

The location of financial activity and the euro

EMU study



HM TREASURY



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This study has been prepared by HM Treasury to inform the assessment of the five economic tests

This study has benefited from review by Professor Philip Davis, working in a personal capacity as an academic consultant to HM Treasury. It has also benefited from comments by Bank of England officials. All content, conclusions, errors and omissions in this study are, however, the responsibility of HM Treasury alone.

This is one of a set of detailed studies accompanying HM Treasury's assessment of the five economic tests. The tests provide the framework for analysing the UK Government's decision on membership of Economic and Monetary Union (EMU). The studies have been undertaken and commissioned by the Treasury.

These studies and the five economic tests assessment are available on the Treasury website at:

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Printed by the Stationery Office 2003 799414

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EXECUTIVE SUMMARY

Introduction **1** To inform the assessment of the financial services test, the fourth of the Government's five economic tests for EMU entry, this study considers the factors that drive the location of wholesale financial activity, and examines the evidence and emerging trends in the sector. The study's main focus is on the cluster of wholesale financial services activity in the City¹, and the relative impact, if any, of currency as a factor affecting the competitiveness, and the location of, wholesale activity. The study is essentially backward looking and focuses on the performance of the City to date. The question of the effects that UK membership of the single currency would have on the City is not addressed in the study. This is a matter for the assessment itself.

Why location? **2** Firms operating in the wholesale financial sector in the UK are internationally mobile. If they consider that the UK is not a competitive location, they can quickly relocate some or all of their activity to more competitive locations. Should they relocate, it could have important implications for the UK economy, where the financial services sector makes a significant contribution in terms of employment and invisible earnings. An efficient financial services sector also has a key role in raising the productivity and growth of the UK economy.

3 Key to the study is the evidence that, since the advent of the Euromarkets in the late 1950s and early 1960s when large dollar deposits were placed in regulatory jurisdictions outside the US (mainly in banks located in Europe), London has reinvented itself from being an international clearing centre for sterling to making international markets in a variety of currencies and providing international financial services across borders. Its competitiveness in these markets has been largely divorced from both the strength of the underlying economy and sterling. The basis for its competitiveness has instead been grounded in the clustering forces that attracted a critical mass of international wholesale activity to the City.

The study's approach **4** This study sets out to understand how London arrived at this position of strength. Section 2 begins with an overview of London as a financial centre today. London enjoys a strong presence across a very wide range of markets and in many cases is the dominant international financial centre. This dominance stems from a number of factors but, above all, from the critical mass of financial expertise that is present in the City. No other financial centre in the European time zone currently possesses such a depth of expertise, and probably only New York can currently match London on this measure.

5 Sections 3 and 4 offer two contrasting but complementary approaches to explain why this intensive pattern of financial services activity has developed in London: economic geography and economic history.

Economic geography **6** Section 3 draws on recent developments in new economic geography. This highlights the benefits for wholesale financial market participants of locating in a cluster of activity such as that in the City. This is because of the strong external economies of scale that individual firms enjoy as a result of the presence of other firms in the same location.

7 The theory suggests that London has become an international financial centre through creating centripetal or agglomeration forces that have made it attractive relative to other financial centres. Current evidence suggests significant centripetal forces would include: a critical mass in financial expertise, offering a wide range of complementary services to the international investor; market infrastructure which can support high levels of activity, offering liquidity to traders; institutional infrastructure, both formal (appropriate regulation) and informal (market practice); and a large pool of skilled labour and flexible labour markets relative to other financial centres.

¹ 'The City' is a descriptive rather than geographical term which includes all financial market activity in Greater London and not just that in the City of London or Square Mile. The terms 'the City' and 'London' are used interchangeably throughout this study.

8 New economic geography also defines dispersion or centrifugal forces that may encourage relocation by some businesses to lower cost locations. There are a number of these forces at work in London: a physical infrastructure under stress (transport and housing); relatively high living costs compared to other financial centres; and, until recent market downturns which have affected the growth of both London and overseas financial centres, a tight labour market where recruitment problems were experienced. Technology has also been an important dispersion force, in some cases allowing the relocation of lower value added, bulk processing operations to lower cost locations outside clusters. The Prudential's recent decision to establish an offshore service centre in Mumbai, India is one example of this trend.

9 If centripetal forces outweigh centrifugal forces and a critical mass of activity is reached, the theory suggests that a financial centre can enter a process of self-sustaining growth. How far it develops relative to other financial centres will depend on the relative strengths of these centripetal and centrifugal forces in each centre. As this agglomeration process strengthens, so a location's development can become self reinforcing or path dependent. Such path dependency implies that the prospects of a rapid decline of a cluster such as London are diminished (though not altogether removed), and that the forces holding the cluster together exhibit a degree of robustness against adverse changes in circumstances.

Economic history **10** Section 4 offers alternative insights into the factors behind London's development since the 18th century from the perspective of economic history. Again, these can be mapped onto the picture of London as a financial centre today portrayed in Section 2.

11 A number of themes repeat themselves as playing an important role in London's success, notably the UK's long history of openness to foreign firms and to immigrants who brought their financial expertise to the UK. The open-door policy of the authorities allowed London to develop at an early stage a critical mass of financial expertise, liquid markets and a range of complementary services to support international wholesale financial activity.

12 This critical mass of expertise enabled London to overcome the gradual decline through much of the 20th century of the relative global importance of the UK economy and sterling that together had been its previous sources of strength. Coupled with a favourable regulatory and legal environment that encouraged financial innovation, they provided the springboard that allowed London to take full advantage of the development of Euromarkets in the late 1950s and early 1960s which was to change profoundly international wholesale markets. The abolition of exchange controls in 1979 and 'Big Bang' in 1986 were other key moments in a trend towards greater international openness which has led to foreign ownership playing a significant role in today's City.

Recent developments in euro financial markets **13** Section 5 provides a brief review of developments in euro financial markets since 1999. The euro is one of a number of factors affecting the development of financial centres such as London. It has in some cases added an additional stimulus to existing trends, and London would have expected to face these challenges either inside or outside the euro area.

14 The evidence shows that London has participated fully in recent developments in euro financial markets. London benefits from access to euro financial market infrastructure. The UK is the second largest user of TARGET² behind Germany, providing a cheap and effective route for wholesale euro payments across borders. London-based traders have unrestricted access to trading platforms in most other euro area financial centres (e.g. Eurex based in Frankfurt). Where restrictions do remain, for example to cross-border access to settlement systems, they are the result of national rules and not related to membership or otherwise of the single currency.

² Trans-European Automated Real-time Gross settlement Express Transfer system: this links the 15 euro-denominated Real-Time Gross Settlement (RTGS) systems in the EU and the ECB payment mechanism to provide an EU-wide RTGS system.

15 Similarly, the boost which the euro gave to the growing euro corporate bond market has benefited London. The European Central Bank (2002a, p. 25) notes that the City is “one of the main channels through which non-euro area residents purchase euro-denominated bonds issued inside and outside the euro area”. The Bank of England estimates that London’s market share of the issuance of euro-denominated Eurobonds in 2002 was around 60 per cent, compared with 50 per cent in 1999.³

Factors shaping financial centres’ development

16 Section 6 sets out some of the factors that are shaping the development of financial centres such as London. Identifying the likely factors behind future structural change is complicated by the current strong cycle in global equity markets, and its consequences. Nonetheless, five influences are identified:

- **globalisation**, as evidenced by increased integration and the establishment of trends and transmission of shocks across national boundaries;
- **supply-side determinants**, especially technology;
- a changing **business environment**, including regulation and tax;
- changing **business strategies**, in particular further consolidation, for example in the banking sector; and
- the role of **currency** – the advent of the euro being the most important in this context.

Globalisation

17 Globalisation will undoubtedly continue to be a strong over-arching factor. Policy action – for example in the next trade round, and with the EU – is likely to remove more barriers to trade. Companies are likely to develop global strategies further. In financial markets, there is likely to be a greater take-up of international and global standards and norms.

Supply-side determinants

18 Technology has a complex impact on location and clustering. On the one hand, it has allowed market firms to concentrate their wholesale operations in one place (in the European time zone, usually London) and offer their services from there. On the other, it creates the potential for firms to relocate to lower-cost sites, so undermining clustering forces. Thus far, these latter effects have largely been seen on lower value added activities (back-office functions for example) and core wholesale operations still see large benefits from locating in a cluster. However, by increasing the mobility of some forms of activity, locations may become more ‘contestable’ whereby small changes in the relative attractiveness of locations may provoke a quicker response by firms than in the past.

Business environment

19 Developments in the EU’s regulatory approach contained in the Financial Services Action Plan (FSAP) – which applies to all Member States whether inside or outside the euro area – are an important influence on London as a financial centre. In principle, the removal of barriers in the Single Market should deliver significant economic benefits for users of financial services and opportunities for providers, and the Government strongly supports the aims of the FSAP. As well as potential benefits, there are, however, potential risks for London. First, unnecessary harmonisation of standards or procedures might affect competition in the Single Market, with potential implications for the location of some activities within the EU. Second, if new EU legislation has costs which are not justified by the benefits, this may force activity out of the EU altogether. Tax, both personal and business, could also be an important factor determining firms’ location choices – the UK has a competitive personal and corporate tax regime for wholesale financial firms.

³ Bank of England (2002).

Business strategies 20 Recent equity market downturns have slowed the trend towards greater industry consolidation, certainly in the short term. Business strategies are, however, likely to evolve in response to the growing opportunities and challenges posed by EU market liberalisation, technology and the increasingly global nature of financial services outlined above. Another issue is the high level of foreign ownership in London's wholesale markets. One possible consequence of this may be a greater potential risk of relocation away from London if circumstances do not remain favourable.

Currency: the euro 21 The final factor is the single currency. The euro will become a more important international currency, with the eventual likely take-up of the euro by the new EU entrants adding a further boost to its role as an international currency. In some areas, the euro is already encouraging deeper and more liquid capital markets in the euro area, and providing an added impetus to existing trends. Increases in demand for euro-denominated assets, whether in equity or bond markets, have not however been to the detriment of London, which has been able to participate fully in euro financial market developments and maintain market share.

Conclusions 22 The locational advantages of the UK – the UK business environment, and particularly the significant clustering benefits offered by London – have provided it with the conditions to be competitive in international wholesale financial activity. While there are challenges and risks, as highlighted in the study, to date the euro has not affected London's ability to compete in international wholesale markets. However, the dynamic nature of the sector means that London's performance in the four years since the start of EMU provides no grounds for complacency.

23 This study is essentially backward looking and focuses on the performance of the City to date. The question of the effects that UK membership of the single currency would have on the City is not addressed in this study. This is a matter for the assessment of the financial services test, the fourth of the Government's five economic tests for EMU entry. The test assesses the specific question of the potential impact entry to EMU might have on the City's competitive position, particularly its wholesale markets and their ability to attract euro business.

INTRODUCTION

1.1 The aim of this study is to inform the assessment of the financial services test – the fourth of the Government’s five economic tests for EMU entry. The study focuses on the performance of the City¹ to date. The question of the impact UK entry to the single currency would have on the City is not addressed in the study. This is a matter for the assessment itself.

1.2 The study sets out to understand what factors influence the location of wholesale financial activity and what makes the UK a competitive location for wholesale financial activity. Pinning down the location of financial activity is not altogether straightforward. The Bank of England (2002) describes the five steps for a foreign exchange transaction: customer contact, trade execution, booking, risk management and settlement. Each step may take place in a different location and often through electronic markets which have no physical presence.

Why location?

1.3 Understanding what influences choices of location is important. The financial services sector makes a significant contribution to the UK economy in terms of employment and invisible earnings. An efficient financial services sector also has a key role in raising the productivity and growth of the UK economy.

1.4 Both the potential opportunities and risks to the UK as a location for wholesale activity associated with the decision not to join EMU in the first wave were highlighted in the conclusions of the Treasury’s 1997 assessment (HM Treasury, 1997). Since that assessment, the euro area has been successfully established. As the euro is likely to have had its most immediate structural impact on the financial services sector, some evidence of an impact on the location trends of wholesale financial services activity since 1999 may have started to emerge. Any change with respect to the UK that might be linked to the euro could be suggestive of its longer-term competitive position as a location for wholesale financial activity.

The scope of the study

1.5 Two particular aspects of the scope of the study should be noted, reflecting the emphasis of the financial services test itself:

- the focus is on wholesale financial activity because this is dominated by international firms who can choose from a variety of locations from which to undertake their business. If London and the UK in general are becoming uncompetitive, then they might consider relocating; and
- although other UK wholesale financial centres such as Edinburgh are covered, most of the analysis and accompanying discussion is of the markets served by the City because this is by far the dominant financial centre in the UK.

¹ ‘The City’ is a descriptive rather than geographical term which includes all financial market activity in Greater London and not just that in the City of London or Square Mile. The terms ‘the City’ and ‘London’ are used interchangeably throughout this study.

² The EMU study by HM Treasury *EMU and business sectors* examines the potential implications of EMU for all business sectors.

1.6 Section 2 provides a survey of London as a wholesale financial centre today, as shown by its share in international wholesale markets, and the critical mass of financial expertise it holds. Scotland's importance, especially in institutional asset management, is briefly outlined too.

Economic geography and economic history

1.7 Sections 3 and 4 offer two contrasting but complementary approaches to examining London's current position as a leading international financial centre. Section 3 uses a theoretical approach based on new economic geography to explain spatial concentrations or clusters of financial services activity such as in New York and London. Section 4 then turns to economic history to provide a more descriptive overview of London's development, and the key forces that have shaped its fortunes.

A dynamic environment

1.8 Section 5 reviews some of the recent developments in euro financial markets and the impact of the euro. It looks at evidence to assess whether the euro has transformed euro financial markets in a way that has excluded London from participating. The study has been carried out against a backdrop of a difficult environment for wholesale financial services, following significant falls in global equity markets since 2000. This has affected the life insurance sector, mergers and acquisitions activity, stockbroking and fund management particularly seriously with adverse effects for wholesale financial services employment³ both in London and in financial centres overseas. The effects of this cycle make it all the more difficult to separate out any structural shifts that may be a result of the introduction of the single currency, compounding the problems posed by the short period of time under consideration.

Five drivers of financial centre development

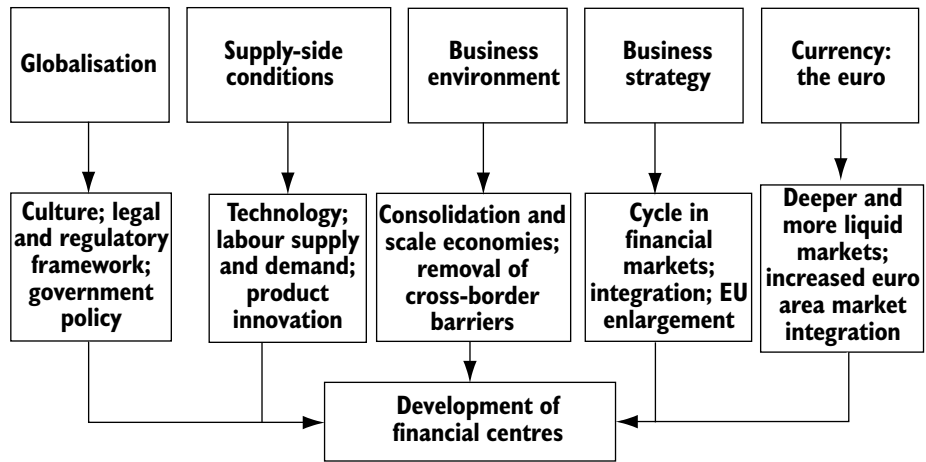
1.9 Looking beyond such short-term cyclical effects, Section 6 considers a number of more long-term dynamic forces affecting the structure of the financial services sector. Such drivers include:

- **globalisation**, as evidenced by increased integration;
- **supply-side determinants**, especially technology;
- **a changing business environment**, including regulation and tax;
- **changing business strategies**, in particular consolidation; and
- **the role of currency**, in this context, the advent of the euro as a new currency.

1.10 Chart 1.1 depicts the five drivers at work in financial services, and the ways in which they affect a financial centre's development. Together, they comprise the drivers that are shaping the development of European wholesale financial markets. Section 7 concludes the study. It does not, however, attempt to evaluate the relative importance of these factors, or what impact UK entry to EMU would have on the City, which is a matter for the assessment itself.

³ The Centre for Economics and Business Research (CEBR) estimates that 10,000 jobs will be lost in the City in 2003, the highest number since 1992 (CEBR, 2003).

Chart I.I: Sectoral drivers and the development of financial centres



Source: Adapted from Begg, 1992.

London has a critical mass of expertise in a wide range of wholesale activities, reflected in its leading share of many international wholesale markets and activities. The presence of a large range of wholesale firms, supporting services and financial talent act as strong attractions for wholesale financial activity to locate in London. Flexible working practices, competitive personal and corporate tax rates and an effective regulatory framework add to its attractions as a place to do business.

London is supported by an efficient market infrastructure. It ensures that the high level of liquidity in UK wholesale markets is smoothly and efficiently handled. Equal terms of access for foreign firms are a further important attraction that adds to the clustering forces at work.

London's critical mass is translated into a dominant position across a range of international, regional and national wholesale market activities, placing it at the top of the hierarchy of financial centres alongside New York.

2.1 This section describes the current position and characteristics of London as a financial centre. London is arguably the most international of all financial centres, even more so than New York, and is competitive across a wide range of international wholesale markets.

London serving markets at every level

2.2 On the basis of its role as an international financial centre, Clark (2002) views London as unique. He argues that its historic roots, coupled with a huge diversity of market participants with a wide range of risk profiles, gives London a major advantage over other financial centres in attracting wholesale financial business:

- through its position in the European time zone, as an interchange between Europe, Asia and the US, facilitating and mediating in financial interactions between these regions as well as the rest of the world – its global role;
- as a provider of financial products not found in continental Europe, or if provided, not at a suitably competitive price – its regional (i.e. EU) role; and
- as a provider of domestic financial services such as the very significant volume of institutional and pension assets managed by London – its national role.

Critical mass 2.3 An indication of London's importance in the world's financial system is immediately apparent in its size or critical mass relative to other financial centres. For example:

- London hosts a greater number of foreign bank branches and subsidiaries than any other international centre, and its 19 per cent share of global cross-border bank lending is nearly twice as high as the next largest centre;
- London is, by some distance, the world's dominant foreign exchange dealing centre, with around a third of the world's daily turnover of foreign exchange dealing taking place in London;

- London-based bookrunners are estimated to account for around 60 per cent of euro-denominated Eurobonds issued, with 70 per cent of secondary trading taking place in London;
- turnover is higher and there are more companies listed on the London Stock Exchange than on other leading European exchanges;
- Euronext-LIFFE is the largest derivatives exchange in Europe by the notional value of contracts traded and more trading takes place from London on Eurex, the Swiss-German derivatives exchange, than from anywhere else in Europe;
- London has over a third of the global market for over-the-counter (OTC) derivatives trading;
- London is home to the world's premier non-ferrous metals market, the London Metal Exchange, and to Europe's leading energy futures and options exchange, the International Petroleum Exchange;
- the UK is the third largest home of assets under management internationally, and London is the leading European centre for asset management;
- the UK insurance market is third largest in size internationally, and London is home to Lloyd's of London, the world's leading specialist insurance market;
- London is the leading centre in the provision of insurance services to the international maritime community, with owners of about one fifth of the world fleet tonnage represented in London; and
- London is one of the two leading centres for international legal services, and is also a leading international centre for accountancy and management consultancy services.

2.4 Market data show that London has maintained a dominant position across a wide range of wholesale markets. Together, the data show that London continues to enjoy a strong presence across a wide range of markets and in many cases is the dominant international financial centre. Tables 2.1, 2.2 and 2.3 provide a broad overview of the current position in selected international markets. Annex A contains a more comprehensive set of market indicators that underlines the picture.

London is an international financial centre

2.5 A particular feature of UK financial markets is the high proportion of activity denominated in foreign currencies, such as US dollars and euro. As noted above, London is by some distance the leading global foreign exchange centre, with a high and relatively stable share of non-sterling trading activity (Table 2.1). More foreign exchange trading in euro takes place in the UK (US\$207 billion per day in April 2001) than within the entire euro area. The international nature of London's market is underlined by the fact that transactions involving its home currency (sterling) accounted for only 13 per cent of global market turnover in 2001.

Table 2.1: UK share of global foreign exchange trading activity

Per cent	1992	1995	1998	2001
UK market total	27	30	33	31
UK share of major currencies:				
US dollar	25	29	30	31
Euro currencies	26	26	34	35
Pound sterling	49	55	83	61
Japanese yen	16	24	22	24
Swiss franc	22	26	29	29
Other	14	18	19	20
Pound sterling (global total)	14	9	11	13

Source: Bank of England and Bank for International Settlements (BIS), 2002a.

Table 2.2: Global market share held by major financial centres in key wholesale markets

Per cent – rounded	UK	US	Japan	France	Germany	Others
Cross-border bank lending (Jun 2002)	19	10	9	6	10	46
Foreign equities turnover (Jan – Aug 2002)	56	26	–	–	3	15
Foreign exchange dealing (Apr 2001)	31	16	9	3	5	36
OTC derivatives turnover (Apr 2001)	36	18	3	9	13	21
Gross insurance premium income (2000)	10	35	21	5	5	24
Marine insurance net premium income (1999)	19	13	14	5	12	37
Aviation insurance net premium income (1999)	39	23	4	13	3	18

Source: International Financial Services London (IFSL), International Financial Markets in the UK, various editions, and BIS, 2002a,b.

Table 2.3: Leading fund management centres ranked by institutional equity holdings, 1999 (year-end)

	Country	US\$ billion
1. London	UK	2,461
2. Metropolitan New York	US	2,363
3. Tokyo	Japan	2,058
4. Boston	US	1,871
5. San Francisco	US	726
6. Los Angeles	US	569
7. Paris	France	458
8. Philadelphia	US	419
9. Zurich/Basel/Winterthur	Switzerland	414
10. Denver	US	340
11. Amsterdam	Netherlands	327
12. Chicago	US	316
13. Frankfurt	Germany	310
14. Toronto	Canada	289
15. Edinburgh/Glasgow	UK	253

Source: Thomson Financial Investor Relations, 2000.

2.6 Supporting this high level of international wholesale activity is the critical mass of expertise that can be tapped by participants in London's markets. The main expertise in financial market research in Europe is based in London, as is expertise in international fund management (though Edinburgh and Glasgow are also important UK centres of expertise).

Together, these factors make it easier to do business, and provide the foundations for London's competitiveness relative to other financial centres. As the Bank of England (2002) argues, because of these conditions, London remains one of the first locations for expanding market firms to enter, and one of the last locations for retrenching market firms to leave:

- the range of businesses and financial participants present in London develops synergies for firms. These create economies of scale and scope for firms as well as increasing competitive pressures in the sector and encouraging financial innovation. Contact with a wide variety of competing market firms also creates information spillovers, and backed up by a depth and quality of supporting services, this helps to increase the value added of key staff;
- the presence in London of supporting services (accountancy, law, IT, media, and marketing) that wholesale market participants use widely in their day-to-day business. The availability, depth and quality of these ancillary services acts as a further encouragement for new wholesale financial activity to locate in the City rather than other locations; and
- a large pool of international financial talent familiar with a range of international regulatory environments that wholesale firms undertaking cross-border business can draw upon creates flexibility and encourages innovation. The availability of international and homegrown financial talent sourced from world-class universities and business schools based in and around London repeatedly appears in surveys as one of London's main assets in competing in global financial markets (Cushman & Wakefield Healey & Baker, 2002; Chrystal *et al.*, 2002).

Flexible and deep labour markets

2.7 The attractions of London are reflected in the fact that, until the recent equity market downturns, the number of people employed by market firms in London had increased substantially, and that market players have often concentrated their European time zone wholesale operations in London and delivered services to European markets from there. Some evidence of the depth of London's labour markets is provided in Box 2.1.

2.8 The UK's labour market flexibility and competitive overall rates of personal and corporate taxation are important reasons behind these moves. Morgan Stanley, for example, transferred its German bond and equity trading desks to London when a decision was made to organise the firm's trading along sectoral rather than country/currency lines. Similarly, the firm's sectoral research was concentrated in London.

Cultural factors

2.9 More generally, London's ability to attract an international pool of labour lies in factors that are less easy to quantify but nonetheless important. London's cosmopolitan nature and wide variety of cultural amenities – in part the result of a history of openness to foreign immigration – makes it easier for overseas workers to settle in London compared to other financial centres.

2.10 The use of English as the common language in international finance has been a particular advantage in attracting English language speakers to London. English law is increasingly the basis for international wholesale contracts, and is itself a major source of legal advice business for London.

Box 2.1: Indications of the depth of London's labour markets

The recent Cushman & Wakefield Healey & Baker (2002) survey of major European business cities placed London as the top location both for availability of skilled labour and overall as a business location. A number of pieces of evidence build up the picture of a deep and skilled labour market in London that lies behind this result.

Attracting international skills: the creation of the EBRD

One piece of anecdotal evidence illustrates the depth of London's labour markets. When the European Bank for Reconstruction and Development (EBRD) set up in London in 1991, it recruited staff representing 38 different countries and speaking more than 50 languages. This included experts in banking, economics, law and administration. Three quarters of those it eventually recruited were already living in London (The Economist, 1995).

Professional skills

The Corporation of London (2002) estimates that in 2000 there were around 300,000 individuals engaged in financial services jobs in the City of London, and almost 600,000 more engaged in supporting services. Of these, around 60,000 were involved in legal services, 50,000 in consultancy and 40,000 in accountancy and tax-related activities. These figures do not take account of the effects of the recent equity market downturn, however, and are likely to represent the recent peak of financial services employment in the City.

Graduate supply

London and its surroundings host a large number of world-class universities and higher education institutions. It not only produces a large number of graduates who potentially enter the financial services sector and related activities, but it also attracts graduates from the rest of the UK. Almost 50 per cent of graduates studying in universities in the UK outside London join London's labour pool.

Physical infrastructure

2.11 London offers sufficient office space of the right type to market firms. Cushman & Wakefield Healey & Baker's (2002) survey of European cities backs this view, with London housing the greatest availability of office space, with Paris fourth and Frankfurt sixth. The same study reveals that London scores less well on office occupation costs, which are relatively high. Telecommunications links in the City are, however, good with the London Internet Exchange (LINX) being the largest such interchange in Europe.

2.12 London does face capacity constraints. While its international transport links are highly rated, London faces challenges with its public transport system, which is widely viewed as poor; housing costs are also high compared to other European centres, as is the general cost of living. While these costs are likely to be compensated for by higher salaries for workers, such stress factors may at some point encourage relocation of some classes of activity. As Iain Begg highlights in his contribution to the EMU study *Submissions on EMU from leading academics*, this has been driven by a combination of cost reduction strategies, competitive imperatives and labour shortages in financial centres.

Market infrastructure **2.13** A critical attraction for wholesale financial firms is London's ability to offer access to an efficient financial market infrastructure. An efficient market infrastructure (i.e. trading, payment, settlement and clearing systems) is essential to support liquid markets. Without access to market infrastructure, dealing costs would rise and the execution of orders would be slowed. Information flows could also be hindered, lowering the efficiency of markets, as prices might not reflect all available information.

2.14 Evidence from both market data and other commentators confirms that London's markets enjoy high levels of liquidity providing a key competitive advantage. An important element is the UK's record of being open to foreign participants and offering them the same terms of access to market infrastructure enjoyed by domestic firms. The Centre for Economics and Business Research (CEBR, 2000) and Levin (2001) say that the strength and depth of London's financial markets – the volume of transactions and the diversity of market players – creates the liquidity that enables transactions to take place easily and cheaply, even for non-standard products. These attributes attract firms active in the various markets, and with them the supporting services required to maintain their business (IT, accountancy services, etc.).

2.15 A range of payment, trading, settlement and clearing systems are available to UK-based wholesale market participants operating in euro markets (Bank of England, 2002):

- since the launch of the euro, CHAPS Euro has settled same-day high-value euro payments in central bank money in real time. The NewCHAPS project introduced new technology for sterling payments in August 2001. This increased the efficiency of the sterling system and placed it on the same platform as euro payments;
- CLS Bank, which started operations in September 2002, has introduced payment-versus-payment in real time to address settlement risks arising from foreign exchange transactions in a number of major currencies;
- the London Stock Exchange has enhanced its trading systems and adapted its rules to remain attractive to investors. There are also a range of other execution venues for equity trades, from the virt-X exchange, through Multilateral Trading Facilities (of which London has more than any other financial centre in Europe), to internalisation (i.e. the matching of customer orders either against a proprietary trading book or against other customer orders) of trades by investment banks;
- Euronext-LIFFE's CONNECT platform is one of the world's leading derivatives platforms. It is to be used for all the other derivatives exchanges in the Euronext group, and by the Chicago Board of Trade. Trades on the London Metal Exchange can be executed electronically as well as on the floor of the exchange, and there is some electronic trading of contracts on the International Petroleum Exchange;
- since November 2001, CREST has settled securities against payments of central bank funds, in both sterling and euro, in real time. CREST's merger with Euroclear should further improve functionality and lower the cost of cross-border settlement for UK-based participants; and
- the London Clearing House (LCH) has assumed a greater role as a central counterparty to global OTC market transactions, exchange-traded government bond derivatives, and equities trading on the London Stock Exchange's SETS trading system.

Financial regulation **2.16** The UK's regulatory framework for wholesale markets aims to encourage innovation, competition and risk-taking without compromising safeguards for investors or high standards. This helps London to be at the forefront in responding to new market developments. The Financial Services and Markets Act 2000, the single statutory framework under which the new unified regulator, the Financial Services Authority (FSA) operates, seeks to embody and promote these key features of the UK's regulatory environment going forward. Box 2.2 sets out the new framework in more detail.

Box 2.2: Regulation of financial services in the UK

The regulation of financial services in the UK has undergone substantial change in the last five years.

Regulation was previously on a sectoral basis: there were nine separate regulators of banking, insurance and investment services which led to substantial duplication. It is thought that over 800 financial services firms in the UK were subject to more than one regulator, and at least another 1,000 belonged to a conglomerate which had more than one regulator. Consumers too faced a multitude of compensation and dispute resolution schemes.

New framework for regulation of financial services

Since 1997, a new regulatory framework has been established. Its key features are:

- separation of monetary policy (the responsibility of the Bank of England) from financial regulation (the responsibility of the FSA);
- a single regulator of financial services in the shape of the FSA and, for consumers, a single compensation scheme and ombudsman;
- regulation on a statutory basis under the Financial Services and Markets Act 2000. The FSA acquired its full powers under the Act on 1 December 2001; and
- financial services regulation is at arm's length from the Government. Treasury Ministers have no general power to intervene over the FSA's rules or its decisions about individual firms.

Accountability of the regulator

It is important that regulation is strong and effective to ensure that the UK is an honest place to do business. Nonetheless, these benefits are potentially offset by concerns that the FSA is too powerful and insufficiently accountable. There are a number of mechanisms designed to ensure that this is not the case, including:

- the FSA's statutory objectives. These are: market confidence; raising public awareness; consumer protection; and reducing financial crime. The FSA is required to report publicly on the extent to which it has met these objectives; and
- the FSA is required to have regard to a number of principles in its operations, including that the costs of regulation should be proportionate to the benefits, the desirability of maintaining the competitive position of the UK, and facilitating competition. The FSA has to consult, and provide a cost-benefit analysis, before making new rules.

2.17 Academic evidence provided by La Porta *et al.* (1997, 1998) demonstrates the importance of setting the right regulatory framework. They assess the ability of firms operating in different legal environments to raise external finance through either debt or equity. They find that the legal environment (the rules themselves and their enforcement) are important determinants of the size and the extent of a country's capital markets. Though these are early attempts to assess the impact of the legal environment, the overall conclusions suggest that law has an important bearing on the development of financial markets, and that countries operating under English law have more developed financial markets.

The benefits of critical mass for the international investor

2.18 Together, its critical mass and a supporting public policy framework, make London competitive across a range of wholesale market activity. A practical example of London's competitive edge over other European financial centres is provided by Clark (2002). He illustrates the advantages of London from the point of view of a Swiss investor seeking to purchase investment and management expertise for an emerging-markets equity product: historic expertise, a large range of potential suppliers and auxiliary services (accountancy and legal services and IT), and a supportive regulatory framework (see Box 2.3).

Box 2.3: Why come to London for international financial services – a practical example

Using the example of a Swiss pension fund, Clark (2002) illustrates the advantages of coming to London to buy an emerging-market equity product rather than use local suppliers in Zurich. This provides a practical example of the advantages of critical mass at work in London, and why it often has a competitive advantage over other financial centres. He cites a number of factors, including:

- London's **historic record** in providing these types of products, in part explained by its connections with a wide range of international markets whose links with London have their roots in the British Empire and before. The consequence is that firms are attracted to the services it offers on the basis of its reputation and breadth of experience as well as its competence. The same argument would apply to Edinburgh and its historic expertise in institutional asset management;
- London offers a far **greater choice of firms** with differing areas of expertise than the home market of Zurich, for example extensive research on a variety of international markets. Customers can therefore compare the price and quality of various suppliers and choose the firm with the optimal combination of both;
- London offers a **greater range of support services** such as legal and accountancy firms that are called upon in international transactions. Again, being able to choose from a wide range of competing suppliers is attractive, ensuring that prices are kept low and service standards maintained; and
- London has a **regulatory framework** that encourages innovation and the provision of sophisticated financial products demanded by international investors. Clark makes the general distinction between the UK's procedural approach to regulation and the Continent's preference for a rules-based approach. Derivatives are one area where the UK's regulatory approach has encouraged innovation. For the Swiss pension fund, hedging instruments are important tools for managing their risk – the UK authorities' approach is likely to have put London at an advantage in building the expertise for offering these products.

2.19 International market firms operating in the EU appear to have concentrated their wholesale operations in fewer international centres in recent years. One aim has been to improve risk control, which can be easier if risk and treasury management functions are located in the same place. For the same reasons, the location of euro trading operations has followed that of risk management. Locating wholesale operations in one centre also has the benefit of reducing regulatory costs associated with dealing with different jurisdictions across different legal and tax systems. Indicators of increasing concentration identified by the Bank of England (2002) include:

- the top five investment banks were lead managers for half (by value) of international bond issues by European corporates in 2000;
- the top three investment banks were involved on one side or the other in almost two thirds of European mergers and acquisitions (M&A) transactions in 2001 by value; and
- three quarters of foreign exchange transactions in London were carried out by 17 market firms in 2001, as opposed to 24 in 1998.

2.20 This trend towards consolidation and exposure to international financial services activity is mirrored in the companies supporting investment banks: for example, Freshfields' merger in 1999 with Bruckhaus Westrick Heller Lober and the consolidation of accountancy services which are now dominated by the 'big four' firms (Ernst and Young, PricewaterhouseCoopers, Deloitte and Touche and KPMG).

A hierarchy of financial centres

2.21 From such evidence and the views of commentators (Beaverstock *et al.*, 2001; Clark, 2002; and Sassen, 1991), a hierarchy of financial centres can be identified, based on Begg's (1992) taxonomy of financial centres (Table 2.4).

2.22 This taxonomy illustrates London's pivotal role in the global financial system. London sits alongside New York at the apex of the hierarchy and, following developments through the 1990s, their position as leading financial centres appears more accentuated. They host the variety of wholesale firms and supporting services required for international wholesale activity. Beaverstock and Smith (1996) provide evidence that the presence of these firms in turn attracts international skilled labour, creating a mutually reinforcing relationship that 'locks in' their position as leading financial centres.

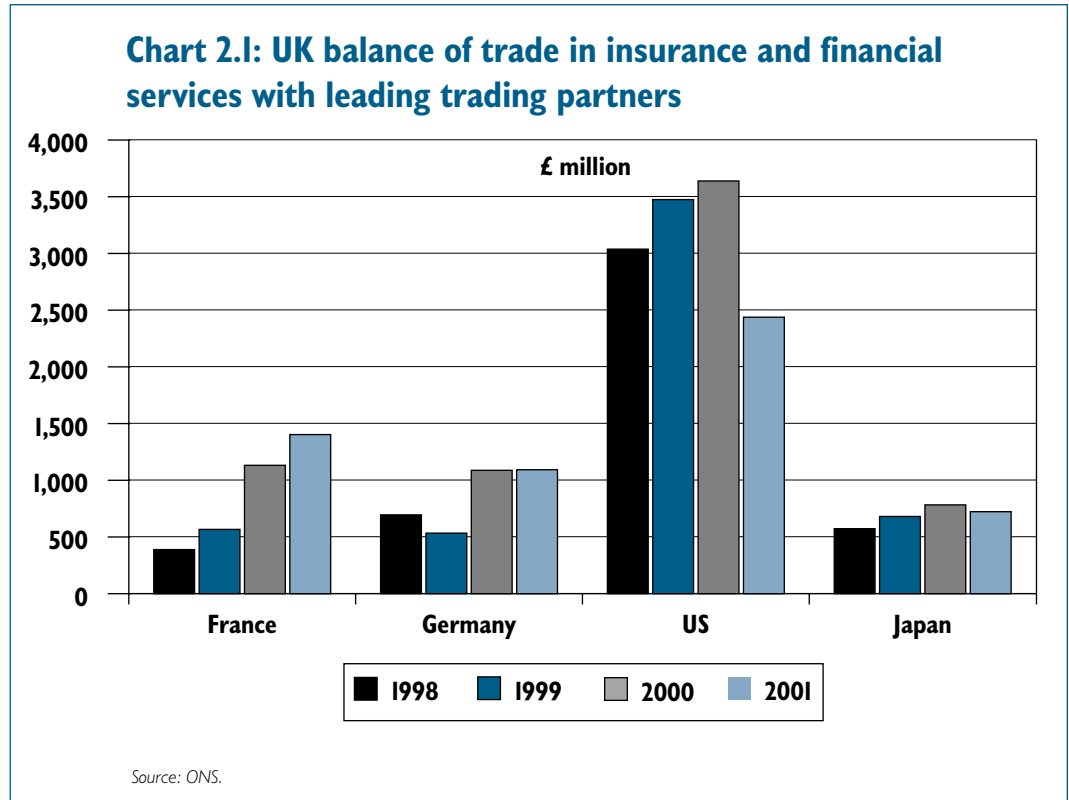
Table 2.4: Characteristics of financial centres

	Characteristics	Cities in category
Major nodes of global financial system	Diversified services; headquarters of major financial entities; high volume securities and foreign exchange markets; branches of foreign banks; 'switching functions' for wide geographic spread of business.	London; New York; Tokyo.
Diversified regional centres	Significant cross-border business; headquarters of major financial and non-financial companies; critical mass in markets; location of regulatory bodies; wide range of complementary services.	In Europe, London and also Paris and Frankfurt. Elsewhere would include Hong Kong and Singapore.
Specialist centres	Niche market expertise.	In the UK, Edinburgh. Elsewhere in Europe, Luxembourg, Dublin and Zurich.
National centres with limited international business	Presence of leading financial firms; mix of both specialist and general financial services; some financial markets with mainly domestic client base; regulatory functions.	In Europe, includes Rome, Hamburg and Barcelona.
Regional centres	Wide range of regional offices; mix of business services; some financial headquarters; host to back-office functions.	In UK, includes Leeds and Bristol. In Europe, Berlin, Rotterdam, Turin and Bilbao.
Specialist national centres	Centre for processing activity or presence of a major financial entity.	In UK, examples would be Norwich and Bournemouth.

Source: Adapted from Begg, 1992.

London: a global city

2.23 These characteristics appear to set London apart from the other European financial centres by making it a 'global city' specialised in "*control and management of uncertainty and complexity*" (Sassen, 1991) based on superior information flows. The UK's trade balance in financial services and insurance reveals its competitive advantage in these activities, and helps illustrate the global nature of London's business. This shows that though growing in importance, the UK's most significant source of earnings is not its nearest trading partners in the EU but the US (Chart 2.1). A sharp fall in the UK's trade surplus with the US in insurance and financial services in 2001 reflects sharply deteriorating market conditions, leading to a fall in demand as well as a fall in the value of insurance exports, the result of large claims from US policy holders. Other European centres' roles appear more focused on serving their regional and national markets rather than international markets (Clark, 2002; and Beaverstock *et al.*, 2001) and/or specialising in one area of wholesale activity. The example of Edinburgh as an important European centre for institutional asset management is a case in point (see Box 2.4).



2.24 Either Frankfurt or Paris could perform a similar role to London in the European time zone and both have grown. At present, however, they do not offer the liquidity, range of markets or the diverse set of complementary services that mark London out as unique in Europe. The example of the Swiss investor in Box 2.3 demonstrates that any international services these regional centres do not possess can be acquired in London. A representative of a leading investment bank¹ in Frankfurt describes the relationship between Frankfurt and London in a recent speech as follows:

“The development of new products takes place in London and it is here that asset management and trading departments are located. In sum, London is the global financial centre in Europe. Germany, in contrast, is not a global financial centre. Frankfurt exports very few products (for example, Pfandbriefe) abroad and foreign banks come to Germany to sell the products and the know-how that they have developed in their own country markets.”

¹ Peter Coym, board member of Lehman Brothers Bankhaus AG, Frankfurt and Chairman of the Association of Foreign Banks in Germany. See Coym (2002).

Box 2.4: The importance of Scotland as a financial centre

Financial services activities concentrated in Edinburgh and Glasgow represents the second largest financial centre in the UK, and the cluster is among the ten largest European centres for banking, life assurance and pension funds and investment management. It is home to a wide range of support services, including law, accountancy and financial information provision. Major overseas financial service players have established a presence in Edinburgh (e.g. State Street Bank and Deutsche Bank), while leading Scottish firms have remained based in Edinburgh's financial district (e.g. Scottish Life and Scottish Widows).

Banking

Four banks have their headquarters or major regional offices in Scotland, including The Royal Bank of Scotland, the second largest bank in Europe by market capitalisation. HBOS and Lloyds TSB Scotland have headquarters in Edinburgh, and Clydesdale Bank is based in Glasgow, where its parent company, National Australia Group, has its European clearing bank headquarters. Together, Scottish banks have total assets of over £360 billion and handle about 40 per cent of UK corporate structured finance. While Scotland is known for its retail and corporate banking sector, a number of investment banks have also set up back-office operations in the region.

Asset management

Scotland is one of the world's major fund management centres, with £294 billion under management in September 2002. Nearly 5 per cent of European pension and long-term life assurance funds are managed from Scotland. It is the sixth largest centre in Europe for institutional equity management and the fifteenth largest internationally. In the insurance sector, Scottish-based life assurance offices alone currently have over £250 billion of funds under management, employing 15,000 people.

This section uses a theoretical approach from **new economic geography** to help understand why wholesale financial services activity can be so highly concentrated in ‘clusters’ such as London.

The theory identifies **positive externalities or centripetal forces** that attract activity to a cluster. These include greater business opportunities for firms compared to other locations, and the availability of skilled labour. Such factors offer competitive advantages for firms compared to other locations, and attract them to the cluster. For a cluster to grow, such centripetal forces need to outweigh negative externalities or centrifugal forces, such as the costs of congestion and high commercial rents, that can disperse activity.

The theory shows that once a pattern of growth is established, a **cluster’s development can become ‘path dependent’**. One lesson drawn is that, in some cases, even small differences between locations at key stages of their development can have significant long-term implications. Path dependency means that clusters can persist for long periods of time, even when the initial cause for their development is no longer an explanatory factor for their current position, and it can be hard to change an existing pattern of activity.

In the case of London, the theory suggests that once it established a sufficient mass of financial expertise, it was able to go on to create a **virtuous path of self-sustaining growth**. On the basis of the evidence presented in Section 2, this critical mass still exists today.

Path dependency does not, however, remove the risk that clusters can decline. Historic examples show that factors such as war and political instability can quickly lead to their decline. Other more moderate influences can also gradually reduce the relative attractions of a centre.

Clusters 3.1 One approach to understanding the advantages of a location such as London and its concentration of financial services activity is based in economic theory. It comes from the theoretical insights provided by new economic geography (Krugman, 1991a,b; and Fujita *et al.*, 1999). Other approaches and insights found in economic theory are summarised in Annex C. These models emphasise the importance of external increasing returns to scale in explaining why financial services firms might be attracted to individual locations such as London, Frankfurt and Edinburgh and form clusters¹ of financial services activity.

New economic geography and clustering

3.2 New economic geography suggests that financial firms locate in clusters because their choice of location is often dependent on, and in many cases dominated by, the location decisions of others. The advantage of locating near to other wholesale firms is that as industry output increases, so externalities are produced that lower average costs for the individual firm. All things being equal, the location becomes more competitive either in terms of lower costs or higher revenues. As Grilli (1989, p. 391) explains:

“Concentration arises whenever a firm’s productivity directly benefits from the proximity of competitors or firms engaged in related activities.”

¹ Clustering is a general idea the appeal of which lies in its applicability to a broad range of scenarios. In essence, it refers to a particular specialised economic activity that is concentrated in one area. Porter (1998, p.197) for example defines clusters as “Geographic concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries, and associated institutions (for example, universities, standards agencies and trade associations) in particular fields that compete but also co-operate.”

Centripetal forces **3.3** These centripetal forces produced by a concentration of activity in a particular location are the key to explaining the formation of clusters.

3.4 A good example of how these forces work at the outset of a financial centre's development comes from the origin of London's stock exchange. Investors needed one location to buy and sell shares. This demand for liquidity meant shares were initially traded in coffee houses, where the underwriting of marine risks associated with London's maritime trade also took place. As activity increased, so other investors were drawn to London. In turn, this increase in financial activity and its sophistication required an increasingly specialised division of labour to support its activity: jobbers, brokers, banks, accountants and insurance brokers as well as the institutions to regulate and manage complex financial transactions.

Comparison shopping **3.5** Hotelling (1929) adds further useful insights into why financial services firms are spatially concentrated rather than seeking locations far away from their competitors. He observed that consumers often undertake 'comparison shopping'. To maximise sales, it pays producers of financial products to locate close to one another, in recognition that purchasers of financial services will want to compare producers' prices and the services being offered. An example would be the range of insurance brokers and the syndicates that formed Lloyd's of London, offering to shipping firms a range of marine insurance services covering a variety of risks.

3.6 Firms involved in these activities then see locating at a central point – in this case, one financial centre or one market – as providing the maximum benefit in terms of being closest to their customers and being able to demonstrate that their products are different from those of their competitors.

3.7 Even today, the largest investment banks are rarely able to execute an entire, complex financial transaction without using skills sourced from elsewhere. Asset management is another example of an area of activity that draws upon a range of skills. It requires using hedging strategies to manage risk as well as core skills required for the management of international equity portfolios. It also draws upon specialist advice from a wide range of professionals such as tax experts adept at understanding international tax and trust law.

3.8 Drawing on Marshall's (1890) 'localisation externalities', examples of centripetal forces at work in financial centres include:

- as outlined in the example of the London Stock Exchange above, the need to be physically close to asset markets and tap their liquidity. As discussed in more detail later in this section, with the advent of new technologies and ability to access markets remotely, this is less of an imperative for some classes of activity today;
- access to infrastructure not available elsewhere. Access to an efficient financial market infrastructure is key for market participants. International transport links and high speed telecommunications networks with the ability to carry high volumes of complex data are also important, as is the availability of Grade A office space that can accommodate trading floors;
- the availability of intermediate goods, for example access to a wide variety of competing specialised suppliers that lower the transaction costs of business compared to other centres; and
- a pool of labour with a wide range of skills. In a knowledge-intensive industry such as financial services, access to a pool of financial talent will be a key consideration in the overall location choice.

Sharing knowledge 3.9 Locating in the cluster has the added benefit of giving firms and their employees access to the knowledge network (Lundvall and Borrás, 1997) through which the latest industry thinking is being circulated. Formal routes for such ‘collected learning’ might include industry-organised seminars and briefings where expert views are exchanged. University links such as with the London Business School and the London School of Economics will also be important avenues for professionals to learn about new developments. More informal routes would be social contacts with colleagues in other firms where industry gossip can be shared.

Information spillovers 3.10 Even with access to Internet technology and modern telecommunication systems, theory and empirical work shows that such information spillovers matter. By locating in a cluster, wholesale market participants can gain timely access to information through these formal and informal routes and thereby gain a competitive advantage over firms located outside the cluster.

3.11 These forces encourage a concentration of activity. Locating in the cluster therefore offers a number of important benefits for wholesale financial firms.

Centrifugal forces 3.12 However, there are also centrifugal forces that offset centripetal forces. These reflect the fact that financial centres are typically based in urban areas. Such agglomerations of activity will at some stage create ‘stress’ forces as finite resources are stretched to capacity. These centrifugal forces can encourage firms to relocate away from the cluster and discourage further entrants. Examples include:

- transport congestion that affects company performance and the general attractiveness of a location as a place to live and work;
- property costs that rise to uncompetitive levels relative to other locations; and
- ‘tournaments’ for labour as firms bid for limited supplies of skilled labour, forcing up wage bills beyond those justified by productivity improvements.

Technology 3.13 Technology also has an influence on location:

- markets can now be accessed ‘remotely’. In theory, trades can take place from multiple locations, decoupling the location or country of ownership of the market from the location of the traders using the market;
- information can be accessed and shared more easily through the Internet and wire services; and
- technology can enhance internal scale economies, enabling services to be provided from one location rather than many.

The ‘death of distance’ 3.14 A central issue for the location of financial services is the extent to which technology has led to the so-called ‘death of distance’.² In some circumstances, technology can permit financial services to be provided from any location. Contact with clients can be made by telephone or Internet. Shares can be traded on-line, and standardised information can be sent over long distances without the need for face-to-face contact with customers.

² See for example O’Brien (1992).

3.15 One example of the ‘death of distance’ is the ability of technology to allow remote membership of markets. Historically, the existence of an exchange floor has been a feature of financial centres and was a key clustering force because, without it, there was no way of transacting business. Remote membership allows direct electronic access to national screen-based trading and settlement systems without establishing a physical presence at the market’s location (e.g. London-based traders are able to access Euronext based in Paris). This effectively ‘dematerialises’ markets so they do not have a physical presence apart from the hardware and software driving trades, and allows direct electronic access to national screen-based systems without establishing a physical presence at the market’s location (however that may be defined). In other words, liquidity is global rather than location specific and the linkage between financial centres and the location of markets (e.g. the London Stock Exchange and Euronext) has been largely broken by technology. So while liquidity is being driven towards fewer exchanges, technology makes access to these exchanges possible without relocating trading activities to the financial centre hosting the market.

3.16 The impact of technology on location choices depends heavily on which attributes of a location matter most to a financial sector activity (Nachum and Wymbs, 2002). Where wholesale activity is heavily reliant on close contacts with clients and needs ready access to skilled labour, then technological development is unlikely to result in relocation outside a cluster. This can be expected to apply to most higher valued added wholesale market activities such as mergers and acquisition, research, treasury and risk management.

3.17 Technology might, however, have an impact on relocation lower down the value chain. For example, technology might provide strong incentives to relocate bulk-processing operations to lower-cost locations outside the cluster. One instance is the administration of mutual funds. Such activities are less dependent on skilled labour and information flows, and information can easily be passed back to head offices through telecommunication systems. Another example is Prudential’s recent decision to establish an offshore service centre in Mumbai, India.

3.18 Factor immobility may also be a consideration. Once attracted to a particular location, skilled labour may be reluctant to relocate, especially if the existing location such as London offers high levels of cultural amenities compared to lower-cost locations. This makes it harder for firms to relocate their existing workforce to new locations as well as attracting new, skilled personnel.

3.19 Finally, technology means that services can be provided from one location rather than many. Where an industry can exploit internal scale economies, lower transport costs (here being the introduction of technology) provide the incentive for multinational firms to reduce their fixed costs and gather operations at one site. Since the costs of providing financial services across great distances are close to zero, firms can concentrate areas of activity in a fewer number of sites to reduce fixed costs and from there offer their services widely.

Table 3.1: Examples of centripetal and centrifugal forces

Centripetal forces	Centrifugal forces
<ul style="list-style-type: none"> • Co-location near to a variety of complementary firms and related services • A large pool of skilled labour • Liquidity and size of markets • Access to financial infrastructure • Physical infrastructure, especially office space, telecommunications networks and international transport links • Localised information and technology spillovers • ‘Thick’ institutional structures, including regulatory approach • Initial conditions 	<ul style="list-style-type: none"> • Poor public transport • Congestion • High relative costs – labour, real estate, regulation • Shortages of skilled labour • Immobile factors of production • Shrinking markets • Technology and the ‘death of distance’ • Institutional rigidities, including legal systems and financial regulators

Self-sustaining growth **3.20** For a financial centre to grow, centripetal forces need to outweigh centrifugal forces. Once a certain critical mass of activity is reached, the centre can then go on to create a process of self-sustaining growth. Here, centripetal factors create a virtuous circle of agglomeration where other firms and their clients as well as supporting services are attracted by the competitive advantages offered by the cluster.

3.21 As newcomers arrive, so the cluster develops a deep market for skills related to financial activity (for example, lawyers, accountants and IT specialists) and the cluster is strengthened and further external economies of scale are created. Studies (Choi *et al.*, 1986; and Jeger *et al.*, 1992) show that the likelihood of attracting a branch of a multinational bank is strongly correlated to the number of banks already there – a good example of the basic premise of new economic geography, that the choice of location is often dependent on the location decision of others, and in many cases is dominated by existing patterns of activity.

3.22 As this agglomeration process strengthens, so a location’s development can become path dependent: once a pattern of growth is set in train, it can become self reinforcing. Such path dependency implies that the prospects of a rapid decline of a cluster are diminished (though not altogether removed), and that the forces holding the cluster together are ‘locked in’, giving the cluster a degree of robustness against adverse changes in circumstances.

Accidents of history **3.23** The idea of path dependency suggests that accidents of history matter, and that small differences at critical stages in a financial centre’s development can have important long-term consequences. Chicago is an example of how an accident of history can matter (Krugman, 1993): it became established as the central city of the mid-West of America without having any particular locational advantages. From that ‘accident of history’, and the fact that it became the pre-eminent commodities trading city in the US, it went on to develop into the leading global centre for derivatives trading.

The decline of clusters **3.24** Though clusters appear to persist, they can of course decline. The forward-looking element to a firm’s location decision immediately highlights a crucial point in models of new economic geography: the locational pattern of financial services activity is dynamic. It can be altered as profit-maximising firms’ expectations of costs and revenues at different locations change and they reassess the merits of one location over another. Firms are known to reassess periodically their requirements, and may decide to leave a location if centrifugal forces are strong enough to overcome centripetal forces. Relative to their financial resources, any sunk

costs incurred by leaving a location are unlikely to be a major constraint on large market players' ability to relocate.

3.25 Predicting exactly when centrifugal forces begin to outweigh centripetal forces is difficult, partly because the process may be very gradual. Nonetheless, a number of causes can be cited: economic conditions at a location can deteriorate; congestion might become unbearable; and other governments might intervene to influence the location choice of financial services firms, for example through more favourable tax policies.

**Self-stabilising
and self-
reinforcing
causes**

3.26 Initially, departures may be self stabilising as exits from cluster lower stresses on other firms (e.g. less congestion on the roads and lower demand for office space leading to lower rents). This may even attract firms back into the cluster. At some point, however, the costs of being in a cluster may accelerate and exits become self reinforcing.

3.27 Clear-cut historical examples of financial centres' decline are provided by Panama and Beirut, where dramatic centrifugal forces forced business away and quickly led to their decline as financial centres. More gradual examples are the decline in smaller regional stock markets in the EU. In Spain, for example, this has led to an increased concentration of wholesale financial services activity in Madrid, strengthening its dominance over other regional markets. Similarly, in France trading has migrated from provincial bourses to Paris.

**Applying theory
to London**

3.28 Elements from new economic geography theory can be drawn across to the description of London as it is today in Section 2. They suggest that London has the conditions for path-dependent growth. In terms of centripetal forces, its significant strengths include:

- a critical mass in financial expertise, offering a wide range of complementary services to the international investor;
- market infrastructure which can support high levels of activity, offering liquidity to traders which thereby encourages other traders into the market; and
- a pool of skilled labour, and flexible labour markets relative to other financial centres.

3.29 However, some centrifugal forces are evident that may encourage relocation by some businesses to lower-cost locations but are unlikely to lead to the unwinding of London as a leading financial centre. They include:

- a physical infrastructure under stress (in particular, transport and housing); and
- until recent market downturns, which have impacted on both London and overseas financial centres' growth, a tight labour market where recruitment problems were being experienced.

This section traces **London's development since the beginning of the 18th century to the present day**. Its position as supplier of capital and financial clearing house to the British Empire and beyond, and a tradition of openness to foreign entry, led to the establishment of a critical mass of merchant banks and other financial institutions that allowed the City to act as the world centre for putting together the financing – and insuring – of global trade.

This **critical mass of financial expertise** allowed the City to withstand the subsequent relative decline of sterling and the UK as an economic power after the First World War, and to make the most of new business opportunities when they came along.

London's ability to **make the most of the opportunities of the new Euromarkets** in the late 1950s and early 1960s was perhaps its most important turning point. By doing so, London reinvented itself from acting essentially as an international clearing centre for sterling to the role depicted in Section 2: that of making international markets in a variety of currencies and providing international financial services across borders.

Since 1979, a deliberate open-door policy to foreign ownership, the ending of foreign exchange controls and a deregulation of some of the City's markets have added further to its ability to capitalise on the growth in global capital flows which have far outstripped trade flows.

4.1 This section complements Section 3 by examining the development of London as an international financial centre from the perspective of economic history. It does not attempt a full analysis of the City's rich history and the many studies of it. Rather, it draws out some of the salient themes and the key drivers of London's development as a leading international financial centre. By doing so, it should help to illustrate the insights of new economic geography in Section 3 with historical examples. Annex B adds to the analysis by offering a similar perspective of New York's development.

4.2 The section begins by outlining the emerging financial infrastructure in London at the turn of the 18th century. It then splits the 130-year period from 1815 to 1945 in line with the time periods used by Kynaston in his seminal work *The City of London*.¹ Thereafter, this study departs from Kynaston in dividing the post-War period into three further sub-periods. This is done to draw out better some of the key events of the past 50 years or so that have shaped the City's development, and to underline the accelerating pace of change in the post-War period.

A brief history of the City

The 18th century

4.3 By the end of the 17th century, a thriving financial infrastructure was already in place in London. The Bank of England had been established in 1694 to fund the war against France. Though at that time a profit-making bank, it increasingly assumed an important role in managing the nation's finances both in terms of the nation's debts and, through issuing banknotes backed by its large bullion reserves, in money markets. Numerous other banks existed both in London and the rest of the country, facilitating the shift in capital from regions that were net savers to those in need of capital. This money market function early on in its development as a financial centre gave London a unique character compared to Continental centres, which were more constrained in the activities they could undertake.

¹ Kynaston (1994, 1995, 1999 and 2001).

4.4 An active, if unsophisticated, stock market had been in operation since the late 17th century, used by brokerage firms whose names still remain part of the City's financial community (immigrant families such as the Cazenoves for example). Immigration had also added to the international character of the merchant banks. A distinguished list of merchant bankers beginning with Barings in 1763 were followed over time by others such as Rothschilds, Kleinwort, Lazard and Warburgs, bringing with them expertise in financing foreign trade and handling foreign issues as well as innovations.

1815-1890 4.5 By the end of the Napoleonic Wars, and the starting point of Kynaston's history, the City had secured its dominant position ahead of Amsterdam as the merchant and trading capital of Europe and the world. According to Kynaston, this left the City "*in a world of its own*". It placed London in pole position to act as financial clearing house to the massive increase in world trade that took place through the 19th century.

4.6 With its large and persistent current account surpluses, Britain acted as a capital exporter, mainly to the US but also to its colonies. London captured a large slice of the market to place foreign debt issues – the issuing houses being the international range of merchant banks already established in the City with contacts across continental Europe and beyond. Its dominant position in global shipping led naturally to the development of a thriving international marine insurance market, centred around Lloyd's underwriters. From this base, other insurance markets developed, insuring against natural disasters for instance.

4.7 This was an era when London was moving from performing what was essentially a traditional export function to acting as an entrepôt centre which foreign businesses used not only to borrow long-term capital but also to place their long-term investment funds. This development was closely related to Britain's role in the world, particularly the expansion of the British Empire abroad and industrial revolution at home. So while the US and Germany steadily overtook Britain in shares of world trade, through the establishment of an international cross-section of merchant banks and other financial institutions, the City developed the critical mass to act as the world centre for the financing and insuring of that trade.

1890-1914 4.8 Kynaston has dubbed this era the "*golden years*". The majority of industrial trade was financed through sterling-denominated bills drawn on merchant banks based in London. These banks were innovators, and diversified from short-term finance into longer-term investment finance and borrowing. Kynaston notes that plentiful back-up services were available in London to support these activities, highlighting three as being especially important: accountancy, legal and insurance services.

4.9 Some indication of the international flavour of London's financial community at the end of the 19th century is reflected in the number of foreign banks operating in the City, and the spread of the nationality of ownership. As well as Continental banks, Chinese, Russian and Japanese banks all had a presence. By 1914, the value of deposits of colonial and foreign banks in London was nearly twice that of British banks.

- 1914-1945 4.10** By 1914 and the advent of the First World War, the City's fortunes had started to decline. Given sterling's central role in the previous century, it is not surprising that currency was perceived as having an equally key role in returning London to its position as the world's leading financial centre. The belief that a return to the Gold Standard would revive its fortunes however proved to be flawed,² hence Kynaston's choice of *Illusions of Gold* as the title for this volume of his history of the City.
- 4.11** The *de facto* suspension of the pound's convertibility during the First World War meant in effect that Britain was no longer on the Gold Standard, which in turn weakened sterling as the currency and the City as the provider of international trade finance. A more dynamic New York market was taking an increasing share of business. Its growing importance was underpinned by a strengthening dollar, its more widespread use for international trade and the fact that, like Britain in the previous century, the US was now a capital exporter to a capital-starved Europe in need of reconstruction. In Kynaston's view "*there was no disguising the fundamental shift*" in the balance between London and New York.
- 1945-1963 4.12** By this stage, the US was the undisputed world economic power. The financial drain of two world wars had left the UK unable to afford exporting its own capital. Strict exchange controls aimed to protect scarce reserves. Indeed, tight exchange controls over capital were in place across Europe and Japan, and the immediate post-War period saw a continuation of pre-War trends, with sterling's international role shrinking. Nonetheless, around 40 per cent of world trade was still being financed in sterling in the late 1940s, and the UK acted as banker to the sterling area which remitted the bulk of its dollar receipts to the UK.
- 4.13** The gradual unwinding of the sterling system in the late 1950s in some ways benefited London, forcing it to look again at its role as a financial centre. Signs of regeneration included a rekindling of an 'internationalist' perspective so important in London's earlier development. Pre and post-War immigration brought a new wave of financial talent to the City, replacing those lost in the war, and with it renewed commercial links to the Continent and beyond. The Bank of England removed a ban on forward dealing in gold, putting London on an equal footing with Zurich. Dollar deposits as well as deposits in other currencies grew steadily, sowing the seeds for the Euromarkets that were to develop in the following years. Other areas, however, remained entrenched in a narrow national view of London's markets, including the London Stock Exchange, and further reforms were needed to make them fully open to international business.
- 1963-1986 4.14** The catalyst for the upturn in London's post-War fortunes was clear: the development of the Eurobond markets as part of the evolution of the wider Euromarkets (see Box 4.1). At this stage, what mattered to the City's well-being was twofold: freedom from unnecessary government interference; and the degree to which it was open to talent from outside its fold. The Euromarkets dynamically combined both and 1963 was the year that the first Eurodollar bond was issued by Warburgs. According to Kynaston (2001, p. 275) "*1963 had been the most important year since 1914 in the history of London as an international financial centre*". Podolski (1986, pp. 112–113) echoes Kynaston saying that:

"The development of the Eurocurrency system was perhaps the most important financial innovation of the post war period...comparable to that of coke smelting in the development of iron and steel, the steam engine in the development of railways..."

²For further discussion of this issue, see the 2002 Cairncross Lecture given by Ed Balls, Chief Economic Adviser to the Treasury (Balls, 2002).

4.15 London had a head start in taking advantage of the new opportunities created by the Euromarkets by virtue of the open-door policy practised over a long period. This had encouraged the development of a critical mass of a diverse set of firms, skills, services and associated institutions over a sustained period. These were the conditions that provided it with the competitive edge over other financial centres to take advantage of new opportunities afforded by the Euromarkets, and laid the foundations for a new period of rapid growth and prosperity.

Box 4.1: The early development of Euromarkets^a

Drawing on Kynaston (1994, 1995, 1999 and 2001), four stages in the development of the Euromarkets can be identified.

Stage 1: The beginning of the Eurodollar market

From 1945 onwards, a huge pool of Eurodollars developed, so called because they were held outside of the jurisdiction of US authorities, the bulk of them in London. The term 'Euromarket' first applied to the acceptance of offshore deposits, when Moscow Narodny Bank transferred funds out of the US to avoid the possibility that the US authorities would confiscate them. The dollars were transferred to a French bank, and soon all dollars deposited in European banks were called Eurodollars.

By making it unattractive to hold short-term deposits in the US, the introduction in the US of Regulation Q in 1957 artificially capping rates that could be paid on dollar deposits in the US added substantially to the flows of dollar deposits to European banks. The UK authorities, including the Bank of England, gave tacit backing to the developing market, which was at this stage a simple offshore deposit market. However, the main drivers for the Euromarkets' development in London were on the supply side – the infrastructure and skilled labour found in many of the foreign-owned institutions in London.

Stage 2: Taking opportunities in the Eurodollar market

London-based firms saw opportunities in developing the simple Eurodollar deposit market into a source of longer-term capital. Warburgs and Samuel Montagu led the way, drawing on the expertise and innovative outlook offered by London's financial talent. Samuel Montagu placed the first non-sterling foreign loan (to the Belgian Government), with Warburgs creating in 1963 the first Eurobond proper (with a loan for the company which ran Italian motorways).

Stage 3: The catalyst of the Interest Equalisation Tax

In July 1963, the US announced the imposition of a 15 per cent Interest Equalisation Tax (IET) on foreign securities purchased by US citizens from foreigners. A step designed to protect the US balance of payments had the indirect (and unforeseen) effect of increasing sharply the costs of financial market activity located in the US, with adverse implications at the margin for US-based firms in the new and dynamic Euromarkets.

Stage 4: The pace quickens

Although the US (and UK) authorities were slow to catch up with the implication of the IET, firms were not. Several more US banks set up operations in the Eurodollar and Eurobond markets in London, joined by a quartet of Tokyo finance houses drawn by the enthusiasm of Japanese concerns to borrow in the new instrument. By the end of 1964, Kynaston's best estimate is that 44 foreign dollar issues had been made in Europe, raising the equivalent of US\$681 million, with the majority of these issues made in London.

^a The prefix 'euro' continues to be used and is the legacy of a period when the growth of these markets was in Europe: today, the term Euromarket refer to any offshore market where an instrument, e.g. a Eurobond, is issued in a specific currency outside the currency's domicile.

4.16 US banks aiming to exploit the opportunities offered by the Euromarkets (especially in the 1970s when the Euromarkets were harnessed by banks to recycle OPEC countries' huge surpluses of 'petrodollars' and to issue loans) led the transformation of London. They were attracted by the existing financial infrastructure and the close cultural and trade links between the US and the UK, including that of a common language which gave London a natural advantage over other European centres. However, without a number of key business environment and regulatory changes (some the result of accident rather than design), these favourable initial conditions would not have been able to guarantee London's growth as the leading international financial centre. In Eurobond markets, it was the lack of regulatory restrictions compared to other centres that encouraged primary and secondary Eurobond business to take place in London.

4.17 In addition to Euromarkets, the development of investment banking and the increasing role of investment institutions in the late 1960s and 1970s were additional factors setting the City on a sharp upward trend. The subsequent abolition of exchange controls in 1979 and the introduction of full competition to the banking sector by 1980 were crucial foundation stones for London's more recent success, allowing foreign (mainly US) banks to take over British concerns and establish their European time zone wholesale operations in the City. Foreign firms' investment came to dominate London's wholesale markets – 'the City as FDI'.

1986 to date **4.18** The 1980s were characterised throughout by the modernisation and liberalisation of London's markets, and the ending of long-established practices. London would trade on a reputation of having open and well-run markets with a strengthening of the regulatory framework that guaranteed equal access for all market participants, e.g. the 1986 Financial Services Act.

4.19 These revitalised trends towards openness and innovation sustained the growing internationalisation of the City's markets, and put them in a strong position to make the most of the new opportunities available in the EU's growing capital markets. Old practices were swept away. 'Big Bang' (the term applied to the liberalisation in 1986 of the London Stock Exchange when trading was automated) was one of the main catalysts for change, making London the first European market to undergo a major deregulation of this type. This provided it with a first-mover advantage over other wholesale financial centres vying for pole position in the European time zone. This focus on competitiveness meant that foreign investment was encouraged, resulting in most of the leading wholesale institutions being foreign owned.

4.20 The UK regulatory framework has supported, and continues to support, global wholesale trading activities. Most recently, a unified financial services regulator, the Financial Services Authority (FSA) which acquired its full powers on 1 December 2001, was created. The FSA is required to "*bear in mind*" when pursuing its statutory objectives "*the international character of financial services and markets and the desirability of maintaining the competitive position of the UK*" (FSA, 2002).

**Applying
economic history
to London today**

4.21 Applying this narrative to the current position of London set out in Section 2, a number of themes emerge:

- perhaps most strongly, the importance of the critical mass of financial skills in London, often enhanced by waves of immigration (the Warburgs and Rothschilds for instance). Being able to draw upon this talent and encourage new entrants was a critical advantage at key stages of its development, most importantly in the advent of the Euromarkets; and

- openness to international business and immigration and a proportionate, facilitative regulatory style free from government interference, particularly over the last 25 years, allowed new practices to spread quickly, encouraging innovation and growth.

A key insight 4.22 The success of London, particularly since the 1960s, has depended on the decoupling of currency and location: the City's strength has largely been independent of the fortunes of the UK economy and currency, sterling or otherwise. By taking full advantage of this decoupling, London has – over a period of more than a century – moved from being a centre grounded in the UK's dominant global economic position, and the role of sterling, to the one described in Section 2: that of making international markets in a variety of currencies and providing international financial services across borders.

Discerning specific factors behind any structural changes in euro financial markets since 1999 is made difficult by the **recent equity market downturn**. This has forced firms to re-evaluate priorities, and uncertainty remains about what the eventual outcomes will be in terms of their location decisions.

Until the sharp downturn in markets since 2000, **EU financial centres had been growing** as a result of market liberalisation and a growing equity culture among euro area investors. The introduction of **the euro is generally seen to have had a positive impact**, especially in encouraging the growth of the euro corporate bond market. It has also encouraged some further integration in the euro area. One direct consequence of the single currency has been the need to build an efficient euro area wholesale payments system infrastructure that ensures a smooth flow of funds across the euro area.

The euro has, however, been only one of a **number of factors at work in euro financial markets**. Other trends include the increased globalisation of the financial services sector, changing business strategies marked by increased consolidation, a changing business environment especially in the regulatory framework being developed within the Financial Services Action Plan (FSAP), and supply-side conditions continuing to be influenced by the impact of technology.

London has played a full part in these euro financial market developments and has not been excluded as a result of the UK not being part of the euro area – the evidence shows that, to date, London has maintained market share and has benefited from access to euro financial market infrastructure.

5.1 The study now turns to euro financial market developments since the euro's introduction in 1999 to identify trends that might have influenced the development of financial centres and the location of wholesale activity. Apart from the introduction of the euro, the European financial services landscape has been most influenced by the recent sharp downturn in equity markets since 2000.

Falls in equity markets

5.2 Falls in equity prices have hit fund managers, stockbrokers and the life insurance sector particularly severely, as well as denting merger and acquisition activity. Their effects are now being seen in job losses in the City and overseas financial centres. In the short run, further retrenchment by market participants seems probable unless global markets quickly reverse their recent falls. This background makes it difficult to predict how recent reversals might impact on the long-term behaviour of firms and on investors' strategies. It underlines the fluid and open nature of the wholesale financial services environment, where trends become established quickly and shocks are transmitted rapidly.

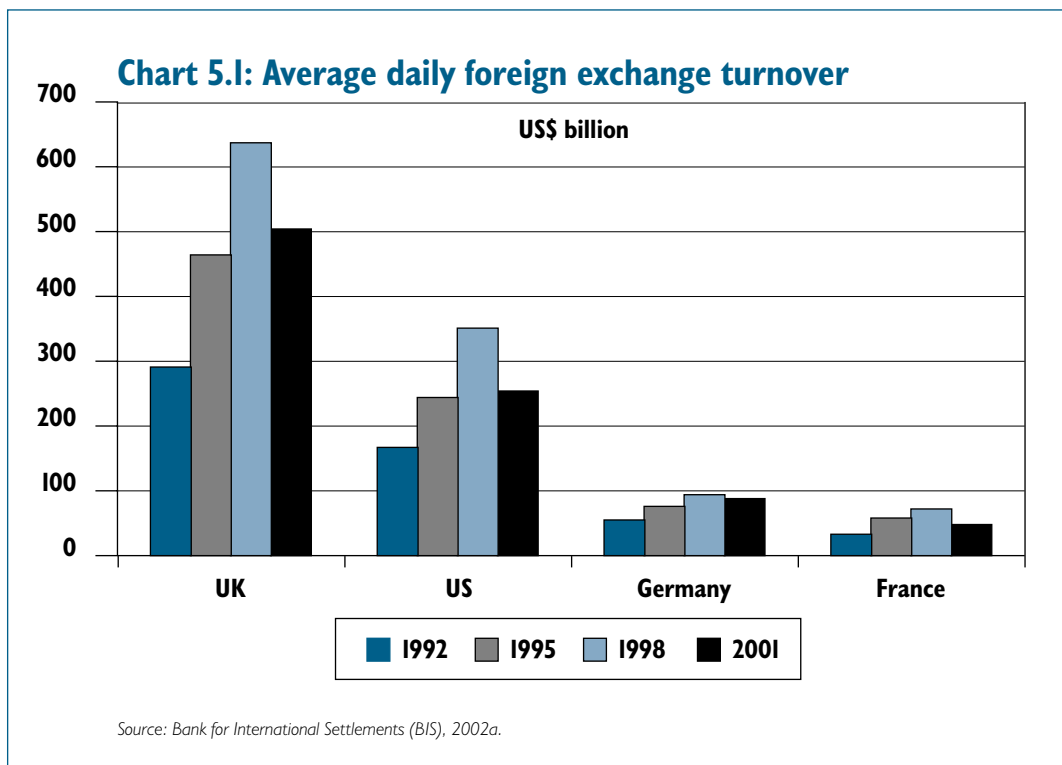
5.3 A key question addressed is whether London has been able to participate fully in the euro financial markets. Currency has not been the only factor affecting the structure of euro financial markets. The discussion therefore considers other developments shaping financial services in Europe, including regulation in the form of the Financial Services Action Plan (FSAP), industry consolidation and attempts to rationalise European market infrastructure that remains fragmented along national lines.

Euro financial market developments

Currency markets **5.4** The market most directly affected by the introduction of the single currency has been the foreign exchange market. A significant decline in the value of foreign exchange turnover was seen between 1998 and 2001 in leading financial centres. Much of the fall can be explained by the replacement of the legacy currencies with the euro on 1 January 1999. Other important factors were, however, at work, including consolidation in the banking industry and the increasing use of more efficient electronic trading systems.

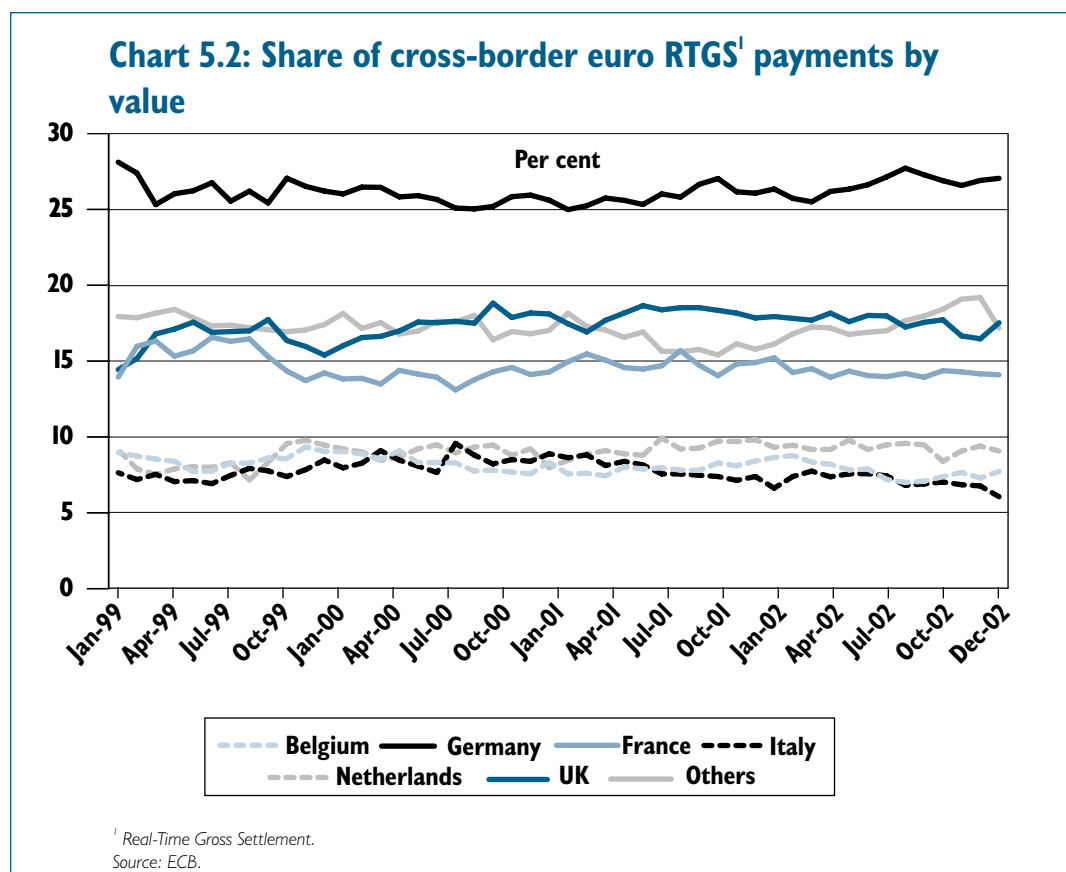
5.5 The fall in trading volumes associated with the euro's introduction created a corresponding fall in foreign exchange fee revenues for market participants. One estimate puts the loss at around 12 per cent of total foreign exchange revenue, and factoring in the vehicle trades using the dollar, the figure rises to between 13 and 15 per cent of total foreign exchange revenue (Danthine *et al.*, 2000). With increased competition for the remaining foreign exchange business, most pressure has been seen in spot foreign exchange markets, where further consolidation is likely. Though representing a loss to brokers and banks, this loss of foreign exchange fee income is a transfer to other agents, and creates an overall economic gain as markets become more efficient and consumers no longer incur currency transaction costs.

5.6 Though it has lost foreign exchange fee income, in terms of market share London has maintained its dominance over other financial centres. Daily trading volumes were over US\$500 billion in 2001 or around 31 per cent of daily global foreign exchange turnover (see Chart 5.1). In comparison, its nearest rival, New York, transacts around 16 per cent of daily global foreign exchange turnover.



TARGET 5.7 A direct consequence of the single currency has been the need to build an efficient euro payment system that ensures a smooth flow of funds across the euro markets. The successful introduction of TARGET,¹ the EU's real-time gross settlement system, has allowed funds to move smoothly across the EU. This has helped the integration of euro money markets and lowered liquidity costs. Short-term interest rates have converged and the unsecured euro money markets are now fully integrated.

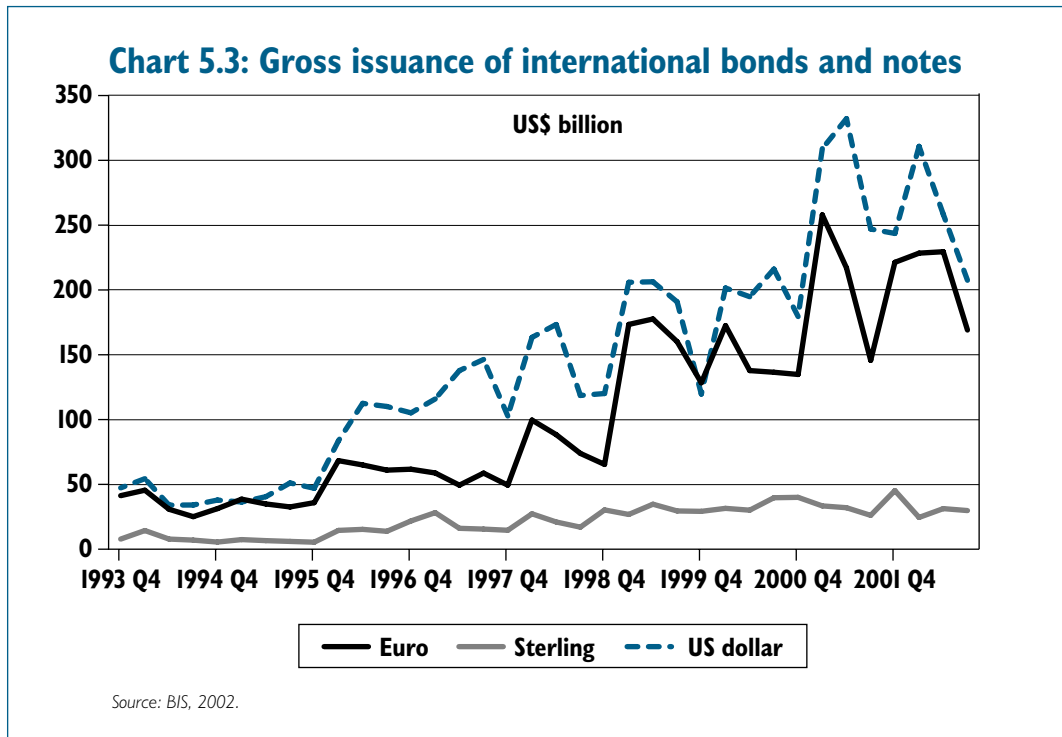
5.8 TARGET provides a cheap and effective route for wholesale euro payments across borders and is now the dominant euro payment system. While it has had relatively few technical or functional problems, plans are in place to improve it further. The UK is the second largest user of TARGET (see Chart 5.2), especially impressive given that UK banks are also heavy users of other euro payment systems such as the Euro Banking Association's (EBA) EURO1 system. In 2002, CHAPS Euro accounted for 18 per cent by both volume and value of all cross-border payments made through TARGET. This has increased from 10 per cent by volume and 15 per cent by value when the euro was launched in January 1999.



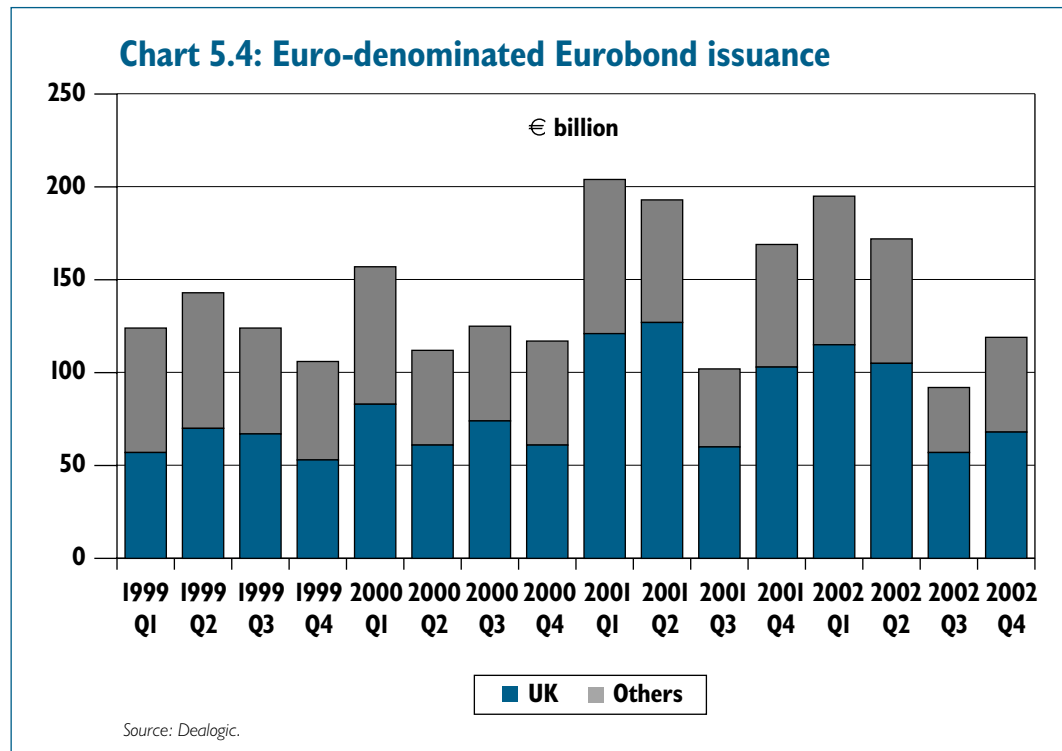
Corporate bonds 5.9 In terms of market activity, the introduction of the euro has probably had the most positive impact on the euro corporate bond market. Jean Dermine in his contribution to the EMU study *Submissions on EMU from leading academics* provides evidence that the removal of the legacy currencies has taken away a competitive advantage for banks in some Member States. He quotes work by Santas and Tsatsaronis (2002) that shows that prior to the euro's introduction in 1999, over 80 per cent of bond issues were underwritten by banks from a country with the same currency denomination. In the post-EMU period (1999-2001), this had fallen to less than 60 per cent.

¹ Trans-European Automated Real-time Gross settlement Express Transfer system: this links the 15 euro-denominated Real-Time Gross Settlement (RTGS) systems in the EU and the ECB payment mechanism to provide an EU-wide RTGS system.

5.10 The market has grown strongly since 1999 (see Chart 5.3), primarily driven by issuances of commercial bonds mostly by the financial sector. The average size of issues has increased, as has the range of credit ratings offered. Factors other than the introduction of the euro have played a part in these trends – other international markets also witnessed increases in issuance in 1999. One important factor was a market rebound after the Russian debt default and the Long Term Capital Management (LTCM) crisis in late 1998. In addition, the sector received a boost from several large issues from the telecommunications sector, used to finance the purchase of third-generation mobile phone licences. However, the corporate bond market fell back in 2002 due to the deteriorating global economic environment.



5.11 London has participated fully in the growth in the euro-denominated bond market. As the ECB (2002a, p. 25) notes, the City is “one of the main channels through which non-euro area residents purchase euro-denominated bonds issued inside and outside the euro area”. The Bank of England estimates that London’s market share of the issuance of euro-denominated Eurobonds in 2002 was around 60 per cent compared to 50 per cent in 1999 (see Chart 5.4).



Equity markets 5.12 Through the removal of currency risk, an increase in price transparency and the lowering of transaction costs, the euro has encouraged some increase in cross-border financial services trade and investment flows, adding further impetus toward greater integration in the Single Market. The single currency has also encouraged integration by lowering or removing technical and regulatory barriers in euro area countries (e.g. the requirement in some Member States for pension funds to currency match their assets and liabilities), and led to the reduction in the marked home-market bias that characterises many investors' portfolios in the EU. Evidence of this latter trend is noted by Jean Dermine in his contribution to the EMU study *Submissions on EMU from leading academics*.

5.13 Equity issuance in the euro area rose sharply in 1999 and 2000 compared to the pre-euro period. New equity worth US\$86 billion was issued in 2000 Q1-Q3, compared with US\$108 billion in full year 1999 and an annual average of US\$56 billion between 1995 and 1998.² The euro, however, does not explain this increase, with the cause lying in a combination of other factors.

5.14 Until 2000, a gradual cultural shift by investors in the euro area towards higher-risk equity-based assets had been seen. Similarly, euro area firms had started moving from traditional bank-based financing arrangements to greater use of market-based financing. Both led to an increasing demand for funding through capital market instruments and hence for wholesale market services. The value of European equity markets was rising sharply in the 1990s, mirroring those in the US and the UK, and this in turn encouraged equity issuance. In addition, a substantial proportion of new issuance was in the telecommunications and technology sectors, propelled by rapid worldwide growth in these areas towards the end of the 1990s. Increasing merger and acquisition activity in the euro area had also led to increased equity issuance.

² Bank of England (2000).

5.15 The growth of new equity issuance coincided with the continued expansion of EU mutual funds, signalling the change in EU investors' attitudes to higher-risk, equity-backed investments. In 1992, EU mutual fund assets totalled 8.2 per cent of EU GDP. By 1998 this had risen to 31 per cent.³

5.16 Since 2000, equity markets in the euro area, the US and the UK have fallen substantially, especially in the telecommunications and technology sectors. This confirms the importance of sectoral developments in the market, and makes it all the more difficult to isolate any EMU effect. On balance, though recent equity market falls have certainly dented confidence, the longer-term trend appears to point to further shifts towards an equity culture in the euro area. The ageing European population and the increase in demand expected for personal savings through pension funds and mutual funds should continue to provide finance for investment in the euro area equity market in the future.

Innovation 5.17 Financial innovation continues apace in European markets, encouraged by the introduction of new technologies and the ongoing liberalisation and deregulation of Member States' capital markets through initiatives at the national and supra-national levels. The trend is most visible in two areas. First, the increasing use of asset-backed securities (i.e. the securitisation of debt), which is still under-developed compared to the US. Second, the rapid growth in the use of over-the-counter (OTC) and exchange-traded financial derivatives – for example, the euro area OTC derivatives market grew by around 35 per cent between April 1998 and April 2001.⁴ The euro is likely to have contributed to this growth by creating a large and liquid market for euro-denominated interest rate swaps. The euro's introduction may, however, have been behind the fall in euro area OTC and exchange-traded foreign exchange instruments over the same period.

Industry structure 5.18 Running alongside the general process of financial market integration has been a restructuring and rationalisation of the banking and financial services industry, and a trend towards consolidation. The sustained period of rising asset markets in the 1990s provided the opportunities for firms to take over rivals, encouraged by rapid developments in liberalisation, technology and globalisation in the financial services industry. The relaxation of regulatory constraints, which had for example excluded commercial banks from entering investment banking and asset management, has encouraged tie-ups between financial services firms. As a result of such developments, there has been a significant number of major banking mergers and mergers between banks and other financial companies such as insurance firms to form 'bancassurance' groups. The merger between Allianz and Dresdner is a recent example.

5.19 Most of these mergers have been between companies from the same country. Cross-border mergers, which the euro might have been expected to stimulate, have so far been limited. The wholesale banking sector is already very concentrated, limiting the possibilities for cross-border mergers. More scope exists for cross-border mergers between commercial banks, and a few of these have taken place, but significant barriers remain:

- legal and regulatory rules vary considerably between countries;
- for cultural reasons, customers may prefer local banks;
- savings may not be as great as for domestic mergers where overlapping services can be reduced; and
- availability of information on credit history and current financial characteristics may be limited.

³ Bank of England (2000).

⁴ ECB (2002b).

Developments in euro financial market infrastructure **5.20** Underpinning wholesale market activity has been market infrastructure: trading platforms, clearing houses and settlement systems. Compared to US markets, European equity markets are more segmented, reflecting previous national arrangements and a split between clearing and settlement systems. EU market infrastructure is now going through a period of intense change. As Europe moves towards a Single Market for financial services, providers of market infrastructure have been restructuring themselves and looking to link up with providers across (although also within) borders. New entrants are also providing competition for existing providers.

5.21 The most significant development since the start of EMU has been the establishment of Euronext, through the merger of the Paris, Brussels and Amsterdam stock exchanges. The Portuguese exchange has now joined Euronext; and in early 2002, Euronext purchased the London derivatives exchange LIFFE.

5.22 In the bond market, Euro-MTS is a common platform that has been created for trading the government bonds of Belgium, Finland, Germany, Greece, Spain, France, Italy, Ireland, Portugal, the Netherlands and Austria.

5.23 Before EMU, European settlement systems were based on a framework of national central security depositories (CSDs) in each Member State, plus two international depositories (ICSDs). Two separate mergers so far have taken place: Cedelbank, an ICSD based in Luxembourg, merged with Deutsche Börse Clearing, the German CSD, to form Clearstream (which has recently been taken over by Deutsche Börse); while Euroclear, which settles trades for Euronext's exchanges in Europe, acquired the national CSDs of France, Belgium and the Netherlands and more recently London's CREST. The new Euroclear group will handle about 60 per cent of trades in leading European equities and more than 50 per cent of fixed income trades.⁵

5.24 In addition to these three main infrastructure elements for securities, there are also two pan-European payment systems mentioned earlier: TARGET, the ECB's cross border payment system, and the EBA's EURO1, which, by allowing commercial banks to manage euro liquidity in a virtual single pool, are contributing to the integration of euro trading and settlement.

5.25 Most of these market infrastructure developments have been driven by a strong case to rationalise European market infrastructure – access to their services has not been driven by consideration of membership of the single currency. Remote access to trading platforms in London (e.g. the London Stock Exchange and Euronext-LIFFE) is unrestricted; similarly, London-based traders have unrestricted access to trading platforms in most other euro area financial centres (e.g. Eurex based in Frankfurt). Where restrictions do remain, for example to cross-border access to settlement systems, they are the result of national rules and not related to membership or otherwise of the single currency.

Regulation **5.26** Regulation of financial services has continued to evolve and is set to influence further the shape of the sector and where activity takes place. International agreements have played their part, increasing competition and market opportunities through encouraging the opening of national markets, but it is at the European level that the greatest impact on the UK-based sector has been seen.

⁵ Based on pre-merger volumes.

5.27 Steps to create a Single European Market in financial services have gradually removed Member States' barriers to trade in financial services. More progress has been made in wholesale financial services, which are generally viewed as more integrated in the EU compared with retail financial services. In recognition that there is more to do, however, the EU has set in train a series of initiatives contained in the FSAP adopted in 1999. This aims to address the remaining barriers in the Single Market and progress in a number of areas has already been made (see Box 5.1).

Box 5.1: The Financial Services Action Plan

Integration of financial services across the EU has the potential to be an important factor in boosting productive investment. A report published by the European Commission in late 2002 suggested that full integration of EU financial markets would result in: a 0.5 percentage point reduction in the cost of equity capital for EU business; a 0.4 percentage point reduction in the cost of corporate debt financing; and a one-off increase in EU15 GDP over 10 years of about 1.1 per cent (equivalent to €130 billion in 2002 prices) and an increase in EU15 employment of 0.5 per cent over the same period.

Adopted in 1999, the FSAP aims to:

- **create a single wholesale financial market to allow companies to raise capital on an EU-wide basis;**
- **complete a single EU retail market, ensuring consumer choice while maintaining consumer confidence and protection; and**
- **underpin all of this through state of the art prudential rules and supervision.**

Over 30 of the FSAP's 42 measures have been adopted at the EU level, with progress under way on many others. Key recent developments have included:

- **adoption of a new Collateral Directive, which will provide increased legal certainty as to the validity and enforceability of collateral in cross-border securities markets;**
- **agreement on a single set of accounting standards, allowing financial reports to be produced on a consistent and comparable basis across the EU; and**
- **progress on the Prospectus Directive, intended to facilitate companies wanting to raise capital across the EU on the basis of a single prospectus. A revision of the Investment Services Directive is an important element of the FSAP currently under negotiation.**

However, adoption of FSAP measures at the EU level is only part of the process. Effective implementation by Member States is essential, as is enforcement.

Developments in Paris and Frankfurt

5.28 Paris and Frankfurt – the other leading European financial centres alongside London – have seen growth over the past decade and established healthy market shares in a number of activities. Growth has come through a number of routes. Member States' markets have been deregulated, stimulating demand for wholesale services helped by a cultural shift in attitudes by firms and consumers in the euro area towards capital markets.

Table 5.1: Recent financial market trends in Frankfurt, Paris and London

	Frankfurt		Paris		London	
	1998	2001	1998	2001	1998	2001
Foreign banking institutions (number)	138	129	187	188	332	293
Cross-border bank lending (global share, per cent)	8.4	9.7	6.7	6.0	19.2	19.7
OTC derivatives turnover (global share, per cent)	7.3	12.7	9.7	8.8	36.0	36.1
Foreign exchange turnover (global share, per cent)	4.8	5.4	3.7	3.0	32.5	31.1
Foreign equity turnover (global share, per cent)	3.7	2.9	0.5	1.3 ¹	64.0	55.8

¹ Data are for Euronext, created in September 2000 by the merger of the Paris, Brussels and Amsterdam exchanges.

Note: The distinction between data for individual centres and for entire countries is often not clear. See the relevant charts and tables in Annex A for clarification of what each series represents.

Source: Bank of England, *International Financial Services London (IFSL)*, *International Financial Markets in the UK*, various editions, and BIS, 2002a,b.

5.29 More generally, as Iain Begg argues in his contribution to the EMU study *Submissions on EMU from leading academics*, competition between financial centres has meant activity in national markets has been increasingly concentrated in Paris and Frankfurt as well as London. By replacing the legacy currencies, the euro may have accentuated this trend towards increasing concentration in fewer financial centres, so boosting their market shares within the euro area. Iain Begg quotes Giannetti *et al.* (2002, p.3), who argue that ongoing integration of the EU market will result in the following effects: “*in countries that are less financially developed, the financial sector stands to lose market shares and profits...In financially developed countries, the situation is likely be reversed. The financial sector will gain from integration...*”.

5.30 Beaverstock *et al.* (2001) in their study of the relationship between Frankfurt and London provide one perspective on the recent growth in Frankfurt, and its effect on London. Their starting point is to stress the relations between cities rather than direct competition. In arguments similar to Clark (2002) presented in Section 2, they believe London is better viewed as complementary to Frankfurt and Paris, offering a range of global financial services not available in other European centres and thereby contributing to the overall competitiveness of the EU (CEBR, 2001). Beaverstock *et al.* (2001) conclude that:

- Frankfurt’s position in Europe has strengthened, but not at the expense of London (noting, however, that Frankfurt itself is seeing increased domestic competition from Munich which has a traditional strength in insurance; London has no similar domestic rival);
- London remains the main European financial centre; and
- the single currency has had no major effects on changing business relations between the two cities.

Developments in Frankfurt

5.31 Frankfurt has established a strong market presence in a number of areas of activity, helped by improvements in market infrastructure. As the Bank of England (2002) points out, the Bundesbank’s new RTGS^{plus} system handles a greater volume of cross-border euro payments than CHAPS Euro. Deutsche Börse’s vertically integrated structure, bringing together the Xetra cash market platform, the Eurex derivatives market and the Clearstream settlement system, was endorsed by the shareholders, who are its principal users, and is generally regarded as IT-driven and efficient. A single Federal supervisory body for all financial services (BAFin) has also been created, although it shares responsibility for banking supervision with the Bundesbank.

5.32 The status of Frankfurt as a trading centre for euro-denominated Eurobonds might potentially have been enhanced by the use of the long Bund as a benchmark. Trading volumes have, however, fallen off sharply since 1998 and Frankfurt has lost ground to London in bookrunning for new euro-denominated Eurobond issues (as noted in Section 2, London-based bookrunners took around a 60 per cent share of the market in 2002).

5.33 However, to the extent that the arrival of the euro has stimulated euro-denominated Eurobond issuance, it may also have contributed to the very substantial increase in euro-denominated derivatives business on Eurex, the German-Swiss derivatives market based in Frankfurt. The total number of contracts traded on Eurex in 2001 was over two and a half times greater than in 1998 and, although over 40 per cent of all contracts traded on Eurex in 2002 involved UK-based traders, the majority of the exchange revenues from this activity accrue to Deutsche Börse AG in Frankfurt. The market in short-term euro derivatives remains firmly rooted in London, as does the foreign exchange market where Frankfurt's market share has changed little in recent years.

5.34 In contrast, OTC derivatives trading has grown faster in Germany than in any other major financial centre, almost trebling in volume between April 1998 and April 2001, leading to Germany's global share of this market rising from 7.3 per cent to 12.7 per cent over the same period.

5.35 In the late 1990s, large American investment banks built up sales and marketing teams in Frankfurt to maintain client relationships with a view to future merger and acquisition and new issues business. Thus far, they are maintaining a presence during the present lean period in the expectation of business when the equity market recovers and re-structuring resumes, driven by globalisation and by the growing impact of the Single Market (to which the euro is likely to contribute).

5.36 The number of authorised foreign banks in Frankfurt has, however, fallen from a peak of 138 in 1998 to 126 in 2002. The Association of Foreign Banks in Germany says this is due to the withdrawal of several Japanese Banks and to banking mergers. The total business volume of foreign banks was only 1.5 per cent greater in 2001 than at the end of 1998, and their collective share of the total volume of business of all banks in Frankfurt fell over the same period from 11.5 per cent to under 9 per cent, primarily reflecting the foreign banks' relative dependence on investment banking opportunities that have been limited by market falls.

Developments in Paris

5.37 Paris is a leading European and international financial centre, with a particular strength in the fund management business, where it can draw on a large pool of local savings. It has nearly 200 foreign bank branches and subsidiaries, and ongoing consolidation within the domestic banking sector may eventually enhance French banks' presence in the euro area. Historically, however, Paris has not been a leading centre for foreign exchange trading and the level of foreign exchange dealing in Paris has continued to decline. The latest BIS survey in April 2001 showed daily turnover in Paris averaged US\$48 billion, less than half of Frankfurt and one tenth of London.

5.38 France has been working towards reform and rationalisation of the financial market regulators, with a view to enhancing their effectiveness. On 5 February 2003, the French Government approved and sent Parliament the Loi de Sécurité Financière. This will create a 'twin peaks' system of regulation through the creation of a new markets regulator, the Autorité des Marchés Financiers, formed through the merger of three existing bodies (the Commission des Opérations de Bourse, the Conseil des Marchés Financiers and the Conseil de la Discipline de la Gestion Financière) sitting alongside the Commission Bancaire and a unified insurance regulator.

5.39 Paris has suffered with other European wholesale financial centres from the unwinding of the 1990s equity bull market. The CAC 40 recorded its largest ever fall last year, down by around 34 per cent. The bond market has, however, fared better, especially government bonds, thanks to the efforts of the Trésor's Debt Management Agency, Agence France Trésor (AFT). Investors have seen the bond market as a relative safe-haven and French government bonds have done especially well. AFT have worked closely with the markets to develop an attentive debt management style, which to date has worked very smoothly. The introduction of both domestic inflation-linked and euro area inflation-linked securities (OATi and OATei) has been a success, attracting both national and international investors ranging from pension funds to hedge funds. Good back-office systems have helped trading, although the futures/options market is less well developed.

5.40 In terms of exchanges, Paris' cash and derivative markets are part of the recently formed Euronext group of exchanges. Euronext is one of the three largest equity exchanges in Europe and the largest derivatives exchange, Matif, has been fully integrated into Euronext-Liffe and is now focusing on equity and commodity instruments (in 2002 equity contract volumes rose by 15 per cent and commodities by 50 per cent) with the bulk of its business in CAC 40 futures/options. NextWarrants was launched in May 2002, and groups 20 issuers across Euronext's four markets (10 are Paris-based, dominated by Credit Agricole, SocGen and BNP-Paribas). The warrants business is looking to attract Paris-based US investment banks to help offset the decline in activity (the volume of transactions fell from 2.8 million to 2.7 million between 2001 and 2002).

6

FACTORS SHAPING FINANCIAL CENTRES' DEVELOPMENT

This section looks at **the potential factors** that affect the location decisions of wholesale financial services firms and shape financial centres such as London. It does not attempt to evaluate the relative importance of these factors, or what impact UK entry to EMU would have on the City. This is a matter for the assessment of the financial services test itself.

Globalisation is likely to lead to greater integration of markets and greater global reach of both suppliers of, and customers for, finance. The way these trends play out may have wider implications for financial centres in terms of businesses' strategies and policymakers' responses to the implications of greater integration.

The **business environment** is likely to be affected by public policy, both domestic and European. The development of EU financial services policy through the FSAP will be a key driver for change. As well as potential benefits, there are also potential risks in the way that new EU legislation may affect location decisions.

On the **supply side**, technology is likely to continue to have an influence. It has already meant that markets can potentially be accessed from any location. It has increased the locational mobility of firms and certain types of activity. Lower value added bulk processing functions, for example, can now be relocated to lower cost locations. Technology can also mean that wholesale services can be provided from one location rather than many, providing a countervailing force to the dispersion effects that technology can have.

Business strategies are likely to evolve in response to the growing opportunities and challenges posed by EU market deregulation, technology and the increasing global nature of financial services. Recent equity market downturns have, however, slowed the previous trend towards consolidation.

In terms of **the euro**, the evidence available thus far suggests that London has been able to participate fully in euro financial markets. To date, the competitiveness of the City (and other UK financial centres) as a location for wholesale activity remains in place, and lies in the forces that create and sustain clusters.

6.1 The previous sections have set out how and why London has established itself as a major international wholesale financial market centre. To help inform the assessment of the five economic tests for EMU entry, this section looks at the factors shaping London's and other financial centres' development. It does not attempt to evaluate the relative impact of these factors or what impact UK entry would have on the City. This is a matter for the assessment itself.

Five drivers **6.2** Five drivers of financial centres' development were identified at the outset of the study. These are:

- **globalisation**, as evidenced by increased integration and greater global reach of both suppliers of, and customers for, finance. Trends are becoming established more quickly and shocks can be transmitted more rapidly across national boundaries;
- a changing **business environment**, particularly in relation to the ongoing development of regulation and other aspects of public policy towards labour, products, tax and profits;
- **supply-side determinants**, including the continuing impact of technology on businesses and their location choices;

- changing **business strategies**, in particular consolidation in the EU banking sector; and
- the role of **currency**, here being the advent of the euro.

What economic geography and economic history suggest

6.3 Both economic geography and economic history suggest a number of common themes that explain the development of London as a major international financial centre. Initial conditions were obviously important, especially openness to foreign entry and relatively lightly regulated markets, which gave London a 'first-mover advantage' among European financial centres. Further policy action to encourage cross-border activity also helped it to become a leading international financial centre.

6.4 The effects were to attract quickly a critical mass of expertise into the City. This path-dependent growth allowed the City to withstand periods of relative decline in the UK economy. Key characteristics such as openness and an appropriate regulatory culture also gave London an ability to respond quickly to new developments and events and to make the most of the accidents of history that crossed the City's path, the most important probably being the advent of the Euromarkets in the late 1950s and early 1960s.

6.5 By taking full advantage of these opportunities over the course of time, London has reinvented itself from acting essentially as an international clearing centre for sterling, building on the UK's role in the world economy and trade, to making international markets in a variety of currencies and providing international financial services across borders.

6.6 The evidence suggests that London's competitiveness is largely decoupled from the strength of the underlying economy and the domestic currency regime. From both an economic history and economic geography perspective, the basis for its competitiveness is instead to be found in the clustering forces that attracted a critical mass of international wholesale activity to the City and a supportive public policy framework at key junctures in its development. They explain why the City can currently compete successfully in all the markets identified by Clark (2002) in Section 2:

- its global role facilitating and mediating in financial interactions between the European time zone, the US, Asia and the rest of the world;
- its regional (i.e. EU) role providing financial products not found in other euro area centres such as Paris or Frankfurt. If other centres do provide these services, London's critical mass means that they often cannot compete on cost or quality grounds; and
- the national role, for example as a provider of domestic financial services such as the very significant volume of institutional and pension assets managed by London.

6.7 The remainder of this section examines the five drivers identified in Section 1 shaping London's and other financial centres' development.

Globalisation

6.8 Globalisation represents the increasing integration of national product, capital and, to some extent, labour markets. Key elements adding to this trend include:

- further reduction in trade barriers, through policy initiatives such as the Doha WTO round and, in Europe, from EU enlargement and further structural reform within the EU;
- an increasing weight of companies with a global reach and strategy, which might be looking to raise finance on a global rather than national or regional (i.e. EU) basis;
- greater locational mobility of firms and the further use of out-sourcing of elements of the production chain across national boundaries to lower-cost centres; and
- a further tendency towards the development of international or global standards and their more widespread use. Examples might range from international accounting standards, off-the-shelf financial contracts and standards for the prudential supervision of financial institutions.

6.9 Globalisation has already been associated with a massive increase in global capital flows in the last 20 years that have far outstripped trade flows and the increased integration of national capital markets. In this more fluid and open environment, trends become established more quickly and shocks can be more rapidly transmitted across national boundaries.

6.10 This is evident in the current world trade cycle, and even more obvious in the longer-term cycle in financial markets, best seen in the increasing correlation of developed markets' equity prices in the long bull market through the 1990s and their subsequent fall. These cyclical and secular trends have been matched by the development of concerns at a global level, for example in relation to corporate governance. The way these trends play out may have wider implications for business strategy and environment in the different levels of the market, particularly at the EU level.

Business environment

6.11 Business environment is a generic term to describe the collection of factors that together define a country's style or approach to business. The focus here is on UK Government policy, which plays a key role in setting the business environment. Other governments are also pursuing policies that have an impact on the relative attractiveness of their financial centres. The growth in the financial sectors of Dublin and Luxembourg through a combination of low taxes and business-friendly policies are notable examples of these policies bringing success.

6.12 Particularly relevant to the development of financial centres and the location choice of market firms is regulation. Financial services regulation, and above all its style, is an important driver for change and innovation, particularly so in the wholesale financial services sector where firms are mobile and relatively free to choose the most appropriate regulatory regime. Tax, both personal and business, could be a further important influence on firms' location choices.

Regulation 6.13 Markets thrive best on the basis of confidence and trust. Good regulation will underpin that, but without stifling competition, risk taking and innovation. Less effective regulation can hamper the dynamic development of financial centres and drive business away.

6.14 The UK has recently modernised its regulatory regime, reflecting the growing integration of financial services activity, particularly across sectors. It established a new unified regulator, the FSA, responsible for the banking, insurance and securities industries. The framework under which the FSA operates (see Section 2) seeks to embody the proportionate, risk-based approach to regulation that has served London well in the past.

6.15 The regulatory environment is also being influenced at EU level through measures to develop the FSAP. The objective of the FSAP is to address the remaining barriers in the Single Market in financial services. In principle, the removal of barriers will deliver significant economic benefits for the users of financial services, although the studies so far suggest that, at the wholesale level, customers in the UK benefit relatively less because its wholesale markets are already relatively efficient. The removal of barriers should also potentially offer benefits to providers of financial services.

6.16 Over 30 of the FSAP's 42 measures have been adopted at the EU level, with progress under way on many others. However, effective implementation by Member States is essential. The development of the FSAP is separate from the issue of membership of the single currency: the FSAP applies to all EU Member States, irrespective of whether or not they belong to the single currency. The challenge will be to ensure that the final legislation delivers the maximum possible benefit. Enforcement and the appropriate use of other instruments, such as competition policy, will also be important if the maximum benefits are to be captured. The UK has strongly supported the FSAP's objectives and is seeking to secure outcomes that are compatible both with the strengths of London's way of doing business and the achievement of economic reform in Europe. In 2002, the UK and Germany successfully led an initiative to improve the EU's decision-making processes for developing financial services legislation and enhancing cooperation among supervisors. These processes, when fully implemented, are intended to facilitate progress to a more dynamic and efficient EU Single Market.

6.17 However, in terms of locational decisions by firms, EU regulatory developments have two potential risks for London:

- to the extent that London is preferred over other EU financial centres on account of its distinctive regulatory style (which can take various forms), unnecessary harmonisation of standards or procedures might affect competition in the Single Market, with potential implications for the location of some activities within the EU; and
- if new EU legislation has costs which are not justified by the benefits, this may force activity out of the EU altogether.

Market infrastructure 6.18 A specific regulatory issue is the regulation of market infrastructure. As discussed in Section 5, Europe's market infrastructure is currently going through a period of intense change. Many exchanges have demutualised and become for-profit companies keen to do deals to strengthen their position in the marketplace. There is a move away from providing infrastructure services on a purely national basis to cross-border provision of such services. This process of change should help to support the development of a single European securities market by breaking down barriers to cross-border trades and thereby reducing the costs of such activity.

6.19 There are potentially difficult regulatory issues arising out of consolidation of market infrastructure in Europe. Many countries may find that as a result of consolidation, the market infrastructure providers used in their country are regulated from elsewhere in Europe. Regulators will need to cooperate and share information. It is also vital from a competition point of view that whatever regulatory structures are put in place ensure open and equal access for users across Europe, and from a financial stability point of view that they ensure risks are effectively mitigated.

Tax 6.20 The burden of the UK tax regime compares favourably with that of other EU Member States, with the headline rate of corporation tax having been recently reduced to make it one of the lowest in Europe. Coupled with labour market flexibility, this makes the UK an attractive location for wholesale activity.

6.21 Some concerns have been raised by industry representatives about the proposal to allocate capital to foreign bank branches for tax purposes, which places the UK tax regime on a similar basis as other financial centres.

6.22 Another concern raised by industry representatives relates to the issue of stamp duty and stamp duty reserve tax (SDRT). Stamp duty is payable each time shares in UK-incorporated companies change hands irrespective of where the shares are traded – to avoid stamp duty, a UK business would have to incorporate abroad. While in some circumstances, particularly in relation to some collective investment vehicles, this may affect corporate decisions on where to incorporate, stamp duty needs to be seen in the context of the overall tax burden on UK-incorporated companies which, as noted, is favourable compared to other European countries. In terms of the location of financial services activity, other considerations are more relevant for firms when deciding where to locate their wholesale activity, in particular the significant advantages offered by London's critical mass of wholesale financial activity and the UK's overall business environment. For example, even those Exchange Traded Funds that have incorporated in Ireland are locating their management activity and the vast majority of their employment in London.

Supply-side determinants

Technology 6.23 Further technological developments are likely to be a major influence on the development of financial centres and the delivery of financial services. Technology has already had a profound effect on the financial services sector over the past 20 years and promises to continue to shape the sector. Newer, more complex financial products (most notably derivatives) would not have developed without the potential created by trading programs and powerful hardware to drive trading platforms and carry and store huge amounts of information. Technology has increased the spread of firms' client bases and firms have reacted by adjusting management structures to reflect the global spread of business – their products too reflect this globalisation and are increasingly managed along global lines.

6.24 One of technology's effects identified in Section 3 has been to increase the locational mobility of firms and certain types of activity. Lower value added, bulk processing functions for example can now be relocated to lower-cost locations – asset management back-office functions for example. The Prudential's recent decision to establish an offshore service centre in Mumbai, India is one example of this trend. Such attempts to reduce costs and circumvent labour shortages in London may provoke relocation to lower-cost sites and hence weaken clustering forces.

6.25 For many forms of wholesale activity, however, clusters continue to offer benefits. Wholesale firms are still heavily dependent on skilled labour, and this is most easily recruited by locating in a financial centre such as London, which attracts significant numbers of international workers highly skilled in financial services activity.

6.26 Perhaps more important for London is an issue raised in Section 3 relating to the impact of technology on trading. Historically, the existence of an exchange floor has been a feature of financial centres and was a key clustering force. Technology has changed this by creating the possibility for remote membership of exchanges, effectively 'dematerialising' markets. This has allowed direct electronic access to national screen-based systems without establishing a physical presence at the market's location (however that may be defined). In other words, the liquidity in some markets has become global rather than location specific. For example, the Eurex market is located in Frankfurt, but 75 per cent of its turnover comes from traders located outside Germany (see Table 6.1).

Table 6.1: Eurex market turnover by country of origin

Per cent	1997	1999	2001	2002
UK	7	25	33	41
Germany	81	41	31	25
US	1	7	10	11
France	3	8	9	10
Others	8	19	17	13

Source: Eurex.

6.27 At another level, technology also means that wholesale services can be provided from one location rather than many, reducing the need for a presence in every national market. The choice of location is again determined by the attributes of clusters such as skilled labour and physical and market infrastructure.

Changing business strategies

Consolidation 6.28 As outlined in Section 5, the past decade or so has been marked by increasing consolidation in the financial services sector. EU mergers and acquisitions activity increased in the 1990s, but this was mainly among smaller domestic banks seeking scale economies and sufficient critical mass to compete in increasingly deregulated EU and global markets: a significant rise in cross-border activity in the euro area has yet to be seen.

6.29 Recent equity market downturns have slowed this process, certainly in the short term, and in some markets (including the UK) opportunities for further consolidation in the banking sector are now limited. In the longer term, however, business strategies are likely to evolve in response to the growing opportunities and challenges posed by EU market deregulation, technology and the increasingly global nature of financial services.

Ownership 6.30 The City has long been open to foreign companies buying wholesale market participants. Most investment banks in London are now foreign owned. This foreign direct investment brings important benefits. It has led to investment on a scale that was probably beyond British-owned institutions, helped the transmission of new ideas from overseas and led to an influx of talented individuals enriching the available pool of labour in London.

6.31 Greater foreign ownership may have made location decisions in relation to London more sensitive to changes in the driving factors than they might have been in the past. As one manifestation of this, it has been argued that in difficult market conditions, such as those currently prevailing, cuts in jobs and investment may fall more heavily on overseas branches in London than on domestically-located offices. It is not clear whether this would imply a structural change in London's relative importance or simply an amplification of cyclical movements in City-related employment.

Currency systems: the euro

6.32 The locational advantages of the UK – the UK business environment and particularly the significant clustering benefits offered by London – have provided it with the conditions to be competitive in international wholesale financial activity. While there are challenges and risks, as highlighted in the study, to date the euro has not affected London's ability to compete in international wholesale markets.

6.33 However, the dynamic nature of the sector means that London's performance in the four years since the start of EMU provides no grounds for complacency. This study is essentially backward looking and focuses on the performance of the City to date. The question of the effects that UK membership of the single currency would have on the City is not addressed in this study. This is a matter for the assessment of the financial services test, the fourth of the Government's five economic tests for EMU entry. The test assesses the specific question of the potential impact that entry to EMU might have on the City's competitive position, particularly on its wholesale markets and their ability to attract euro business.

7.1 The study has set out to inform the assessment of the financial services test and consider the factors that drive the location of wholesale financial activity. This includes the role of currency, in this case the euro, and whether the fact that London is outside the euro area is excluding it from developments in euro financial markets.

7.2 A key basis of the study is that since the advent of the Euromarkets in the late 1950s and early 1960s, London has reinvented itself from being an international clearing centre for sterling to making international markets in a variety of currencies and providing international financial services across borders.

7.3 Through the twin approaches of economic geography and economic history, the study has shown that the City's competitiveness in these markets has been largely divorced from the strength of the underlying economy and sterling. The basis for its competitiveness has instead been grounded in the clustering forces that attracted a critical mass of international wholesale activity to the City. These forces are still very much in evidence today, best illustrated by the range of wholesale market firms present in the City, their international diversity and the depth of the labour market for financial skills in London.

7.4 Public policy supports this high level of activity. Through the FSA, the UK's regulatory framework aims to be fair, risk based and quick to adapt to market innovation in order to encourage competition and risk taking without compromising safeguards for investors or high standards. Labour market policy is important too, creating flexibility for market firms faced with a fast moving environment.

7.5 An important question the study asks is whether London has been excluded from euro financial markets through not being part of the single currency. The evidence to date shows that since the introduction of the single currency, London has participated fully in euro financial markets. For example, market firms based in London have cheap and effective access to TARGET for wholesale euro payments across borders and unrestricted access to other market infrastructure. London also has a majority share in the growing euro-denominated Eurobond market.

7.6 It is clear that London and other overseas financial centres face challenges. A central theme of this study is the dynamic nature of the financial services sector. Sharp equity market declines have forced wholesale firms to retrench and rethink business strategies. This has resulted in job losses in London and other financial centres and reflects the dynamic global and integrated nature of capital markets, where shocks are quickly transmitted. How wholesale institutions will regroup once markets recover remains to be seen.

7.7 On the supply side, technology has increased firms' mobility and potentially makes locations more 'contestable', especially for back-office functions. Greater foreign ownership may increase London's vulnerability to changes in firms' location choices in response to small changes in relative conditions. Finally, the business environment in the EU is changing, not least in the way that the regulatory environment for financial services is evolving as a result of the Financial Services Action Plan.

7.8 The locational advantages of the UK – the UK business environment and particularly the significant clustering benefits offered by London – have provided the City with the conditions to be competitive in international wholesale financial activity. While there are challenges and risks, as highlighted in the study, to date the euro has not affected London’s ability to compete in international wholesale markets.

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