spread the workload for the second half of 1998 more evenly, both for the CMO and its members, has been explored. As a result, the CMO will be trialling the systems with members in June and July, and euro CMO and the amended sterling CMO are scheduled to be in place by mid-August. From that time the euro CMO will be live, but euro members will be prevented from accessing the interactive service until the first working day of EMU. Over the conversion weekend, a short procedure within the Bank will open members' access to the euro CMO; no direct action will be required by members until normal start of business on the first working day following the conversion weekend.

Operating days for CGO and CMO

45 Securities settlement systems which hold assets that may be used as collateral to obtain liquidity in RTGS systems may need to be open when TARGET is open, in order to facilitate the movement of collateral. It is therefore possible that both CGO and CMO will need to be open for business on all TARGET operating days.

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CHAPTER 3: THE CONVERSION WEEKEND

INTRODUCTION

1 This Chapter is set out as follows.

- First, key points on common issues relating to all financial markets over the conversion weekend.
- Second, more detail about the conversion weekend in individual markets: money and foreign exchange markets; an update on bond markets and repos (both of which were originally covered in the December 1997 *Practical Issues*); equity markets; and derivatives markets.
- Third, contingency planning, testing and the timetable for the conversion weekend.

The proposals in the Chapter represent the recommendations of those market practitioners who are closest to the planning of the conversion weekend in London.

2 The focus in the Chapter is on the conversion weekend itself (ie the period from 31 December 1998 to 4 January 1999). But the period before and after the conversion weekend is also discussed, where relevant. The Chapter covers both the euro in London and across the prospective euro area.[1] Key conclusions identified in the December 1997 *Practical Issues*, but not yet acted on, are repeated for emphasis.

A COMMON ISSUES

3 Even though the UK will not join EMU on 1 January 1999, the conversion weekend in London will in many ways be as complex as in the euro area because of London's international role. Market firms in London will need to convert cash balances and redenominate securities over the conversion weekend in accordance with the variety of different approaches likely to be adopted in EU markets. Planning for the conversion weekend is important for *all* major financial market firms in London, not just those that have been active in the planning process so far.

4 The smooth establishment of euro financial markets at the start of EMU depends on the successful implementation of the conversion weekend. Although most of the preparatory work falls to individual market firms, CSDs and ICSDs, the authorities across Europe have a direct interest in the outcome. A number of key decisions, particularly by the governments of Member States hoping to join EMU at the outset, will hold up preparations in the market unless they are made very soon. At present, the market is preparing on the basis of how it expects these issues to be resolved. We may already have passed the point where surprise decisions in some areas will start to risk market disruption at the beginning of 1999. That point will certainly have been passed by mid-1998. If uncertainty persists, large international investors may react ahead of the conversion weekend by scaling back their activities in the markets concerned.

1 The Chapter does not cover the operating procedures of the ESCB or the TARGET Interlinking from 4 January 1999. They have been discussed in previous editions of *Practical Issues*, and more information will be included as it becomes available.

- *Methods of redenomination.* Participating governments have already decided to redenominate into euro some or all of their national currency debt over the conversion weekend. They should confirm the methods of redenomination that they propose to adopt as soon as possible. Redenomination by other issuers, whether of debt or of equity, over the conversion weekend should be kept to the minimum, and should preferably not take place until a period of at least one month after the conversion weekend.
- *Reconventioning of existing issues.* If governments intend to change market conventions on existing issues, market practitioners recommend that they should not do so over the conversion weekend. In the case of Treasury bills, where existing issues will quickly run off, changes should apply only to new issues. In the case of bonds, issuers should only change day-count conventions on an interest payment date or give sufficient notice of a 'big bang' change so that investors can plan for the consequent changes to accrued interest.
- *Harmonised market conventions on new issues.* Market associations have recommended harmonised market conventions for new issues of securities in the euro money and bond markets, and for the foreign exchange market. These proposals have been welcomed and supported by the Council of the EMI and endorsed by the European Commission. They need now to be adopted by the governments of individual Member States, which will also help to give a lead to the private sector.
- *Disappearing price sources.* Price sponsors which have not so far stated how they propose to replace disappearing price sources should do so as soon as possible. All price sponsors should inform the market and the screen services as to the display of successor rates.
- *Pending trades.* The market needs more information about how CSDs will treat pending trades over the conversion weekend: in particular, whether they will handle discrepancies between the buy and sell sides of transactions following redenomination and rounding using the preferred 'auto-give-take' approach (outlined in Chapter 4 of the December 1997 *Practical Issues*).
- *Derivatives exchanges.* It is not yet clear in all cases how derivatives exchanges in the prospective euro area will approach the conversion weekend.
- *Price feeds.* There is a lack of information on what price feeds will be available from exchanges and data vendors over the conversion weekend. They will quote prices in national currency until the close of trading in 1998, and then in euro from 4 January 1999. Some market practitioners would find it helpful if exchanges also requoted the closing prices for 1998 in euro to give a seamless series of external prices. Price providers should clarify their intentions as soon as possible. Lack of adequate price information will cause particular problems for regulated investment funds which are required to value portfolios daily.
- *Operating days.* The market needs to know whether national RTGS systems plan to close on some TARGET operating days, if so on which dates, and whether RTGS opening days have implications for national and bank holidays.
- *Start of the conversion weekend.* The market needs to know which exchanges and settlement systems will be open on 31 December 1998 and which will be closed. Market practitioners would prefer new trading on that day to be kept to a minimum,

while settlement systems should as far as possible be open. This should serve to reduce the volume of trades to be converted over the conversion weekend by allowing market firms to complete the maximum volume of settlements before it starts.

- *Euro conversion rates.* The rates for the conversion into euro of the national currencies of participating Member States should be set as early as possible in the conversion weekend, and the procedure for setting them and timing of the announcement should be made public as soon as possible. No decision has yet been taken, though there appears strong market support for the proposition that the relevant event should be the last official ECU fixing. Since New Year's Eve is not a public holiday throughout the EU, but market trading usually winds down early, the last official ECU fixing is expected to be at 11.30am Central European Time on 31 December 1998. (The normal afternoon official ECU fixing at 2.15pm does not take place on New Year's Eve.)
- *Dissemination of information.* Reliable information about exchanges' and issuers' plans is needed by the market as soon as possible. This includes methods of redenomination of bonds, equities, preference shares, convertibles and other specialised securities. Information is best distributed via traditional data vendors (eg Bloomberg, Bridge, Dow Jones, Reuters, Telekurs and Thomson) as well as by CSDs and ICSDs. But the European Commission and the EMI have a role to play in encouraging national authorities to publish reliable information quickly in an accessible form.

5 There is concern in the market that standard settlement instructions (SSIs) for euro transactions will not be updated to reflect the introduction of the euro sufficiently in advance of 4 January 1999.[2] Banks should provide information to their customers by 31 May 1998 about the account structures that will be available to handle payments in euro and national currency units (NCU). Market participants should decide where they will have euro nostro accounts and advise their counterparties of the appropriate SSIs by 30 September.

6 In cases in which open trades are converted automatically over the conversion weekend, they should not depend on reconfirmation by either party. Nor should there be a need for customers to issue new instructions to their custodians, nor for the conversion to be reported for regulatory purposes. The SFA considers that it is not necessary for firms to reconfirm in euro transactions which remain outstanding over the 1998 year-end. However, where conversion takes place by bilateral agreement, the parties may choose to reconfirm.

7 Market practitioners expect that new transactions entered into *after* the conversion weekend in wholesale financial markets will generally be denominated in euro rather than NCU. Transactions in NCU entered into *before* the conversion weekend and due for settlement afterwards should, as a rule, settle as dealt (ie in NCU and according to the original instructions). But there will be major exceptions. The exceptions are where transactions are converted to euro by a CSD or ICSD during the conversion weekend[3], or the parties agree bilaterally to convert to euro.[4] Counterparties wishing to receive euro can make use of any conversion facilities available from settlement banks to receive payments in NCU but credit euro accounts in euro.

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2 It is important to distinguish between: (i) SSIs which need to be established for new transactions in euro from 4 January 1999 onwards; (ii) updating ECU SSIs to euro SSIs; and (iii) updating existing NCU SSIs to euro, where appropriate.

3 ICSDs will only convert the proceeds of trades where the underlying issue is being redenominated, as well the proceeds of transactions with a counterpart in a national market converting in a 'big bang'. Most CSDs will convert the proceeds of all trades.

4 Transactions in ECU will be converted to euro 1:1.

8 Whereas bonds are traded in nominal amounts and priced as a percentage of the par value of the debt, shares are traded by number and valued at the quoted price. The important change in the equity markets, therefore, is conversion of quoted prices from national currencies to the euro by stock exchanges in the euro area. This will happen over the conversion weekend. Subsequently, individual companies in the euro area are likely to redenominate the par value of their share capital or move to shares of no par value. But this should have no impact on share trading.

9 Recommendations on contingency planning, testing and the timetable for the conversion weekend are set out at the end of the Chapter.

B MONEY AND FOREIGN EXCHANGE MARKETS

Redenomination and reconventioning

10 It would ease pressures on the market if issuers could avoid redenominating money market instruments over the conversion weekend. Indeed, market practitioners discourage issuers from redenominating at all, given that most money market instruments in NCU will mature within six months of the start of Stage 3. They also recommend against any reconventioning of existing instruments to alter the day-count used to calculate prices from quoted yields (or vice versa).[5] Nevertheless, all prospective 'in' governments, other than Austria, Germany, the Netherlands and Portugal, have plans to redenominate their Treasury bill issues over the conversion weekend, and some (eg Belgium, Finland, Italy and Spain) have plans to change conventions for existing debt.

Payment instructions

11 Market practitioners consider that existing NCU transactions in the money and foreign exchange markets settled through correspondent banks should settle in NCU as originally instructed. There should be no automatic reinstruction into euro.[6]

- Counterparties wishing to receive euro can make use of the conversion facilities available from settlement banks to receive payments in NCU but credit euro accounts in euro, or vice versa. Payments should be made to the account specified in the original settlement instructions, unless the counterparty has been notified otherwise with at least 30 days' notice.[7]
- However, firms should bear in mind that the requirement on settlement banks to provide conversion facilities applies only to banks in the country of the NCU concerned, and so it may not always be possible to redirect NCU payments to accounts (even euro accounts) in other countries. And, even given 30 days' notice, banks may be unable to comply with requests to change settlement instructions in this way because payment instruction messages are formatted on the basis that the destination bank is in the same country as the paying agent.

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5 See the *Joint Statement on Market Conventions for the Euro* (16 July 1997) by ACI, Cedel, EBF, EFFAS, EMF, Euroclear, IPAA, ISDA, ISMA.

6 This is consistent with the approach to be adopted by the corresponding OTC derivatives and futures markets.

7 This is consistent with the London Code of Conduct (July 1995) and with ISDA, *EMU: Operations Issues for Derivatives Businesses* (December 1997).

- Banks may find it more practical to agree bilaterally to redenominate NCU trades into euro and then apply their euro instructions. In the case of netting systems (eg FXNet), banks may agree bilaterally to cancel trades in NCU and rebook them into euro, or to book special trades to switch open NCU positions into euro.

12 Payment mechanisms in individual firms will need to be altered to recognise the euro as a currency, create euro payment messages and route euro payments appropriately. There is no reason why SSIs for dealing in euro after 1 January 1999 cannot be notified to counterparties well before the conversion weekend. In fact, firms should aim to notify euro SSIs by 30 September 1998 in order to provide their counterparties with sufficient time to set them up, bearing in mind the heavy workload in this period. In the absence of SSIs, euro deals will require specific instructions, reducing 'straight-through' processing volumes and increasing operational risk. It will certainly not be feasible, and would be operationally risky, to wait to make substantial numbers of SSI changes over the conversion weekend. However, the relevant accounts and use of SSIs may need to be 'switched on' and tested at that point. Any revisions to SSIs for accounts remaining in NCU will also need to be notified in advance. Even if firms wish to move all their transactions to new euro accounts (or to revised NCU accounts), it would be sensible to keep old NCU accounts open for a period after the start of Stage 3 in case not all payments are directed to the new euro accounts.

Accounts

13 The objective of advance notification of SSIs will also require settlement banks to provide information to customers well in advance of the euro banking facilities which they will provide, including their approach to account numbering, so that customers can decide on the facilities which they will need and therefore obtain the detailed information (eg account numbers) which will be required for SSIs. Settlement banks should do so by 31 May 1998.

14 The December 1997 *Practical Issues* described some options available for managing correspondent banking accounts in Stage 3. These included either using existing account numbers and converting them to euro, or setting up new euro accounts. If existing accounts are converted to euro, this would be likely to simplify the tasks for the conversion weekend because it would avoid the need to alter account numbers in payment instructions. Where the denomination of an account changes, it is important to have sufficient control procedures to ensure that there is no ambiguity about the denomination of amounts being paid into the account. (Most banks which account in more than one currency have such controls already.) Banks will need to consider at what stage they 'open' new euro accounts so that they are available for money to be paid in, if this is to be allowed before the start of Stage 3.

15 One possibility is for firms to use their existing ECU accounts as euro accounts in Stage 3. This would have the advantage of allowing payments into the accounts, before the start of Stage 3, which would automatically convert 1:1 into euro, thus reducing conversion weekend work, and would allow notification of SSIs at an early stage. Firms will need to consider to what extent existing ECU accounts are likely to be able to meet their euro needs.

16 Even if accounts in euro have been opened prior to the end of 1998, any interfaces to CHAPS euro and to other systems will need to be 'switched on' and tested during the conversion weekend. Cash management systems will need to have had set up in advance facilities to allow

them to comply with euro RTGS or other limit requirements for holdings of liquidity, as well as the appropriate holiday calendars and day-count bases for use in managing their euro accounts.

17 If a firm retains NCU accounts as well as setting up euro accounts, it will need to make changes to its position monitoring systems so as to group together NCU and euro positions as required. Preparations for this should be made well before the conversion weekend, so that they can be implemented as easily as possible at that stage.

Traders' systems

18 Traders' systems for the money and foreign exchange markets will also need to be converted over the conversion weekend, so that the euro is included as a currency and NCU are linked to it via the conversion rates. All spreadsheets, composite screen pages or other front-office applications used for trading, ticket-writing and position-keeping purposes will need to be amended to reflect the new currency and the new market conventions. These changes should all be checked and reconciled internally. Automated price feeds (such as for money market rates and foreign exchange rates) will need to be updated to refer to their euro equivalents. Many of these changes can be prepared well in advance, and automated price feeds can be tested if 'dummy' feeds are available before the start of 1999. Screen providers are expected to be amending formats during 1998 to display euro data, even if the data fields in many cases remain empty at that stage, to assist in the amendment of data feeds. Nevertheless, the feeds and other applications may still need to be finally tested for accuracy during the conversion weekend once price feeds are 'live'.

19 An important point to bear in mind is that the 'spot' date for foreign exchange or money market transactions in the euro for value 4 January 1999 will be 30 December 1998 (or 29 December 1998 for markets which will be closed on 31 December 1998). Firms will need to make sure that their dealing systems are adapted in time to allow such spot dealing where required. They may need to make changes even earlier if they wish to make transactions in the euro earlier in 1998 for forward settlement in 1999.

C UPDATE ON BOND MARKETS

20 The December 1997 *Practical Issues* contained a detailed report on debt securities over the conversion weekend. It also included a description of the procedures for the conversion weekend of the CSDs in France and Germany (Sicovam and DBC respectively), the ICSDs (Euroclear and Cedel) and the use of S.W.I.F.T. in the conversion process.[8] This section provides an update.

Brouhns working party

21 In September 1997, the Monetary Committee established an ad hoc working party of EU government and central bank officials (the Brouhns working party) to exchange information on plans to redenominate and reconvention marketable government debt at the start of Stage 3. The working party has made its progress report available to market associations, including a series of provisional tables indicating each government's intentions regarding redenomination of its outstanding debt and market conventions. The latest information available to the Bank is

8 Euroclear has since published a second edition of *Opening the Door to the Euro*. S.W.I.F.T. has also since published a new edition of its manual.

summarised in the two tables at the end of this section; and is consistent with the latest findings of the working party.[9] Table 1 updates the redenomination table in the December 1997 *Practical Issues*, including information on discount instruments such as bills. Table 2 gives information on market conventions. These tables are also available on the 'updates' page of the Bank's euro website, and the Bank will further update them as new information becomes available.

Market conventions

22 In all cases except Luxembourg and Spain, which have already announced their decisions, the information on market conventions in Table 2 represents governments' current intentions, but final decisions have not yet been taken. Market practitioners in London consider it essential that governments make these decisions quickly. Changes to market conventions (eg changing day-counts to actual/actual) will require system changes for market firms.[10] For example, LIFFE plans to list its March futures contracts in German and Italian government bonds in June. It will need full details of the deliverable securities (including the accrued interest convention). Market practitioners urge governments to announce their plans as soon as possible. At this stage, any decisions that differ significantly from what the market currently expects would create a real risk of market disruption at the start of Stage 3.

23 Whereas all participating EU governments intend to implement their redenomination plans over the conversion weekend, there are likely to be differences in the timing of reconventioning. For example, the Belgian authorities are planning to move to an actual/actual day-count convention and TARGET business days for the calculation of accrued interest on secondary market trades in Belgian government bonds from 1 January 1999. The accrued interest on all trades that settle after that date will be calculated on the basis of the new convention for the entire period from the previous coupon date to the settlement date. Likewise it is planned that Belgian Treasury certificates will be discounted using the actual/360 rather than actual/365 day-count from 1 January 1999. The Spanish authorities are also planning a 'big bang' approach to change to actual/actual. The date of the switch is yet to be fixed, but it is likely to be after the conversion weekend. The Italian Treasury Ministry is recommending a change in the day-count convention on each of its government bond issues to actual/actual from the first coupon date in 1999. The German authorities have not yet decided whether to change the conventions on German Federal Government bonds. However, the Bundesbank recommends that the day-count convention on existing German Government bonds should change on the first coupon date in 1999.

24 Market practitioners recommend that, if governments intend to change market conventions, they should *not* do so over the conversion weekend. Government issuers should only change day-count conventions on an interest payment date, or give sufficient notice of a 'big bang' change so that investors can plan for the consequent changes to accrued interest outstanding.

Non-government issuers

25 The December 1997 *Practical Issues* reported that it would ease pressures on systems and back offices if issuers other than participating governments were to delay any redenomination of their securities until at least a month after the conversion weekend. Our information is that most

9 It is expected that the working party's tables will be finalised shortly, endorsed by each government and made available to the market.

10 They may also require changes to exchange traded and OTC derivatives contracts, such as adjustments to strike prices.

large issuers in the Euromarkets either do not plan to redenominate at all during the transition period or intend to delay redenomination in this way.

26 Most corporate issuers have not yet decided whether or how they will redenominate their outstanding bonds and very few have made an official announcement. IPMA understands that no UK company has announced its intention to redenominate its bonds or included a redenomination clause in its bond issues or MTN programme. Most ‘parallel’ and ‘euro’ bonds with redenomination clauses provide for redenomination to occur on an interest payment date. These issues are not therefore expected to redenominate over the conversion weekend.

27 IPMA expects that France and Germany are the Member States where corporates will redenominate their bond issues on a large scale, but in most cases after the conversion weekend. In France, a Redenomination Committee will assign dates during the transition period for each French company to redenominate its French franc bonds. In Germany, Article 6 (3) of the *Draft Act on the Introduction of the Euro* will allow debtors to redenominate DM-denominated bonds that are tradable on a securities market from 1 January 1999, but Article 6 (6) requires them to give at least one month’s notice. In both countries, issuers will also have powers to redenominate bonds denominated in other participating currencies but governed by domestic law. This will be on condition that the government of the currency in question has converted at least part of its public debt.

28 IPMA understands that the few non-government issuers that will redenominate over the conversion weekend, include the following.

- CADES (Caisse d’Amortissement de la Dette Sociale) in France, which has made a formal announcement. Other large French issuers, including EdF, SNCF, RATP and CNA, have indicated that they will wait until a later date.
- The mortgage banks in Germany, which have announced that they will redenominate their jumbo and global Pfandbriefe over the conversion weekend but will not redenominate traditional domestic Pfandbriefe.
- KfW, which intends to redenominate its domestic DM bond issues (some 200) during the conversion weekend. Its international finance subsidiary, KfW International Finance, does not have very many outstanding issues in participating currencies and will make decisions about them on a case-by-case basis.
- Dresdner Bank, which has announced that it will redenominate all of its domestic bonds during the conversion weekend as well as those of its Dutch and Irish subsidiaries (where governed by German law).

29 None of the supranational issuers that IPMA has surveyed has indicated that it intends to redenominate its bonds during the conversion weekend.

- The World Bank does not intend to redenominate any of its bonds.
- Whilst the European Investment Bank intends to redenominate as many of its bonds as possible, and has issued several parallel bonds, it does not intend to redenominate any of its bonds during the conversion weekend.

- The European Bank for Reconstruction and Development does not intend to redenominate its bonds that mature before the end of the transition period but intends to redenominate bonds maturing after 2002 over the course of the transition period.

Issuers in other participating currencies

30 The provisional Brouhns tables give information about the intentions of EU governments with regard to their debt in participating currencies other than their own domestic currency.[11] They indicate that the Belgian, Greek, Irish, Italian, Portuguese and Spanish governments intend to redenominate their debt in the currencies of other participating EU governments, using Article 8(4) of the EU Regulation under Article 109l(4) of the Treaty on, or soon after, 4 January 1999. Sweden and Finland have not yet taken decisions. Austria and Denmark have no plans to redenominate. (Germany, France, Netherlands, Luxembourg and the UK currently have no debt in other EU national currencies that will be outstanding at the start of Stage 3.)

Bonds remaining in NCU

31 Market participants do not expect any problems to arise in the trading of bonds that are not redenominated. Interest and principal payments can be made in euro, and cash consideration in secondary market transactions will be paid in euro. Prices will continue to be quoted as a percentage of the face value of the bond. Trades will be in nominal amounts of the national currency unit with consideration paid in euro according to the following formula: *consideration (€) = price (%) multiplied by nominal amount (in NCU) divided by conversion rate* and applying standard roundings.[12]

11 The Brouhns working party notes some uncertainty as to the method of redenomination to be adopted for debt issued by one Member State in the currency, and subject to the law, of another Member State.

12 In Belgium and Germany, it has been announced that the exact formula will be as follows: (i) clean price times nominal value divided by the conversion rate, rounded to two places of decimals; (ii) accrued interest divided by the conversion rate, rounded to two places of decimals; (iii) these sums are then added. (In Germany, the same principle applies for brokerage and commissions.)

TABLE 1: REDENOMINATION PLANS OF EU MEMBER STATES WISHING TO JOIN EMU ON 1 JANUARY 1999

	Plans to redenominate all/some government debt	Status of redenomination decision	Proposed redenomination date	Redenomination basis	Rounding rule for converted nominal amounts	New minimum nominal amount or lot size	Cash compensation	Will ISINs change following redenomination?	Published information
Austria	Only liquid government bond issues selected in conjunction with banks (c. 34% of tradable debt)	Draft law expected in mid-1998	1-4 Jan 1999	Face value of each individual bond	Round to nearest euro cent	One euro cent	N/A	No	
Belgium	Dematerialised public debt securities: linear bonds (OLOS) Treasury certificates and strips	Intention to redenominate and methodology stated by Euro Commission in Interim Report October 1997; Royal Decree of 16 Oct 1997	2 Jan 1999	Investor holding ('Line by line in each client account')	Round to nearest euro cent	One euro cent until July 1999, then €1000; odd lots of up to 999.99 will be repackaged by Securities Regulation Fund for holders of securities accounts on a voluntary basis, which will do the same for their customers	N/A	No	Euro Commission Interim Report Oct 1997
Finland	Markka -denominated serial bonds in book entry form and short term Treasury bills	Economic Policy Committee announced intention to redenominate on 28 Oct 1997; Decree expected in mid-1998	1-4 Jan 1999	Investor holdings	Round to nearest euro cent	One euro cent; minimum settlement lot of €1000	N/A	No	
France	All negotiable government debt (OAT, BTAN, BTF)	Announced on 8 July 1997	1-4 Jan 1999	Investor holdings	Round down to nearest euro leaving a remainder	One euro (except OAT stripped coupons: €0.25)	Remainder is truncated after the fifth decimal, marked to market to obtain the 'net amount' (except BTFs will probably be paid 'gross'), rounded to nearest cent and paid to investor in cash	Yes	
Germany	Listed Federal government bonds (Federal Government bonds, MTNs and treasury notes) falling due after 19 Jan 1999	Draft Act on Introduction of the Euro includes conversion of bonds into euro	1-4 Jan 1999	Investor holdings	Round to nearest euro cent	One euro cent	N/A	No	Draft Act on Introduction of the Euro

	Plans to redenominate all/some government debt	Status of redenomination decision	Proposed redenomination date	Redenomination basis	Rounding rule for converted nominal amounts	New minimum nominal amount or lot size	Cash compensation	Will ISINs change following redenomination?	Published information
Ireland	General government debt (bonds and bills)	Decision taken on methodology	1-4 Jan 1999	Investor holdings	Round to nearest euro cent	One euro cent	N/A	No	
Italy	Marketable government debt (BOT, CCT, BTP, CTZ)	Law no. 433 of 17 Dec 1997 delegates the necessary powers to government; Decree expected in mid-1998	1-4 Jan 1999	Minimum nominal denomination (in most cases ITL 5,000,000)	Round to nearest euro cent	One euro cent initially; subsequent repackaging of odd lots to minimum lot size of €1000	N/A	No	Euro Committee report 'From the Lira to the Euro' July 1997
Luxembourg	All dematerialised linear bonds (OLUX)		4 Jan 1999 (to be agreed with Cedel)	Investor holdings	Round to nearest euro cent	One euro cent	N/A	No	
Netherlands	All tradable government debt maturing after 1999	Draft redenomination Bill expected in spring 1998	1-4 Jan 1999	Investor holdings	Round down to nearest euro	One euro	Yes at the level of each bank; and then the CSD	Yes	
Portugal	Tradable government debt maturing after 31 Dec 1998	Law expected in mid-1998	Jan 1999	Investor holdings	Round to nearest euro cent	One euro cent; no decision yet on subsequent repackaging	N/A	No	
Spain	All government debt registered at book entry system for government securities (T-bonds and T-bills)	Intention to redenominate and methodology published on 25 Sept 1997	4 Jan 1999	Investor holdings	Round to nearest euro cent initially	€100 for government bonds and €10,000 for T-bills; odd lots in euro cents will be repackaged by primary dealers	N/A	No	Paper published by Ministry of Finance on 25 Sept 1997

TABLE 2: CONVENTIONING INTENTIONS OF EU MEMBER STATES WISHING TO JOIN EMU ON 1 JANUARY 1999

	Current conventions for bills (ie discount instruments of less than one year)	**Conventions for new bills issued after entry into Stage 3**	**Conventions for existing bills after Stage 3 begins**	**Current conventions for bonds**	**Conventions for new bonds issued after Stage 3 begins**	**Conventions for existing redenominated bonds after Stage 3 begins**
Austria	act/360, national holidays	act/360, TARGET business days	act/360, national holidays	30/360, national holidays, annual coupon	act/act, TARGET business days, annual coupon	act/act, TARGET business days, annual coupon
Belgium	act/365, national holidays	act/360, TARGET business days	act/360, TARGET business days	30/360, national holidays, annual coupon	act/act, TARGET business days, annual coupon	act/act, TARGET business days, annual coupon
Finland	act/365, national holidays	Probably act/360, probably TARGET business days	Probably act/360, probably TARGET business days	30/360, national holidays, annual coupon	act/act, TARGET business days, annual coupon	Probably act/act, probably TARGET business days, annual coupon
France	act/360, national holidays	act/360, business days under study	act/360, business days under study	act/act, national holidays, annual coupon	act/act, business days under discussion, annual coupon	act/act, business days under study, annual coupon
Germany	act/360, national holidays	act/360, business days under study	act/360, business days under study	30/360, national holidays, annual coupon	act/act, business days under discussion, annual coupon	Not yet decided apart from annual coupon
Ireland	act/365, national holidays,	act/360, TARGET business days	act/365, probably TARGET business days	30/365 and act/act, national holidays, annual and semi-annual coupons	act/act, probably TARGET business days, annual coupon	act/act, probably TARGET business days, annual coupon
Italy	act/365, national holidays	act/360, TARGET business days	act/360, TARGET business days	30/360, national holidays, semi-annual coupons	act/act, TARGET business days, semi-annual coupon	act/act, TARGET business days, semi-annual coupon
Luxembourg	No bills in issue			30/360, national holidays, annual coupons	act/act, TARGET business days, annual coupon	act/act, TARGET business days, annual coupon
Netherlands	act/360, national holidays	act/360, TARGET business days	act/360, TARGET business days	30/360, national holidays, annual coupons	act/act, TARGET business days, annual coupon	30/360 (to be discussed with the market), TARGET business days, annual coupon
Portugal	act/365, national holidays	act/360, TARGET business days	act/360, business days under study	30/360, national holidays, annual and semi-annual coupons	act/act, TARGET business days, annual coupon	Probably act/act, business days under study, annual and semi-annual coupons
Spain	act/act, national holidays	Probably act/360, probably TARGET business days	Probably act/360, probably TARGET business days	act/365, national holidays, annual coupons	act/act, probably TARGET business days, annual coupon	act/act, probably TARGET business days, annual coupon

Note: Final decisions have not yet been taken.

D UPDATE ON REPOS

32 A working group of practitioners drawn from the ISMA repo sub-committee and the London Broker Group has published a paper on the impact of the introduction of the euro on finance trades. The paper considers finance trades in the currencies of participating EU Member States and involving securities issued by participating governments that are pending over the conversion weekend. These may be subject to four kinds of impact, as follows.

- The nominal value of the trade will be redenominated in euro, possibly to two decimal places.
- The cash amount may be converted to euro.
- The ISIN of the security may change (eg in the case of French and Dutch government bonds).
- The minimum denomination of the security may change.

33 In this context the French authorities have confirmed that pending transactions in French government securities will be subject to two conversions, one of the cash amount, the other of the securities. They propose that the original cash amount in French francs will convert to euro at the conversion rate, the securities will be redenominated and rounded down to the nearest euro according to the French method (see Table 1) and the seller will recompense the buyer for the rounding down by a movement of the net cash remainder over their accounts at the Banque de France. Sicovam will make these small cash payments to the relevant accounts at the Banque de France automatically.

34 The group's paper does not recommend a particular method by which firms should handle these changes in their own systems (the December 1997 *Practical Issues* set out a number of options). But it does state that one essential result is the conversion of the settlement total on the maturity of the trade to the euro, and this euro amount must be precisely equivalent to the amount in national currency agreed at the inception of the trade. All trades (whether entered into before or after Stage 3 begins) should settle in euro after 4 January 1999.

35 Participants need to consider how they intend to:

- convert trading systems to reflect the new position in the redenominated security;
- convert settlement systems to send instructions with the correct ISIN, nominal and cash values; and
- convert positions in settlement systems.

36 The group notes that most euro area CSDs will convert all instructions in their systems to settle against euro cash over the conversion weekend, whether the trades involve redenominated or un-redenominated securities. The ICSDs, however, have confirmed that they will convert only the cash leg of trades involving securities being redenominated, in order to avoid mismatches between the denomination of the nominal amount of the security and the denomination of the cash.

37 The group reaffirms the principle that any method that firms use to convert their positions should be invisible to the market. Therefore firms should *not* reconfirm trades following

redenomination, in common with the recommendations for cash market trades. Clients that do require a statement of redenominated finance trades should contact their broker/dealer before the conversion weekend to arrange this.

38 The group recommends that best practice should be for firms to ensure that instructions to settlement systems are submitted and matched before the close of business on 31 December 1998 to reduce risk over the conversion weekend. Additional efforts should be made to avoid failed trades or clean up existing 'fails' and new euro settlement instructions should be distributed in a timely manner.

39 The group also recommends as best practice that repo counterparties should carefully review before the conversion weekend all outstanding open-ended repo and stock lending trades (ie trades that are rolled over, typically daily, and do not have a fixed maturity date), and that they should clean up all outstanding margin calls and repo/rebate interest during the week before the conversion weekend. The group has identified three options to deal with open-ended repos in bonds that are due to be redenominated over the conversion weekend, as follows.

- One option would be to convert open trades into term trades, with an early January end-date. This would simplify the conversion process and allow the accrued repo/rebate interest from the pre-conversion portion of the trade to be added on to the final settlement amount, and paid in euro on termination. Counterparties should agree bilaterally if there are any stipulations to agreeing a fixed end-date on their transactions, such as the right of recall if the securities are sold.
- A second option would be to convert the trade on 1 January 1999, and carry the accrued repo interest forward until such time as the trade is terminated. This would be likely to be more difficult to track and control, since there would be no known end-date to which to attach interest.
- A third option would be to add the accrued repo interest as of 1 January 1999 to the second leg of the trade, in effect compounding the interest already accrued.

Different options may suit different market firms.

E EQUITY MARKETS

40 Whereas bonds are traded in nominal amounts and priced as a percentage of the par value of the debt, shares are traded by number and valued at the quoted price. The important issue in the equity markets is conversion of quoted prices from national currencies to the euro by stock exchanges in the euro area. This will happen over the conversion weekend. Subsequently, individual companies in the euro area are likely to redenominate the par value of their share capital or move to shares of no par value. But this should have no impact on share trading.

Equity markets in the euro area

Quotation, trading and settlement

41 In the euro area, the prices of all listed securities will be quoted, traded and settled from 4 January 1999 in euro (and euro cent) irrespective of whether the security has been redenominated. Depending on whether 31 December is a trading day or not, exchanges will

transmit closing prices in national currency to market participants on either 30 or 31 December. All market participants will have to implement all price conversions for all relevant instruments, in all markets, between 31 December and 4 January. Similarly, OTC equity derivatives will need to convert strike prices to euro.

42 Closing prices used should be taken from the market where the company is registered or where most trading takes place. Unlike bonds, where issuers determine redenomination, the repricing of equity quotations will be determined by the exchanges. Market participants would find it useful if exchanges could also provide a feed of closing prices converted to the euro for the last trading day of 1998. It is understood that, in general, they do not currently have plans to do so.[13] A feed of closing prices in euro would ensure that all firms use consistent prices for portfolio valuation. However, firms will not be dependent on receipt of these external prices because they have the alternative of converting the closing prices in NCU to euro themselves.

43 Fund managers do not in most cases expect there to be a demand for trading in NCU from 4 January 1999. Although in principle an investor will have the right to price an order in NCU, there will in practice be no official quotation available against which to measure the order, and the intermediary will have to convert the order into euro. But intermediaries will be free to account to their clients in euro or NCU, depending on the client's requirements.

Pending trades

44 All euro area exchanges will cancel any orders in the central order book remaining unexecuted at the close on the last trading day of 1998. They will then convert all executed trades to euro, whether matched or unmatched. Matched trades before the conversion weekend in national currency falling due for settlement after the weekend will be settled in euro in most of the prospective euro area, with the exception of Ireland and (possibly) Portugal.

45 Confirmations for transactions entered into in national currency prior to 1 January 1999, for settlement in euro after 4 January 1999, for which confirmation will have been sent in national currency, do not need to be reconfirmed over or after the weekend in euro. Similarly, transactions reports in national currency generated on matching do not need to be reported again in euro for regulatory purposes.

Tick sizes and trading lots

46 All euro area exchanges will in due course publish new tick sizes, which in value terms will approximate to the old tick sizes in national currency. Where trading in equities is in lots (ie round numbers of shares rather than values), there is no reason why the lot size need change as a result of the introduction of the euro.

Redenomination and no par value shares

47 It currently seems unlikely that companies in the euro area will redenominate their share capital over the conversion weekend, and market practitioners recommend that they do not do so, because of the large number of other changes which already need to be accommodated. However, many French and German companies in the euro area plan to redenominate their share

13 Most markets have not yet stated how opening prices in euro on 4 January 1999 will be communicated. The stock exchange in France will convert the closing national currency prices of 30 December, and release these prices formally before 8am on 1 January 1999.

capital during the course of 1999. The market's expectation is that ISIN codes for equities will not change.

48 In no European country, except Belgium and Luxembourg where share certificates without par values are permitted, is it at present possible to issue no par value shares. The conversion of existing shares into shares of no par value is generally considered in the market to be a good way for companies to avoid the need to alter the par value of their shares after conversion into euro. Member States that are currently considering the introduction of no par value shares include Austria, France and Germany. Most listed German companies planning to redenominate their equity capital in 1999 are planning to adopt no par value shares.

The London Stock Exchange (LSE)

Quotation, trading and settlement

49 The conversion weekend will have no impact on the majority of companies whose shares are traded in the UK domestic market. All securities traded on SEAQ and currently quoted in sterling will remain quoted in sterling after EMU begins, at least until there is a demand for euro trading.

50 The LSE has issued a consultative document on, among other things, a proposal to introduce parallel order books for the 106 most liquid UK companies included in the euro FTSE Eurotop 300 index (see Chapter 4).[14] Euro order books would exist alongside, but not interact electronically with, existing sterling order books. Both order books would be based on the same security identifiers. The LSE is currently assessing the implications of this approach with market participants. Other securities will be traded in one currency only: initially, the trading currency would be sterling, with the option of switching to euro in the future if the market requires.

Redenomination and no par values

51 The DTI is consulting on whether there is demand in the UK for the voluntary redenomination of company share capital into euro and also for the option to convert into shares of no par value (see Chapter 4). No UK listed company has announced an intention to redenominate its equity over the conversion weekend. But a number of major companies are believed to be actively considering the possibility of redenominating their share capital in euro at some point while the UK is 'out'. The LSE expects that ISINs will not change on redenominated shares in the UK.

Equity indices

52 The composition of equity indices over the conversion weekend should change as little as possible, given that swap and derivatives contracts relate to an index level in the future. FTSE International is proposing to adopt the following approach.

- No change will be made to the index value for an existing index or its history.
- Where an index value is calculated in a single base currency (eg FT/S&P-AWI (France) in French francs and FTSE Eurotop 300 in ECU), the index value will remain unaltered

14 London Stock Exchange, *EMU: Proposals for the Equity Markets* (February 1998).

over the conversion weekend, although some or all of the constituent share prices may convert to euro.

- Where an affected index is calculated in more than one currency (eg FT/S&P- AWI (Europe)), a new euro calculation will be introduced and pre-EMU national currency calculations will be linked to the post-EMU euro calculations and clearly marked to distinguish them (eg FF-euro, DM-euro).

FTSE International plans to publish at the end of March a detailed consultative document regarding the changes.

CREST

53 The key points relating to CREST over the conversion weekend are as follows.[15]

- CREST's existing multi-currency system will be expanded to cater for the euro no later than November 1998. It will not be possible to settle euro transactions until the start of Stage 3.
- The last day for the input of transactions with an Irish pound consideration will be 31 December 1998.
- CREST will facilitate the settlement of transactions against both Irish pounds and euro from the start of 1999. The market will therefore be able to settle open transactions in Irish pounds over the conversion weekend for a short period, which will probably end on 29 January 1999.
- All transactions for Irish pound consideration which have not settled by the end of this period will have to be deleted by members and reinput for euro settlement.
- From the commencement of EMU, Irish securities will be priced, traded, matched and settled in euro.
- Final euro payments in CREST will occur at 14.30pm (local time).
- CREST will introduce new functionality towards the end of 1998 to transform automatically transactions which remain open over a redenomination or renominalisation date of a bond or an equity.

F DERIVATIVES MARKETS

OTC derivatives markets

54 ISDA's EMU Operations Task Force has agreed a set of basic principles for the conversion weekend, as follows.

- The changeover approach for OTC derivatives should minimise the burden for the conversion weekend. There will be considerable preparatory work to do before the end of 1998 and changes may be made on an on-going basis throughout the transition period.
- In specific areas, however, it is recognised that changes to the underlying markets will require work over the conversion weekend. In addition, internal risk management and

15 CRESTCo, *CREST and EMU* (February 1998).

front-office pricing systems may be changed over during the conversion weekend to reflect the new currency.

- OTC derivatives do not themselves need to be converted. NCU should continue to be used for notional/nominal values and payment advices. Conversion can be made by mutual agreement of the counterparties, with a sufficient period of notice, at some point during the transition period, if the parties so wish.
- Certain adjustments relevant to the conversion weekend relating to contracts based on ISDA standard form documentation may be made under a multilateral protocol that ISDA is developing.

Interest rate products

55 One main area of work over the conversion weekend will be to switch to new reference rates, where price sources have changed. This will affect short-term interest rate products for NCU. Whilst LIBOR rates in NCU will continue to exist, many continental rates for NCU will be replaced by euro EURIBOR.[16] Many parties will wish to clarify with their counterparties before the conversion weekend what the agreed successor price source will be. ISDA is likely to include provisions to enhance certainty on this point in its multilateral protocol. In the case of ECU deals, in addition to changing the price source, ISDA recommends that rate resets and payment advices should refer explicitly to euro from the conversion weekend.

Bond options and asset swaps

56 Where redenomination and reconventioning do not alter the economic value of a bond, ISDA does not envisage any need to adjust bond options over the conversion weekend. Similarly, mismatches should not arise on asset swaps, so the swap need not be adjusted.

57 Where significant renominalisation or reconventioning does change the economic value of a bond, the bond option will require adjustment. ISDA recommends that calculation agents are mandated to adjust strike prices in the light of reconventioning and that this is done by the end of the first week of January 1999, but *not* on the conversion weekend, unless exercise is possible during that first week. In the case of significant renominalisation, a cash adjustment may be an alternative, subject to a *de minimis* threshold. ISDA is still studying this point. ISDA also advises firms to study carefully the implications of reconventioning or significant renominalisation for asset swaps and similar structures.

58 Bonds and other fixed income assets are frequently held by a special purpose vehicle as part of a repackaging exercise. If such underlying assets are redenominated, renominalised or reconventioned, and the cash flows they generate change, there is a risk that any swap or other derivatives contract into which the special purpose vehicle has entered may cease to match the underlying assets. If the swap or derivatives counterparty does not accept the change in the cash flow, and does not perform, the special purpose vehicle may not be able to honour its obligations under the securities it has issued.

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16 ISDA believes that the disappearance of a price source is unlikely to affect the continuity of a contract, but simply its performance. The ultimate fallback will be to reference banks. But where a price source sponsor has designated an official successor rate, this may be enforceable as the successor rate to the original price source, unless there is significant doubt that the official successor is comparable to the original in economic terms.

Equity derivatives

59 For internal purposes, ISDA expects that holders and writers of single share options on 'in' country exchanges will adjust strike prices using the conversion rate over the conversion weekend. For external purposes, however, this change is not required until exercise. No redenomination, reconfiguration or adjustment to strike prices is anticipated for 'in' country indices (the level of the index should not change if redenomination of the individual stocks occurs to the nearest euro or euro cent).

60 For single share options on 'out' country exchanges, the question arises as to the foreign exchange rate to employ for converting strike prices. ISDA recommends that the exchange rate to be used should be the exchange rate on the day on which shares of the company concerned switch trading to euro, as it is expected that this is the approach that the relevant derivatives exchanges will adopt. For 'out' country indices, a concern is raised by the 'euro creep' effect caused by some constituent shares trading in euro and others in NCU. Given that the index and future will include this 'euro creep' effect, it is recommended that OTC derivatives should follow suit (and an appropriate provision for the multilateral protocol is being developed).

Foreign exchange derivatives

61 ISDA notes specifically that no presumption should be made that cross-currency swaps in two 'in' currencies will be closed out either over the conversion weekend or in general. However, many firms may decide to do so by mutual agreement (and should give sufficient notice before the conversion weekend or close-out date) and the date at which this is done is also a matter for agreement between the counterparties. ISDA also notes that 'barrier' derivatives[17], involving an exchange rate between 'in' and 'out' currencies, need to convert to euro over the conversion weekend, and reflect any change in the convention for foreign exchange quotations, and ISDA recommends that this conversion is reconfirmed.

Derivatives exchanges in the euro area

62 Many derivatives exchanges in the prospective euro area have yet to finalise their conversion plans. However, a number of different conversion methods and mechanisms are being proposed. The methods described below are not mutually exclusive. Proposals differ between exchanges, and there are different methods proposed for different products within exchanges.

63 Product conversion methods proposed so far include the following.

- *'One for one' ECU to euro*. ECU contracts convert to euro at the rate of 1:1. This is the simplest conversion method.
- *'One for one' NCU to euro*. Contract parameters (ie strike price, tick value, nominal etc) are converted to euro at the conversion rate, producing non-round amounts. These are quoted to zero, one or two decimal places. The remainder is ignored.
- *'One for one' NCU to euro, plus cash*. Contract parameters are converted at the conversion rate to rounded amounts, with cash settlement of the residual.

17 ie derivatives triggered when the relevant rate, in this case a foreign exchange rate, reaches a particular threshold.

- *'One for two'* (ie one contract is replaced by two new contracts, 'A' and 'B'). Contract 'A' has a large rounded nominal and rounded tick value. Contract 'B' has a small nominal and tick value, possibly up to six decimal places. Once the conversion rate has been published, exchanges can finalise the new 'A' and 'B' contract specifications on the principle that the value of 'A' plus 'B' is equivalent to the value of the NCU contract. The 'A' contract is actively traded. The 'B' contract is expected to trade out within a short time, and is marked daily with the price of 'A'.
- *'One/many to one/many'* (ie not a linear conversion). Positions are converted at a flexible ratio. For example, an exchange may convert a one lot position in the NCU contract to one lot in the euro contract, but a 2,000 lot position in the NCU contract might be converted into 1,520 lots of the euro contract.
- *Parallel listing*. Exchanges list a new ECU product during 1998. The equivalent NCU contract is listed in parallel until expiry. Settlement of, or delivery into, NCU contracts remaining after 31 December 1998 may be in euro.

64 The various mechanisms for converting from the old product to the new include the following.

- *'Big bang'*. Positions are converted over the conversion weekend at a contract, trade or position level.
- *Exchange conversion facility*. Some exchanges will make a mechanism available to facilitate conversion before the conversion weekend from ECU to euro, and after the conversion weekend from NCU to euro. The administration of the facility varies from mainly manual to largely automated. At least six different variations of this mechanism are currently under consideration.
- *Spread trading facility*. A spread trading facility will be made available by some exchanges to facilitate conversion from NCU contracts into their ECU equivalents before the conversion weekend.

65 This summary demonstrates the complexity that market firms are facing in converting listed derivatives. In order to allow firms adequately to prepare for EMU, the Futures Industry Association (FIA) urges exchanges to standardise approaches both within and between them, and to publish detailed plans as soon as possible. Exchanges should confirm that the information that firms will require over the conversion weekend will be made available, and when. Exchanges should also address the questions raised in the FIA EMU questionnaire.[18]

LIFFE

Short term interest rate (STIR) products

66 The STIR contracts that are likely to be directly affected by EMU are the one-month Euromark, three-month Euromark, Eurolira and ECU. LIFFE's three-month ECU contract will redenominate automatically on a 1:1 basis into a three-month euro contract over the conversion weekend, and will thereafter settle to three-month euro BBA LIBOR. The Deutschemark and lira contracts should also settle to euro interest rates. However, they will not be forcibly converted from NCU into euro, since:

18 The FIA EMU questionnaire is available from the FIA's web page (http://www.fiafii.org).

- a pure euro contract will in any event be available by converting NCU positions voluntarily; and
- any forced conversion would involve substantial back-office implications and/or more or less arbitrary impact on positions and exposures in order to achieve neat rounded denominations of contract sizes.

67 Spread trading facilities (STF), which are pit-based, and voluntary position conversion facilities (VPC), which are clearing systems-based, will be available to enable firms to convert outstanding positions in NCU contracts (lira and Deutschemarks) into the 'ECU/euro' contract. The STF, which takes the form of a single transaction encompassing two different contracts, will facilitate trading in and out of LIFFE's euro contract, whereas the VPC will only allow users to convert NCU positions (eg Euromark and Eurolira) into euro positions. The STF is already available, and the VPC will be available before 4 January 1999. LIFFE expects that the VPC will be provided daily at the outset and less frequently later, if at all, depending on the degree to which positions have been converted to the euro benchmark.[19]

68 The conversion rates established on 31 December 1998 between these currencies will be input into LIFFE systems to assist the conversion process. Should the VPC facility be introduced before the end of 1998, LIFFE will provide market participants with the relevant exchange rate (based on the prevailing foreign exchange rates for ECU at the time) to be applied when using the facility. Additional changes will need to be made by members to accommodate the euro. Some will treat it as a simple book-keeping entry, others as a notional foreign exchange trade: either way their systems will need to be revised before the end of this year.

Bond products

69 The bond products that are likely to be directly affected are the ten-year (Bund) and five-year (Bobl) German Government bond contracts, and the ten-year Italian Government bond contract (BTP). The first of the 1999 delivery months for bond futures contracts is due to be listed in early June 1998. Two possible approaches have been identified: to replace the March 1999 delivery months onwards with relevant single-issuer euro-denominated contracts or to list a euro-denominated contract sooner or later alongside each of the NCU contracts. LIFFE must announce which of these options it intends to use before the contracts are listed in June 1998. The market would prefer the announcement to be made sooner, if possible. If euro-denominated contracts are listed in 1998 (with 1999 expiry dates), they will be ECU-denominated until the end of the year, and incorporate an exchange rate risk between ECU and the NCU of the underlying deliverable bonds.

70 If parallel euro-denominated contracts are listed in 1998, then the fixing of the NCU/euro rates and redenomination of the underlying bonds will provide for a smooth transition to the euro contract. Hence, as with STIR products, LIFFE's workload over the conversion weekend will involve loading the VPC with the conversion rates from 4 January 1999.

71 If, by 4 January 1999, euro-denominated bond contracts have not been listed, the contracts will be listed on that day with a front delivery month of March 1999, and voluntary conversion facilities from the NCU contract will be provided. In this case, there may be some system testing and logistical work to be carried out over the weekend, as with any new contract.

19 More detail about these facilities is provided in: LIFFE, *Euro Market Strategy* (March 1998).

Equity products

72 Conversion of LIFFE's FTSE products depends on whether there is a full or partial conversion of the underlying FTSE index into euro. Individual stock options may convert if the underlying stocks convert into euro. LIFFE is liaising with FTSE International and the LSE in relation to these issues.

LCH

73 In its preparations for the conversion weekend, LCH assumes the following.

- Irrevocable conversion rates will be available by midnight on 31 December.
- All data from all exchanges in respect of business transacted on 31 December will be received by LCH within the normal timescale (ie approximately midnight the same day).
- LIFFE will transmit postings for ECU-denominated contracts overnight on 31 December in ECU.
- All relevant documentation regarding conversion requirements will be received from members in the designated timescale.
- All relevant information regarding account structure, correspondent bank details etc, will be received from Protected Payments System (PPS) settlement banks in the designated timescale.
- All settlement banks will be able to provide information regarding account balances over the weekend.

Pre-conversion weekend preparations

74 In January 1998, LCH issued a questionnaire to PPS settlement banks, specifically requesting information including account structures, value dating and correspondent bank details in respect of the euro. LCH systems testing is due to begin in July, with a full systems test and dry-run of the conversion weekend occurring by November. LCH's pre-conversion weekend's preparations also include requesting details in August from its members as to their conversion requirements for their accounts held at LCH. All information is to be received regarding members' conversion requirements by November.

Cash accounts over the conversion weekend

75 On 31 December 1998, LCH will close its banking system[20] as soon as possible after cessation of trading. End-of-day processing will start but will not include feeds from any of the exchanges (this is to enable LCH to ascertain a true closing cash balance on members' accounts). A report will be produced detailing by member their closing cash balances in NCU and ECU. A system enhancement will be made to change XEU to read EUR. A report will be produced again by member detailing cash balances in the euro equivalent. LCH will accept but not process feeds received from the exchanges.[21]

20 The LCH banking system provides core functionality for payments, collateral and member accounting operations.

21 LIFFE postings will be received in XEU. A system enhancement at LCH will convert these to EUR.

76 On 1 January 1999, NCU balances will manually be converted in accordance with member requests into euro. LCH will reconcile converted balances to NCU balances in members' accounts. Static data changes will be made (eg bank correspondent details, account numbers etc). Overnight processing for 31 December 1998 will be run, and reports will be available to members in the normal manner. The XEU currency code will be replaced by EUR. Between 2 and 3 January, LCH cash account balances will be reconciled at its settlement banks.

Non-cash collateral over the conversion weekend

77 LCH will convert holdings of 'in' countries' government bonds in accordance with the issuers' policies. Currently all such bonds are held in LCH's account at Euroclear. LCH will not accept new lodgements of NCU-denominated government bonds for matching at Euroclear on 31 December. On 31 December, LCH will close the banking system as soon as possible and a statement denominated in NCU will be produced of each member's collateral holdings. On 1 January 1999, LCH will manually withdraw all relevant NCU-denominated government bonds, and re-lodge the equivalent amount in euro within its internal system. (LCH internal collateral identification codes will remain unchanged.) Where cash compensation is applicable, amounts will be posted to members' accounts. Static data changes will be made (eg to ISIN codes). Statements will be reproduced to show each member's collateral holdings in euro. LCH will reconcile the conversion of stock balances in members' accounts from NCU to euro. On 2 January 1999, stock holdings and the cash position at Euroclear will be reconciled with the banking system.

G OTHER ISSUES

Contingency planning

78 Given the scale of the work to be undertaken, it is important that market firms should review their contingency arrangements in advance, and consider what steps they may need to take to ensure that they can conduct their operations effectively over the conversion weekend. Firms should already have in place arrangements to carry on their business in the event of disruption caused by loss of electrical power or computer failure. These plans should be reassessed in the light of the additional demands of the conversion weekend, and adjusted as necessary.

Testing

79 The main technical risks over the conversion weekend appear to be: the risk of failed trades; the risk of inability to handle the volume of client enquiries; the risk that operations and support staff will be swamped; the risk of loss of integrity and accuracy of books and records; and the risk of loss of up-front trade matching controls. To keep these risks to the minimum, it is essential that market firms conduct dress rehearsals for the conversion weekend.

80 The Securities Conversion Industry Group is developing a set of generic testing guidelines, which will enable participants to test systems in order to check that the automated conversion procedures are robust. The group is developing a set of logic test packs which can be used to benchmark the preparedness of participants for the conversion weekend. The group hopes to develop a proposal on how volume testing for the conversion weekend should be conducted.

The proposal would outline the scope and structure of a test and establish a set of conversion test timings and procedures.

81 The information in the logic test packs will cover the debt and equities in participating Member States, where the conversion and redenomination of financial instruments is due to occur, including the conversion of balances and pending trades. Once the logic test packs have been finalised, the group will agree on a method of communication with the rest of the market.

Timetable

82 The timetable for the conversion weekend in different markets has been discussed in the relevant sections of this Chapter (except on bonds and repos, where it was set out in the December 1997 *Practical Issues*). This section is divided into three: the key steps in the lead-up to the conversion weekend; the current state of play on whether payment and settlement systems and exchanges are open or closed on 31 December 1998; and the timetable for the conversion weekend itself.

Pre-conversion weekend

83 The key steps in the lead-up to the conversion weekend can be summarised as follows.

- Issuers contemplating redenomination of their securities from the start of 1999 should announce their intentions as soon as possible, together with the detailed redenomination method to be used, any reconventioning and whether the security's ISIN will change. A final list of the securities to be redenominated over the conversion weekend should be published no later than 30 September 1998. New securities issued between 1 October and 31 December 1998 should provide information on the same basis.
- Banks should provide customers with information about account structures that will be available to handle NCU and euro payments by 31 May 1998, and euro SSIs should be notified to counterparties by 30 September. In addition, the processes for the conversion weekend should be agreed bilaterally between banks and their clients to ensure that the timetable, reporting formats, standing instructions (eg for odd lots) and other conditions are understood and documented. This will probably need to be done before any bilateral testing of conversion processes starts.
- Rounding will give rise to differences between nominal amounts of securities at different levels of holding, including on pending trades. CSDs and custodians need to make clear the basis on which they will make any adjustments necessary to participants' or clients' holdings.
- Settlement instructions for 'when issued' trades should be input as soon as the CSD or custodian concerned will accept them.
- All parties should ensure that outstanding problems are resolved before the conversion weekend, and that accounts are fully reconciled regularly, preferably on a daily basis, during the final days of 1998.
- To avoid confusion over the denomination of nominal amounts, CSDs and custodians should not accept any instructions, at least in securities where ISINs are not to be changed, for a period after a cut-off time on the last settlement day before the

conversion weekend. All correctly formatted instructions received after this period should be taken as being denominated in euro.

- Settlement cycles will remain unchanged: ie trades in France transacted on 29 December 1998 for settlement on a T+3 basis will settle on 4 January 1999.
- The euro conversion rates should be announced as early as possible.
- Trading should be kept to a minimum on 31 December 1998 in order to allow sufficient time to clear NCU business, process settlement instructions, match outstanding trades and resolve outstanding problems and queries, before the conversion process starts.

31 December 1998

84 The current state of play on whether payment and securities settlement systems and exchanges in each Member State will be open or closed on 31 December 1998 is understood by market practitioners to be as follows.

PAYMENT AND SECURITIES SETTLEMENT SYSTEMS AND EXCHANGES ON 31 DECEMBER 1998

	Payment systems	Settlement systems	Exchanges
Austria	U	U	C
Belgium	O	O	C
Denmark	AM	AM	C
Finland	U	AM	C
France	O	O	C
Germany[(a)]	C[(b)]	C	C
Greece	O	O	O
Ireland	U	O[(c)]	AM
Italy	O	O	C
Luxembourg	O	O	C
Netherlands	AM[(d)]	C[(e)]	C
Portugal	U	U	U
Spain	O	O	U
Sweden	C	C	C
UK	O	O	U[(f)]

Notes: O = open on 31 December. C = closed on 31 December. U = uncertain. AM = open in the morning only. (a) Bank holiday on 31 December. (b) EAF2. No decision has yet been taken in the case of EIL-ZV. (c) CREST. (d) TOP. (e) AEX securities. (AEX options: open.) (f) The LSE is not currently expecting to be open for new trades on 31 December. LIFFE is likely to be open in the morning. On 4 January, trading on LIFFE will commence at the normal times for each contract.

The conversion weekend

85 The timetable for the conversion weekend itself in the securities markets, as set out in the recommendations of standard practice by the Global Custodians EMU Forum, is as follows.[22]

- Global custodians should accept settlement instructions from clients up to normal cut-off times on 30 December 1998. Instructions will be accepted on 31 December on an exceptional basis by arrangement between individual global custodians and their

22 In addition, Paribas has published a useful paper on the ‘big bang’ weekend which is available on the Bank of England website.

clients.[23] Instructions submitted on 30 and 31 December should be for settlement with the market in NCU regardless of settlement date.

- Global custodians should make statements of positions in affected markets on 31 December 1998 available to clients.
- Global custodians should reconcile these statements with their clients and sub-custodians and document any differences. Areas to be so reconciled include: settled securities and cash positions; open transactions including fails and repos; and other open transactions.
- The conversion process should commence as soon as practicable after the reconciliation process is complete, with the aim of completion by mid-day on 2 January 1999.
- Cash accounts should be redenominated to euro or new accounts established in euro and NCU balances should be converted to euro.
- Securities should be redenominated in accordance with the practices laid down by the governing country of issue and national numbering agency.
- In order to facilitate securities processing across market participants, that part of any holding less than one euro of nominal value should be disposed of at the point of redenomination or as soon as practicable thereafter.
- Open trades, including fails and repos, should be converted to reflect settlement in euro without the need for renotification, rematching, or reinstruction to the market.
- Once all conversion and redenomination activity is complete, global custodians should make statements of positions, in affected markets, available to clients.
- Global custodians should reconcile these statements with their clients and sub-custodians and document any differences. Areas to be so reconciled include: settled securities and cash positions; open transactions including fails and repos; and other open transactions. Any differences should equate to those documented in the reconciliation process conducted prior to conversion and redenomination.
- Global custodians should complete the post-conversion reconciliation with their clients and with the market (agents, CSDs, ICSDs as appropriate) by the close on 3 January 1999.
- All subsequent settlement instructions to global custodians should be for settlement with the market in euro.
- These recommendations should apply to off-exchange transactions as well as exchange-traded transactions.

Regulation

86 The FSA and its constituent entities are aiming to minimise any changes to regulatory reporting over the December 1998 and January 1999 reporting dates, and the FSA will take the conversion weekend into account in planning any other regulatory changes. A statement by the FSA is included in Chapter 7.

23 In the case of markets that are open on 31 December, custodians will accept instructions on that day. Some custodians will also accept instructions on 31 December for markets which are closed on that day. To the extent that trading takes place on 31 December, the timetable may slip.

CHAPTER 4: FINANCIAL MARKETS AND EXCHANGES

A FINANCIAL MARKETS

UK euro note programme

1 On 13 January, the Bank published an HM Government *Euro Treasury Note Information Memorandum*. This converted the denomination of the Government's ECU note programme into euro, and replaced the *ECU Note Information Memorandum* issued in 1996. Copies of the new Information Memorandum are available from the Bank of England on request.

2 The main aspects in which the *Euro Treasury Note Information Memorandum* differs from its predecessor are as follows.

- Notes issued in future under the programme will be denominated in euro.
- Once Stage 3 of EMU begins, all payments of interest and repayments of principal will be made in euro.
- Before Stage 3 begins, all payments at tender will be made in ECU at a rate of 1 ECU for 1 euro.
- The day-count convention for calculating interest will initially be 30/360 days, as for international ECU bonds at present; but it will change to an actual/actual day-count at the first interest payment date after Stage 3 begins. Interest and principal repayments will be made in euro on any due date when TARGET is open to make payments to the account nominated by the investor.

3 Payments of interest and repayments of principal on all outstanding HM Government ECU securities which become due after Stage 3 begins will also be made in euro at a rate of 1 euro for 1 ECU. However, until Stage 3 begins, these securities will remain denominated in ECU, and the day-count convention for their accrued interest will remain throughout their life at 30/360, in line with the terms and conditions under which they were issued.

4 The market has welcomed the retitling of the programme, as removing any remaining uncertainty that the notes would be repaid in euro, and the additional statement that all existing HM Government ECU securities would also be repaid in euro.

Other UK market conventions

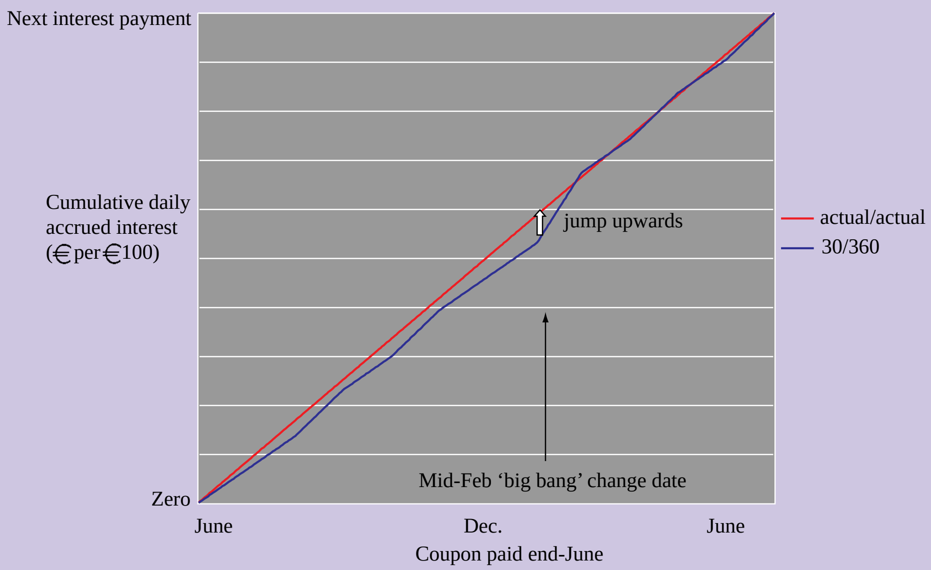
5 The Bank has also announced changes to gilt-edged market conventions to bring them into line with market conventions in the euro markets. The Bank intends to proceed with the change from using an actual/365 to an actual/actual day-count convention, and the trading of gilts in decimal places in place of the current practice of trading in £1/32 per £100 nominal of stock. It is also proposing that accrued interest should be calculated to 6 (rather than 5) decimal places. Following market consultation, the Bank has announced that it intends to implement these changes on 1 November, so that they are in place before EMU.

6 Separately, the Bank has announced the abolition of special ex-dividend trading on gilts as of 31 July 1998. Any stock entering its special ex-dividend period (ie the period of 21 calendar days prior to the ex-dividend date) before 31 July will continue the special ex-dividend period to its normal conclusion. Any stock that would have entered its special ex-dividend period on or after 31 July will not do so. It will trade cum-dividend until it enters its ex-dividend period. This change will be implemented through an amendment to Stock Exchange Rule 2.14, to take effect on 31 July.

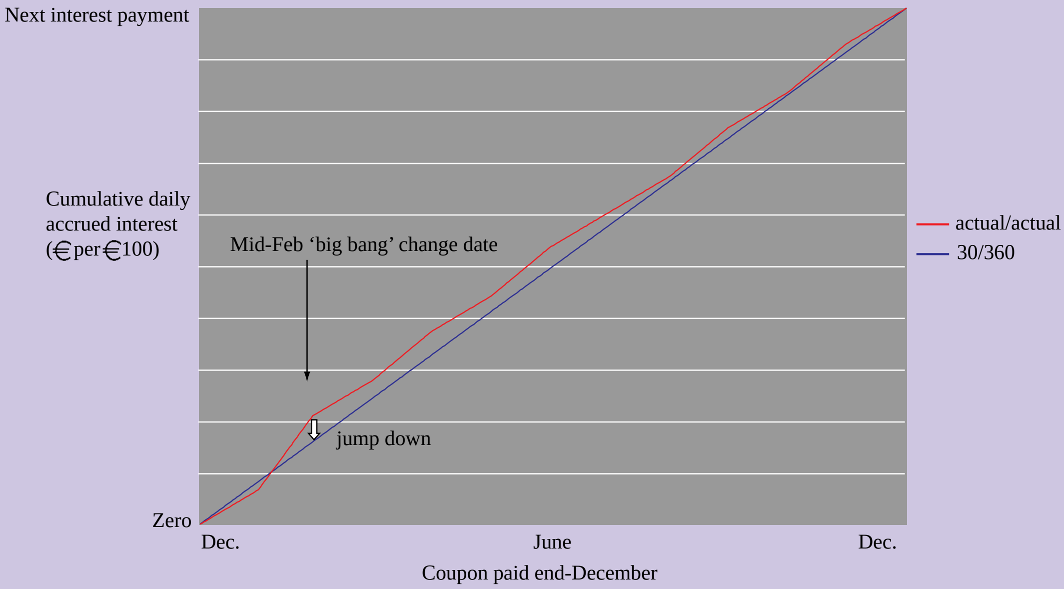
ACCRUED INTEREST ON BONDS: THE EFFECT OF CHANGES TO THE DAY-COUNT CONVENTION

1 A number of EU Member States intend to change the day-count convention for the calculation of accrued interest on existing bonds to actual/actual after Stage 3 begins. In most cases, they will change from 30/360 (the exceptions are Spain and the UK, where the current day-count is act/365). This box considers the implications of this change. There are two ways to implement it: (i) the convention for each bond changes at the next coupon date or (ii) the convention for all bonds changes on the same date in a ‘big bang’. Where an issuer has a large number of bonds outstanding (eg a government), the ‘big bang’ approach has the advantage that there is no transition period when some bonds are traded using the new convention and some using the old. Unlike the coupon date approach, however, the ‘big bang’ approach will cause a ‘jump’ in the value of the accrued interest on a bond. This is illustrated in the diagrams below. (The difference between the two methods has been magnified ten times to make the effect clear; and the total accrued interest for each month using the 30/360 method has been smoothed over the actual number of days in that month).

Bond paying interest at end-June



Bond paying interest at end-December



2 The jump shifts the outstanding accrued from that calculated using the less precise 30/360 convention to its value calculated using actual/actual. Because the next interest payment is unchanged, the jump must be offset by a change in the daily rate of accrual for the remainder of the coupon period. This changes to a constant, 'true' rate from a rate with a discontinuity at the end of each month that does not have thirty days. The jump can be upward or downward, depending on the month in which the 'big bang' change occurs and the coupon date of the bond.

3 It is important that countries changing their day-count convention make no consequent changes to the amount or timing of interest payments. Provided the future cashflows on the bonds remain the same, the value of the bond or 'dirty' price should theoretically also be unchanged. The dirty price must equal the sum of accrued interest and the clean price. This implies that, as the value of accrued interest jumps, the clean price of the bond should adjust to offset the change. One practical problem is that, whereas dirty prices and accrued interest are calculated to four or more decimal places, clean prices are typically quoted to two decimal places. On a trade of €10 million, this means the value of accrued interest has to jump by around €500 before the clean price will adjust.

4 For example, consider a repo trade in Belgium 4.25% due 22 January 2000, undertaken from December 15 to January 15 at a clean price of 95 and a repo rate of 5% in a market where the day-count changes from 30/360 to actual/actual.

Original maturity trade

Nominal €10,000,000, clean price 95.00, accrued interest (30/360) €381,319,
dirty price 98.8132, repo interest (act/360) €41,172, maturity cash total €9,922,491

New maturity trade

Nominal €10,000,000, clean price 95.01 (adjusted to offset lower value of accrued interest), accrued interest (act/act) €380,753, dirty price 98.8818, repo interest (act/act) €41,174, maturity cash total €9,922,927

Difference in maturity cash total = €436

5 Traders may consider that these small gains and losses are not material. The diagrams above show that they only arise if trades occur around the date of the 'big bang'. The change in the rate of accrual over the remainder of the coupon period compensates for the jump over a longer holding period. The diagrams also show that an uneven rate of accrual is an existing feature of the 30/360 method that arises largely because February is a short month. Moving to actual/actual in a 'big bang' concentrates the shift back to the 'true' rate of accrual into one jump rather than this occurring gradually over the remainder of the coupon period, as it does at present. The long-term advantage of using actual/actual is that it eliminates these tiny discrepancies, leading to greater transparency.

6 Provided the underlying cashflows on the bond do not change, therefore, the economic effect of a day-count change should be small. Nonetheless, the necessary changes to systems may be significant. Market participants will need sufficient notice to programme the new accrual convention into back and front office systems, to plan any manual intervention needed and to carry out reconciliations. For example, they will have to ensure that systems can cope with the fact that the sum of the interest accrued each day may not equal the next coupon payment if the day-count convention changes over a coupon period. It is primarily for these reasons that market participants need good notice of any changes and recommend that they are not implemented over the conversion weekend.

Price sources

7 We reported in the December 1997 *Practical Issues* the confirmation of BBA plans for euro LIBOR and the publication of plans for euro EURIBOR by the EBF and others. ISDA has compiled a table on whether price sources will continue unchanged, if not what the designated successor rate will be, and where the successor rate will be displayed. This table is available on the Bank's euro website. The key points are as follows.

- There has been significant progress recently in clarifying the impact of EMU on existing price sources in other Member States, though some decisions are still awaited (eg on Italian lira RIBOR and Portuguese escudo LISBOR).
- In addition to clarifying whether a price source will continue or not, it is important to establish whether an official successor rate will be designated. Nearly all price sponsors that have reported that their existing rate will not continue, have confirmed the name of the successor rate, except in the case of Dutch guilder AIBOR (as well as RIBOR and LISBOR).
- In nearly all cases, except BBA LIBOR and Belgian national rates, it is still unclear whether the successor rate will be displayed on the same screen page as the existing price source or whether the screen page of the discontinued rate will simply refer to the

successor page. Price sponsors need formally to announce their plans, where they have not already done so, and they need to be confirmed with the relevant screen service providers, as soon as possible.

8 The EMI Council agreed last year that the ECB would help with the computation of an effective euro overnight rate (EONIA), as EONIA is an average weighted by business done rather than an average of quoted rates, and figures for business done are regarded as commercially sensitive. The same panel of banks will be used as for EURIBOR.

ISDA's EMU protocol

9 ISDA is proposing a multilateral protocol to reduce the cost of amending outstanding deals in areas where there is broad market consensus that changes are needed. ISDA believes that there are a number of EMU-related issues which could usefully be clarified for existing transactions, such as the disappearance of prices sources or continuity of contract in jurisdictions where there is no applicable legislation. However, amending outstanding deals one by one would be very time-consuming and expensive. Under the proposed multilateral protocol, individual firms would agree to amend their outstanding contracts with other signatories. To ensure freedom of contract, participants would elect which provisions they wished to adopt, and an outstanding contract would only be affected if both counterparties made the same election.

B EXCHANGES

LIFFE's euro market strategy

10 There are two main elements to LIFFE's euro market strategy.

- Reviewing and enhancing its range of contracts and adapting them to meet the needs of the market in the run-up to the launch of the euro.
- Reinforcing its trading platforms by investing in technology to support its open outcry trading while building the next generation of electronic trading systems.

Short-term interest rate (STIR) contracts

11 LIFFE has introduced a range of detailed enhancements to its contract specifications to ensure a smooth transition to the euro. It has prepared its contract specifications to deal with any potential euro market scenario. In addition, LIFFE has also confirmed the following changes to ensure that its STIR product range is ready for the introduction of the euro.

- LIFFE's ECU contract will evolve into a euro contract on a 1:1 basis at the start of Stage 3 of EMU.
- LIFFE's three-month euro contract will have a nominal value of euro 1 million.
- LIFFE's euro contracts will settle against BBA euro LIBOR.
- LIFFE's ECU/euro contracts will mirror the one-month and three-month Euromark.
- The ECU/euro contract will be available on APT during the APT evening session.
- There will be parallel listing of NCU and ECU/euro contracts until 2002 at the latest, and amendment of contract specifications for post-2002 delivery months.

- Initial margins at the LCH are being reduced and harmonised.

Conversion facilities for the migration of open positions into LIFFE's ECU/euro contract are described in outline in Chapter 3. In effect, these conversion mechanisms will help to bring about the formation of a euro benchmark contract.

Bond contracts

12 The impact of EMU on the bond markets raises a number of interesting prospects and challenges for cash, OTC and exchange-traded products. LIFFE's responsibility is to provide continuity of contracts in a manner that is readily acceptable to the market place as a whole, whilst minimising complexity and maximising flexibility. To meet this objective, LIFFE has been consulting widely for some time with participants, with the following results to date.

- The market wants LIFFE to continue to have separate futures and options contracts listed against each government bond issuer (ie list post-1999 delivery months for Bunds and BTPs).
- The participating bond markets will, in an EMU environment, continue to trade at a credit spread between each other.
- The possibility of listing a multi-issuer contract should not be dismissed.
- LIFFE should provide flexibility ahead of, and through, the introduction of the euro.

13 NCU and euro-denominated bond contracts for post-1999 delivery months could be listed on LIFFE in parallel: for example, Deutschemark and euro-denominated March 1999 Bund contracts. Both contracts would have exactly the same deliverable baskets, containing redenominated and newly issued euro-denominated debt.

14 To provide continuity, the euro-denominated contracts (eg euro Bund) would have to be listed as ECU-denominated through 1998. This would provide the market with the flexibility to choose whether it preferred trading and rolling into a Deutschemark or a euro-denominated contract for delivery in March 1999. The disadvantage is that there would be an exchange rate risk between the ECU and the Deutschemark-denominated Bund contracts, because the March 1999 delivery month would be denominated in ECU during 1998. Some participants may regard the exchange rate risk as too great to make the ECU contract sufficiently attractive. Therefore, liquidity may be split between both contracts if the market remains undecided between them.

15 To overcome the potential division of liquidity, LIFFE could consolidate trading activity into a single contract by automatically converting the open interest in the Deutschemark Bund contract into the euro-denominated Bund contract between the end of trading in 1998 and the start of EMU. Alternatively, if an automatic conversion process was seen as inappropriate, the voluntary conversion facilities, as proposed for LIFFE's money market products, could be made available for the EMU 'in' bond contracts.

16 Given that LIFFE is due to list its March 1999 delivery months in June 1998, a decision is needed soon (in the meantime LIFFE has postponed its December 1998 contracts). Whatever decision is made, LIFFE will ensure that its members and users have a sufficient lead-time to make any necessary changes. As for developing and listing a multi-issuer contract, LIFFE has

not ruled out this possibility. It has examined a number of approaches and will continue to do so over the coming months.

17 *Launch of five-year gilt future.* A new five-year gilt contract was introduced on 26 February. This new bond contract will strengthen LIFFE's position in this segment of the yield curve and allow for spread trading with other medium-term contracts. It will: be traded in decimals; have a unit of trading of £100,000 nominal value; and be based on a bond with a notional coupon of 7%.

18 *Change to long gilt contract.* The following changes have been agreed to the long gilt contract specification.

- A change to the notional coupon for the long gilt contract from 9% to 7% from the June 1998 delivery month.
- A change to trading in decimals from 32nds for futures (and 64ths for options) ahead of the cash market changes expected later this year.
- A change to the unit of trading from £50,000 to £100,000 from the September 1998 delivery month, to be traded in decimals.

Equity contracts

19 *Contract specifications.* Provisions have been made to all index contracts to allow for possible changes to the pricing of the index and potential settlement in euro rather than in sterling. Further consultation with the market and the LSE is continuing to establish appropriate provisions for the settlement of LIFFE's individual equity options contracts.

20 *Index products.* On 9 February, LIFFE announced its intention to join a strategic alliance with FTSE International and Amsterdam Exchanges, aimed at ensuring that futures as well as options are available across the family of FTSE Eurotop pan-European and euro bloc indices. In addition, further research is being undertaken into the feasibility of launching new pan-European sector indices, should significant market demand arise. To date, a number of LIFFE members have already established licence agreements to trade OTC products on pan-European indices, which in turn could create the opportunity to provide liquid exchange-traded derivatives.

21 *Individual equity options.* Specific requirements for LIFFE's single share options are yet to be fully considered, although the treatment of its stock options should be relatively straightforward, if a company's shares were to be traded in euro (see below). LIFFE will liaise with the LSE to ensure that the approach taken for LIFFE's derivatives contract is consistent with the changes in the cash market. The possibility of listing non-UK stock options will also be examined.

22 *LIFFE Connect:* LIFFE's new individual equity options electronic trading system will go live on 30 November. The system is being developed to stimulate existing, as well as to capture new, individual equity options business. This is expected to increase post-EMU. The new market will operate in an anonymous, order-driven environment, with orders being matched according to strict price and time priority. LIFFE believes that this will lead to increased competition and a subsequent improvement in bid/offer spreads and liquidity. Members are offered considerable flexibility in the way they choose to access LIFFE Connect, in that they

may choose between developing their own systems, using a third party or using the application being developed by LIFFE.

Commodity contracts

23 All LIFFE's commodity contracts are based upon the price of an underlying commodity and physical delivery. Therefore the only amendments necessary will be to alter contracts to reflect the change in the currency of the tick value and settlement. LIFFE's sterling-denominated contracts with delivery months in 1999 and beyond have been amended so that, in the event that the UK ultimately participates in EMU, there is provision for payment in euro.

Dual currency trading on the LSE

24 The LSE has recently published a paper, *EMU: Proposals for the Equity Markets*, in which it proposes to allow trading in both euro and sterling for 106 UK SETS securities included in the FTSE International Eurotop 300 index. This section sets out the background to LSE's proposal, and the reasoning behind it.

Market trends

25 It is generally accepted that EMU will result in fundamental changes to European capital markets although, whilst the UK remains outside EMU, the impact here is harder to judge.

26 Continental investors are anticipating the creation of a euro bloc and diversifying their asset allocations accordingly. This trend is likely to be widespread and to develop rapidly among investors from participating Member States. The LSE expects investors to treat Europe as a single geographical area with more emphasis on sectoral asset allocation. This will result in a rebalancing of portfolios to reflect the corporate profile of the whole of Europe rather than individual countries. Non-European investors are likely similarly to adjust their investment approach.

27 The LSE's research in the UK suggests that large investment institutions with predominantly sterling liabilities are adopting a cautious attitude, pending firm decisions on UK entry to EMU. This attitude is often driven by legal requirements to match assets and liabilities in the same currency. Retail investors are also expected to wish to continue to trade shares in sterling until full UK entry into EMU.These two groups hold between 60 and 70 per cent of the UK equity market by value. Other investment institutions are adopting a similar approach to continental investors and beginning to rebalance their portfolios.

28 The LSE's conclusions are that most UK investors will keep their portfolios predominantly invested in sterling assets and will not rebalance them on the European model for some time. However, such a process may in practice begin before formal entry, in order to minimise the market impact effect of rebalancing. These conclusions lead LSE to expect the following.

- Most UK securities will continue to be traded in sterling while the UK remains 'out'.
- There will nonetheless be increased demand for UK securities from continental investors who will wish to trade in euro.

- Once the UK decides to join EMU, there will be a rapid switch to euro, at least in the wholesale market.

Options for the LSE

29 Based on this analysis, and the prospect of changes in investor and issuer behaviour, the LSE has considered a number of options. These are: no change; to offer trading in both sterling and euro, but in only one currency per security; to switch to euro; to introduce a currency conversion mechanism into its dealing system; or to introduce dual currency trading for some or all securities.

30 *No change.* This would obviously be the simplest solution, but it would not allow the LSE to service demand from continental investors denominated in euro. This might lead companies with significant European investor bases to move their listings elsewhere, so as to provide a trading facility for these investors; and investors might seek to carry out a significant proportion of trading in UK securities elsewhere.

31 *Offer trading in both sterling and euro, but in only one currency per security.* This option would offer a more flexible approach. It would allow for the fact that different companies have different investors with different trading needs. The LSE would be in a position to offer euro trading as an alternative to sterling trading where required.

32 *Switch to euro.* This approach would also be relatively simple but it would ignore the needs of most investors.

33 *Currency converter.* Building a currency conversion mechanism into the trading system would allow mixed currency order books or prices to be compared across currencies and would superficially be an attractive option. However, the LSE's trading system has no provision for live currency feeds and the option would require a fundamental rebuild of the trading architecture. The complexity and expense of this would not be justified for a solution that would probably have a life span of only a few years.

34 *Parallel order books.* The LSE considers that this option has a number of advantages.

- It would provide the flexibility to cope with growing demand for euro trading in UK equities. Although this demand is expected to be muted initially, the LSE expects it to increase, with consequent investor interest in a transparent euro trading market.
- As decisions are taken by UK multinationals to redenominate, a smooth transition to euro trading would be available. The LSE would be in a position to discourage euro trading migrating to overseas markets.
- It would provide for an orderly transition to UK entry into EMU, the costs of which must be borne at some stage.

35 The LSE believes that the case for parallel order books is worth serious consideration. Ultimately, the LSE needs market support for this because of the systems implications for market participants. The LSE is therefore asking firms to help it gauge the extent of these systems implications in its consultation, and inviting comments on its proposals by 31 March.

Redenomination of share capital

36 The DTI has issued a consultative document which discusses whether changes to the Companies Act 1985 would help companies to redenominate share capital more easily and more cheaply.[1]

37 UK companies will be able, from 1 January 1999, to issue new shares in euro, since UK companies may issue shares in any currency as a matter of existing English company law. The practical difficulty relates to existing shares. If a company wishes to redenominate existing shares into euro, this would be possible but not easy under current law. There is at present no specific and inexpensive procedure for redenominating existing shares in a different currency. Redenomination could be done, for example, by cancelling the existing shares and issuing new euro shares, but any reorganisation of share capital that involved the cancellation of existing shares would, subject to limited exceptions, require both court and shareholder approval under English law. Further, if companies redenominated shares into euro, conversion would invariably result in the par values of those shares being restated to several decimal places. Companies would need to reorganise the affected shares in order to achieve round par values (ie renominalisation). This is likely to be a practical problem for companies in Member States, such as the UK, where shares with relatively small par values are common.

38 There are a number of possible ways forward under discussion.

- The Companies Act 1985 should be amended to introduce a simplified procedure to enable UK companies, if they choose to do so, to redenominate their existing shares into any currency, including euro, at any time after 1 January 1999 and, if appropriate, to renominalise them to achieve round par values.
- Public companies should be permitted, after 1 January 1999, to maintain their minimum allotted share capital (currently £50,000) in euro if they wish.
- The introduction of 'true' no par value shares (similar to the type well established in the USA and Canada, and recommended by successive UK company law reform committees) would offer an attractive method of avoiding altogether the need to renominalise shares. In addition, they would offer other significant benefits.
- The 1976 EC Second Company Law Directive may impose constraints on the introduction of 'true' no par value shares for public companies, since it appears to provide only for a more limited variant. It would be helpful to clarify with the European Commission whether the Directive does have a limiting effect and, if so, to discuss ways to permit the introduction of 'true' no par value shares before January 2002, or earlier if possible, in those Member States that wish to adopt this system.

1 DTI, *The euro: redenomination of share capital* (January 1998). Responses are invited by 3 April 1998. They should be sent to: Jane Swift, Company Law Directorate, DTI, Room 5.S.16, 1 Victoria Street, London SW1H 0ET.

THE IMPACT OF EMU ON CREDIT RATINGS

1 Fitch IBCA, Moody’s and Standard & Poor’s set out their views here on the impact of EMU on credit ratings of issuers of debt securities in the euro area.

Fitch IBCA’s approach

2 Fitch IBCA believes that the euro area will have a ‘sovereign ceiling’ rating of AAA. This AAA sovereign ceiling will be introduced as soon as the arrangements for EMU are seen to be solid. Once the system has bedded down existing banks and corporates, which are currently constrained by the perceived transfer risk of the Member State concerned, would be able to rise to a rating of AAA, even if their government was rated lower than that.

3 Will government ratings in the euro area generally be similar to their existing ratings on national currency debt - AAA for all the participants - or to their foreign currency ratings (where Belgium, Ireland and Finland are AA+, Spain is AA, and Portugal and Italy are AA-)? Fitch IBCA will assess each participating Member State on the basis of its own particular balance of advantages and disadvantages. However, in general, Fitch IBCA believes that sovereign governments with a substantial level of debt will attract ratings closer to their existing foreign currency ratings than their national currency ratings, which are generally higher.

4 Although governments in the euro area continue to have the ability to tax, and this is an important source of support for national currency ratings compared with foreign currency ratings, governments will lose any remaining room for manoeuvre on monetisation when they participate in EMU. At present, monetisation can provide a source of short-term liquidity support which could be important for sovereigns with a substantial level of debt. However, in Fitch IBCA’s view, the loss of this factor may be offset by an improved maturity structure over time, or by back-up facilities. Other important factors, which will continue to vary between different participating Member States, will be whether they can lock in low financing costs and whether their labour markets will be flexible enough to adjust to shocks within EMU.

5 In Fitch IBCA’s view, EMU’s impact on bank credit ratings is likely to be negative, because of the increased competition that will ensue from greater transparency. The banks which will be particularly badly affected are those in smaller Member States which enjoy a substantial local franchise in foreign exchange and government debt markets. For corporates, Fitch IBCA believes that the integration of the European capital markets is likely to reduce their financing costs, particularly for poorly rated companies which may be able to access a new European junk bond market. This trend is likely to emerge as investors discover the ability to offset higher corporate risks by holding a diversified portfolio of bonds.

Moody’s approach

6 On the start date of EMU, Moody’s rating on each participating Member State’s domestic currency debt will become that government’s rating for debt denominated in euro. Currently, Moody’s domestic currency ratings for all of the potential participating Member States are Aaa, with the exception of Belgium (Aa1), Spain and Portugal (Aa2) and Italy (Aa3). Barring

unforeseen developments, Moody's expects these ratings to be the governments' ratings for euro-denominated debt after EMU begins.

7 Moody's believes that EMU will benefit participants by broadening their access to euro-denominated capital and also that the regime in the euro area will probably have a moderating effect on inflation, especially for participants which historically have been somewhat more prone to inflation. However, these benefits may be outweighed in individual cases by risks associated with the loss of prime creditor status of governments in the euro area. The loss of such status removes any incentive for local investors to provide liquidity to their governments in times of financial stress, particularly if they have a heavy burden of debt. This is a concern because the debt levels for participating Member States will initially be unequal, and in Moody's view there will be no legal constraint on deviating from the norm. Nor does Moody's believe that the EU would have sufficient fiscal authority to transfer enough resources between 'winners' and 'losers' over time.

8 Moody's expects that the ceilings on the credit ratings for the debt of participating Member States in the first wave will converge to Aaa by the starting date of EMU, both for foreign currency and euro-denominated debt obligations. As a result, public or private entities domiciled in the euro area that are currently constrained by the below Aaa foreign currency ceilings of their sovereign governments would no longer be constrained. In addition, this would probably have a beneficial effect on asset-backed securities.

9 More generally, Moody's believes that, in a post-EMU environment, the importance of credit risk as a key criterion for investment decisions will increase, and this will be reflected in an increased interest from both issuers and investors in international debt markets in credit ratings. There is a trend by cross-border investors to assign more weight to the credit fundamentals of various debt issuers and to rely less on broader institutional support schemes that were more widely accepted in the past. At the same time, as the euro blurs the borders of intra-European capital markets, investors' focus on portfolio allocation may switch from segmentation by geographic area to segmentation by cross-border industry sector.

Standard & Poor's approach

10 Standard & Poor's (S&P) believes that the first rating impact of EMU will be the elimination of the rating distinction between local currency and foreign currency obligations at sovereign level. Ratings of each government's euro and foreign currency debt will be identical, reflecting the transfer of monetary policy responsiblity to the ECB. The sovereign ratings of participating Member States should fall within the AAA and AA categories, little different from their current foreign currency credit ratings, while S&P expects to assign a counterparty credit rating of AAA to the ECB.

11 A second consequence of EMU will be the removal of the sovereign rating as a constraint on the ratings assigned to issuers based in the euro area, as money and exchange rate policies will be formulated at the supranational level by the ECB. A private sector issuer could obtain a higher rating than that of the Member State in which it is located. For public sector issuers, however, S&P's application of this policy will depend on the relationship between the entities under review and the central government.

12 In practice, will implementation of EMU automatically affect outstanding ratings of national governments in the euro area? S&P believes that the debt of any national government in the euro area will carry only one rating, regardless of its denomination. In potential participating Member States with AAA foreign currency ratings (Austria, France, Germany, Luxembourg and the Netherlands) there should be no change, as these Member States are likely to remain with a unique AAA rating. In all the other participating Member States (not currently rated AAA), their ratings once they are in the euro area are likely to be at the level of their current foreign currency rating. This is AA+ for Belgium, AA for Finland, Ireland, Italy and Spain, and AA- for Portugal.

13 S&P considers that EMU will increase the need for ratings, as ‘name recognition’ will carry less weight in an expanded, cross-border and more transparent European market. In particular, S&P is experiencing a significant growth of interest from the private sector in ratings at BBB level or below. In 1997, 55% of S&P’s new corporate ratings in the region were at BB level or below. S&P concludes that bond investors are focusing increasingly on credit-driven performance strategies as interest rate and currency volatility has declined.

CHAPTER 5: FUND MANAGEMENT AND INSURANCE

INTRODUCTION

1 In the December 1997 *Practical Issues*, the Bank noted that in many cases fund managers and insurance companies were relying heavily for their preparations on their banks. We expressed the view that these preparations should complement - rather than substitute for - those which they need to make themselves. This Chapter reflects the views of a number of major players in the insurance and fund management industries, and the relevant trade associations, on the state of preparations in their respective markets and the main issues that need to be resolved.

A FUND MANAGEMENT

2 The fund management industry is diverse, consisting of investment portfolios managed on an agency basis for institutional and retail clients in UK and foreign markets by divisions within financial institutions, and specialist fund management firms, many of which are based in London. The nature and urgency of euro preparations therefore varies between firms. Those portfolios containing financial assets denominated in participating currencies will be most affected. Even so, all firms will be affected to some degree from 1 January, and most will also have their part to play in the conversion weekend. This section describes the key issues identified so far. A case study of how Schroders is preparing is presented in the box.

Client reporting

3 Fund managers frequently offer their clients a choice of reporting currency. They have been consulting clients about their preferred reporting currency after the introduction of the euro.[1] Some have concluded that there will be little demand for NCU reporting from 1 January 1999, and may as a result switch all NCU reporting to euro in a 'big bang'. A number of clients may request dual currency reporting. Some fund managers are planning to offer this service. Others consider it too costly, or even impractical, given the bulk of client reports and the short time in which they sometimes have to be produced.

4 Where client reporting switches from a participating currency (eg DM) into euro, a technical issue arises if the portfolio contains stocks denominated in another participating currency (eg FF). Before the switch, the historic book cost of the FF security would be converted to DM in reports at the exchange rate prevailing when it was purchased. When both the DM and the FF book values of the stock are converted to euro, the two euro amounts will almost certainly be different, since the bilateral DM/FF conversion rate is unlikely to be the same as the exchange rate at the time of purchase. If client reports list book values of stocks both in the currency of the stock and in the portfolio reporting currency, reports after conversion will list two different euro book values for the same stock. (The same problem would in fact arise if current exchange rates were used to value stocks in any currency.) Some institutional fund managers believe it would be helpful for there to be a market standard for dealing with this problem; others consider

1 Some managers of pooled funds, whether UK authorised or not, may also wish to convert their base accounting and valuation currency into euro after the start of Stage 3 of EMU. For UK authorised unit trusts and open ended investment companies, a change in base currency will, under current regulations, require alteration to the trust deed or instrument of incorporation, and approval by the FSA. It would normally also require unit or shareholder approval.

it a matter for individual fund managers and their clients. The IFMA EMU working group is looking at this.

Historic data

5 An important question for fund managers is whether they should convert their stored pre-1999 national currency data into euro and, if so, how they should make the conversion. This is also a key issue for stock exchanges and data vendors. More work is needed on how to handle these historic data. The Financial Information Services Division of the Information Industries Association (IIA) has convened a working group to look at the following.

- In what form analysts will need historic data to be available. There is likely to be a demand for continued access to original data in national currency, and may also be a need for historic data presented in euro.
- Possible recommendations on conversion methods to use.

6 The group's objective is to define a strict and transparent protocol for the conversion of historic financial information, which it hopes will be implemented universally by European exchanges and by data vendors. It includes representatives of the STA, IFTA, IIMR, EFFAS and INQUIRE. The group expects to report at the end of April.[2]

Performance measurement

7 The presentation of historic data is of particular concern to fund managers because of its impact on performance measurement. There is a growing consensus across the industry that EMU must not be used as an opportunity to use methods of presenting and comparing data that are confusing or misleading. A key question for 'in' currency funds is the best way of presenting time series of performance data which run across 1 January 1999. Should data be presented all in euro, all in national currency, or as a broken series with a change in the currency at 1 January? If any pre-1999 data are to be presented as euro, how is the original national currency information to be converted, given that there are no euro exchange rates before 1999? A closely related question is how to compare euro-denominated funds that were denominated in different participating national currencies before 1 January 1999. If the historic data series from each fund is presented in euro using the respective fixed conversion rates, they may look as if they are directly comparable. But they are not, since they have each merely been scaled by a fixed factor.

8 A common industry approach to these questions would help to ensure clarity and ease of interpretation of performance measurement. The Permanent Commission on Performance Measurement of EFFAS has set up a working group to consider them, including representatives from the NAPF, IFMA and AUTIF. It aims to publish a discussion document at the end of April. AUTIF, in discussion with the PIA, is also considering whether in due course more specific guidance for regulated UK investment funds should build on the general principles that EFFAS develop. FEFSI is also examining performance measurement issues, including historic data, to consider the development of guiding principles on a pan-European basis. It expects to report in the middle of this year. It is in contact with the EFFAS group.

2 The group is inviting submissions from interested parties, addressed to: The IIA Working Group, c/o The Society of Technical Analysts, 28 Panton Street, Cambridge CB2 1DH.

9 Another issue relating to performance measurement concerns the comparison of euro-denominated funds established in different countries. FEFSI's EMU working group, which issued an interim report in September 1997, has noted that there may be scope for confusion in the comparison of such funds because of differing national tax and sales fees. It is unclear when tax and fees should be included in performance calculations, and when they should be shown separately.

Benchmark indices

10 Existing national and European benchmarks are likely to continue to be available in 1999, and fund managers will want to consider whether they will continue to be appropriate comparators in all cases. Some may be expressed in euro if the component stocks are quoted and traded in participating currencies. And if some UK companies' shares are quoted in euro while the UK is 'out', some indices may be constructed using both sterling and euro constituents. Fund managers may also wish to consider the implications of these effects on index tracker funds.

11 There will also be demand for new index products for both bonds and equities, such as pan-European and euro area indices, both at whole market and sector level. Index providers are considering how to respond. FEFSI's working group has argued that a proliferation of benchmarks should be avoided. However, it is possible that competitive forces will of themselves ensure that a few key indices become established as benchmarks relatively quickly.

12 A number of market participants believe that the performance categories they use for classifying their funds may eventually need to change in the light of EMU. For example, there may be a need for a euro area category. AUTIF, which defines a standard set of performance categories for its members, is not currently planning to change its classification scheme, but is keeping it under review. FEFSI's EMU working group is studying European classification categories, including the feasibility of some pan-European sectoral categories.

Trading and settlement

13 Any fund managers with investments in participating currencies, whatever the nature of their clients and the funds they manage, will need to be able to trade and arrange settlement in euro from 1 January 1999, and to handle the conversion of cash and redenomination of securities over the conversion weekend. If the shares of UK companies eventually come to be widely traded in euro, then some funds invested entirely in the UK may also decide to operate in euro in due course.

14 In the first instance, fund managers need to ensure that their own accounting and fund management systems can operate in euro (eg general ledger, management information systems, software for generating client and regulatory reports, and risk analysis and control systems). Although often straightforward in principle, some fund managers have found that the details of the necessary alterations (eg to incorporate the official rounding and conversion rules, including 'triangulation') can prove challenging to implement. Fund managers will also have to co-ordinate their plans with, among others, trustees or depositories, third-party administrators and systems providers, and brokers and custodians. They will need to modify any electronic links accordingly.

15 Fund managers will need to be clear precisely when their transactions with each of the custodians will switch from NCU to euro. This applies equally to custodians appointed by clients and by the fund managers themselves. Most custodial functions involving securities denominated in participating national currencies will convert into euro in a ‘big bang’ shift over the conversion weekend.

16 IFMA’s EMU working group, representing UK institutional fund managers, has published a set of best practice recommendations for fund managers to use in their relations with custodians. The working group’s recommendations can be summarised as follows.

- No orders in NCU which have been placed but not actioned will be left on the market over the conversion weekend. Orders will be reinstated after business opens on 4 January 1999 at the discretion of the fund manager.
- Trades which have been executed but not completely documented will be kept to a minimum on 31 December 1998.
- No reconfirmation or reinstruction of existing good trades (which are in all respects complete bar settlement) will be issued following the conversion weekend.
- Late transactions (ie those likely to be received by custodians after their deadline for settlement instructions on 31 December 1998) in securities which are to be redenominated, will be instructed to custodians with euro nominal and euro consideration. This requires fund managers to identify such transactions and convert them to euro.
- Late transactions in non-redenominating securities but nevertheless due to settle in euro will be instructed to custodians with nominal in NCU and consideration in euro.
- Any cancellation of trades from 1998 in all securities will be instructed to custodians with nominal in NCU and consideration in NCU.
- Corrected trades which result from the cancellation of trades from 1998 in redenominated securities will be instructed to custodians with nominal in euro and consideration in euro.
- Corrected trades which result from the cancellation of trades from 1998 in non-redenominated securities due to settle in euro will be instructed to custodians with nominal in NCU and consideration in euro.
- Fund managers’ internal systems will redenominate settled holdings and unsettled transactions, and reconcile the results with custodians.
- Settlement of all NCU transactions will occur in euro post 1 January 1999. This will require a formal agreement at the portfolio level similar to a standing instruction.
- To facilitate settlement and cash management, each portfolio will have a single euro account replacing all NCU accounts from 1 January 1999.
- Interest claims settled after 1 January 1999 for NCU transactions will be settled in euro.
- Fund managers will provide clear client reports showing the effect of converting NCU cash to euro and the redenomination of securities.
- The back history of holdings will not be converted into euro.

17 While the working group's recommendations establish standard practice, individual fund managers may need to discuss and confirm their own requirements with their custodians. It should be noted that custodians will be making their own arrangements on the timing of the receipt of settlement instructions from fund managers on 31 December. Where fund managers use electronic trading and confirmation systems, they will need to agree with counterparties when they will switch to euro and how they will operate over the conversion weekend.

18 The IFMA working group is also developing a set of recommendations on fund managers' relations with brokers, analogous to those for custodians. More generally, fund managers may want to be assured that their counterparties are able to operate effectively after 1 January 1999. Since many of them deal with a very wide range of brokers, this may be a lengthy undertaking. Some are considering how to modify accordingly their assessment of risk of counterparty failure, and may stop dealing later this year with those who are judged inadequately prepared.

Investment strategy

19 Many fund managers have suggested that EMU may cause a gradual reweighting of portfolios, affecting the allocation of assets between the euro area and the rest of the world, between participating Member States within the euro area, and between cash, bonds and equities. Greater expertise is likely to be required in assessing and managing credit risk. In the equity markets, it is expected that, over time, the disappearance of currency risk will mean that the choice of sector will assume greater importance as a criterion for stock selection, although country-specific considerations will probably remain significant. These developments may have implications for client mandates, and also for staffing. The indications are that most firms will continue to base both their research and trading operations in London.

Marketing

20 EMU may also offer the opportunity for new commercial and marketing strategies. These include creating new products and services (eg based on new indices, or focused on new combinations of markets and sectors). In particular, many institutional investors, either for reasons of prudence or regulation, match the currencies of their liabilities (eg pension payments) with those of their assets. As their liabilities switch to euro, they may wish to diversify their portfolios and seek optimal returns across the whole of the euro area, rather than just in their own country. Demand for pan-European funds may therefore increase. Scope for cross-border sales, both to retail and institutional clients, may also increase with the elimination of exchange risk. Collaboration and merger may be seen as ways of gaining or expanding a presence in foreign markets.

21 A particular issue concerns the structure of funds. Many managers operate country-specific funds, which invest primarily in assets in one currency. EMU, by eliminating currency risk, will remove one major rationale for maintaining distinct funds for individual participating Member States. There may be administrative advantages to amalgamating them. On the other hand, their different tax structures, aimed at investors from particular countries, and lingering investor preferences for country-specific investment, may favour retaining separate funds for some time. The tax consequences of any merger operation would also be a consideration.

PREPARATIONS FOR EMU

Structure of the project

1 Schroders began to plan for EMU early in 1997. Every division has set up an EMU Steering Committee to focus on issues within its own market and product segments. A Schroder Group EMU Steering Committee, including representatives from each major division along with taxation, legal and accounting experts, ensures groupwide co-ordination. There are also local EMU contacts at the geographic and divisional levels at each overseas location.

2 This review focuses on the work being carried out within the Investment Management Division of Schroders. The Division's operations are global, with offices in all the major financial centres, and preparations are being co-ordinated from the centre. For example, where several companies use the same service provider or systems, liaison with the supplier is handled from London. The Division has established its own EMU Steering Committee, which consists of representatives from the front and back offices, and from the finance and IT departments.

Stages of the project

3 At an early stage, internal departments prepared research papers, and there were discussions with peer and other organisations in the City, particularly service providers, to assess market intentions. Consultants were brought in to validate the assumptions, findings and issues identified by each division, and to assess progress vis-à-vis our peers.

4 An impact analysis followed. This included an off-site workshop involving IT managers and business support staff, and the collection of statistical information regarding clients, products, holdings, and transaction volumes. The results were presented to the Division's Steering Committee for review.

5 The Divisional Steering Committee then drew up a policy statement. It set out planning assumptions, covering the likely participants in EMU and the expected rate of transition of the various financial markets, and the approach being followed in London. This was reviewed with other divisions to ensure compatibility and consistency prior to circulation within the division to all staff of Manager rank or above.

6 Detailed plans for the entire Division have now been drawn up and responsibilities assigned, with the initial phase focusing on those currencies and investments relating to likely 'in' countries and other currencies and investments dealt with later. Given the rigidity of the timetable and resource constraints, certain tasks may have to be outsourced. Overseas offices will submit regular progress updates to London and will also be visited by the Internal Audit Department. Support will be available from the centre if required.

7 The Divisional Management Committee has requested a regular update on progress throughout 1998.

Preparations in progress

Systems

8 The IT Department started work early on those parts of the system where the required changes were clear, eg to cater for 'triangulation' computations and redenomination. Elsewhere, front and back-office departments were asked to draw up detailed user requirements for IT. Within Europe, the potential requirements include changes to:

custody operations

- corporate action functionality to redenominate bond positions
- conversion of currency cost and prices for equities

payment and settlement systems

- 'in' currency trades to be settled in euro post 1 January 1999
- interfaces to be adapted for S.W.I.F.T. and other third-party payment, confirmation and reconciliation systems
- creation of new euro accounts for 'in' currency portfolios
- selection of a nostro correspondent bank or banks for the euro

conversion of holdings in investment management and banking systems

- 'in' currency holdings in cash pool funds to be converted to euro
- both in-house investment management systems and package systems

valuation reporting

- ensure that 'in' currency valuations are now reported in euro
- provide analysis by country for investments in Europe

spreadsheets and local network databases containing 'in' currency data.

9 Many of these changes will take place over the conversion weekend, and back-office departments are already planning resource requirements for that period. We have analysed the number of positions on which we expect cash compensation, or that may require minimum lot rounding. We have identified where volumes or operational risk indicate that system enhancements are required, and also where manual processing is feasible. Changes to static data (eg ISIN codes) related to redenomination will be made as the necessary information becomes available, but there are no plans to convert historic transaction data to euro.

10 We will commence testing the modified systems in the third quarter of 1998. We expect to participate in market testing with service-providers at the end of that quarter.

11 At locations outside Europe, few portfolios are recorded or reported in ‘in’ currencies. The main issues relate to the redenomination of any holdings in European bonds and equities, and to ensuring that packaged software can meet requirements.

Education and training

12 Internally, presentations have commenced and regular updates are planned throughout 1998. An intranet site has been established to ensure that staff are kept informed on the progress of the project, on company EMU policy, and changes in market conventions. Those departments which are most heavily impacted will receive training tailored to their specific needs. EMU workshops have been arranged for those Schroder entities operating within the anticipated ‘in’ countries.

Communication

13 Externally, clients and consultants are being informed of our preparations. Individual directors and fund managers will follow up with clients, discussing the implications for client agreements and investment mandates. Staff will have access to policy and expected questions/answers via the intranet. Lastly, the Schroder Group project team maintains a library of EMU information.

Product preparation

14 Certain of our offshore products are priced currently in ‘in’ currencies and will be converted to the euro for 1 January 1999. We are also expanding our product offering in continental Europe during 1998, and our plans will cater for the euro. Cash pools in ‘in’ currencies will be converted to euro with effect from 1 January 1999.

B INSURANCE

Insurance companies and brokers

22 Many companies and brokers expect the impact of EMU on their UK insurance business to be limited, at least initially, while the UK remains ‘out’. They are therefore focusing on their subsidiaries in participating Member States.

23 There may be some limited requirement by large corporates in the UK for euro insurance services from 1999, particularly subsidiaries of companies based in the euro area. Smaller firms that supply them may also seek euro insurance if they also begin to operate mainly in euro. At the retail level, the most significant euro demand that insurers might face could be for savings and life products associated with euro mortgages. As in other industries, use of the euro may increase once notes and coin are available in first-wave countries. There is also a possibility that the euro will become the standard currency for some segments of the insurance industry, driven both by major customers and the larger insurers on the Continent. This might mean that business in those segments would be conducted in euro even within the UK.

24 The issues facing UK insurance companies' and brokers' subsidiaries in the prospective euro area are broadly similar to those in other industries. It is possible that larger-scale continental wholesale insurance business will be conducted largely in euro from a relatively early stage in the first-wave transition. Some insurers are already finding themselves under pressure from large corporate customers in the prospective euro area to deal with them exclusively in euro from early in 1999. Customers may wish to redenominate existing policies into euro, and some companies are planning to offer this facility. Smaller businesses in the prospective euro area appear to be less sure of their requirements, and many may continue to want to use NCU until 2002. On retail insurance, there may not be strong demand for euro-denominated products before notes and coin are introduced, with the possible exception of life insurance and pensions. However, some UK companies' subsidiaries are planning to be able to offer euro retail products if the demand should arise.

The London insurance market

25 The London Market, transacting international wholesale insurance business, will be able to handle euro from the start of Stage 3. Lloyd's and the LPC (London Processing Centre), the settlement bureau for ILU (Institute of London Underwriters) and LIRMA (London International Insurance and Reinsurance Market Association), are both introducing the euro as a settlement currency. They have been working together, and with the broking community, to ensure that the necessary changes to their respective systems and procedures are as consistent as possible. It is intended that the settlement bureaux will issue new procedures manuals for handling the euro as a settlement currency by the summer, following a period of market consultation.

Lloyd's

25 The euro will be available as a settlement currency at Lloyd's from 1 January 1999, joining sterling and US and Canadian dollars. At present, brokers have to convert payments in the continental European currencies into a settlement currency before they enter Lloyd's settlement systems. From 1999, they will be able to route NCU payments to Lloyd's euro settlement accounts. The payments will be converted into euro when they reach the account.

26 Lloyd's brokers will use euro rather than NCU settlement from the outset. Around a third of syndicates are also expected to do so, and will adapt their systems and links to the Lloyd's policy signing office accordingly. For syndicates which do not wish to settle in euro, Lloyd's will offer facilities for the conversion of settlement payments into sterling, so that these syndicates will still be able to accept euro business. Under this system, underwriter signing messages for euro business will contain sterling settlement currency advice, and a narrative description of the value in euro. Lloyd's central accounting will then settle the transaction in sterling. This arrangement will be broadly similar to the existing method of handling currency conversion by brokers, and should not require changes to managing agents' systems. Lloyd's is providing this service on a full cost recovery basis, and users will pay a fee per transaction. Lloyd's expects the proportion of syndicates using full euro settlement to rise during and after 1999, so the cost of using the currency conversion service from sterling to euro will increase over time.

27 Lloyd's will be holding a series of workshops in March to explain the implications of settlement in euro for its managing agents, and the operation and the costs of the currency conversion service. Managing agents will be asked to sign up for either full euro settlement or

the currency conversion service at the start of April. Syndicates adopting full euro settlement will need to set up euro banking and custody facilities. Lloyd's will be negotiating a standard banking arrangement for syndicates in euro with a single bank, similar to that which already exists for other currencies, offering syndicates reduced bank charges, a sweep to a mutual fund and consistency of reporting.

28 Lloyd's reporting requirements for syndicates, and the Lloyd's trust funds, will continue to be in the three existing settlement currencies, and not in euro, while the UK is 'out'. Lloyd's is currently considering which of its regulations and by-laws will need to be changed as a result of the introduction of the euro, and plans to issue a statement in March.

29 The Lloyd's Underwriters' Non-Marine Association has drawn up a draft clause which could be added to new contracts, particularly those governed by non-EU country law, to ensure continuity.

ILU/LIRMA and the LPC

30 The LPC will be introducing the euro as a settlement currency from 1 October 1998, in time for the renewals season at the end of the year. From that date, LPC will accept new contracts in euro as long as they have a settlement date after 1998.

31 It is expected that euro settlement will rapidly supplant NCU settlement for all new business (including renewals). LPC recommends that its users consider adopting a date after which they would seek to transact no further business in NCU. However, underwriters and brokers who do not wish to adopt euro settlement will be able to designate a non-euro bank account (eg in sterling) for their transactions in euro. LPC will divert euro credits and debits, which will be converted by underwriters' and brokers' banks, to these accounts. These arrangements are similar to those already used for LIRMA members unable to accept existing settlement currencies through LIPS (the LPC Irrevocable Payment Scheme).

32 Existing contracts should run off, using NCU procedures. For ILU members, brokers will need to continue to convert NCU amounts from existing contracts into the originally determined settlement currency before they enter LPC systems. For LIRMA members, LPC can currently settle in the Deutschemark, lira, guilder and French franc. Payments in these currencies from existing contracts should be allowed to run off in the original currencies, which will take less than three years for the vast majority of contracts. Some brokers might wish to redenominate existing arrangements for future deferred payment instalments into euro. They would have to cancel the existing payments and draw up replacements in euro, and this would require the agreement of the underwriters. For any slips specifying some premium instalments in NCU and some in euro, the euro instalments will have to be entered separately as 'additional premiums'. For LPC systems that carry previously paid figures (eg CLASS, a claims management system), the previously paid figures will not automatically be converted to euro, and will have to be converted manually at the time of the next transaction. LPC will offer a facility to supply listings of deferred and reserve premiums for affected currencies held on its system falling due after 1 January 1999.

33 LPC systems will not allow the entry of data in NCU for settlement after the end of the transition period. Shortly before that date, LPC will produce listings of deferred and reserve

transactions that fall after it, and these transactions will have to be cancelled manually and replaced by euro entries.

34 LPC intends to hold a euro forum in May to allow users to discuss the new procedures. It will shortly circulate an overview of its plan to its users for comment. A final, detailed version is then expected to be issued in July, when LPC users will also be asked to supply euro account details by signing LIPS bank debiting authorities.

CHAPTER 6: BUSINESS, RETAIL AND PUBLIC SECTOR PREPARATIONS

A BUSINESS PREPARATIONS

1 The establishment by the Government of a Business Advisory Group (BAG) on EMU, together with eight separate working parties, was reported in the December 1997 *Practical Issues*. Since then, the working parties have completed their initial deliberations, and their findings have been brought together in a booklet, *Report from the Business Advisory Group*, published by HM Treasury in January 1998.

2 The Report examines, *inter alia*, the extent to which the euro will be used in the UK while it remains outside EMU. The main considerations governing the use of the euro as a parallel currency were summarised in the December 1997 *Practical Issues*. Since then a number of companies have explained how they intend to use the euro in the UK once EMU has started. As an example, Siemens' approach is set out in the box below.

3 The BAG Report was available for the first meeting of the Standing Committee on Preparations for EMU on 27 January, the establishment of which was announced by the Chancellor in his speech on EMU to Parliament on 27 October 1997. The Standing Committee agreed, *inter alia*, that:

- an official level working party should report on steps that Government departments might take to help firms use the euro from 1999, including legislative and administrative changes;
- a report would be published in April responding to relevant recommendations from the BAG;
- a major information campaign on the need for UK business to prepare for 1999 should begin after the May 1998 decisions; and
- six-monthly reports of preparations would be published, and an outline national changeover plan would be produced around the end of the year.

SIEMENS' APPROACH TO THE INTRODUCTION OF THE EURO

Siemens' strategy, which has attracted some media attention, is as follows. First, from 1 January 1999 Siemens is preparing so that it can conduct business in euro world-wide with third parties, including customers, suppliers and, where possible, local and national authorities. Second, from 1 October 1999, the beginning of Siemens' financial year, Siemens will adopt the euro world-wide as its 'in-house' currency to replace the Deutschemark. This policy will apply uniformly to Siemens' subsidiaries in both 'in' and 'out' countries. As a result, all items in Siemens' accounts, resulting from their 190 locations world-wide, will be converted into Deutschemarks for the last time at the end of September 1999. Thereafter conversion will be into euro. This transformation will be facilitated by an enhanced IT system which will both cope with the euro and be millennium-compliant, the implementation of which is hoped to be completed before the end of Siemens' current financial year, this September.

Although there have been suggestions that Siemens will compel all its suppliers, including those in the UK, to deal with the company in euro from the start of EMU, that is not Siemens' official position. Siemens has said that it will observe the 'no compulsion, no prohibition' principle. Although it will become a euro-based company, it does not propose to force suppliers to use the euro, and will remain flexible on the denomination of invoicing and payment. But Siemens has emphasised that those companies which are able to quote in euro may well put themselves at a competitive advantage; and, for those suppliers outside the euro area which continue to price and invoice in their national currency, Siemens has said that it will look for particularly competitive prices in order to compensate for the exchange risk which it would then have to bear.

Customers will not be forced to transact with Siemens in euro either, but will continue to be free to choose whatever currency they wish. But Siemens expects that customers within the euro area will increasingly wish to be invoiced, and to tender payment, in euro. Indeed, exporters to the euro area from countries outside may be confronted ultimately by customers preferring them to bear the exchange risk in this way, rather than to be invoiced and pay in the 'out' currencies. A UK-based company which has resolved to switch its base currency to euro will willingly take on this risk, in the expectation that it may gain a competitive edge as a result.

Contrary to some reports, Siemens does not at present plan to offer its UK employees the opportunity to have their salaries denominated in euro while the UK remains outside the euro area.

B RETAIL PREPARATIONS

4 As reported in the December 1997 *Practical Issues*, preparations are under way to allow retail payments in euro to be made in the UK as an 'out' country from the beginning of 1999. The main developments relating to the central payments infrastructure are described in the following paragraphs.

5 *Cheque and Credit Clearing Company.* A firm commitment has been made by the Cheque and Credit Clearing Company to develop a bulk paper clearing system to process euro-denominated domestic cheques from 1 January 1999. Items will pass through the clearing in their original denomination/currency (euro or sterling) and, if the receiving account is in a different currency, a conversion will be made by the receiving bank (not the system) prior to posting. Preparation for this is progressing well.

6 As regards a euro credit paper clearing, the Board agreed in early January to the principle of development, but the timescale for implementation has yet to be agreed.

7 The bulk paper debit clearing will be sufficiently robust to process the likely demand for euro-denominated cheques in the early part of a transition period in a UK 'in' scenario. In the interim period, members are developing the functional specification for a euro Inter-Bank Data Exchange (IBDE) which is a fully-automated clearing system. This will be implemented as and when the UK joins EMU, in the light of volumes as they build up.

8 In order to differentiate cheques in euro from those in sterling, both visible and in the automated process, changes are being made to the relevant APACS standards and will be completed for 1 January 1999.

9 *BACS.* The work at BACS to develop the central infrastructure to allow it to handle euro transactions is proceeding to schedule. Whilst further work is being carried out on demand scenarios, BACS Board has confirmed that a direct credit facility will be available for January 1999.

10 *Cards.* The APACS Single Currency Working Group (SCWG) has revised a number of card-specific assumptions in order to reflect the change in the political climate since the Chancellor's October statement, and the implications of this for the UK card industry. In recent months the SCWG has been considering the need for a card industry project to drive co-operative issues forward and ensure an effective and successful migration to the euro on the assumption that the UK is 'out'. Point of sale has been identified within the UK card industry as the single most important aspect of the euro migration. An APACS working group has been analysing the issues, and, many options having been considered, it has been agreed by all parties that migration can be managed most effectively by the inclusion of a currency code/indicator in the message format from the terminal. This proposal is now being progressed through the appropriate committee. A high-level blueprint is expected in April.

11 The international card schemes, VISA and Europay/MasterCard, are responsible for ensuring that their systems can cope with the euro. These schemes have the responsibility to inform their members of the changes required in order to interface with the necessary systems. Switch, the domestic debit card scheme, is continuing to work with its members on the infrastructure changes to be put in place for the processing of euro transactions.

12 *ATMs.* The ATM industry, via the APACS ATM Group, has approved the blueprint which defines the migration path for the move to the single currency. The blueprint will now be regarded as a 'level one' planning assumption on which other projects and work can be developed. Areas identified as requiring further investigation include: (a) cash liaison; (b) cassette conversion; and (c) risk analysis. Following the report on the cash euro project (see Chapter 8), close co-operation between both project groups is expected, due to the interdependencies which exist.

C PUBLIC SECTOR PREPARATIONS

13 The approach taken by the public sector to the euro is an important factor in determining the ease and extent of use in the wider economy. Preparations in the public sector are being co-ordinated through a network of euro co-ordinators from central government departments. Each department is considering the impact of the introduction of the euro on its own operations and systems. Cross-departmental issues are being considered in a number of working groups reporting to the main euro co-ordinators group. An initial survey of the issues was completed in January and progress has been reported to the Standing Committee.

14 Most departments have now appointed a 'euro co-ordinator' to oversee their preparatory work. A number of departments, particularly those likely to be most affected on 1 January 1999, have also set up a task force to steer preparatory work. The Department of Environment,

Transport and the Regions is in the process of setting up a forum to allow exchange of information with local government. Departments responsible for other public bodies are establishing links to provide a two-way channel of communication on practical single currency issues.

17 The focus of the public sector's preparation will now be in two main areas.

- Providing information aimed at alerting business to the strategic implications of the introduction of the euro on 1 January 1999. This campaign will be targeted at raising awareness in small and medium-sized enterprises in particular.
- Looking at steps that the public authorities might take to help businesses using the euro from 1 January 1999. A working group is considering steps that might be taken and is due to reach conclusions by end-March.

18 Looking longer term, departments will continue to consider how they would introduce the euro if the UK were to join the single currency. This work will feed into the outline changeover plan to be published around the end of this year.

CHAPTER 7: OVERARCHING ISSUES

A THE LAW

1 The Financial Law Panel (FLP) recently published its Report on continuity of contracts in English law. The Report considers the likely effects of the introduction of the euro on commercial and financial contracts governed by English law, particularly those concluded in the London markets.

2 The main question underlying the FLP's research is whether the process of EMU would, as a matter of English law and without the wish of the parties, lead to the contract terminating automatically, or entitle one or more of the parties to terminate or materially alter the terms of the contract. Based on its wide-ranging research, the FLP has found no classes of transaction or forms of contract commonly in use in financial and commercial markets, governed by English law, where the principle of continuity is likely to be called into question.

3 The FLP considers that continuing work is required from market associations and participants to ensure that transactions respond in a consistent and predictable way to EMU, particularly as regards issues such as the disappearance of price sources, although it does not see these issues as bringing continuity of contract into question. The FLP does not consider that further legislation is necessary or desirable in the UK in this context and concludes that the financial markets are justified in their confidence that English law will uphold continuity of contracts in the financial markets generally.

4 Lovell, White and Durrant has compiled a useful checklist of legal questions and answers relating to the euro, which is available on the Bank's euro website.

B ACCOUNTING

5 The December 1997 *Practical Issues* included a summary of the draft guidance on accounting issues arising from the proposed introduction of the euro, issued by the Urgent Issues Task Force of the Accounting Standards Board (ASB). The draft, with no significant changes, was ratified by the ASB on 26 February and has subsequently been published.

C TAX

6 The Chancellor of the Exchequer announced at the Bank's symposium that the Government proposed to introduce legislation in the next Finance Bill to help businesses by dealing with technical tax issues arising from EMU. This followed discussions between the Inland Revenue, Bank and certain representative bodies (ISDA, LIBA, BBA, IPMA, ISMA, IFMA and ABSAL).

7 The proposed legislation is designed to achieve the normal result that, when dealing with foreign currency, the corporate tax system broadly follows the accounting treatment.

- Under existing law a trading company can, subject to certain conditions, elect for its corporation tax liability to be computed on the basis of accounts drawn up in a foreign currency. The Government will bring forward legislation to convert automatically an existing election for a currency which joins EMU into an election for the euro.

- Bonds in currencies which join EMU may be redenominated into euro. It is the Government's intention that a straightforward redenomination will not normally give rise to a tax charge that would not otherwise have arisen. The Government is considering what legislation will be needed to achieve this result.
- There are special rules applying, for the purposes of the legislation on foreign exchange gains and losses and financial instruments, to contracts involving two currencies ('currency contracts'). The Government proposes to introduce legislation to allow these rules to continue to apply to existing contracts if both currencies join EMU.

8 The Chancellor has subsequently also announced that the Government is reviewing the existing arrangements under which business taxes can be paid in foreign currencies, will ensure that payment in euros will be easy, and will give clear guidance on the payment options available.

SOME TAX ISSUES ARISING AS A RESULT OF EMU

The following is a summary of some tax issues arising as a result of EMU, whether or not the UK participates. The issues addressed are not comprehensive, but are those of immediate concern which have been raised with and agreed by the Inland Revenue.

Foreign exchange legislation

Q *The foreign exchange legislation allows a trading company which satisfies certain conditions (an 'eligible company') to adopt a currency other than sterling as its functional currency for tax purposes by making a local currency election (under sections 92-94 FA 1993 and SI 1994/3230). Will eligible companies be allowed to make a local currency election for the euro?*

1.1 Yes. The euro will be allowed as the subject of a local currency election.

Q *Will an existing local currency election in respect of a participating currency effectively carry over into the euro without any action or consequence for taxpayers?*

1.2 The Government proposes to introduce legislation in the next Finance Bill to ensure the continuity of a local currency election for a participating currency.

Q *Will a company which has an existing local currency election for a non-participating currency be able to re-elect for the euro following monetary union?*

1.3 Yes, if it satisfies the conditions in the normal way (that is, if the euro becomes an eligible currency and the existing currency becomes ineligible).

Q *When will the revised local currency elections described at 1.2 and 1.3 above become effective?*

1.4 The election for a participating currency (1.2) will switch automatically (as a result of the legislation proposed in 1.2) from that currency to the euro for the first accounting period ending after 1 January 1999 when the company in question prepares its accounts in euro.

An election for the euro which replaces an election for a non-participating currency (1.3) will only be effective from the beginning of the next accounting period after it is received. So companies must make an election before the start of the first accounting period to which they want the election to apply.

Q *The foreign exchange legislation contains the anti-avoidance legislation in sections 135-136 Finance Act 1993 which may be applied at the direction of the Board. Respectively, the sections apply where the main benefit of the asset or liability is the accrual of a loss and where the transactions are entered into otherwise than at arm's length. In cases where the conversion of assets or liabilities occurs, or the main economic purpose of the transaction has fallen away, as a result of the introduction of the euro, will the Board seek to apply these provisions?*

1.5 No. Sections 135-136 Finance Act 1993 will not be invoked as a result of the introduction of the euro, provided that the Board believes that no abuse is taking place. It should also be noted that the Consultative Document on the Modernisation of Transfer Pricing Legislation proposes that under self assessment the requirement for a Board's direction would be removed, so taxpayers would have an obligation to declare when these provisions applied. If these reforms proceed, then taxpayers may rely on this statement in the preparation of their tax returns.

Q *Unrealised exchange gains on debts which are considered 'long-term capital assets or liabilities' may be deferred under Section 139 Finance Act 1993. If the assets or liabilities are redenominated in such a way as to appear to give rise to a different asset or liability, will such gains or losses be considered realised and therefore ineligible for deferral?*

1.6 The Government proposes to introduce legislation to prevent the relief in section 139 Finance Act 1993 being lost as a result of redenomination.

Q *A company may choose to hedge a foreign currency asset with a foreign currency liability or currency contract. Under Schedule 15 Finance Act 1993 and SI 1994.3227 exchange movements on an eligible liability or currency contract may, in the circumstances prescribed, be deferred eg until the disposal of the matched asset. If such a matched asset is redenominated in such a way as to appear to give rise to a different asset will it cause the crystallisation of any deferred exchange movements on hedging liabilities or currency contracts?*

1.7 It is not the Government's intention that redenomination should cause matching elections to become ineffective. Views are invited on whether legislation is needed to achieve this in practice.

Financial instruments legislation

Q *The financial instruments legislation provides inter alia for the taxation of 'currency contracts'. It contains a definition (section 150 Finance Act 1994) of 'currency contract' which requires payments in different currencies. Will currency contracts involving two* *currencies that convert to the euro no longer be currency contracts, as only the euro will be involved?*

2.1 No. The Government proposes to introduce legislation to ensure that such contracts will continue to be currency contracts for all purposes of the legislation.

Q The financial instruments legislation provides that 'qualifying payments' may be paid gross by a 'qualifying company' (section 174 Finance Act 1994). Will fixed rate swaps of two currencies which convert to the euro lose this protection, becoming subject to withholding as an annuity or annual payments for tax purposes?

2.2 No. The Government's intention is that such contracts will continue to be within the financial instruments legislation provided that no abuse is taking place (eg where a transaction is entered into immediately before conversion to exploit this relief).

Q The financial instruments legislation prescribes the payments which may be made under a 'currency contract'. A contract may allow for other transfers of money or money's worth and still be a 'currency contract' provided that the conditions in section 152 Finance Act 1994 are met, which broadly seek to ensure that the relative value of these transfers at the 'relevant time' is small. Will conversion constitute a 'relevant time' for section 152 Finance Act 1994, causing the issue of whether or not a contract is a 'currency contract' to be re-considered?

2.3 No. Conversion, regardless of how it is achieved, will not be a 'relevant time' for these purposes. (Council Regulation (EC) No 1103/97 under Article 235 of the Treaty provides for continuity of contract on the introduction of the euro. However conversion may also be achieved through bilateral legal agreement.)

Q The financial instruments legislation contains anti-avoidance provisions, dealing with transfers of value, transactions not at arm's length and qualifying contracts with non-residents (sections 165-168 Finance Act 1994). If conversion to the euro causes there to be a new contract, will there be a re-consideration of sections 165-168 Finance Act 1994 potentially causing adjustments to taxable income to arise under these anti-avoidance provisions?

2.4 No. Conversion to the euro of itself will not cause anti-avoidance provisions to apply, provided the Board believes that no abuse is taking place. (The removal of the requirement for a Board's direction which is referred to in 1.5 above also applies to this legislation.)

D REGULATION

9 The organisations which will make up the FSA are working together, and in consultation with industry and consumer groups, to establish the impact of EMU on regulatory requirements. The regulators believe that it is important for regulated firms to recognise that they must continue to meet their ongoing regulatory obligations notwithstanding the market changes which will result from EMU.

10 However, in this respect the regulators believe that the increasing use of the term 'euro (or EMU) compliant' for regulatory purposes is unhelpful. It is used both to refer narrowly to

systems functionality, and more broadly to encompass general regulatory compliance issues, after the introduction of the euro. It can also lead to comparisons with ‘millennium compliant’. Whilst the millennium problem is almost exclusively an IT issue, the introduction of the euro has far wider implications for financial services’ companies and society at large.

11 The constituent entities of the FSA are therefore encouraging all the firms which they regulate to conduct thorough audits of all their business processes and product lines in order to ascertain where these will be affected in any way by the introduction of the euro. Where additional risks arise as a result of this unique event, firms must take steps to mitigate and control these risks, as they would any other new operational risks which are identified as part of normal ongoing risk management and compliance procedures. In short, firms must be in control of their business during and after the advent of the euro, as at all other times.

12 The FSA constituent regulators will be incorporating a review of firms’ preparations for EMU into their ongoing surveillance and monitoring procedures during the remainder of this year. General guidance has been issued on areas of concern already identified, and the FSA will continue to issue guidance as the EMU process develops. However, whilst some detailed technical points relating to EMU may emerge where regulators will wish to issue specific directions to regulated firms, firms cannot in general expect their regulators to issue detailed prescriptive guidance on what steps firms should take. The introduction of the euro will affect every firm differently, depending on the nature and scope of its business and the exact control systems used, and it is for firms to identify and control any new risks which arise, in order to comply with their ongoing regulatory obligations to organise and control their internal affairs in a responsible manner. However, regulators do recognise that clarification may be necessary on how rules and other regulatory requirements may operate in practice after the introduction of the euro and are reviewing requirements, in discussion with the industry, and will provide appropriate clarification in due course.

E CONVERSION, ROUNDING AND ‘TRIANGULATION’

13 Questions continue to be asked about how, during the transition period between January 1999 and end-2001, conversions will be made involving:

- the euro;
- national denominations of the euro; and
- other currencies, such as sterling, the US dollar and the Japanese yen.

This section seeks to clarify the main principles. *All figures used are illustrative.*

Conversion between the euro and other currencies: the foreign exchange markets

14 It is expected that the national denominations of the euro will cease to be traded as separate currencies on the foreign exchange markets. This means that market quotations will be readily obtainable between the euro, sterling, the US dollar and the yen, but not usually between, say, the US dollar and the Deutschemark, or sterling and the French franc. It will, of course, be possible to derive cross-rates in the way that they are derived and published today, and there is a presumption that wire services and newspapers will continue to make this kind of information available, in respect of the currencies quoted and traded in the foreign exchange markets, as now.

15 There are no fixed conventions about how exchange rates are quoted. Some exchange rates are quoted to 5 significant figures (for example, £1 = $1.6349) whereas others are often quoted to 6 significant figures (for example, £1 = 61.5914 Belgian francs). Cross-rates are often quoted to 4 significant figures.

16 Conversion between the euro and other currencies will be a simple matter of multiplying by the appropriate exchange rate. For example, assume that at a point in time the rate in the foreign exchange market between the US dollar and the euro is €1 = $1.0838. Then a sum of €1,000,000 would convert into $1,083,800 (but note that there is no convention about how the dollar amount should be rounded, if rounding is necessary).

Conversion between the euro and its national denominations

17 The relationship between the euro and its national denominations, and between the national denominations, will be very different from the relationship that exists today between the national currencies. From January 1999 onwards, trading between those national currencies will cease.

18 The Article 235 Regulation specifies that, from January 1999 onwards, there will be a fixed conversion rate between the euro and each participating currency. These conversion rates will be expressed to six significant figures. So, for example, €1 might equal:

6.60054	French francs
1.97048	Deutschemark
40.6684	Belgian francs
...etc	

19 These conversion rates must not be truncated or rounded when making conversions. So, for example, when converting from euro to Belgian francs, the rate of 40.6684 must be used, and not 41, 40.7, 40.67, etc.

20 The Regulation is very precise about how amounts of money are to be converted between the euro and the national denominations, and about how the results are to be rounded after conversion.

Rounding after a conversion

21 If the result of a conversion yields a result which is not an exact number of pfennigs, centimes or cents, the result must be rounded up or down to the nearest pfennig, centime or cent. If the result is exactly half way, the result shall be rounded up. So, for example, €10.00 would convert to DM 19.7048, which would be rounded down to DM 19.70; €100.00 would convert to DM 197.048 which would be rounded up to DM 197.05.

Conversion between euro and a national denomination, and vice versa

22 When converting from euro to a national denomination, the sum in euro should be multiplied by the conversion factor, so that, for example, a sum of €1,000 converted into Deutschemarks would convert to 1,000 x 1.97048, giving DM 1,970.48 .

23 When converting from a national denomination to euro, the sum in the national denomination should be divided by the conversion factor, so that for example a sum of DM 1,000.00 would convert to 1,000 ÷ 1.97048 giving €507.49056067..., which rounds to €507.49. The conversion from the national denomination to euro must be done by division, using the conversion rate. It is not permissible to multiply by an 'inverse rate' (eg an approximation to the reciprocal of 1.97048, such as 0.507491); for large sums, the use of inverse rates would produce inaccurate results.

Conversion between two national denominations ('triangulation')

24 The procedure for converting from one national denomination to another is a little more complex. It has acquired the name of 'triangulation'. There are three stages to the procedure:

(a) convert from the first national denomination into euro (by division by the conversion rate);

(b) convert the result of step (a) into the second national denomination (by multiplication by the conversion rate);

(c) round the result to the nearest sub-unit of the second denomination (eg centime, pfennig), or to the nearest unit if there is no sub-unit (eg lira), or according to national law or practice to a multiple or fraction of the sub-unit or unit of the national currency (some countries have special conventions; for example in Belgium there is a half-franc coin, but the banking system works to the nearest franc).

25 The result at stage (a) of the above procedure will usually have a large number of figures after the decimal point. It is permissible, but not compulsory, to round this figure, but to no less than 3 decimal places (for example, 0.123456789 might be rounded to 0.123, or 0.1235, 0.12346, etc, but not to 0.1 or 0.12).

26 An example of conversion of 1,000.00 Deutschemarks into French francs, using this method, would be as follows.

Step (i): divide 1,000.00 by 1.97048 to give 507.4906 (rounded in this case to 4 decimal places - 3 or more decimal places are allowed)

Step (ii): multiply 507.4906 by 6.60054 to give 3,349.7120...

Step (iii): round to the nearest centime, to give a result of FF 3,349.71.

Conversion between the national denominations of the euro and other currencies

27 After January 1999 it is not expected that there will be significant volumes of trading in the foreign exchange market between the national denominations of the euro and other currencies (ie between, say, the Deutschemark and the dollar, or between the French franc and sterling). But some trading of this type may nevertheless take place, and rates between the national denominations of the euro and other currencies may be quoted in the foreign exchange market. In addition, it is likely that parties to a foreign exchange transaction between the euro and another currency, whose internal accounting is still conducted in a national denomination of the euro, will want the result of that foreign exchange transaction to be expressed as if it had been a

transaction between the national denomination of the euro and the other currency. Likewise, for accounting purposes it may be necessary to know how to convert sums of money between national denominations and other currencies (for example, a US company with an Italian subsidiary, wanting to draw up global accounts expressed in US dollars).

28 Two methods of conversion between the national denominations of the euro and other currencies will be possible. The first will be to convert 'via the euro', in a process which looks very similar to triangulation (because the arithmetical processes *are* the same; only the rounding processes are slightly different). The second will be to use 'cross-rates' between the national denominations of the euro and other currencies. It will be possible to derive these cross-rates using the fixed EMU conversion rates and the exchange rates between the euro and other currencies quoted in the foreign exchange market. These cross-rates between the national denominations of the euro and other currencies may be quoted in the foreign exchange markets themselves; or they may be derived and published by information service providers, and by newspapers; or individuals may simply be left to calculate these cross-rates themselves.

Method 1: conversion via the euro

(1a) conversion from another currency, to a national denomination, via the euro

29 For example, suppose that at a point in time the foreign exchange rate between the US dollar and the euro is €1 = $1.0838. Then a sum of $1,000,000 could be converted into Deutschemarks as follows:

(i) convert dollars to euro: $1,000,000 = €1,000,000 ÷ 1.0838 = €922,679.46 (rounded to the nearest cent)

(ii) convert euro to Deutschemarks, following the Article 235 Regulation (and assuming the illustrative EMU conversion rates given above):
€922,679.46 = DM 922,679.46 x 1.97048 = DM 1,818,121.42.

30 This process is very similar to the triangulation process. Note however that there is no regulation or convention about how the result of stage (i) is to be rounded.

(1b) conversion from a national denomination, to another currency, via the euro

31 As in (1a) above, assume that at a point in time the foreign exchange rate between the US dollar and the euro is €1 = $1.0838. Then a sum of DM 1,000,000 could be converted into dollars as follows:

(i) convert Deutschemarks to euro, following the Article 235 Regulation (and assuming the illustrative conversion rates given above):
DM 1,000,000.00 = €1,000,000.00 ÷ 1.97048 = €507,490.56

(ii) convert euro to dollars: €507,490.56 = $507,490.56 x 1.0838 = $550,018.27 (rounded to the nearest cent).

32 This process too is very similar to the triangulation process. Note that there is no convention about how the result of stage (ii) is to be rounded. It is also a moot point whether the result of stage (i) needs to be rounded in accord once with the Article 235 Regulation, since the euro amount may not be 'a sum to be paid or accounted for' (as specified in the Regulation).

Method 2: conversion using a cross-rate

(2a) conversion from another currency, to a national denomination, using a cross-rate

33 In the example 1(a) above, the cross-rate from the dollar to the Deutschemark might be 1.81812, which is an approximation to 1.97048 ÷ 1.0838 (there is no convention to say how many significant figures should be quoted in the cross-rate). The use of this cross-rate to convert a sum of $1,000,000 would give a different result from example 1(a), namely DM 1,818,120.00.

(2b) conversion from a national denomination, to another currency, using a cross-rate

34 In example 1(b) above, the cross-rate might be 0.550018, which is an approximation to 1 ÷ (1.97048 ÷ 1.0838) (again, there is no convention to say how many significant figures should be quoted in the cross-rate). The use of this cross-rate to convert a sum of DM 1,000,000 would give a different result from example 1(b), namely $550,018.00.

Is it better to convert using method 1 or method 2?

35 There is no regulation, or market convention, which states which of methods 1 and 2 is to be regarded as correct, so either can be used. Of the two methods, it may be preferable to convert via the euro (ie method 1), simply because that is a more transparent method and closer to the 'triangulation' method. But it may cause difficulties for some computer software packages. For the avoidance of confusion, it will always be important to make it clear which method has been used.

36 It could be asked whether the use of method 2 is in breach of the Article 235 Regulation. It is possible to argue that it is not. It is possible to work backwards from the cross-rate, and the fixed conversion rate between the euro and the national denomination, to derive an *implicit exchange rate* between the third currency and the euro. In example (2a) above, the implicit rate between the dollar and the euro is 1.97048 ÷ 1.81812 = 1.0838008....; this implicit rate is only very slightly different from the *explicit* exchange rate (ie 1.0838) used in method 1. Given the amount of variation in the rates used in the foreign exchange market, such differences between implicit and explicit rates may not be very important. So there would be a difference between the implicit and explicit rates between the euro and the other currency, but there would be no breach of the Article 235 Regulation.

CHAPTER 8: PREPARATIONS FOR JOINING THE SINGLE CURRENCY

1 In accordance with the Government's approach towards UK EMU entry of 'prepare and decide', the BAG addresses in its Report the steps necessary to join the single currency in due course following a positive decision by Government, Parliament and the people in a referendum.

A THE TIMETABLE

2 The Report identifies five steps in the changeover to the single currency:

Step 1 UK decision to seek membership.

Following endorsement by Cabinet, the Parliament and the people in a referendum, the UK would have to be assessed by the EU Council of Ministers against the Maastricht convergence criteria.

Step 2 UK joins the single currency.

The euro becomes the legal currency of the UK, although sterling remains for some time as a denomination of the euro.

Step 3 Introduction of euro notes and coin as legal tender in the UK.

However, at any point after 1 January 2002 when euro cash will become available for the first time in the initial EMU Member States, there would be nothing to prevent euro notes and coin in circulation in other countries also being used in the UK, even if they were not legal tender here.

Step 4 End of the legal transition period.

Sterling ceases to be a denomination of the euro, except for sterling notes and coin if they remain to be withdrawn.

Step 5 End of the dual circulation period.

Legal tender status is withdrawn from sterling notes and coin, no more than six months after euro notes are officially introduced in the UK, and perhaps a substantially shorter period.

Note that some of these steps might take place at the same time as each other.

3 Although there has been informal agreement within the EU that later participants in EMU could have as long as first-wave entrants to change over their national currencies to the euro, in practice this is unlikely to be desirable. In particular, the Government is likely to want to minimise the period between steps 1 and 2 in order, *inter alia*, to limit the possibility of adverse exchange market speculation; and, assuming that euro notes and coin are already in circulation elsewhere in the euro zone, there will inevitably be leakage into the UK economy once a decision has been made to join, and this would undermine the notion of a three-year period (corresponding to steps 2, 3 and 4) before they could become legal tender in the UK.

B LEAD TIMES

4 The key consideration which would determine whether the UK's changeover scenario could be shortened would be the state of preparation in the financial sector and in the economy more generally. So far as the overall transition is concerned, in the financial sector full preparations for wholesale banking and market operations in euro for the beginning of 1999 are already in hand. Corporate banking facilities in euro will also be made available, but on a limited scale.

5 To go further and develop comprehensive retail banking facilities, throughout banks' extensive branch networks, would require major software development. The BBA, after consulting its membership, estimates that a minimum of 3 years would be required from the point at which they began to make significant investments to the date for the introduction in the UK of euro notes and coin (E day - step 3). The Bank has no reason to question the BBA's estimate, although clearly not all individual banks will be in the same position.

6 Whilst the three years needed to produce sufficient euro banknotes is one factor underlying the long transition for the first wave, preparation of UK euro notes would be unlikely to prolong a UK transition. Some 18 months would suffice to produce adequate UK euro banknotes so long as the necessary machinery was already in place (and sufficient sterling notes for that 18-month period had been stockpiled, so that production could focus solely on euro notes).

7 For the final period, after E day (step 5), the financial sector may well prefer a shorter period than the 6 months' maximum available, in order to keep its costs down.

8 Beyond the financial sector, the retail sector also seems to require a similar three-year period to prepare. It is not clear how long the UK public sector would need to prepare, although in some of the Member States preparing for first-wave entry, the public sector is said to be the 'slowest ship in the convoy'.

9 There is a separable, but equally important, question about how much of the transition would take place *before* UK entry. As already indicated, there are strong reasons for a short period between a UK decision to join and actual entry (ie between steps 1 and 2 above). Not only would there be no operational reason for a long period, unlike for the first wave when it is necessary to transform the EMI into a fully operational ECB, but a short period would also help minimise potential market volatility.

10 The extent to which individual financial institutions will start investing in the necessary systems development before a definite decision to join no doubt depends in part upon their confidence that the Government will make an early application, and how convinced they are that a referendum would in fact provide a positive result in favour of UK entry. Absolute certainty is unlikely to be required. An analogue would be the way in which banks across the EU have been preparing for some years for the start of EMU on 1 January 1999, even though that start date has at times looked in doubt, or it has not been clear that a particular Member State would qualify. One possible trigger for UK institutions to start investing would be the state of preparations in the public sector, as a signal of the Government's intentions. Another relevant factor would be if the pace of demand for euro facilities began to develop in the UK, even while it remained 'out', beyond the capacity of the banks' available systems to cope. Furthermore, the fact that, as suggested above, the banks collectively wish to minimise the 'dual currency' period between the

date of entry and a UK E day, because it is costly, may itself give an incentive for greater preparation ahead of UK entry. But banks are unanimous that they will not begin to develop retail systems for the euro until preparations for the millennium have been completed.

11 In the business sector more generally, the BAG Report notes that many businesses will look to the outcome of a referendum as the key signal to prepare in earnest. They, too, are constrained by the availability of IT resources, especially with the millennium problem to contend with. They are also in search of more certainty about the shape and timing of the transition, and the BAG recommends that the Government should produce an outline ‘national changeover plan’.

12 Business will be guided by the same sort of considerations as identified above for the financial sector. A period of about three years for preparation is also thought necessary, and the ‘high street’ retail sector will, according to some retail representatives, undertake relatively little preparation before a definite entry decision.

13 At a level of detail, the BAG Report recommends that euro notes and coin should be introduced into the UK in mid-February or March of the relevant year, but not later than four weeks before Easter. It concludes that the legal period of dual circulation, after E day (step 5), should be six months, the maximum period allowed for first-wave entrants.

14 The Report includes recommendations on how the public sector should behave during the changeover and also identifies a number of guiding principles for pricing arrangements during this period.

15 Clearly, before UK entry there would need to be a major information programme, on which the BAG Report makes a number of specific recommendations.

C EURO BANKNOTES AND COIN

16 The APACS Cash Services Group (CSG) set up a cash euro project in 1997 to develop a blueprint for the changeover period, which reported in February 1998.

16 The project involved extensive consultation with a wide range of organisations involved in the changeover together with detailed modelling and logistical analysis. The blueprint confirms that the changeover would be extremely complex and challenging. Additional resources would be required, particularly in the key area of transporting coin. Co-ordinated planning and a supportive regulatory regime would be vital to make the most effective use of the resources available.

17 There is considerable uncertainty concerning the quantity of euro coin that would need to be produced. Further research is being undertaken.

18 APACS recommends that action should be taken to build up the stockpile of sterling coin as soon as possible, including a campaign to encourage the return of hoarded bronze coin. Similarly, a campaign will be needed to encourage the public to phase the return/exchange of sterling notes and coin rather than letting it be concentrated around E day.

19 The speed with which sterling coin is displaced by euro after E day will largely depend on the extent to which retailers give change in euro. The critical factor for notes will be the ATM and counter dispense policies of the commercial banks (an area in which further work is being undertaken). The policy of the Benefits Agency and of employers will also be important. The regulatory environment may also have a bearing on the speed of the changeover. Overall, it will take between three weeks and three months before there is more euro than sterling in active public circulation, and between two and six months before the large bulk of sterling has been removed from circulation.

D RETAIL ISSUES

20 The BAG Report lists a number of considerations which would arise during the transition and dual circulation periods of euro and sterling units.

- Conversion and rounding practices between the euro and sterling units would need to meet the required standards.
- Till software would probably need to show at least the total of the transaction in both euro and sterling units. Most large retail chains are expected to resist suggestions to show individual components of bills in both currency units.
- Till displays would need to be altered if it was desired to show both currency units as items are registered.
- Bar coding and scanning equipment need to handle the conversion between currency units. Identifiers may be needed to prevent confusion when reading values. The same consideration would apply to bar-coded coupons and vouchers.

21 During the dual circulation period, retailers would need to decide whether to give change in only one currency unit or in both. The former is simpler administratively and avoids reconfiguration of the till drawer, and there are no current legal obstacles in the way of this option; but retailers will no doubt want to take account of consumer preferences.

22 Over one million vending machines would need to be converted if the UK were to join the single currency, and gaming machines would additionally require the replacement of digitally-held records.

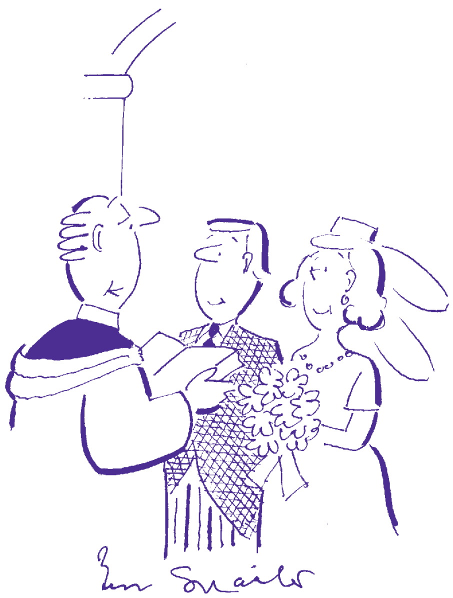
23 The European Commission has recently issued a Communication entitled, *Update on the Practical Aspects of the Introduction of the Euro*, following an earlier publication dated October 1997. The Communication served as a basis for the Round Table on 26 February 1998. It reports, *inter alia*, on the conclusions of the five expert working groups set up as a follow-up to the Round Table of May 1997 - on banking charges for conversion to the euro, technical and cost aspects of dual display, adjusting to prices and values in euro, small enterprises and the euro, and the role of education in the introduction of the euro. All these would be directly relevant to the UK if and when it joins EMU.

24 The December 1997 *Practical Issues* contained a summary of the report on banking charges for conversion to the euro. The Commission's preliminary view is to accept the Report's conclusions. It may therefore make a Recommendation for a standard of good practice on conversion without charge, including: the conversion of payments from NCU to euro and

vice-versa during the transition period; the conversion of accounts from NCU to euro during and at the end of the transition period; and the exchange of ‘household’ amounts of national banknotes and coin into euro banknotes and coin in normal amounts and frequencies, which banks should define in advance. The Commission has also stated that it interprets the law as requiring ‘no discrimination’ between fees charged for services in euro as compared to those in NCU.

25   The expert group on technical and cost aspects of dual display notes that dual displays represent just one of many communication instruments for educating citizens and employees, and considers it imperative that there be flexibility in the approach to dual displays. Imposing requirements involving expensive modifications to existing equipment, or the purchase of new equipment, solely for the purpose of dual display should be avoided. Limiting dual display to the final price to be paid by consumers would also minimise the need for hardware and software changes. Many retailers, utility companies, banks and insurance companies are planning to provide dual displays even in the absence of an obligation to do so, but the group considers it essential that both Community and national authorities clarified the regulatory framework for dual display without delay. It is further considered that a progressive introduction of dual displays could take place in the retail sector, especially in the months approaching E day.

26   The group makes four proposals: first, the fixed conversion rates should be used when calculating countervalues in dual displays; second, a dual display should not place an obligation on the retailer to accept payments in euro; third, there should be a clear distinction between the lead unit in which the price is set and the amounts paid are to be calculated, and the countervalue which is displayed for information purposes only; and fourth, voluntary agreements on common formats or design of dual display should be encouraged. The Commission’s preliminary view is to accept these proposals and, accordingly, to make a Recommendation on a ‘standard of good practice’. Regulation would be proposed only if this provision was seen to be ineffective.



AND WILL YOU BOTH OBSERVE
THE CONVERGENCE CRITERIA...?

CHAPTER 9: FISCAL AND MONETARY POLICY

A ECONOMIC CO-ORDINATION

1 The Luxembourg European Council in December agreed that Finance Ministers of the participating Member States may meet informally to discuss issues connected with their responsibilities for the single currency. This is a reference to the so-called ‘Euro-X’ committee. The Commission, and the ECB when appropriate, would be invited to participate. It was further agreed that, whenever matters of common interest are involved, they would be discussed by Ministers of *all* Member States, including the ‘outs’. In any event, as the European Council made clear, the ECOFIN Council is the centre for the co-ordination of economic policies, in particular for the broad economic guidelines, and is the only body empowered to act in the relevant areas. Decisions will in all cases be taken by ECOFIN in accordance with the procedures laid down in the Treaty.

2 There was also discussion of certain external aspects of EMU. An agreement at the Mondorf Informal ECOFIN that general exchange rate orientations would only be issued in exceptional circumstances was reconfirmed. There was also elaboration of the way in which the external economic policies of the participating Member States and of the Community, where relevant to EMU, should be formulated and how the euro area should be represented internationally, including at the International Monetary Fund, in which, it was acknowledged, only individual countries could be members. The main principles on economic co-ordination, internally and externally, were incorporated in a Resolution adopted by the European Council.

B PREPARATIONS FOR THE ECB’S FOREIGN EXCHANGE AND RESERVES MANAGEMENT OPERATIONS

3 The EMI and the NCBs have continued with their preparation of the operational framework for managing those foreign currency reserves due to be pooled with the ECB. The proposed framework would allow the ECB in principle to manage its reserves either on a centralised or a decentralised basis. In practice, however, preparations have been taking place on the basis that at the beginning of Stage 3 these operations will be decentralised: each ‘in’ NCB will manage a portion of the reserves on behalf of the ECB. This approach has been taken because of the long lead times involved in preparing the technical specifications needed for such support systems, and to negotiate with system vendors; and so that maximum use can be made of the expertise, and front/back office technology, already available in NCBs.

4 Within this decentralised reserves management framework, the ECB will be responsible for strategic decision-making, including the establishment of overall operational objectives in terms of currency and interest rate benchmarks, and the setting of limits for market risk, credit risk and requirements for liquidity. Each NCB will be responsible for undertaking foreign exchange and reserves management operations in accordance with the instructions and investment parameters laid down by the ECB. NCBs will also provide settlement facilities, operate accounts in the name of the ECB, and report transactions data to the ECB so that it can monitor performance and risk.

5 An essential part of the infrastructure for managing the ECB's foreign reserves will be an IT support system based at the ECB but providing direct links to NCBs: the system will incorporate the ECB's strategic investment decisions and its limits in respect of risk. NCBs will be able to manage their respective portfolios against these parameters, reporting transactions undertaken to the ECB for the purposes of position and risk monitoring; and periodically for performance measurement purposes.

6 The ECB reserves management support system was the subject of a competitive tender process during 1997. The project has now moved into its implementation phase, with completion and testing scheduled ahead of the start of Stage 3. In parallel with this work, discussion and analysis is taking place on the size and likely currency composition of the ECB's reserves. Under Article 30 of the ESCB/ECB Statute, the NCBs will pool foreign reserves up to a total of €50 billion equivalent. As the main purpose of the ECB's reserves will be for exchange rate management, they are likely to comprise mainly major reserve currencies, but may also include an element of gold. They may not include other EU Member States' currencies, ECUs, IMF reserve positions or SDRs. Decisions on the amount and composition of the reserves to be called up will be made by the ECB Governing Council after it is established in the summer.

C MONETARY POLICY IN STAGE 3

7 Reports published by the EMI last year outlined the strategic choices open to the ECB in the field of monetary policy, and gave the broad outline and many of the details of the instruments and procedures being prepared for the implementation of policy. A number of issues were left for decision by the ECB when it is established. But, given the relatively short length of time between the establishment of the ECB and the start of Stage 3, work continues in the EMI to prepare the ECB's decisions.

8 The EMI's Report, *Elements of the Monetary Policy Strategy of the ESCB,* published over a year ago noted further work that would be needed before the start of Stage 3. Some of this work related to the technical features of any monetary or inflation target – the precise definition of the target, the length of the target horizon, the width of the target range etc. Some related to the ECB's communication policy, and some to the necessary understanding of the transmission process in the euro area as a whole. Much work in these areas is now in hand in the EMI, with the collaboration of NCBs, including work on the relationship between decentralised fiscal policy and the single monetary policy.

9 In the field of monetary implementation there are many details left for final decision by the ECB – for example precise lists of counterparties, and precise lists of eligible collateral which are currently being prepared by NCBs and the EMI. The *General Documentation* published in September outlined the risk control measures to be adopted by the ESCB for its holdings of collateral, including initial margins and valuation haircuts. Work on possible numerical values for margins and haircuts is in hand. NCBs which expect to be in the euro area from next year are also working on the legal documentation they will use, adapted to their local jurisdictions. On reserve requirements, the ECB will have to decide whether or not to use them at all. In the meantime work continues on the details of the possible reserve base and on possible remuneration.

SUMMARY OF THE BANK'S SECOND EURO SYMPOSIUM

1 The following pages are a brief record of the Bank's second euro symposium on 20 January 1998, attended by representatives of many of the City's major financial institutions and the market associations. It is necessarily selective. It may nevertheless serve as a useful introduction to the many practical issues relating to the euro for those unfamiliar with the subject or for those who do not need to follow the detailed material set out elsewhere in *Practical Issues*.

Payment infrastructure

CHAPS euro

2 CHAPS euro will be ready with full RTGS capability well in advance of January next year. Development work is on schedule and testing is already under way. Decisions on the terms of access to intra-day credit from the euro area central banks will be made by the ECB when it is formed later this year. The Bank of England has been fully involved in the debate leading up to such decisions being taken. Three possible constraints regarding liquidity provision are being considered: limits on credit to 'outs'; unlimited access by all NCBs to intra-day credit until a short time before TARGET close, after which 'out' NCBs would only be able to make euro payments from positive balances; and early customer cut-off times and the application of penalty rates to deter 'spillover' to overnight credit. CHAPS euro is being built in such a way that it is compatible with the adoption of any one or more of these options.

3 CHAPS euro will combine the proven CHAPS efficiency and experience with the ease of access provided by the S.W.I.F.T. network. It has been built to enable remote access from outside the UK. A large number of major banks world-wide have expressed an interest in joining the CHAPS euro system. These will add to the current 17 settlement members and 400 participants in CHAPS sterling. CHAPS is aware that major banks will have a choice of euro systems available to them, and is confident that CHAPS euro will mirror CHAPS sterling in providing members with low risk, high service levels, and rapid transmission. The design of CHAPS euro will also make the system very competitive on cost, much cheaper in fact than the current CHAPS sterling system.

TARGET

4 The Bank of England is committed to trying to make TARGET efficient. TARGET is a unique opportunity to reduce risk, promote payment efficiency, and is part of the infrastructure to underpin the single market for the 21st century. The system will have long operating hours - 7am to 6pm (Frankfurt time) - and will be available on all weekdays except Christmas Day and New Year's Day. It will be priced on a full cost recovery basis, which the EMI has said means charging for cross-border payments between €1.5 and 3.0. There are still some outstanding issues, and legal arrangements must be finalised. Only then can comprehensive service level agreements be published so that users can fully understand the system and what it offers.

5 There is still work to be done, but London will be ready from the beginning of next year with an efficient payment infrastructure in euro. This will cater for payments between members

of CHAPS euro in London and also, through TARGET, cross-border within the EU. And the full range of competing payment mechanisms, including correspondent banking and the EBA net end-of-day euro clearing system (based on its present ECU system) will be available for euro payments into and from London. We will thus have the payment systems we need to support London's position as the leading financial centre in Europe.

Securities settlement infrastructure

The Central Moneymarkets Office (CMO) and Central Gilts Office (CGO)

6 The Bank has been consulting extensively in the past six months to establish the likely demand to settle euro-denominated instruments in London through the two settlement services which it operates.

CMO

7 CMO settles short-term, bearer, non-fungible money market paper, such as bills of exchange and CDs. The Bank also acts as depository for such paper, except for CDs, which are dematerialised. A survey of the CMO membership has revealed that the London market plans to issue and trade euro-denominated London CDs, so there is a clear demand for settlement of euro-denominated money market paper.

8 CMO can deal only in one currency, so it settles only sterling instruments now. Adding a multi-currency functionality would be an extensive project because of the age of the software. Instead, the Bank intends to create a clone of the existing CMO, with the euro as its base currency, to run in parallel. Very few system changes are required. Payments will, as now, be made at the end of the day across accounts at the Bank of England, in sterling from sterling-CMO and in euro from euro-CMO. The system will be ready later this year. The euro system would become central, and ultimately be the only money market settlement system, if and when the UK were to join EMU.

CGO

9 CGO settles fungible, registered and dematerialised instruments, predominantly UK gilts (for which the Bank acts as registrar). A CGO membership survey revealed a clear demand for the ability to settle trades in sterling-denominated gilts for euro consideration, from January 1999.

10 CGO software now has the ability to handle more than one currency, and the Bank will be adding euro as a currency alongside sterling during the course of 1998. The service will need a group of euro settlement banks, and members will need to ensure that one of them is willing to make assured payments in euro on their behalf. Members will be able to choose the base currency for their debit cap, or be able to have two caps, one in each currency, although this could be inefficient in its usage of collateral. As in CMO, two payment streams will be produced each day, one in sterling and one in euro, for settlement across the Bank's books.

11 Whether to issue euro-denominated gilts will be for decision by Government. But CGO will be able to settle trades in sterling-denominated or euro-denominated gilts using either currency as

the consideration from the beginning of 1999. In line with other systems, there will be no 'intelligent matching'. The Bank's Registrar's Department is currently trialling a new version of its register, one element of which will be the ability to handle issues in more than one currency.

12 If the UK joins EMU at a future date, CGO will revert to a single currency system on the date of entry. The base currency will be euro and any outstanding amounts in the system will be converted. Given that the UK will not participate in the first wave, CMO and CGO are not concerned with the redenomination of securities and the conversion weekend at the end of this year.

13 No significant demand for the settlement in the UK of a euro-denominated *fungible* money market instrument, such as the proposed ECB debt certificates, has been identified. If such demand were to emerge, settlement in the euro clone of CMO would not be appropriate, since CMO is designed to handle only non-fungible instruments. Rather, the Bank would look at the position with CRESTCo to establish where such a facility could best be provided in the UK. (Subsequently we have agreed that CRESTCo will prepare to settle ECB debt certificates.)

CREST

14 CREST settles transactions in corporate securities both in the UK and Ireland (a potential first-wave EMU entrant). CREST does not settle government securities and does not face the immediate need to offer cross-border collateral management. Furthermore, much of the burden of redenomination falls primarily on the registrars for the securities rather than on the CREST settlement system. Since CREST already offers multi-currency settlement, the addition of the euro requires no new CREST functionality. However, since CREST will probably be settling for both an 'out' and an 'in' country, a separate group of euro payment banks (and a mechanism for inter-bank euro settlement) to handle CREST-assured payments in euro will be needed; and the precise structure of the CREST settlement day, including the timing of the final euro DVP movements, will need to be established.

15 The majority of CREST securities are equities, and it is unlikely that many, if any, issuers in the UK and Ireland will choose to redenominate their securities in early 1999. Nevertheless, CREST's functionality will be improved so that open bargains across a redenomination date will automatically be converted without the need for CREST members to re-input the transaction. This would also facilitate any redenomination of corporate debt. CREST can already handle security balances in decimals.

Euroclear and Cedel

16 Euroclear and Cedel are multi-currency DVP systems and will add euro as an additional settlement currency from the beginning of 1999. Governments have chosen different methods to redenominate their outstanding national currency debt into euro at the end of this year, and these will all be accommodated.

17 The redenomination process will start when notification is received about which securities are to redenominate. Euroclear and Cedel will send this information to their participants in a structured format, hopefully several weeks in advance of the conversion weekend, so that they know the exact parameters used for converting their balances and can match the information

received with the information in their securities master files. On the evening of 31 December, the balances will be converted together with pending delivery instructions. Euroclear and Cedel will synchronise with local markets, so if a local market will only settle in euro from the beginning of 1999, settlement instructions in national currency will also be converted. The results will be sent back to participants as early as possible on 1 January 1999. There will be special facilities for these reports because of the large volume involved. Euroclear will also provide information in the structured form after redenomination, so that firms can reconcile their own redenomination results to their Euroclear statement.

18 Testing in Euroclear and Cedel is now well under way. Extensive documentation and testing plans for participants are being developed so that they know exactly what to expect and can test their own systems.

Conversion weekend

19 The conversion weekend at the end of this year will require an unprecedented number of changes to be co-ordinated. Careful, meticulous planning is required by all market participants. Not all aspects of a financial institution's activities have to be converted over the conversion weekend. Some markets, for example foreign exchange, have already stated that transactions dealt prior to January 1999 for settlement after that date will not be converted but will run off in the currencies originally dealt. However, the following major conversions must be achieved: redenomination of government bonds; conversion of securities transactions and balances; conversion of most participating currency cash ledger balances; conversion of equity price quotation; and conversion of certain OTC derivatives.

20 All securities market participants will be affected by the conversion weekend, albeit in different ways. In preparing for the conversion weekend, it is very important that firms work with their counterparties to ensure not only that they are prepared themselves, but also that the conversion of transactions and balances with these counterparties will be successful. A failure adequately to prepare for the conversion weekend carries many risks. Market counterparties can reduce these risks by working together to ensure that approaches to conversion are practical and that comprehensive market testing is conducted.

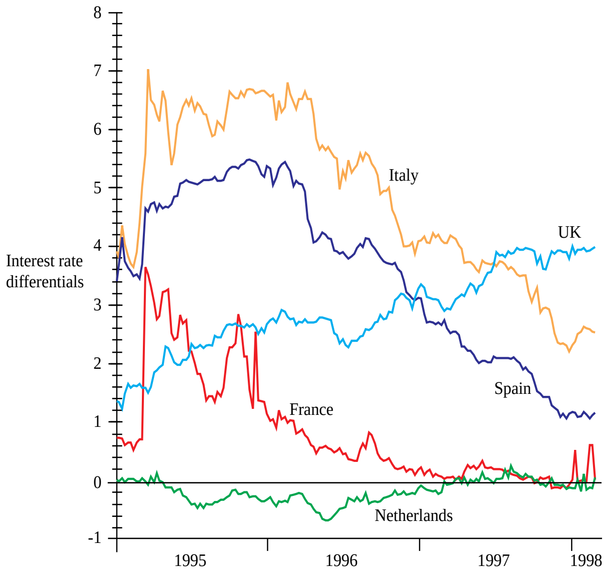
Money and foreign exchange markets

Euro money and foreign exchange markets

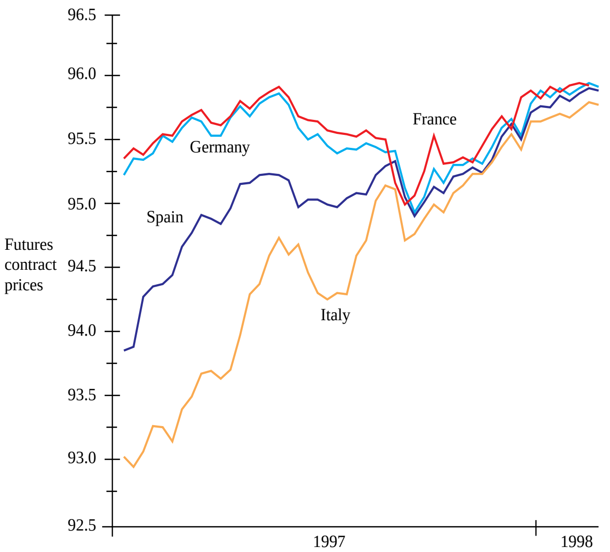
21 Short-term interest rates of many Member States hoping to participate in the first wave of EMU have largely converged already; but UK rates have diverged (see charts on next page).

22 The euro is likely to be very actively traded in the foreign exchange market against other major currencies for many reasons - amongst them, reserves diversification, the development of the euro bond market and demand for the euro as an invoicing currency by trading partners outside the euro area. London is the largest foreign exchange market in the world, and will be a competitive centre for trading the euro. The location of the foreign exchange market and the sources of demand for the euro will also help a euro money market to develop in London, and there will be a choice of ways to settle euro payments.

France, Italy, Netherlands, Spain & UK three-month money over Germany



March 1999 three-month interest rate futures contracts



Disappearing price sources

23 Many, but by no means all, existing national price sources will cease to exist with EMU. The concern is to ensure that, for those which disappear, there is a designated successor and the consequential changes to screen pages (on which many contracts are based, such as those using ISDA Master Agreements) are clear. This information is needed urgently, not only in order to amend contracts, but also to complete the necessary systems work.

24 BBA LIBOR is the main interest rate source in London for nearly all currencies, and used widely around the world. The BBA announced its plans for euro LIBOR in good time, and there are no legal problems involved in using this. Those continental rates which disappear are likely to designate the planned new euro EURIBOR (to be calculated from quotes by a large panel of banks across the euro-area as a whole) as their successor rate. In order to address the potential legal problems in this approach, arising for example because a rate determined in one country now would be replaced by a euro area-wide rate, legislation is being considered in some countries. The EURIBOR sponsors will also publish a new euro area-wide overnight effective rate, on the basis of actual rates at which trades take place in the money market, weighted by volume (LIBOR and its equivalents are indicative rates). This should facilitate the development of a short-term index swap market in euro.

Screen providers

25 Screen services deliver five generic types of facilities which will be affected by EMU: real-time market prices from exchanges and over-the-counter price makers; background information such as terms and conditions for bonds; analytical tools; facilities which allow users to trade through the screen; and time series of historical prices.

26 The layout of some foreign exchange price displays will need to be changed to reflect the disappearance of some currently-traded currency pairs and to accommodate new ones. In-house information handling systems may also need to be amended. Where prices originate from an exchange, converting price sources to euro quotation is relatively straightforward, but in OTC

markets there are 4,000 or so price makers world-wide whose data contribution may need to change.

27 There will be major changes in the background information on screens describing the terms and conditions for bonds. All information on government bonds from participating currencies will need to be converted as they are redenominated. Analytical software tools will be converted to handle the euro and its conventions. There will be layout changes to dealing screens, and banks' internal deal capture systems will need to be amended if these are fed directly by an electronic ticket feed.

28 A variety of time series of price histories for currencies will be offered. All existing pre-EMU histories for national currency pairs will be preserved. New price histories of participating currency pairs will be created at the conversion rates. And new price histories will be created showing the historical price movement of national currencies against the US dollar, but with the values for the national currency re-based to show the equivalent euro value at the conversion rate. A range of synthetic price histories will also be made available.

Debt capital markets

Corporate bond redenomination

29 There are three potential aspects of bond redenomination. The first is currency conversion: a change in the currency in which payments (in respect of principal or interest) on the bond are made. This will happen automatically in wholesale markets, which will convert to the euro immediately for both trading and settlement in January 1999. The second is simple redenomination of the nominal amount of the bond to two decimal places. This amount can then be renominalised by rounding up or down to the nearest euro, tens of euro or hundreds of euro. But if so, it gives rise to an odd lot (ie a 'left over' amount). In some cases these odd amounts will be repackaged into bonds and in others the issuer will make a cash payment for the difference. The third aspect of redenomination is reconventioning. The markets today trade on the basis of agreed conventions which vary from market to market, eg the day-count convention. It is possible to reconvention when redenominating and some issuers plan to do so.

30 Market surveys show limited appetite on the part of most issuers of corporate bonds for redenomination, largely because of the cost. Under the terms of the euro Regulations, all references to participating national currencies will automatically be converted into euro on 1 January 2002 at the conversion rate.

Repos

31 Unlike outright trades, repo transactions involve two linked transactions. Any modification to a repo - for example, a change to its currency or collateral - will impact both transactions. In the case of a repo where the first leg (or 'onside') is dealt in 1998 and the maturity date (or 'offside') is during 1999, the 'onside' will settle in participating national currency while the 'offside' will settle in euro. This presents some accounting challenges, notably because many repo transactions are repeatedly 'rolled', so that there could potentially be an impact on a series of inter-dependent transactions spanning several months.

32 Market participants should consider solutions which are *internal*, designed to update their own trade and accounting records. There are three main options: to defer the conversion exercise for pending repos until the maturity date of the repo; to 'close out' pending repos in national currency on 1 January 1999 and re-book in euro; and to retain the cash proceeds of the repo in national currency, and substitute euro nominal amounts for national currency nominal amounts when the bonds are redenominated.

The euro bond market

33 There is a striking contrast between the government and other bond markets in the EU and in the USA. During the next decade, the euro bond market has the potential to become the world's largest bond market. This would be a substantial commercial opportunity. Euro area government bond markets after the introduction of the euro will broadly match the scale of the US Treasury market. But the private sector euro markets will initially be dwarfed by the dollar-denominated markets, and have considerable growth potential if the EU moves to the same level of 'securitisation' of private credit.

Ratings

34 The demand for credit ratings is likely to increase as a result of the growth in the range of investments available across the euro area. Since governments in the euro area will no longer issue their own currency, first-rate corporates may in some circumstances be able to obtain better ratings than their own governments. There is also likely to be considerable growth in lower quality issues, as in the USA.

Fund management and equity capital markets

Fund management

35 EMU will be a spur to European market development and provide major opportunities for UK fund managers. A large volume of existing fund management business in the new euro area will convert its asset allocation to euro to match the redenomination of its liabilities. The pace of this change is uncertain, and is likely to happen more rapidly for bonds than equities. However, if euro indices are widely used as benchmarks, the integration of European equity markets could happen much more rapidly than underlying economic integration.

36 Asset re-allocation will create opportunities for fund managers to win new mandates as euro area clients re-appraise their domestic management arrangements, and look to appoint managers with demonstrable experience of investing outside their national boundaries. To gain market share, UK fund managers will need to be at the forefront of developing and offering the right products. Fund managers will also need to implement changes in investment administration, modelling tools and client reporting.

Equity indices

37 Surveys have shown that fund managers believe the importance of a *country* approach to investment in the euro area will decline in favour of a *sectoral* approach, and that a majority of fund managers expect to change their benchmark because of the euro.

38 FTSE International has introduced the FTSE Eurotop index series in collaboration with the Amsterdam Exchanges. These are large cap indices on which derivatives will be traded on both LIFFE and Amsterdam Exchanges. Real-time European sector indices based on their new classification system will be introduced later this year, and euro currency calculations and a new euro-area benchmark index for the FT/S&P-AWI will be introduced in May using the bilateral conversion rates to be announced. FTSE International also intends to introduce an All-Share index for Europe to allow investors to follow the performance of industry sectors and large, mid and small cap stocks across Europe. Companies which switch to trading in euro will continue to be included in the FTSE 100 so long as they continue to meet the rules for domicile in the UK.

Equity capital markets

39 The LSE system supports trading in 37 currencies, so adding the euro is a minor issue. The key question is the extent to which there will be demand, whether in the UK or within the euro area, to trade UK securities in euro. The LSE proposes to offer the facility to trade UK stocks in euro from the beginning of EMU, through a parallel euro order book alongside the current sterling order book. The LSE believes the demand for the euro trading facility will be relatively low at first, but it may well grow over a three or four-year period. Some UK companies may also wish to redenominate their equity capital while the UK is 'out'.

European M&A

40 The introduction of the euro, and the resulting increase in competition, is a significant stimulus to cross border M&A activity in the EU. Market shares at home are under threat, leading to cross-border expansion in order to reduce unit costs. Acquisitions are one route to achieve this. The introduction of the euro will take away one of the many M&A risks which managers need to consider. London is well placed to be a key centre for corporate finance business.

Derivatives markets

LIFFE

41 LIFFE has a wide product range of currency and interest rate contracts, which are cleared at LCH. LIFFE's strategy has been to list as early as possible products relevant to the post-EMU environment. It has been trading deliverable months which fall after 1 January 1999 for some time. Work is continuing on a number of issues, including conversion facilities and the composition of the benchmark bond after EMU begins. LIFFE is also working with FTSE International to design indices on which a future euro index contract will be based.

OTC markets

42 OTC derivatives transactions are important for London, but equally London is important for OTC derivatives. ISDA has produced a form of continuity clause to be used with ISDA Master Agreements. ISDA is also proposing a protocol, under which institutions can amend their existing Master Agreements multilaterally rather than having to reach individual agreements bilaterally with counterparties. A set of guidelines for the practical implementation of changes necessary as a result of EMU to derivatives in back offices has also been published for consultation. The guidelines suggest that parties agree to continue making gross payments on

currency swaps involving participating national currencies until bank systems are capable of netting them.

Professional services

Legal services

43 English law is commonly chosen as the governing law of many international transactions, especially financial transactions. The reasons for its popularity are that: it is well developed and business-friendly; it allows extensive freedom of contract; it provides a very high degree of certainty; and the City of London has law firms with the expertise to assist the financial markets to structure and execute transactions, however innovative and complex. Despite very extensive review, very few legal issues are judged likely to arise under English law as a result of the introduction of the euro.

Accounting, tax and management consultancy

44 The introduction of the euro, whether the UK is 'in' or 'out', can be handled within the existing accounting framework. No new issues of principle are involved. The Urgent Issues Task Force of the Accounting Standards Board recommends, *inter alia*, that: costs of preparing for the euro should be taken as incurred; expenditure incurred in the year, and commitments at year-end, on preparing for the euro should be disclosed in financial statements; and costs of modifications to assets (eg cash handling equipment) should in most cases be written off to profit and loss as incurred.

45 In general, existing tax legislation will provide a workable framework for the introduction of the euro. Market associations' preference is for the tax approach to the euro to provide both continuity and certainty of tax treatment.

46 Management consultants are assisting companies in analysing the strategic threats and opportunities arising from the potential changes in their businesses following the introduction of the euro, both from the UK's position as an 'out' at the beginning of EMU and the possibility of being an 'in' later.

Systems

47 Besides preparations for the euro, a number of other important IT projects are in hand, including the Year 2000. Skill shortages have been apparent in the market for many months. Skill requirements relate not merely to systems programming but also to configuration management, testing, and project management. There is a need to train IT staff in technical skills; to train the trainers about new systems; to train the users of new systems; and to promote awareness of euro IT issues generally.

PRACTICAL ISSUES ADDRESSED IN RECENT EDITIONS

Readers may wish to refer back to a number of issues explained in recent editions.

ORGANISATIONS INVOLVED

Wholesale payments and settlement

Association for Payment Clearing Services (APACS)
BACS Ltd (BACS)
Cedel Bank
Clearing House Automated Payment System (CHAPS)
CRESTCo
Deutsche Börse Clearing (DBC)
ECHO
Euro Banking Association (EBA)
Euroclear
London Clearing House (LCH)
Sicovam

Financial markets and exchanges, and other market associations

American Banking & Securities Association of London (ABSAL)
Association of British Insurers (ABI)
Association of Corporate Treasurers (ACT)
Association of Unit Trust and Investment Funds (AUTIF)
Baltic Exchange
Bloomberg Financial Markets
Bridge Information Systems
British Bankers' Association (BBA)
British Venture Capital Association (BVCA)
Building Societies Association (BSA)
Council of Mortgage Lenders (CML)
Dow Jones
EBS Dealing Resources
EFFAS European Bond Commission
Federation of Commodity Associations (FCA)
Finance and Leasing Association (FLA)
Foreign Banks and Securities Houses Association (FBSA)
Futures and Options Association (FOA)
Futures Industry Association (FIA)
FXNet Ltd
Gilt-Edged Market Makers' Association (GEMMA)
Institute of London Underwriters (ILU)
Institutional Fund Managers' Association (IFMA)
International Money Market Trading Association (IMMTA)
International Petroleum Exchange (IPE)
International Paying Agents Association (IPAA)
International Primary Markets Association (IPMA)
International Securities Markets Association (ISMA)
International Swaps and Derivatives Association (ISDA)
Lloyd's of London
London Bullion Market Association (LBMA)
London Investment Banking Association (LIBA)

London International Financial Futures and Options Exchange (LIFFE)
London International Insurance and Reinsurance Market Association (LIRMA)
London Metal Exchange (LME)
London Stock Exchange (LSE)
National Association of Pension Funds (NAPF)
Reuters
Tradepoint Financial Networks

Legal groups

City of London Joint Working Group (CLJWG)
City of London Law Society (CLLS)
Financial Law Panel (FLP)

Accounting

Accounting Standards Board (ASB)
Consultative Committee of Accounting Bodies (CCAB)
Fédération des Experts Comptables Européens (FEE)
International Accounting Standards Committee (IASC)
Institute of Chartered Accountants in England and Wales (ICAEW)
Institute of Public Finance Ltd

Business and retail

British Chambers of Commerce (BCC)
British Retail Consortium (BRC)
Confederation of British Industry (CBI)
Consumers in Europe Group
Institute of Directors (IoD)
The Consumers' Association
The Hundred Group
The Simpler Trade Procedures Board (SITPRO)

Regulators and Government

Building Societies Commission
Department of Trade and Industry (DTI)
Export Credits Guarantee Department (ECGD)
Financial Services Authority (FSA)
Government Actuary's Department (GAD)
Investment Management Regulatory Organisation (IMRO)
Inland Revenue
Securities and Futures Authority (SFA)
HM Treasury

Information Technology

British Computer Society (BCS)
Business and Accounting Software Developers Association (BASDA)
Computing Services and Software Association (CSSA)
Securities Industry Software Association (SISA)

ABBREVIATIONS AND ACRONYMS

ABSAL . . . . . . .American Banking and Securities Association of London
AEX . . . . .Amsterdam Exchange
ANNA . . . . .Association of National Numbering Agencies
APACS . . . . . . .Association for Payment Clearing Services
ASB . . . . .Accounting Standards Board
ATM . . . . .Automated Teller Machine
AUTIF . . . . .Association of Unit Trusts and Investment Funds
BAG . . . . .Business Advisory Group
BBA . . . . .British Bankers' Association
BIS . . . . .Bank for International Settlements
BTAN . . . . .Bons du Trésor à taux fixe et intérêts annuels
BTF . . . . .Bons du Trésor à taux fixe et intérêt précompté
BTP . . . . .Buono del Tresoro Poliennali
CADES . . . . . . .Caisse d'Amortissement de la Dette Sociale
CD . . . . .Certificate of Deposit
CGO . . . . .Central Gilts Office
CHAPS . . . . . . .Clearing House Automated Payment System
CMO . . . . .Central Moneymarkets Office
CNA . . . . .Caisse Nationale des Autoroutes
CSDs . . . . .Central Securities Depositories
CTZ . . . . .Certificati del Tresoro zero-coupon
DBC . . . . .Deutsche Börse Clearing AG
DTB . . . . .Deutsche Terminbörse (Frankfurt futures exchange)
DVP . . . . .Delivery Versus Payment
EAF2 . . . . .Elektronische Abrechnung Frankfurt (net settlement system)
EBA . . . . .Euro Banking Association
EBF . . . . .European Banking Federation
ECB . . . . .European Central Bank
ECOFIN . . . . . .Council of Finance Ministers of the European Union
ECSDA . . . . . . .European Central Securities Depositories Association
EdF . . . . .Electricité de France
EFFAS . . . . .European Federation of Financial Analyst Societies
EIL-ZV . . . . . . .Eiliger Zahlungsverkehr (RTGS system)
EMI . . . . .European Monetary Institute
EONIA . . . . . . .Euro Overnight Index Average
ESCB . . . . .European System of Central Banks
EURIBOR . . . . .European Inter-bank Offer Rate (proposed)
FEFSI . . . . .Federation of European Investment Funds
FIA . . . . .Futures Industry Association
FRN . . . . .Floating Rate Note
FSA . . . . .Financial Services Authority
FTSE . . . . .Financial Times Stock Exchange (indices)
FT/S&P-AWI . . .Financial Times/Standard and Poor's - Actuaries World Indices
IBDE . . . . .Inter-Bank Data Exchange
ICSDs . . . . .International Central Securities Depositories (Euroclear and Cedel)
IFMA . . . . .Institutional Fund Managers' Association
IFTA . . . . .International Federation of Technical Analysts
IIMR . . . . .Institute of Investment Management and Research
ILU . . . . .Institute of London Underwriters
IMRO . . . . .Investment Management Regulatory Organisation

INQUIRE . . . . .Institute of Quantitive Investment Research
IPMA . . . . .International Primary Markets Association
ISDA . . . . .International Swaps and Derivatives Association
ISIN . . . . .International Securities Identification Number
ISMA . . . . .International Securities Markets Association
KfW . . . . .Kreditanstalt für Wiederaufbau (German export credit agency)
LCH . . . . .London Clearing House
LIBA . . . . .London International Banking Association
LIBOR . . . . .London Inter-bank Offer Rate
LIFFE . . . . .London International Financial Futures and Options Exchange
LIPS . . . . .LPC Irrevocable Payment Scheme
LIRMA . . . . . . .London International Insurance and Reinsurance Market Association
LPC . . . . .London Processing Centre
LSE . . . . .London Stock Exchange
MATIF . . . . .Marché à Terme International de France
MTN . . . . .Medium-Term Note
NAPF . . . . .National Association of Pension Funds
NASDAQ . . . . .National Association of Securities Dealers Automated Quotation System
NCB . . . . .National Central Bank
NCU . . . . .National Currency Unit
NNA . . . . .National Numbering Agency
OAT . . . . .Obligations Assimilables du Trésor
OEICS . . . . .Open-ended Investment Companies
OLOS . . . . .Obligations linéaires - lineaire obligaties (Belgian government bonds)
OTC . . . . .Over-the-counter
PIA . . . . .Personal Investment Authority
PPS . . . . .Protected Payments System
RTGS . . . . .Real-Time Gross Settlement
SEAQ . . . . .Stock Exchange Automated Quotation
SEDOL . . . . . . .Stock Exchange Daily Official List
SETS . . . . .Stock Exchange Electronic Trading Service
SFA . . . . .Securities and Futures Authority
SI . . . . .Statutory Instrument
Sicovam . . . . . . .Société Interprofessionnelle pour la Compensation des Valeurs Mobilières
SSI . . . . .Standard Settlement Instructions
STA . . . . .Society of Technical Analysts
STF . . . . .Spread Trading Facility
STIR . . . . .Short-term interest rate (LIFFE contracts)
S.W.I.F.T. . . . . . .Society for Worldwide Inter-bank Financial Telecommunication
TARGET . . . . . .Trans-European Automated Real-time Gross settlement Express Transfer system
UCITS . . . . .Undertakings for Collective Investment in Transferable Securities
VPC . . . . .Voluntary Position Conversion

INTERNET ADDRESSES FOR INFORMATION ON THE EURO

General	
Bank of England: general	http://www.bankofengland.co.uk
Bank of England: euro	http://www.bankofengland.co.uk/euro.htm
HM Treasury	http://www.hm-treasury.gov.uk
European Institutions (general)	http://europa.eu.int/index.htm
European Commission	http://europa.eu.int/comm/
EMI	http://europa.eu.int/emi/
Payments and settlements	
S.W.I.F.T.	e-mail: euro@swift.com
Securities Conversion Workshop	http://www.europe.ibm.com/euro
Euroclear	http://www.euroclear.com
Markets	
FIA	http://www.fiafii.org
Retail	
European Commission (DGXV) (report on conversion charges)	http://europa.eu.int/comm/dg15/en/finances/banks/expert.pdf
Accounting	
FEE	http://www.euro.fee.be
FEE: UK help desk	e-mail: noel.hepworth@ipf.co.uk
IT	
British Computing Society	e-mail: ijones@bcs.org.uk
European Commission (DGXV) (report on IT issues)	http://www.cordis.lu/esprit/src/wdiseuro.htm

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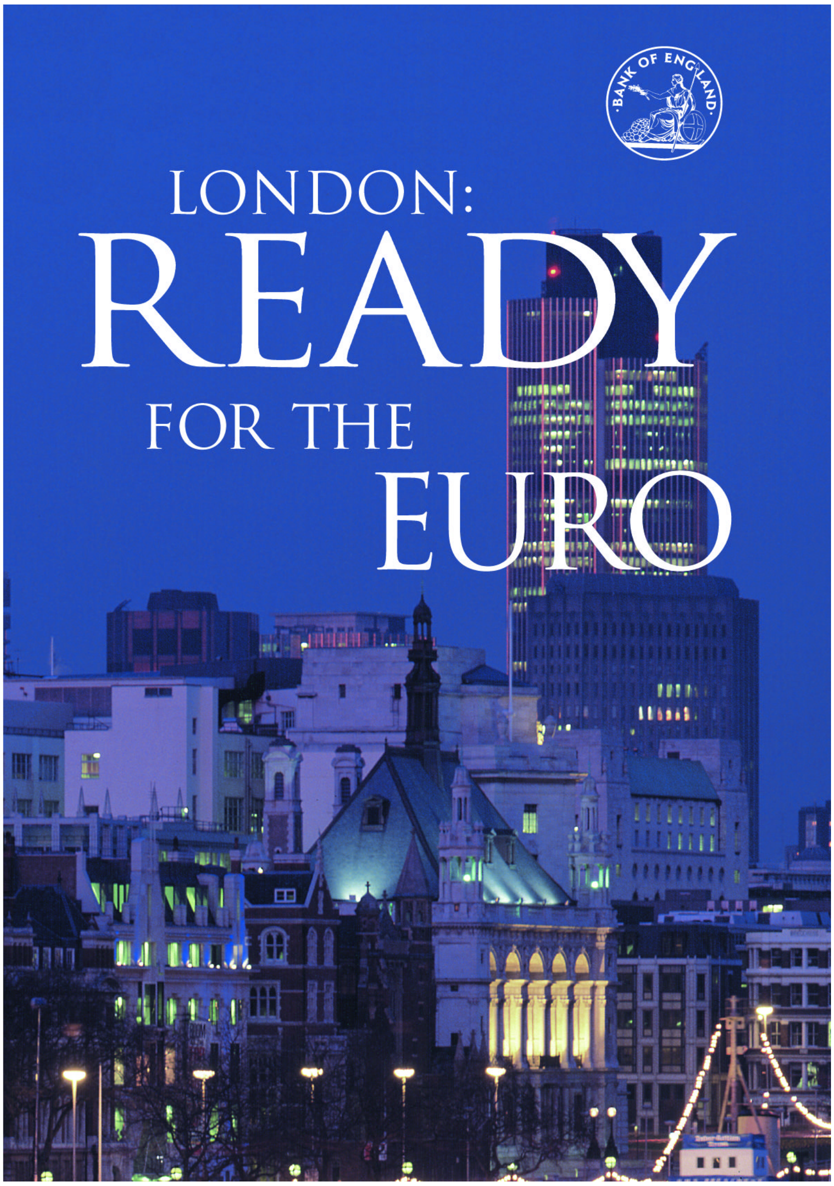

Copies of the Bank's six-page brochure, prepared for the recent international 'roadshows', are available from Public Enquiries Group on 0171 601 4012.