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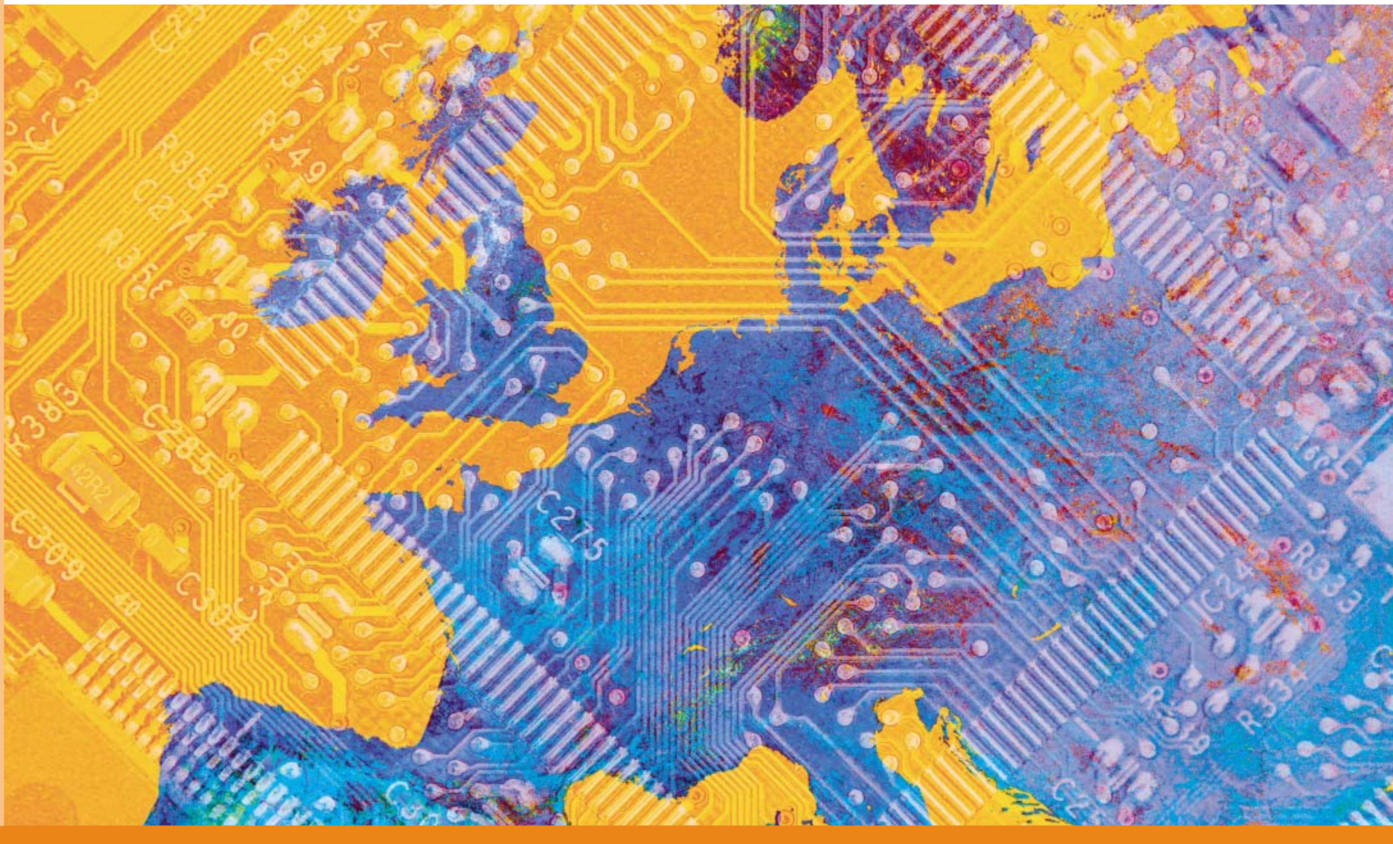
The Importance of Wholesale Financial Services to the EU Economy 2006



CITY OF LONDON

April **2006**

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Foreword

Michael Snyder
Chairman, Policy and Resources Committee
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The Importance of Wholesale Financial Services to the EU Economy is a new report designed to demonstrate the importance of wholesale financial activity to the prosperity of the European Union within the context of globalisation. This report, undertaken by the centre for economics and business research (cebr), replaces *The City's Importance to the EU Economy* - a report that last year quantified the contribution the City of London makes to the European Union and the importance of EU business to the City.

EU-wide wholesale financial activity was worth €173bn in 2005. This industry constitutes the 'nervous system' of Europe's single market, enabling the efficient transfer of resources to stimulate economic growth, resulting in jobs and prosperity for all Europeans. Moreover, the wholesale financial services industry is a highly productive economic sector, conforming to the aspirations of the Lisbon Agenda. Between 1998 and 2005, EU wholesale finance averaged 4.8% annual growth, compared with 2.3% in the economy as a whole. The EU has an industry that is a world leader.

The reasons behind this impressive performance are varied, but can be distilled into the increasingly integrated nature of the industry and the economies of scale and scope that exist within Europe's key financial centres. In the first instance, such integration is evidenced by the rapid expansion of intra-EU trade in finance and insurance, the rising number of cross-border EU banking mergers, and the declining variation in equity market returns across EU countries. Secondly, wholesale finance is highly clustered within the EU. Frankfurt, Paris and London account for 41% of EU sectoral output and productivity in these clusters is higher than the EU average. With London as the largest of these clusters, the City is truly an asset for all of Europe.

An equally important feature of this revised report is its analysis of Europe's wholesale financial services from a global perspective. Although the industry has grown faster than most other European sectors, Europe's share of the global market is falling. In part this is due to the growth of emerging market economies – particularly China and India - but worryingly the US now accounts for 39% of world wholesale financial services compared with 28% for the EU. In the early 1990s, the two were on a par.

Clearly there are a number of policy challenges to be addressed if Europe's relative decline in market share is to be arrested. This report shows that it can. Chapter four introduces a number of scenarios for the future of the wholesale finance sector to 2020. The high growth scenario (reflecting further financial integration and industry clustering) would enable EU wholesale finance sector growth to accelerate to an average 5.1% pa (compared with 4.8% pa during the period 1998-2005). This growth would be the same as that of the US, more than Japan's, but below – albeit to a lesser degree – that of China and the Rest of the World. EU policy makers have it in their power to facilitate the conditions for higher economic growth, for example by ensuring that current protectionist stances in some Member States do not prevail.

The scenarios also contain a number of warnings. Under the base case scenario (reflecting current policy and economic structure), growth in the sector slows to 3.5% pa, and all other countries/regions considered outperform the EU. Other scenarios paint a bleaker picture. Performance would be much worse under an adverse regulatory scenario, where inappropriate legislation increases the cost of doing business in the EU and activity is transferred to non-EU countries with less onerous regulatory burdens. Under this scenario, growth slows to just 1.1% pa, with other centres increasing their growth rates. Finally, a further alternative scenario sees the EU losing the benefit it derives from clustering, perhaps because of reversal in market integration or growing protectionism. Here growth slows to 2.3% pa.

The overall message from this report is clear: wholesale financial services are critical to the competitiveness and success of the EU economy, and they are constantly evolving and intensely competitive. For the EU to take advantage of the full growth potential for wholesale financial services, European policy makers should be encouraged to introduce measures to maintain and strengthen the process of integration in the financial services industry, enabling Europe's financial clusters to contribute further to the wealth and international competitiveness of the Union and so to the fulfilment of the Lisbon Agenda.

Michael Snyder
London
April 2006

Executive Summary

The Importance of Wholesale Financial Services to the EU Economy 2006 is a report examining the contribution of the wholesale financial services sector to the EU in the context of the changing global economy. The report replaces *The City's Importance to the EU Economy 2005* which looked at London's unique cluster of international financial businesses and its contribution to Europe's prosperity.

This report demonstrates the increasing importance of international trade and the global economy, not only in goods but also in services, including financial services. World trade in financial and insurance services reached €141 billion[1] in 2004, or 8.2% of world trade in commercial services. Wholesale finance's contribution to global economic activity was €630 billion in 2005, and has averaged 6.3% annual growth over the past eight years, compared to 3.7% for global output generally.

In wholesale financial services, the EU has a sector which is a world leader. The EU contributes to over half of world trade in finance and insurance services. The UK is the single largest exporter of such services, enjoying 24% of world exports. The EU leads a number of financial markets — such as international equity, foreign exchange and derivatives — whilst it is growing strongly in others, such as internationally issued bonds, regulated funds and hedge funds. It is level with the US in the insurance market.

Countries such as China and the US pose a considerable challenge to the EU within the wholesale financial sector. The US accounts for 39% of world wholesale finance services, whilst the EU accounts for 28%. The EU's wholesale financial sector has averaged 4.9% annual growth between 1997 and 2005; the US 7.0%. In the early 1990s, the two were on a par but a larger, more integrated services market and faster economic growth have helped the US pull away. In real terms, China's wholesale financial sector is growing at nearly three times the pace of the EU's and now accounts for 4% of the world market.

The EU's wholesale financial services sector is extremely important in terms of the health and wealth of the European economy. EU wholesale finance is worth €173 billion, or 1.6% of the bloc's gross domestic product. In 1995 it stood at 1.3%. The sector has averaged real growth of 4.8% between 1998 and 2005. EU gross domestic product has only managed 2.3% growth over the same period. Furthermore, the sector is roughly three times as productive as the EU economy as a whole.

The report demonstrates how wholesale finance is a pan-European sector, in the light of the limited progress towards much of the *Lisbon Agenda*. Growth in trade in finance and insurance services within the EU averaged 12.3% and 18.4% per annum respectively between 2000 and 2004. These compare to 10.7% for all services and 7.7% for manufacturing. In addition, nearly 40% of inter-bank EU loans are cross-border, just under a quarter of payments between European banks are across borders and 12% of the EU's bank assets are owned by residents or companies from a different country.

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[1] In this report we convert from US dollars to euros at the average rate of exchange in the relevant year. The only exception is when we make a comparison over time of real values, where we take the average exchange rate for the base year.

The EU's wholesale financial activities are clustered in a few sophisticated centres. The London, Paris and Frankfurt regions account for 41% of EU sectoral output, raising the productivity of the sector and of the economic bloc. In the Frankfurt, London, Madrid and Paris clusters, the productivity of wholesale finance and finance as a whole is higher than that in the local economy as a whole. In Frankfurt, London and Paris wholesale finance is more productive than in wholesale finance in the rest of the EU. Most euro EU inter-bank payments (57%) are through only three clearing systems whilst 90% of the growth in the EU's international bond market is in only seven countries.

A large part of the EU's leadership of world wholesale finance is as a result of the London cluster. The UK accounts for the largest share of EU finance (35%) of which London accounts for four fifths. The UK has increased its share of the sector in the EU by averaging 6.2% annual growth since 1996. This growth rate is nearly as fast as the US'. London is the location for over two thirds of the EU's foreign exchange and derivatives markets — markets in which the EU is world leader. It also has 42% of total EU share trading, including three quarters of EU share trading in foreign company listings. London leads the EU's hedge fund, pension fund and insurance fund markets. The UK is Europe's biggest market for insurance premiums, with over a quarter of the EU's market.

This report shows the potential (or lack of) for growth in wholesale finance in four large emerging economies. China could account for 9% of world wholesale finance in 2020, as the economy matures**;** India's banks average 11% annual growth, but growing imbalances pose medium-term risks; Russia is becoming a commodity market, so wholesale finance will struggle to grow; Turkey's financial sector is small and still recovering from 1990's mismanagement, but there are large opportunities for growth.

This report also demonstrates the possible future implications for European wholesale finance of certain policy stances in terms of its main global competitors. World wholesale finance output could be €232 billion smaller than would otherwise be the case in 2020, if global integration is prevented; A lack of competitiveness in the EU will bring estimated growth in wholesale finance down from 4.0% per annum to just 0.3% per annum; Adverse EU regulation will likely cut growth to 2020 by a third; Lack of clustering in the EU will halve growth in wholesale finance to 2020.

There are a number of opportunities and threats for trade in wholesale finance within and outside of the EU. China's financial services are likely to average over 11% real growth per annum over the next fifteen years and its imports of financial and insurance services are likely to increase ten-fold by 2020. Intra-EU finance trade could account for up to 47% of wholesale finance by 2020 if the sector continued to integrate, raising the growth rate of the sector.

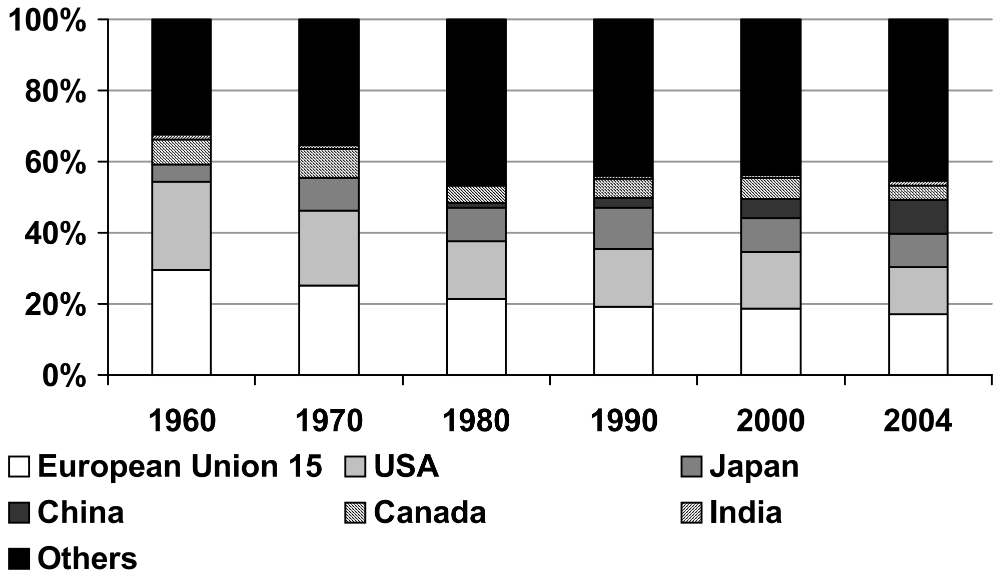
1 Globalisation, Finance and the European Union

This chapter presents the challenges and opportunities faced by the European Union from globalisation. It studies how the world economy is integrating through trade and identifies the EU's position within global wholesale finance, and how this has changed in recent years.

1.1 The growth of world trade

World trade as a ratio of world economic activity has risen from 11% in 1960 to 27% in 2005.[2] In 1960 the fifteen countries that made up the European Union up to May 2004 enjoyed 30% of world trade (excluding trade between the fifteen countries). With the growth in trade across the world, this share slipped back to 20% in 1980 but has remained roughly at the same level since.

Figure 1-1: Share of world trade



Source: Eurostat, *External and Intra-EU trade*, Monthly Statistics 2003.

World trade reaches equivalent of 27% of world GDP

On the other hand, China has increased its share of all goods exported from near 0% in 1960 to 5% in 2000 and to 7% in 2004. As yet, other emerging economies such as India, Russia and Brazil are finding it harder to become such notable exporting countries, though as a whole, emerging economies' share of world trade has increased dramatically, as demonstrated in Figure 1-1.

Most of the growth in world trade over the past forty years has been in goods (merchandise) rather than in services. In current prices, the value of world merchandise exports increased from €0.2 trillion in 1953 to €7.2 trillion in 2004,

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[2] *International Trade Statistics*, World Trade Organisation, 2005 and cebr analysis.

whilst the volume of exports averaged annual growth of 9.6% between 1953 and 2004.

The emergence of new major goods exporters such as China has had a number of significant economic implications for developed economies, such as the European Union. Apart from eating away at their share of the world export market, it has also had an effect upon the way domestic markets operate. It has coerced developed economies into re-evaluating their manufacturing markets, shrinking them in parts and raising the quality in others to be able to compete. Their emergence has also lowered world prices of goods that are produced by large emerging countries, such as cotton and electronic equipment, but at the same time has raised the prices of goods imported by such countries, such as energy, other commodities and even many traded services (see Figure 6-1 and Figure 6-2 in Annex A).

Only one fifth of world trade is in services

Compared with the size of world trade in goods, trade in services remains in its infancy. As trade in services grows, should we expect a similar impact as seen in the EU's merchandise market?

The World Trade Organisation provides data on world exports in commercial services from 1994. The nominal annual value of commercial services exports in the world rose from €855 billion in 1994 to €1,711 billion in 2004: only one fifth of world trade is in commercial services — the remainder being merchandise trade (see Table 1-1 opposite).

World finance and insurance trade only 2% of world trade

Of the trade in commercial services in 2004, €906 billion was in transport and travel. Trade in financial services totalled €89 billion and trade in insurance services equalled €51 billion so that together financial and insurance services made up just 1.6% of total world trade and 8.2% of trade in commercial services. Therefore world trade in financial and insurance services currently remains low, and not much larger than cross-border royalty payments and license fees.

Table 1-1: Breakdown of world exports,[a] 2004, € billion

			World Exports
Total world exports			8,881
Of which:	Merchandise		7,170
	Services		1,711
	Of which:	Transportation	403
		Travel	503
		Communication services	35
		Construction services	45
		Insurance services	51
		Financial services	89
		Computer and information services	56
		Royalties and licence fees	100
		Personal, cultural and recreational services	25
		Other business services	401

Source: World Trade Organisation, *International Trade Statistics 2005*.
[a] Exports include Intra-EU trade; figures may not sum due to rounding.

As presented in Table 1-2, despite Asia's growth in services' exports, as yet, finance and insurance make up only 4.0% of Asia's services exports, or €14.7 billion in 2004. This compares with 7.7% in North America, or €23.4 billion, and 11.5% in the EU-25, or €94.6 billion. We estimate the world average to be at 8.2% or €140.7 billion. Including intra-EU trade, the EU contributes 67.2% of world trade in financial and insurance services.

Table 1-2: Regional breakdown of commercial services' exports,[a] 2004,[b] € billion

	EU-25	Non EU-25 Europe	North America	Asia
Transportation	222.3	32.5	95.8	96.6
Travel	184.6	21.6	53.5	103.3
Communication services	16.5	1.4	6.2	6.5
Construction services	24.7	2.0	3.1	8.1
Insurance services	37.0	3.0	7.8	3.3
Financial services	57.6	4.7	15.6	11.4
Computer and information services	32.9	2.7	6.2	13.0
Royalties and licence fees	37.0	3.0	43.6	14.6
Personal, cultural and recreation services	12.3	1.0	7.8	3.3
Other business services	193.3	15.9	65.5	102.5
Total commercial services	**818.3**	**88.0**	**305.1**	**362.6**

Sources: World Trade Organisation, *International Trade Statistics 2005* and OECD *Statistics on International Trade in Services 1993-2002*.
[a] Exports include Intra-EU trade.
[b] 2004 data is an estimate based on 2003 shares of total services trade and 2004 total services trade.

UK single largest country exporter of finance and insurance

The EU-15 exported €39.5 billion in 2002 to countries outside the EU-15, up from €12.6 billion in 1995. As a result the EU-15 have raised their share of world trade in finance and insurance from 27.3% in 1995 to 28.7%. The UK is the single largest country exporter of finance and insurance in the world. According to the World Trade Organisation and the OECD, the UK exported €32.6 billion in 2002 raising its share of world exports to 23.7% from16.6% in 1995.

Table 1-3: Exports of finance and insurance services, € billion

	Exports, 1995	Share of total world exports, 1995	Exports, 2002	Share of total world exports, 2002	Share of country commercial services exports, 2002
EU 15 (to extra EU 15)	12.1	27.3%	39.5	28.7%	11.8%
Belgium-Luxembourg	3.6	8.3%	14.3	10.4%	25.5%
France	3.2	7.3%	2.3	1.6%	2.5%
Germany	2.7	6.1%	12.2	8.8%	10.8%
Italy	2.8	6.4%	2.1	1.5%	3.3%
Netherlands	0.4	0.9%	1.2	0.9%	2.0%
Spain	1.1	2.6%	2.7	2.0%	4.2%
Sweden	0.5	1.1%	1.1	0.8%	4.3%
UK	7.4	16.6%	32.6	23.7%	23.7%
Czech Republic	0.1	0.1%	0.2	0.1%	2.8%
Hungary	0.1	0.3%	0.2	0.1%	2.1%
Poland	0.6	1.5%	0.4	0.3%	3.5%
Switzerland	5.0	11.3%	10.2	7.4%	NA
Turkey	0.1	0.3%	0.3	0.2%	0.8%
Brazil	0.2	0.4%	0.5	0.4%	NA
Japan	0.4	1.0%	2.9	2.1%	4.2%
Canada	2.1	4.8%	3.2	2.3%	8.2%
China	0.0	0.1%	0.3	0.2%	0.4%
India	0.1	0.2%	0.5	0.3%	NA
Russia	0.2	0.4%	0.3	0.2%	NA
South Korea	0.1	0.1%	1.0	0.7%	3.2%
US	5.6	12.6%	24.1	17.5%	7.9%
Total world	**44.4**	**100%**	**137.7**	**100%**	**8.2%**

Sources: World Trade Organisation, *International Trade Statistics 2005*, OECD *Statistics on International Trade in Services 1993-2002*, cebr analysis.

In comparison, the US sold €24.1 billion in 2002 worth of finance and insurance services to the world. Other large exporters include Luxembourg (€13.9 billion), Germany (€12.2 billion) and Switzerland (€10.2 billion). Emerging economies hold a small share of the finance and insurance export market: China exported €0.3 billion, India and Brazil €0.5 billion each and Russia €0.3 billion. However they are growing fast. Indeed between 2002 and 2004, we estimate that these four countries increased their exports of finance and insurance by 32%.[3]

The fast growth in wholesale finance trade in recent years in emerging economies highlights the potential for further growth in such countries.

Indian stock exchanges nearly as big as Hong Kong's

Financial markets in emerging economies remain comparatively small when compared with those in developed economies such as the US and EU. For example in 2004 the domestic equity market capitalisation of China's Shanghai and Shenzhen stock markets stood at €360.4 billion compared to the US' exchanges equivalent of €13,141 billion[4] and the London Stock Exchange equivalent of €2,307 billion. In Asia, the largest bourses remain those of Hong Kong and Taiwan, outside of Japan.

However the Indian stock exchanges in aggregate had a domestic market capitalisation in equities of €603.4 billion in 2004, compared to Hong Kong's €693 billion. They are amongst the fastest growing, with domestic market capitalisation having risen 238% between 2001 and 2004. This compares with growth of 15% on the New York Stock exchange, 29% on NASDAQ, 32% on the London Stock Exchange, 29% on Euronext and 12% on the Deutsche Börse over the same period.

Chinese stock exchanges struggling to expand

Chinese stock exchanges have had a tougher time over recent years. The Shanghai stock exchange was launched in 1990 and started off with eight listed companies and a market capitalisation on equities and securities of €0.1 billion. In 2000 these rose to 572 firms and €300 billion. Between 2000 and 2004, although the number of listed firms rose to 837, market capitalisation on equities and securities rose to only €390 billion (see Table 6-2 in Annex A). One reason is that Chinese companies are largely financed through bank loans, and therefore do not revert to public listing as much as in India for example.

In general, however, the Indian and Chinese financial markets remain small compared to those in the US, Japan and the EU. Fast Indian growth has failed to raise the stock market growth of emerging economies as a whole above that of developed countries. Indeed the percentage growth in domestic market capitalisation of emerging economies between 1995 and 2004 has fallen short of that in developed economies (see Figure 6-3 in Annex A).

The likelihood is of faster emerging market growth in coming years. Dynamic economic growth in economies such as India and China will eventually feed through to more mature and advanced financial markets: for example, currently some €1.4 trillion worth of private savings resides in deposit accounts in China. Much of this is likely to feed through to equity and bond markets over the next fifteen years, as the wholesale financial market reforms.

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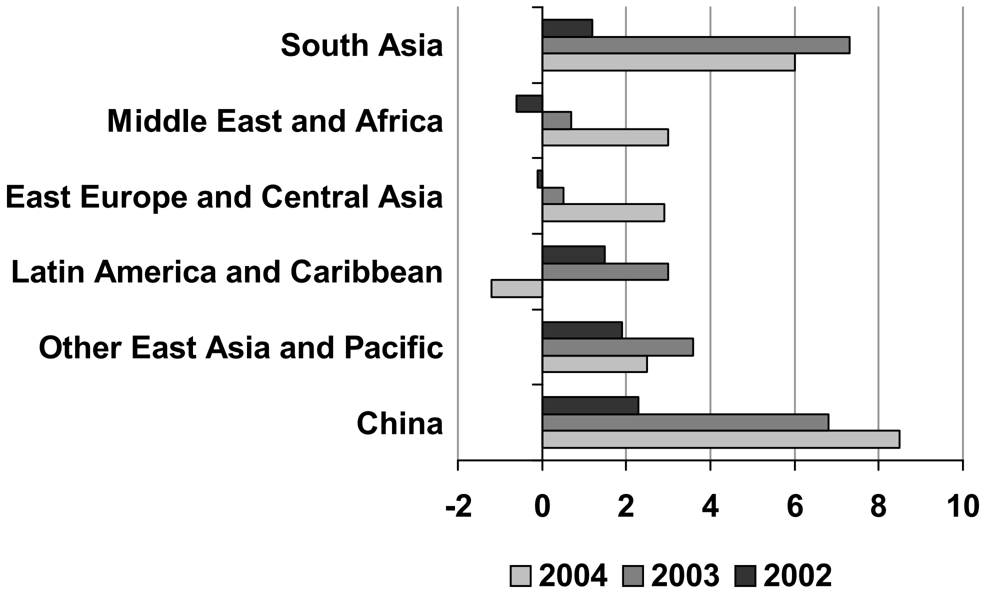
[3] See Table 6-1 in Annex A for trade balance data on finance and insurance services.
[4] New York Stock Exchange, NASDAQ and America Stock Exchange.

China and India largest net recipients of emerging country portfolio flows

Foreign investment is also helping the growth of financial markets in the emerging economies. According to the World Bank, China and India are by far the largest net recipients of portfolio flows to developing economies. As presented in Figure 1-2 below, China received a net $8.5 billion in 2004 and $6.8 billion in 2003 whilst South Asia, largely India, received $6.0 billion in 2004 and $7.3 billion in 2003.

Between 1997 and 2004, China and India benefited from net portfolio equity inflows of €34 billion and €28 billion respectively. South Africa also benefited from net equity inflows of some €30 billion during this period, though these were mostly in the 1990s (see also Figure 6-4 and Figure 6-5 in Annex A).

Figure 1-2: Net portfolio flows to developing countries, $ billion



Source: World Bank, *Global Development Finance 2005.*

1.2 The world's wholesale financial sector

Having analysed world trade in financial services and growth in financial markets in emerging economies, we now estimate the size of the world's wholesale financial services sector. We compare the structure and size of the financial sector across the world's largest economies.

We define wholesale finance to be financial services conducted between financial services companies and institutions such as banks, insurers, fund managers, and stockbrokers.

No data exists on the economic contribution of the wholesale financial sector to gross domestic product. We have therefore estimated the contribution of the sector in the world's largest four economies — the EU, the US, Japan and China. We repeat this exercise for the EU member states in chapter three of this report, as we have done as part of *The City's Importance to the EU Economy 2005.*

We use the following methodology:[5]

i. First we find estimates of contribution of financial intermediation to gross domestic product in all 25 EU countries, the US, Japan and China using data from local national statistics offices, Eurostat and Groningen Global Development Centre;

ii. Second we estimate the share of retail finance relative to all finance in each country using a benchmarking system against twenty European countries that are not highly dependent on the financial sector;

iii. Third we deduct the share of retail finance from all finance to arrive at an estimate of the contribution of wholesale finance to gross domestic product in each country;

iv. Finally we estimate the size of wholesale finance in all other countries using financial variables in these countries, such as finance exports and the size of the stock market in the EU, US, Japan and China.

World wholesale finance worth an annual €630 billion

As presented in Table 1-4 overleaf, we estimate the contribution of wholesale finance to world economic output to be €629.6 billion in 2005 in constant 2004 prices. In real terms world wholesale finance has averaged 6.3% annual growth between 1997 and 2005. This compares with average annual growth in total world gross domestic product of 3.7% during the same period.

The US is the largest contributor to world wholesale finance activity with an output of €244.0 billion in 2005. We estimate wholesale finance in the US to have averaged 7.0% growth per annum between 1997 and 2005, growing from €142.0 billion in 1997. According to the US Bureau of Economic Analysis, the whole of the financial sector averaged 6.5% growth per year during the same period. Because of this high rate of growth in its wholesale finance sector, the US has raised its share of the world wholesale finance sector from 36.7% in 1997 to 38.8% in 2005.

Europe's wholesale finance losing out to the US'

On the other hand, we estimate that the EU has seen its share of world wholesale finance slip from 30.7% in 1997 to 27.5% in 2005. Annual growth in the sector has averaged 4.8% over this period to bring EU-25 wholesale finance economic output to €173.1 billion. Because of faster economic growth and a larger, more integrated services market the US' wholesale financial sector has outpaced the EU's. As a result we estimate that after being on par in the early 1990s, the US now has a larger wholesale financial sector than the EU.

Analysing the various financial markets that make up world wholesale finance, which we describe in detail in Annex B, the EU is a market leader in markets such as the international equity, foreign exchange and derivatives. The EU is also growing

[5] It is very difficult for national statisticians to estimate financial services (both retail and wholesale finance). This is because of the lack of pricing information. Banks have multiple sources of revenues; direct ones such as fees and charges, and indirect ones such favourable interest rates charges and received relative to the market interest rate. For a further discussion, see Allsopp (2004): *Review of Statistics for Economic Policymaking – Final Report to the Chancellor of the Exchequer, the Governor of the Bank of England and the National Statistician*, HMSO, 2004.

strongly in others — such as internationally issued bonds, regulated funds, hedge funds and private equity.

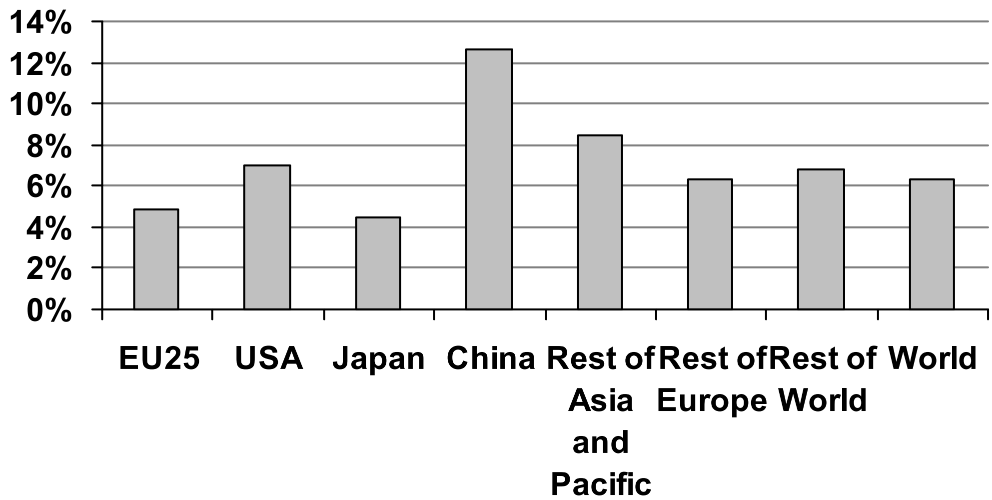
The principal difference in the size and growth of EU wholesale finance when compared with the US is in markets such as domestic equity, domestic bonds, investment banking, pension funds, mutual funds and hedge funds where the US is the world leader. The two are on a par in the insurance market.

Table 1-4: Estimates of wholesale finance economic activity at 2004 constant prices, € billion

	1997	2002	2005	Share of world wholesale finance GDP, 1997	Share of world wholesale finance GDP, 2005
EU-25	118.5	148.3	173.1	30.7%	27.5%
US	142.0	192.9	244.0	36.7%	38.8%
Japan	51.6	63.8	73.1	13.3%	11.6%
China	10.1	14.0	25.3	2.6%	4.0%
Rest of Asia and Pacific	26.3	34.3	49.8	6.8%	7.9%
Rest of Europe	15.1	21.1	24.6	3.9%	3.9%
Rest of World	23.5	31.7	39.6	6.1%	6.3%
World	387.5	506.1	629.6	100%	100%

Sources: National Bureau of Statistics of China, *China Statistical Yearbook 2004*; Japan Statistics Bureau, *Japan Statistical Yearbook 2004*; US Bureau of Economic Analysis; Eurostat; Groningen Growth and Development Centre; cebr analysis.

Figure 1-3: Estimated real growth in wholesale finance between 1997 and 2005



Sources: National Bureau of Statistics of China, *China Statistical Yearbook 2004*; Japan Statistics Bureau, *Japan Statistical Yearbook 2004*; US Bureau of Economic Analysis; Eurostat; Groningen Growth and Development Centre; cebr analysis.

Due to the debt and liquidity problems that Japan has had in its banking sector over the past fifteen years, growth in the Japanese wholesale financial sector has only averaged 4.5% between 1997 and 2005. As a result Japan's share of world wholesale finance has fallen to 11.6%, down from 13.3% in 1997.

China's wholesale finance growing three times as fast as Europe's

On the other hand, we estimate that China has increased its share of world wholesale finance from 2.6% to 4.0%, helped by growth in the sector averaging an annual 12.6% between 1997 and 2005. The rest of Asia and Pacific has also been experiencing strong growth though part of this reflects the recovery following the Asian Crisis of 1997.

Economies are becoming increasingly specialised

The world economy is changing. Countries are trading more and more with each other, raising competitive pressures upon local economies. As a result, economies are becoming increasingly specialised in areas where they have a competitive advantage. In financial services, the European Union has a sector in which it is highly competitive internationally. However there are challenges ahead. Growth in wholesale finance is higher in countries such as China and the United States, largely because their domestic economies are large, integrated and growing at a faster pace than the European Union's.

2 Financial Services: a European Industry

This chapter analyses the wholesale financial services sector in the European Union. It describes the structure of the sector within the EU and investigates the extent to which the sector is integrated across the bloc, given the European Commission's *Lisbon Agenda.* The Commission aims to create a single market in services within the EU by 2010.

2.1 The importance of European wholesale finance

The finance sector is an important sector for an economy in two critical ways:

i. It is highly productive, outpacing growth in the rest of the economy and hence raising economic prosperity.

ii. It enables higher economic growth in other sectors of the economy, by providing the mechanism for the transfer of capital to sectors where it is needed.

In order to describe the structure and importance of the European wholesale financial services industry we estimate the contribution to gross domestic product, the number of jobs in wholesale finance and their productivity in the EU and in each of its member states.

2.1.a Wholesale finance economic activity

We first estimate the contribution of wholesale finance to the gross domestic product of the EU. This exercise follows the same methodology as the one used in the previous chapter to estimate the contribution of wholesale finance to total world economic activity.

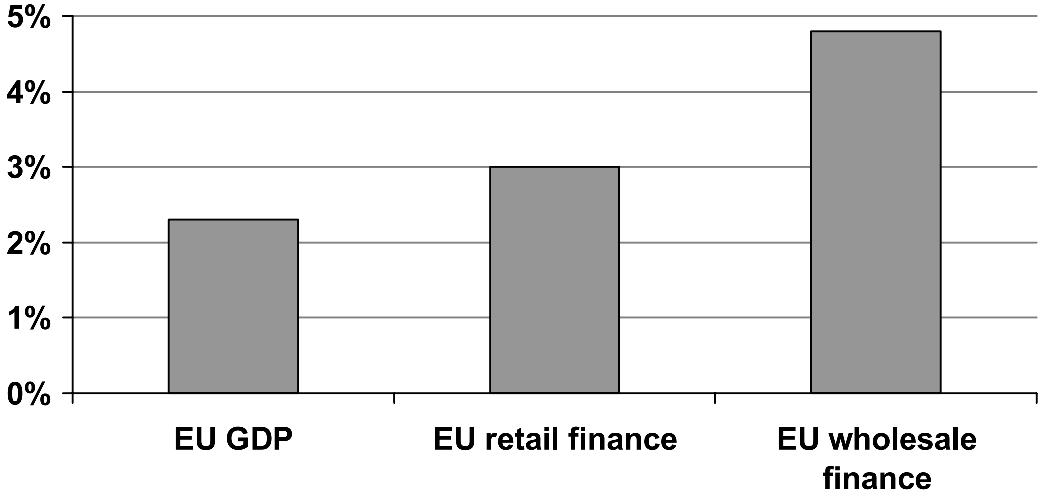
EU wholesale finance is worth €173 billion

As presented in chapter one, we estimate the EU wholesale financial market to contribute €173.1 billion to the EU's gross domestic product in 2005. We estimate that the sector expanded from €109.7 billion in 1995 (at 2004 prices), so average annual real growth between 1995 and 2005 stood at 4.8%. This compares with 3.0% in European retail finance and 2.3% in the bloc's economy as a whole.

Wholesale finance accounts for 1.6% of the EU economy

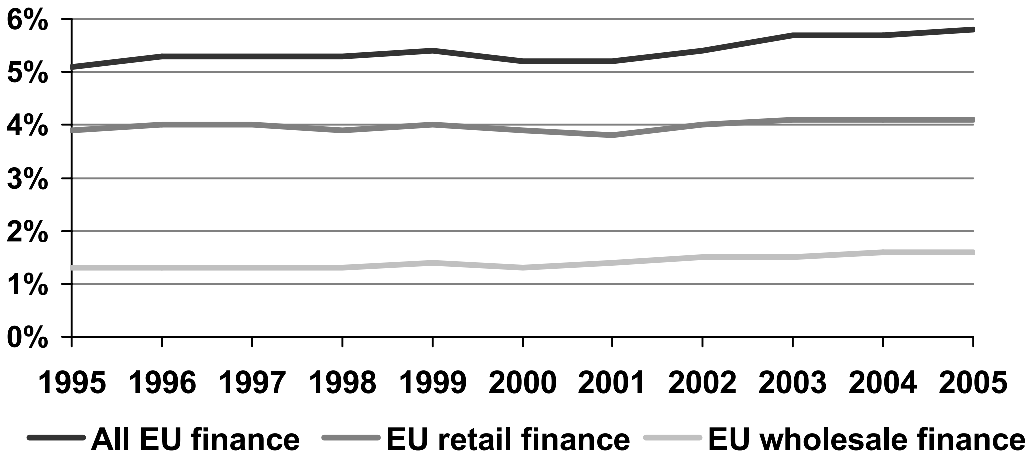
The fast growth of financial intermediation relative to the economy as a whole means that the sector is becoming more important to the EU's economy. Financial intermediation accounts for 5.8% of EU gross domestic product compared with 5.1% in 1995. Retail finance accounts for 4.1% of the bloc's economy and wholesale finance 1.6%. We estimate that these shares have increased from 3.9% and 1.3% respectively in 1995.

Figure 2-1: Average annual real growth in wholesale finance between 1996 and 2005



Sources: Eurostat, Groningen Growth and Development Centre and cebr analysis.

Figure 2-2: Financial intermediation as a share of EU gross domestic product



Sources: Eurostat, Groningen Growth and Development Centre and cebr analysis.

In Table 2-1 overleaf we present our estimates for wholesale finance's contribution to gross domestic product in each of the EU's member states.[6]

[6] The emphasis of this report is on the European wide wholesale financial sector rather than the London financial sector as in *The City's Importance to the EU Economy 2005*. We have therefore based our estimates on Eurostat data rather than on data from the UK's Office for National Statistics as was done in the 2005 edition of this report. There are some differences in the estimation of the size of the economy between these two sources, such as in the way 'indirectly measured financial services' are treated, and therefore our estimate for EU wholesale finance has changed when compared with last year. We also use a further new source, the Groningen Global Development Centre for estimates of the percentage contribution of the finance sector as a whole to gross domestic product. As a result, we have revised our estimate of EU wholesale finance economic activity upwards to €165.7 billion from €143.9 billion in 2004 at 2004 prices.

Table 2-1: Estimates of wholesale finance contribution to GDP at 2004 constant prices, € billion

	1995	2002	2005	Country share of EU wholesale finance, 2005	Wholesale finance as share of country GDP, 2005
Austria	1.4	1.4	1.6	0.9%	0.6%
Belgium	4.3	7.3	7.6	4.4%	2.6%
Cyprus	0.1	0.1	0.2	0.1%	1.3%
Czech Republic	0.2	0.3	0.3	0.2%	0.3%
Denmark	1.0	1.5	1.6	0.9%	0.8%
Estonia	0.0	0.1	0.1	0.1%	1.0%
Finland	0.5	0.6	0.6	0.4%	0.4%
France	14.6	18.5	18.6	10.7%	1.1%
Germany	24.4	27.7	33.0	19.0%	1.5%
Greece	0.7	1.1	1.6	1.0%	0.9%
Hungary	0.1	0.3	0.3	0.2%	0.4%
Italy	11.0	13.4	13.6	7.8%	1.0%
Ireland	1.5	3.2	4.1	2.4%	2.7%
Latvia	0.0	0.0	0.0	0.0%	0.3%
Lithuania	0.0	0.0	0.0	0.0%	0.1%
Luxembourg	2.6	4.1	4.9	2.8%	18.2%
Malta	0.0	0.0	0.0	0.0%	0.3%
Netherlands	6.0	8.5	10.0	5.8%	2.0%
Poland	0.1	0.2	0.3	0.2%	0.1%
Portugal	0.4	0.7	0.8	0.5%	0.5%
Slovakia	0.1	0.1	0.1	0.1%	0.3%
Slovenia	0.3	0.4	0.6	0.3%	2.2%
Spain	4.5	8.4	9.8	5.7%	1.1%
Sweden	1.4	1.9	2.0	1.2%	0.7%
UK	34.0	48.4	61.3	35.4%	3.5%
EU-25	**109.7**	**148.3**	**173.1**	**100.0%**	**1.6%**

Sources: Eurostat, Groningen Growth and Development Centre and cebr analysis.

We estimate that the UK is the largest contributor to the EU's wholesale finance sector. Wholesale finance in the UK contributed €61.3 billion or 35.4% to the EU total in 2005. This increased from 34.9% in 2004.

UK's wholesale finance growing nearly as fast as the US'

The UK has increased its share of EU wholesale finance from 31.0% in 1995 to 35.4% in 2005, by averaging 6.2% growth since 1996 compared to 4.8% in the EU as a whole. This is not far below average US wholesale finance growth of 7.0%

between 1997 and 2005. Because of London's status as a global financial city, wholesale finance in the UK accounts for 3.5% of its €1.7 trillion economy. This is the second largest ratio of all EU countries after Luxembourg, where wholesale finance accounts for 18.2% of the economy. These ratios compare with an EU average of 1.6%.

Germany has the second largest share of wholesale finance, accounting for 19.0%. The next largest contributors are France, Italy, the Netherlands, Spain and Belgium.

2.1.b Number of jobs in wholesale finance

The next step in analysing the structure of EU wholesale finance is to estimate the number of jobs in the sector in the EU and in each member state. As with gross domestic product no official data exist on the number of jobs in wholesale finance. We therefore estimate the job numbers using three benchmarking methods:

i. The first benchmarking technique is the same as the one used for estimating wholesale finance economic activity. We assume similar rates of productivity in retail finance across the EU[7] and then benchmark the ratio of the number of finance jobs to all jobs in the economy for each country against the ratio for all other member states. We have accurate data on the number of jobs in wholesale finance in London from a report which cebr publishes every three months.[8] We use this to verify the number of wholesale finance jobs in the UK. Based on this method, we estimate London to host 73% of the UK's wholesale financial jobs.

ii. According to Eurostat, financial intermediation accounts for 23% of Luxembourg's gross domestic product. In the second benchmarking technique, we first estimate 80% of all finance jobs in Luxembourg to be in wholesale finance and then take this ratio of wholesale jobs to total jobs in Luxembourg as a benchmark for other countries. We estimate wholesale finance to equal 18% of the whole economy.

iii. We take our estimate for wholesale finance jobs in the UK as a benchmark for all other countries.

We compare the three estimates for wholesale jobs in each country against other economic data to arrive at a final job estimate. These data include:

i. the share of wholesale finance in the country's economy
ii. the number of jobs in all finance
iii. the share of wholesale finance jobs to retail jobs compared wholesale finance output to retail finance output
iv. productivity
v. data on finance jobs numbers in financial clusters such as Frankfurt, Luxembourg, London, Madrid and Paris.

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[7] This is legitimate given that retail finance is largely bank accounts, credit cards and personal loans and corporate loans, the price and profits on which are largely governed by central bank interest rates and inter-bank lending and borrowing (which is wholesale finance). Therefore the productivity differences in retail finance are limited across countries.
[8] cebr, *Quarterly Business Forecasts: London,* December 2005.

We estimate that there are 1,110,100 jobs in wholesale finance in the EU, or 0.6% of all jobs in the bloc. Of these jobs, 340,400 are in the UK, representing 1.2% of all UK jobs. A further 201,400 are located in Germany and 108,400 in France.

Nearly a third of EU wholesale finance jobs are in the UK

Luxembourg has the highest proportion of all jobs in wholesale finance, followed by Ireland, the UK and Belgium. When compared to the size of their economies, all four countries contribute disproportionately to the EU's wholesale financial sector.

Table 2-2: Jobs in wholesale financial services in the EU, thousands

	Jobs in wholesale finance, 2000	Share of jobs in country, 2000	Jobs in wholesale finance, 2005	Share of jobs in country, 2005
Austria	16.2	0.7%	16.6	0.7%
Belgium	44.7	1.1%	42.1	1.0%
Cyprus	2.4	0.8%	2.4	0.7%
Czech Republic	9.1	0.2%	8.8	0.2%
Denmark	12.4	0.5%	12.5	0.5%
Estonia	2.8	0.5%	2.6	0.4%
Finland	7.3	0.3%	6.8	0.3%
France	108.1	0.5%	108.4	0.4%
Germany	207.0	0.6%	201.4	0.6%
Greece	16.4	0.4%	17.2	0.4%
Hungary	11.0	0.3%	10.8	0.3%
Italy	93.9	0.4%	90.2	0.4%
Ireland	18.5	1.1%	22.9	1.2%
Latvia	1.1	0.1%	1.7	0.2%
Lithuania	1.3	0.1%	1.4	0.1%
Luxembourg	10.7	5.9%	11.3	6.0%
Malta	0.2	0.2%	0.2	0.1%
Netherlands	65.2	0.8%	62.0	0.8%
Poland	14.7	0.1%	14.3	0.1%
Portugal	12.8	0.3%	13.5	0.3%
Slovakia	3.3	0.2%	4.3	0.2%
Slovenia	8.0	0.9%	8.0	0.9%
Spain	77.1	0.5%	85.9	0.5%
Sweden	15.0	0.4%	15.2	0.4%
UK	348.6	1.3%	340.4	1.2%
EU-25	**1,107.9**	**0.6%**	**1,110.1**	**0.6%**

Sources: Eurostat and cebr analysis.

Since we have estimated both the gross domestic product and the number of jobs in wholesale finance, we therefore have a measure of productivity in the sector.

Wholesale finance nearly three times as productive as economy

If productivity is measured as the ratio of economic output (the sector's contribution to gross domestic product) to the number of jobs, then in the EU wholesale finance is 2.9 times as productive as the average EU sector.[9] The equivalent ratio for the whole of the financial sector is of 2.0.

Luxembourg and the UK have the most productive wholesale financial sectors when compared with the overall productivity of their domestic economies. The UK's ratio of wholesale finance output per job relative to that of the whole country has increased from 1.9 to 2.9 between 2000 and 2005. This is because of the cutback in jobs following the stock market crash of 2000 — only in 2005 did the number of jobs recover to their 2000 level.

On the other hand, the sector's contribution to gross domestic product has grown strongly on the back of cost cutting, a strong performance by the stock market and growth in merger and acquisition activity. The growth over the past three years in international bonds, foreign exchange, derivatives, private equity and funds, including hedge funds, has also raised productivity in the UK, and as a result in the EU. Likewise Germany's wholesale financial sector has also seen productivity rise in recent years to 2.7. Other highly productive wholesale financial sectors include the Netherlands, helped by its three major banks (ABN AMRO, Rabobank and ING), Belgium, Slovenia and France.

Importantly, in all countries the ratio of output per worker in the wholesale finance sector to that in the country as a whole is above one, indicating that wholesale finance is more productive than the average sector in the EU's member states.

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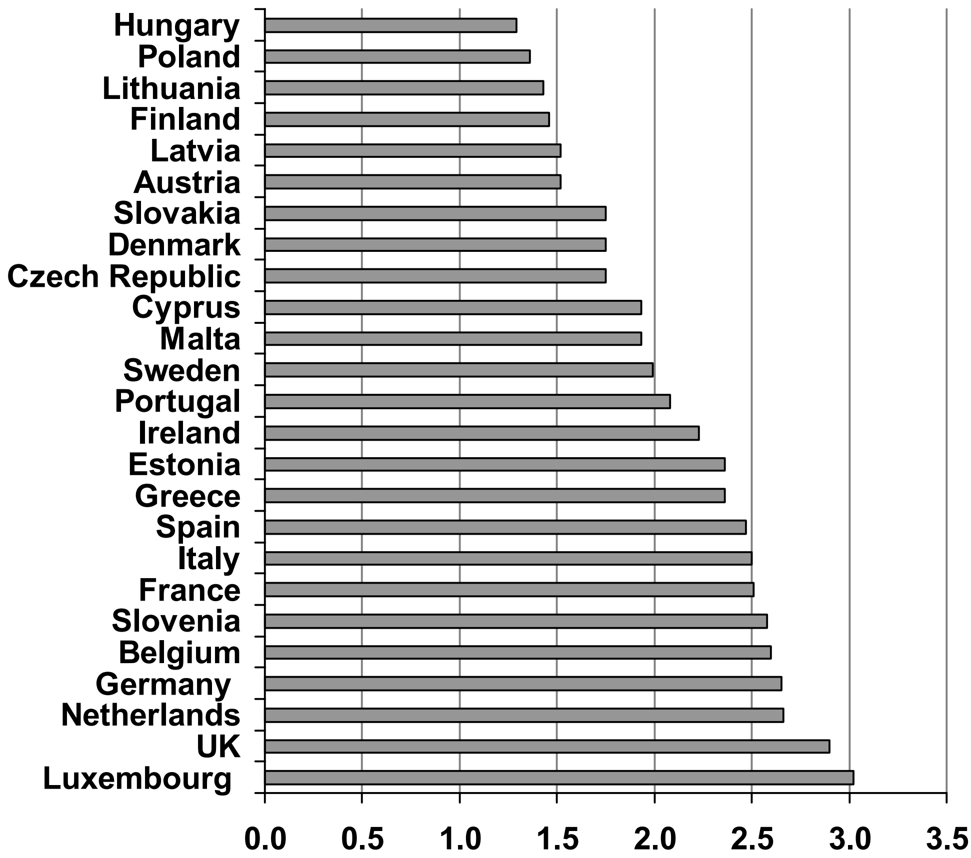
[9] The ratio is amplified because the UK is much more productive in wholesale finance that it is in its average sector. Since the UK accounts for over a third of EU gross domestic product in wholesale finance it has a high weighting and raises the contribution of EU wide wholesale finance output per job relative to the EUs gross domestic product per job. In addition Poland has a low ratio of total gross domestic product to the number of jobs, but has a larger weighting in the sector-wide gross domestic product per jobs measure than the wholesale finance output per job.

Figure 2-3: Productivity in wholesale finance: ratio of wholesale finance output per job as a ratio of GDP across all industries, 2005



Source: Eurostat and cebr analysis.

2.2 The integration of the European banking sector

Having looked at the importance of the EU's wholesale financial sector to the Europe's economy in terms of economic output, jobs and productivity, we now discuss the extent to which the sector is integrated, in the light of the European Union's *Lisbon Agenda* for the creation of a single market in services.

2.2.a The Lisbon Agenda

In March 2000, at the height of the dot.com boom, EU leaders agreed to make the bloc the most competitive and dynamic knowledge-driven economy by 2010. The EU already had a single market in the trade of goods. However despite making up 70% of its economy, services trade within the EU remained fragmented.

The *Lisbon Agenda's* main targets are to achieve average annual economic growth of 3% and to create twenty million new jobs by 2010. As part of achieving these goals, the EU aimed to create a single market in the trade of services by 2010.

An important part of the *Lisbon Agenda* is the *Financial Services Action Plan* which was launched in 1999 *"to create a single deep and liquid financial market to serve as a motor for growth, job creation and improved competitiveness in the European economy."*[10]

The plan was largely implemented by 2005 with all but one of its 42 measures adopted.[11] But progress in other service sectors earmarked for liberalisation such as health, environmental services, business services, construction and real estate has been disappointing. And as we have discussed earlier in this chapter, average annual economic growth in the EU has averaged 2.3% since 1996, or 2.0% since 2000 — short of its 3.0% target.

The European Commission claims that "*the market for services remains fragmented*", "*intra-EU trade in goods stagnated in 2002 and actually fell in 2003*" and *"intra-EU trade in services as a per cent of GDP is lower today than ten years ago."*[12]

The Commission will only run an economic and legal analysis of the impact of the *Financial Services Action Plan* in 2006-2008 once all the measures are adopted in the member states. However it states that *"Financial market integration is expected to result in a narrower spread of equity and bond rates. This would allow a potential increase in EU GDP of 1.1% over the next decade; an increase in employment of 0.5% and an average reduction on the cost of capital of 0.5%".*[13]

What we need to ask at this stage is to what degree is the financial sector in the EU integrated given the failures in other sectors and in the achieving the overall aims of the *Lisbon Agenda*.

2.2.b How integrated is the European Union's financial sector?

Before identifying the degree to which the EU's financial sector is integrated, we first analyse the extent to which it is integrating.

Intra-EU finance and insurance trade growing at 14% every year

Trade in financial and insurance services within the EU is amongst the fastest growing. According to the World Trade Organisation and the Organisation for Economic Co-operation and Development between 2000 and 2004, intra-EU-25 trade in financial and insurance services averaged an annual 12.3% and 18.4% respectively, reaching €32.6 billion and €14.2 billion respectively in 2004. These average annual growth rates compare with equivalent growth in all services of 10.7% and all goods of 7.7%. Annual growth in the trade of manufacturing goods within the EU bloc of 25 averaged around 7%, whilst in agricultural goods and fuel and mining goods it averaged around 11% and 13% respectively.

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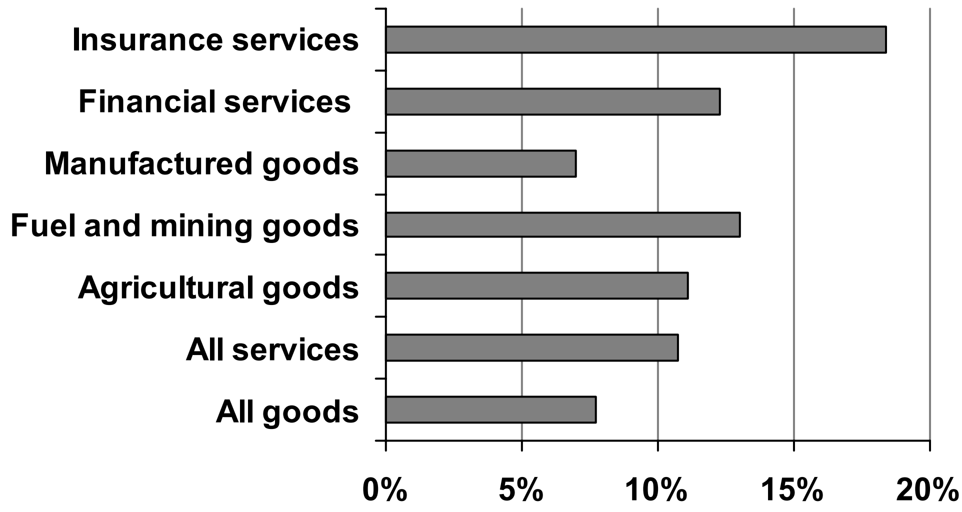
[10] European Commission, "*FSAP Evaluation, Part 1: Process and Implementation*" 07 November 2005
[11] *ibid.*
[12] http://europa.eu.int/growthandjobs/areas/fiche01_en.htm
[13] *ibid.*

Figure 2-4: Average annual growth in intra-EU 25 trade between 2000 and 2004



Sources: World Trade Organisation and OECD.

The European Central Bank and the European Commission have both discussed the extent to which the EU financial sector is integrated.[14]

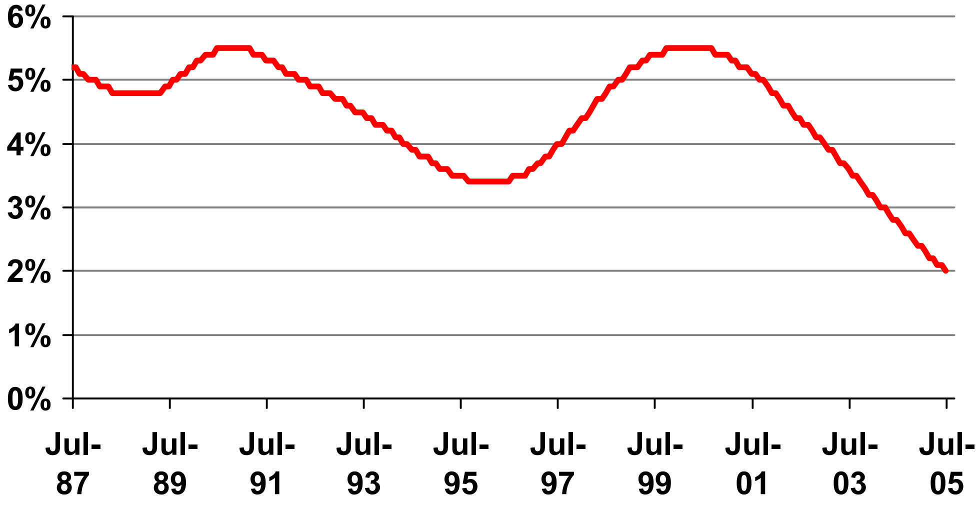
According to a member of the executive board of the European Central Bank: "*a significant level of integration has already been reached in the EU banking market…At the moment, more than 40 EU banking groups develop significant cross-border activities participating in up to seventeen foreign banking markets. In addition, the market share of foreign branches and subsidiaries in the EU as a whole stood at 36% of total assets at the end of 2004. Furthermore, there was progress in euro area cross-border activity in the wholesale and inter-bank markets. At present, for example, close to one half of the securities held by euro area banks are issued by non-banks resident in other EU countries and cross-border interbank loans account for more than 40% of all interbank loans, up from 25% in 1998. At the retail level however, EU banking markets still remain rather fragmented.*"[15]

Declining variation in equity market returns across EU countries

The standard method for assessing whether a market is geographically integrated is whether the price for a goods or service does not vary between different locations. Financial markets are essentially markets in which money is traded (or monetary products), the price of which is the interest rate — the rate of return on monetary assets. The European Central Bank calculates differences in equity returns across different countries. As presented in Figure 2-5 opposite, the average difference has declined from around 5.5% in 2000 to 2.0% in July 2005, a record low. Further, as presented in Figure 2-6, changes in the returns to equities are increasingly becoming dependent on events common across the euro area, rather than just national events.

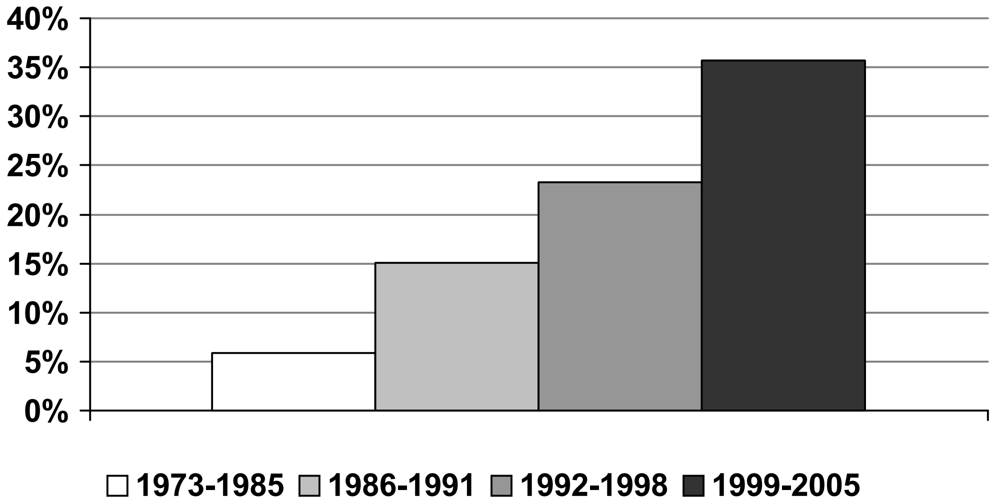
[14] See for example the European Commissions' '*Integration and Consolidation in EU banking – an unfinished business*', April 2005 and the European Central Bank's Occasional Paper No.6, *'Banking Integration in the Euro Area',* December 2002.
[15] http://www.ecb.int/press/key/date/2005/html/sp051021.en.html

Figure 2-5: Dispersion across countries of equity market returns[a]



Source: European Central Bank.
[a] The data is monthly.

Figure 2-6: Proportion of change in local equity returns explained by euro area-wide events



Source: European Central Bank.

A further measure of the degree of geographical integration in the banking sector is the proportion of the total assets of credit institutions in a country that are held by subsidiaries of credit institutions from other countries. According to the European Central Bank, an average of 12% of member states' credit institution assets are held by subsidiaries of credit institutions of foreign countries, three quarters of which are held by subsidiaries of institutions from other countries within the European Economic Area.[16]

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[16] The European Economic Area is made up of the EU 25, Iceland, Norway and Switzerland.

Table 2-3: Ownership of credit institutions' assets, € billion

	Assets of subsidiaries of credit institutions from EEA countries, 2001	Total assets of credit institutions, 2001	Assets of subsidiaries of credit institutions from EEA countries, 2004	Total assets of credit institutions, 2004	Share of EEA ownership other than domestic country, 2004	Share of all foreign ownership other than domestic country, 2004
Austria	103	573	116	635	18.3%	18.7%
Belgium	146	776	167	914	18.3%	18.7%
Cyprus	4	36	8	38	21.5%	[c]
Czech Republic	43	78	67	87	77.0%	81.6%
Denmark	58	454	63	607	10.4%	11.9%
Estonia	4	4	8	9	88.9%	88.9%
Finland	1	163	112	212	52.8%	52.8%
France	299	3,770	304	4,415	6.9%	8.6%
Germany	111	6,269	253	6,584	3.8%	4.9%
Greece	28[a]	203	34	230	14.8%	14.8%
Hungary	22	39	36	65	55.4%	58.5%
Italy	20	1,852	29	2,276	1.3%	[c]
Ireland	146	422	182	723	25.2%	34.2%
Latvia	2	7	4	11	39.4%	43.5%
Lithuania	2	4	6	6	74.1%	74.1%
Luxembourg	507	721	513	695	73.8%	77.7%
Malta	7	14	8	20	39.1%	[c]
Netherlands	97	1,266	151	1,678	9.0%	10.2%
Poland	81	133	77	132	58.2%	66.8%
Portugal	68	352	67	345	19.4%	20.3%
Slovakia	15	22[b]	22	29	75.9%	[c]
Slovenia	3	18	5	24	18.8%	18.8%
Spain	49	1,248	67	1,717	3.9%	4.2%
Sweden	2	452	4	583	0.8%	1.2%
UK	72	5,830	295	6,970	4.2%	12.5%
EU-25	**1,880**	**24,686**	**2,601**	**29,010**	**9.0%**	**12.0%**

Source: European Central Bank.
[a] Figure is for 2003
[b] Figure is for 2002
[c] Data not provided because number of subsidiaries is less than three.

In countries that have a longer history of free market economics, this ratio depends upon their size. In smaller countries where the historical domestic demand for banking is small, the share of bank assets held by foreign subsidiaries tends to be higher than in larger countries.

For example 74% of bank assets in Luxembourg are held by subsidiaries of banks from other European Economic Area countries. This is because of its size — it has a population of less than half a million — and because of its status as a European financial centre. Other relatively small countries such as Belgium, Austria, and Greece have 18.7%, 18.7% and 14.8% of their bank assets owned by banks from other European Economic Area countries. Amongst large countries, the UK has the highest share of assets that are foreign owned — 12.5%. This is high when compared with Germany, France, Italy, Spain and the Netherlands because of the economies of scale in banking obtained from London financial cluster. Most of this share represents assets owned by subsidiaries of banks from countries outside the European Economic Area, highlighting London's status as a global financial centre and the links it has with the financial institutions in countries such as the US and Japan.

Nearly one in three EU banking mergers are cross border

The average European share of bank assets owned by subsidiaries of banks from other European Economic Area countries increased from 7.6% in 2001 to 9.0% in 2004. This has been aided by the high degree of cross-border bank mergers within the EU.

Between 2001 and 2005 there were 466 mergers and acquisitions in the EU's financial sector. Of these, 321, or 69%, were domestic, 118, or 25%, were cross-border within the European Economic Area and 27, or 6%, were cross-border but outside the European Economic Area.

The consolidation of the Italian financial sector in recent years has meant that a large part of the domestic mergers within the EU occurred in Italy. The UK, France and Germany also had a large share of domestic mergers possibly because of consolidation or possibly through the buy-out of start-ups.

Poland experienced the most number of cross-border mergers between 2001 and 2005. European banks merged with, or acquired, fifteen Polish banks during this period. This compares with fourteen domestic mergers in Poland, and reflects the large share of bank assets held by foreign subsidiaries in the country. Of the large countries there were twelve cross-border bank mergers in the UK during the same period, though seven of these were with banks from outside the European Economic Area — once again reflecting the strong links the UK has with banks from countries such as the US and Japan and its degree of openness. However other countries such as Germany, Italy, France, Portugal, the Netherlands, Denmark, Greece and Spain also experienced a significant number of cross-border mergers, suggesting the extent to which the financial market is integrating. Integration in the sector is happening despite political resistance in some member states.

Table 2-4: Mergers and acquisitions in the EU banking sector between 2001 and 2005

	Domestic	Inter European Economic Area	Other countries	Total
Austria	7	2	1	10
Belgium	5	1	0	6
Cyprus	0	0	0	0
Czech Republic	3	8	1	12
Denmark	5	6	2	13
Estonia	0	2	0	2
Finland	2	1	0	3
France	42	7	1	50
Germany	48	10	2	60
Greece	8	5	0	13
Hungary	9	7	1	17
Italy	87	9	3	99
Ireland	1	3	1	5
Latvia	2	1	3	6
Lithuania	0	4	0	4
Luxembourg	0	4	0	4
Malta	0	0	0	0
Netherlands	8	5	3	16
Poland	14	15	0	29
Portugal	4	8	1	13
Slovakia	2	5	0	7
Slovenia	4	4	0	8
Spain	14	5	1	20
Sweden	4	1	0	5
UK	52	5	7	64
EU-25	321	118	27	466

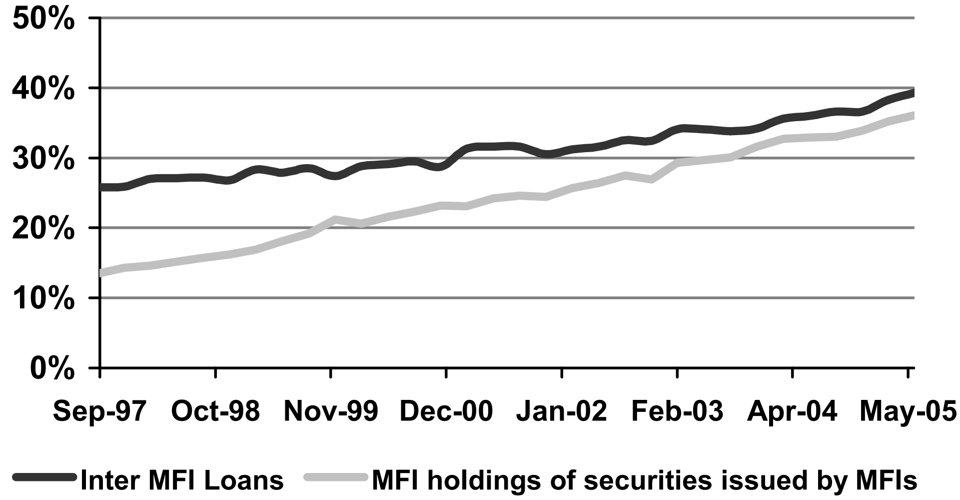
Sources: Thomson Financial SDC Platinum and ECB calculations.

Analysing the geography of ownership of credit institutions' assets and the number of cross-border mergers and acquisitions only tells one part of the story on the extent to which the EU financial sector is integrated. The second part is the degree to which banks on different sides of borders deal with each other.

Nearly 40% of inter-bank EU loans are cross-border

The proportions of inter-bank loans and securities holdings that are cross-border have increased significantly over the past eight years. In June 2005, 39.3% of all loans between 'monetary financial institutions' in the EU were cross border. This share stood at 25.8% in September 1997. More strikingly, the proportion of securities issued by banks and other financial institutions and held by similar organisations in other EU countries has increased from 13.5% to 36.1% in the same period.

Figure 2-7: Loans and security holdings between banks and other financial organisations in different EU countries as a share of EU total



Source: European Central Bank.

The number of cross-border interbank transactions has also grown sharply in recent years. In January 1999 the European Central Bank launched TARGET, the *Trans-European Automated Real-Time Gross settlement Express Transfer System*. This is the interbank payment clearing system that links up all the interbank clearing systems in the euro area and also euro payments made on other systems such as CHAPS in the UK, EURO-RIX in Sweden and Kronos in Denmark. It is the main interbank channel for unsecured trades.

Just under a quarter of payments between EU banks are across borders

In 1999 the average monthly number of euro cross-border transactions that passed through the TARGET system was 621,111. This increased to 1,465,266 in 2005 — a rise of 136%. As a result of this growth, 23% of all interbank transactions that pass through TARGET are cross-border, compared with 18% in 1999. In 2004 the average value of TARGET payments was €8.7 million for cross-border payments. This compares with €5.7 million for payments within a member state.

In a number of countries half or more of euro payments are cross-border — Belgium, Finland, France and Luxembourg, (and clearly Denmark, UK, Poland and Sweden). Germany has by far the largest number of transactions, which are mostly domestic — just 14% of transactions are cross-border.

Table 2-5: Number of inter-bank payments (transactions)[a]

Inter-bank clearing system	Cross-border monthly average, 1999	Cross-border monthly average, 2005	Growth in average monthly cross- border transactions, 1999-2005	Domestic transactions, 2005	Share of cross-border transactions to all transactions, 2005
Artis Austria	32,906	45,404	38%	197,201	19%
Ellips Belgium	47,139	78,124	66%	68,557	53%
Kronos Denmark[b]	4,698	8,139	73%	635	93%
EPM European Central Bank	1,137	3,321	192%	N/A	N/A
BOF-RTGS Finland	7,271	12,139	67%	11,996	50%
TBF France	73,271	177,101	141%	178,344	50%
RTGSplus Germany[c]	222,337	416,353	87%	2,536,897	14%
HERMES Greece	1,932	26,210	1,157%	87,560	23%
BI-REL Italy	69,691	162,203	133%	683,998	19%
IRIS Ireland	12,290	35,396	188%	55,477	39%
LIP-Gross Luxembourg	13,409	33,638	151%	8,974	79%
TOP Netherlands	29,866	65,290	119%	307,566	17%
Sorbnet Poland	N/A	845	N/A	439	66%
SGPT Portugal	15,253	23,273	52%	66,960	26%
SLBE Spain	14,688	70,935	383%	470,938	13%
EURO-RIX Sweden	3,683	7,521	104%	1,385	84%
CHAPS Great Britain[d]	71,260	298,528	319%	123,497	71%
TARGET Total	**621,111**	**1,464,420**	**136%**	**4,800,424**	**23%**

Source: European Central Bank.

[a] All 2005 data excludes December, Data is for clearing systems participating in or connected to TARGET, the European Central Banks main clearing system. Target total includes CHAPS Great Britain.

[b] Clearing system was called DEBES in 1999.

[c] Clearing system was called ELS in 1999.

[d] CHAPS UK in 1999.

In summary, wholesale finance is a critical sector for the European Union's economy. It is nearly three times as productive as the economy as a whole, and therefore is one of Europe's fastest growing sectors. In addition, it enables the transfer of capital from savers to potential investors allowing faster growth in other sectors of the economy. Finally, in wholesale finance the European Union has a sector that is highly integrated across the bloc, bringing the EU closer to achieving its *Lisbon Agenda* targets.

3 Clustering to Compete

According to Porter[17] clusters are a "*geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities*".

'Cluster' activities are typically higher value and highly specialised

There is extensive literature discussing the economic benefits of clusters.[18] The benefits from clusters arise both from the demand and the supply chains of businesses. Close customer proximity and information externalities help boost demand — this is particularly important in wholesale finance. On the supply side reduced search costs, knowledge spillovers, specialisations in labour and infrastructure benefits help business operations.

This chapter analyses the importance of the EU's finance clusters. It takes an in-depth look at four of Europe's financial clusters: Frankfurt, London, Madrid and Paris and investigates how wholesale finance is geographically distributed across the bloc.

3.1 Financial clusters in the European Union

The EU has a number of financial clusters, which all vary in size. In the previous chapters we estimated the size of the wholesale financial sector in the world, in the major economies and in the EU member states.

Using regional and municipal data we extend this analysis to cover the EU's three largest financial clusters: London, Ile de France (the Paris region) and Frankfurt. The EU has a number of smaller financial clusters such as Amsterdam, Edinburgh, Luxembourg, Madrid and Milan. Because of data availability and because Spain's economy and financial markets are amongst Europe's fastest growing we also analyse Madrid.[19]

Europe's financial sector is highly clustered in financial centres

The four locations are of different sizes in terms of their population and economies. Ile de France has a population of 11.1 million and is home to 19% of France's population, Comunidad de Madrid is home to 5.7 million or 13% of Spain's population, London is home to 7.4 million or 12% of the UK's population whilst Frankfurt has a population of 655,000 or under 1% of Germany's 83 million inhabitants.

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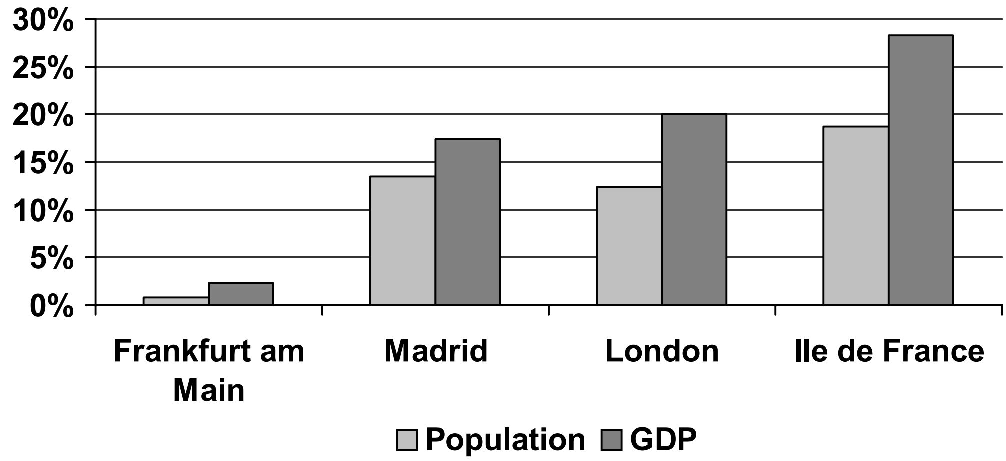
[17] Porter M.E., *The Competitive Advantage of Nations,* 1990 explains the important phenomenon of "clustering," in which related groups of successful firms and industries emerge in one nation to gain leading positions in the world market.

[18] See for example, Baptista, R. and Swann, P, *Do Firms in Clusters Innovate More,* (1998); Harrison, B., M.R. Kelley, and J. Gant, *Innovative Firm Behaviour and Local Milieu: Exploring the Intersection of Agglomeration, Firm Effects, and Technological Change*, 1996; Porter M.E., *On Competition,* 1998; Goldstein, G. S., and T. J. Gronberg, *Economies of Scope and Economies of Agglomeration*, 1984; Storper, M., *Institutions of the Knowledge-Based Economy*, 1996, Investment Fund Association.

[19] The aim of this section is to analyse the characteristics and benefits of some of Europe's most important clusters. We have therefore not made any attempt to make the clusters directly comparable with each other. We have captured the entire size of each cluster and have not made any adjustments to them.

Figure 3-1: Share of country's population and gross domestic product, 2004

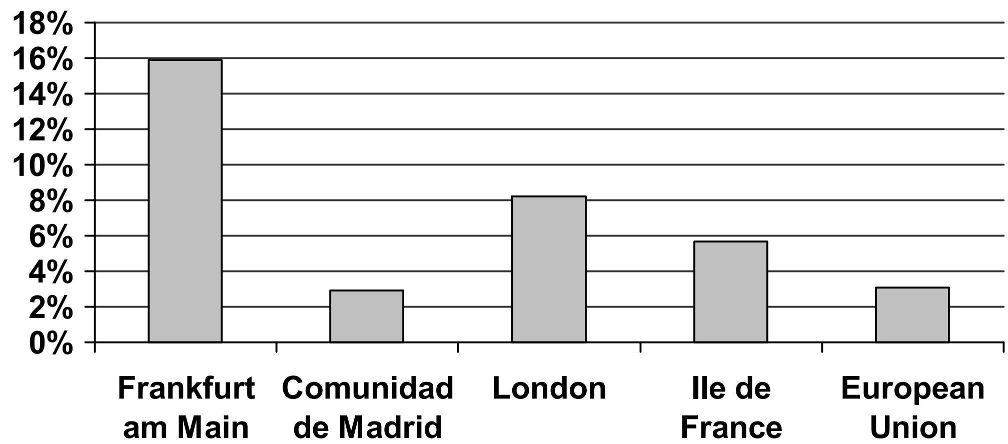


Source: Eurostat.

However, all four account for a larger share of their countries' respective gross domestic product than population. Ile de France accounts for 28% of France's yearly output, London 20%, Madrid 17% and Frankfurt 2%.

Financial intermediation plays an important role in all four locations. In Frankfurt, which is the smallest of the four locations that we compare in this report, there are some 73,000 financial intermediation jobs or 16% of all jobs in the city, as presented in Figure 3-2 below. In London there are 326,000 finance jobs, or over 8% of all jobs, in Ile de France 6%, or 274,000, whilst there are some 91,000 finance jobs in Madrid, representing 3% of the workforce — in line with the EU average.

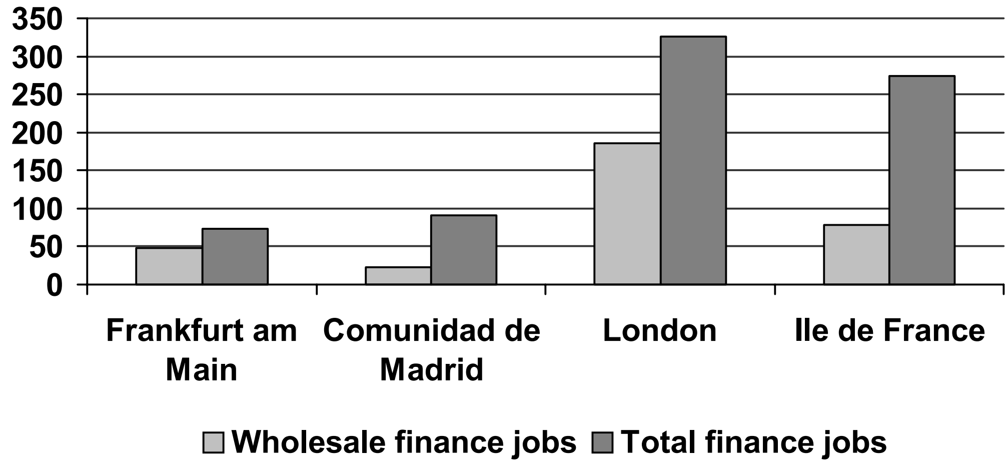
Figure 3-2: Financial intermediation jobs as a share of total regional jobs, 2003



Sources: Eurostat, Annual Business Inquiry, Frankfurt Economic Development GmbH, Instituto National de Estadistica, INSEE.

We estimate that the majority of finance jobs in London and Frankfurt are in wholesale finance. The two cities are each home to one of the world's four most important central banks. Central banks help create and sustain financial clusters by attracting high value financial service jobs and companies to the location. As presented in Figure 3-3 opposite, we estimate that in 2005 there were 48,000 wholesale finance jobs in Frankfurt and 186,000 in London. London is by far Europe's largest cluster of wholesale finance jobs.

Figure 3-3: Wholesale financial intermediation jobs, 2005, thousands



Sources: Eurostat, Annual Business Inquiry, Frankfurt Economic Development GmbH, Instituto National de Estadistica, INSEE, cebr analysis.

We estimate there to be 78,000 wholesale finance jobs in Ile de France, or 29% of all finance jobs in the region, and 23,000 in Madrid, or 20%. Ile de France has a comparatively high number of retail finance jobs located in the region — 200,000 compared to London's 140,000.

London, Frankfurt, Ile de France: a third of EU wholesale finance jobs

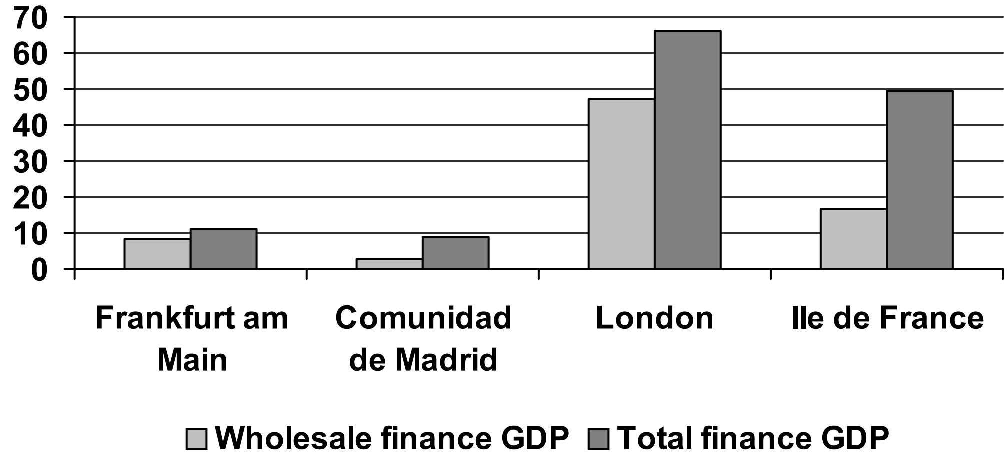
These four clusters employ 31% of all EU jobs in wholesale finance. The largest three — London, Frankfurt and Ile de France — make up 29% of all EU jobs in the industry, demonstrating the extent to which the sector is clustered.[20]

Based on these jobs figures, on official data on the contribution of finance to the location's gross domestic product and on our figures for wholesale finance activity in each EU member state, we estimate the economic activity in wholesale finance in the four locations.

Wholesale finance contributes 1.6% of the EU's gross domestic product. The largest of our wholesale finance clusters, London, contributes €47 billion to gross domestic product, which is equivalent to 11.3% of the London economy, or 77% of economic activity in wholesale finance in the UK. At €17 billion, wholesale finance accounts for some 30% of Ile de France financial sector output. However this equates to some 90% of wholesale finance's contribution to France's gross domestic product. It contributes 4% of Ile de France's gross regional product.

[20] Although the figures show only 29% of the wholesale finance jobs are in London, Paris and Frankfurt, anecdotal evidence would suggest that a rather higher proportion of those jobs generating more value added (like hedge fund managers and corporate M&A specialists) are in these locations.

Figure 3-4: Wholesale finance activity in 2005, € billion, 2004 constant prices



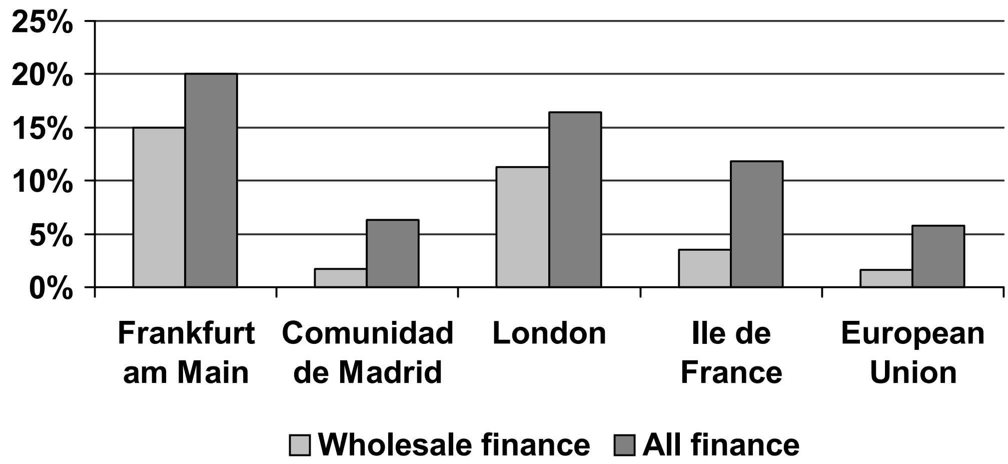
Sources: Eurostat, Annual Business Inquiry, Frankfurt Economic Development GmbH, Instituto National de Estadistica, INSEE, cebr analysis.

Because of the small size of its economy, because of it being the home of the European Central Bank and the German Bundesbank, and because of its financial cluster, finance contributes 20% to Frankfurt's economy. Within this we estimate wholesale finance makes up three quarters of Frankfurt's financial services, or €8.1 billion. The city makes up a quarter of Germany's wholesale financial sector. This is a very high share given that Frankfurt is home to less than 1% of Germany's population.

Frankfurt, London and Paris account for 41% of EU wholesale finance

Taken together, we estimate that the Frankfurt, London and Paris regions account for 41.3% of EU wholesale finance.

Figure 3-5: Wholesale finance contribution to gross region product, 2005



Sources: Eurostat, Annual Business Inquiry, Frankfurt Economic Development GmbH, Instituto National de Estadistica, INSEE, cebr analysis.

In Madrid we estimate wholesale finance to be worth €2.6 billion, or 27% of all finance in the city. Over a quarter (26%) of Spain's wholesale finance activity is located in Madrid — this share appears low when compared to the other three locations that we compare, particularly given Madrid's population and economic size. However finance, including wholesale finance, is more evenly distributed within Spain — Barcelona is the commercial capital, whilst the origins of the two largest banks, *Banco Bilbao Vizcaya Argentaria* and *Banco Santander Central Hispano* are in the Basque region.

We next estimate the number of jobs within each financial market in London, Ile de France, Madrid and Frankfurt,[21] as presented in Table 3-1 below. There is no official data to this detailed level of sector and regional disaggregation. Using data from the UK's Annual Business Inquiry and our own estimates for jobs in the City of London, which we publish in a quarterly report,[22] we arrive at estimates for London. We build our estimates for the other three clusters by comparing the market size in each cluster to London. In addition we compare the estimates for jobs in each region against other economic data in the most comprehensive internationally comparable series for industry comparisons.[23]

Table 3-1: Estimates of job numbers in each financial market, 2005

	Frankfurt am Main	Madrid	London	Ile de France
International banking	11,000	5,000	49,000	15,000
Equity market	6,000	6,000	42,000	11,000
Bond market	14,000	4,000	18,000	18,000
Foreign Exchange market	500	300	6,000	500
Derivatives market	500	200	6,000	1,000
Funds under management	9,000	2,000	25,000	10,000
Insurance	2,000	3,000	26,000	7,000
Investment banking/corporate finance	3,000	2,000	12,000	12,000
Central banking	3,000	2,000	2,000	4,000
Total	48,000	23,000	186,000	78,000

Sources: Eurostat, Annual Business Inquiry, Frankfurt Economic Development GmbH, Instituto National de Estadistica, INSEE, Bank for International Settlements, cebr analysis.

The most labour intensive markets in these four EU financial clusters are international banking, the equity market, the bond market, fund management and insurance. Nearly half of wholesale jobs in London are in international banking and equities. Funds and insurance also contribute sizeably to London's total wholesale finance jobs. In Ile de France and Frankfurt-am-Main, the largest employer is the bond market — the domestic bond market in both clusters is larger than London's. Fund management is relatively more important for Frankfurt than for the other

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21 We recognise that it is difficult to accurately estimate job numbers given the dearth of detailed jobs data. We do not expect our estimates to be highly accurate — they are merely indicative and should only be used to obtain an indication of employment in different markets and clusters.
22 cebr, '*Quarterly Business Forecasts: London*', December 2005.
23 HM Treasury, '*The UK Financial Services Sector: Rising to the Challenges and Opportunities of Globalisation*', March 2005.

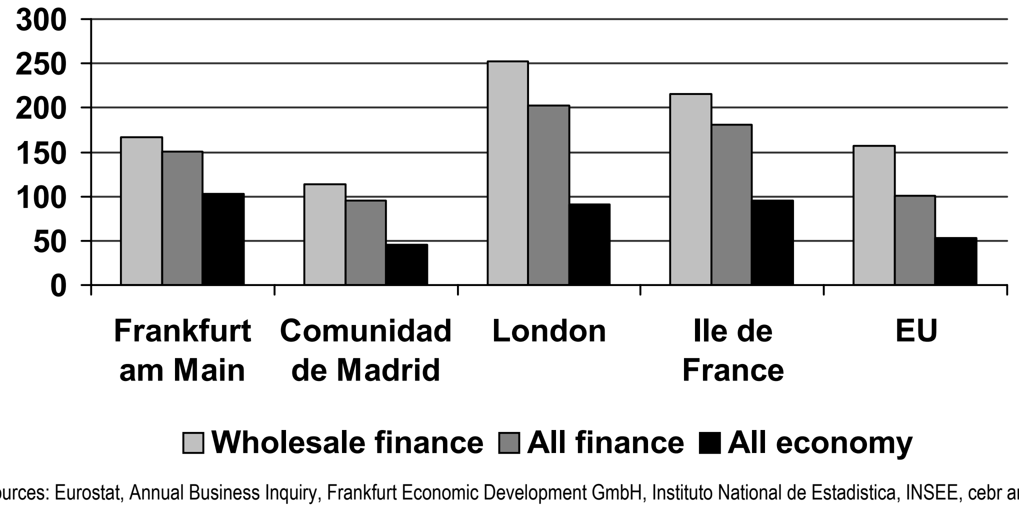
clusters, whilst Ile de France has roughly as many employees in investment banking as in London. The vast majority of derivatives and foreign exchange jobs in these four clusters are in London. In the smaller cluster, Madrid, the equity market is the largest employer, ahead of international banking and the bond market.

We now discuss the productivity — measured as output per job — of wholesale finance in the four clusters and in the EU.

Europe's financial clusters raise EU's productivity

In all four clusters the productivity of wholesale finance, and finance generally, is higher than that in the local economy as a whole, as shown in Figure 3-6. This reflects the economies of scale gained from having a financial cluster. In Frankfurt, Ile de France and London wholesale finance is more productive than in the rest of the EU. Generally, the larger the cluster, the more productive it is. London is the most productive cluster because of the economies of scale it has gained from leading numerous European and world financial markets, its status as a financial centre and the large number of employees employed in the sector. Madrid has a relatively low productivity in wholesale finance when compared to the EU at large. This is because of its small size (only 23,000 wholesale finance jobs) and because London, Ile de France and Frankfurt, which are highly productive clusters employ a third of all EU jobs in wholesale finance, raising overall EU productivity in the industry.

Figure 3-6: Output per worker, 2005, € billion



Sources: Eurostat, Annual Business Inquiry, Frankfurt Economic Development GmbH, Instituto National de Estadistica, INSEE, cebr analysis.

In Table 3-2 opposite we present the location quotients for each of our cluster regions. Location quotients show how densely a sector is located in a specific area relative to other areas.

We first use location quotients to compare the degree to which each cluster specialises in wholesale finance compared with proportion of wholesale finance in the whole country. A location quotient with a value greater than one indicates the concentration of the industry in the region.

All four clusters have a concentration of employment in wholesale finance compared to the average region in their respective country. Madrid has the lowest figure of the four regions – reflecting the more even distribution of finance and wholesale finance in Spain compared to the other countries. Frankfurt, on the other hand, stands out with a location quotient of 18.15. This is plausible given that wholesale finance in Frankfurt makes up three quarters of the city's financial services as well as almost a quarter of Germany's wholesale financial sector.

Table 3-2: Location quotients for the London, Frankfurt, Ile-de-France and Madrid, based on country comparisons, 2005

	Location quotient for cluster region compared to country, 2005
Frankfurt	18.15
Madrid	1.55
London	3.88
Ile-de-France	3.71

Sources: Bank of International Settlements, Eurostat, cebr analysis.

We have also calculated location quotients for each cluster, comparing their share of employment in wholesale finance to the share within the EU as a whole. In Table 3-3 below we present the location quotients for each of our cluster regions measuring the degree to which each cluster specialises in wholesale finance compared with proportion of wholesale finance in the EU. All four have a high concentration of employment in wholesale finance compared to the EU average. London and Frankfurt remain the most specialised with location quotients of 8.37 and 18.02, respectively. London is the only cluster where the location quotient is larger when using the EU as a benchmark suggesting the extent to which wholesale finance is a larger sector in the UK than in the average member state.

Table 3-3: Location quotients for the London, Frankfurt, Ile-de-France and Madrid, based on comparisons with wholesale finance in the EU, 2005

	Location quotient for cluster region compared to EU, 2005
Frankfurt	18.02
Madrid	1.27
London	8.37
Ile-de-France	2.93

Sources: Bank of International Settlements, Eurostat, cebr analysis.

Clusters are not just a European phenomenon. The success of the US' wholesale financial sector is dependent upon the US' big free market economy, but also on its financial clusters. New York is one of the world's three global financial centres. New York State had a gross state product of €675.3 billion in 2004 or 8% of the US' gross domestic product. However, New York's financial cluster contributed to 19% of New York State's gross state product and 15% of the US' financial sector. This contribution is large, despite New York State being the home to only 6.6% of all the US' inhabitants, highlighting the significant economic contribution to the US economy of the New York financial cluster.

3.2 The European Union's financial markets

In the second chapter we analysed the world's financial markets in order to understand how the markets are distributed across the globe. In this section, we focus on the European Union's financial markets in order to identify their geographical distribution across the bloc's member states. We do this exercise to help us understand to what degree the EU's wholesale financial sector is clustered in financial centres. We analyse each market in turn.

3.2.a The international banking market

In this section we analyse the international banking market by studying data on the linkages between banks within the European Union.

Table 3-4 below presents the main findings from *The Banker*'s 2004 and 2005 '*Top 300 European Banks'*.[24] Although it has a smaller economy than Germany, the UK has the largest share of Europe's tier one capital, ahead of Germany and France. Spain has been increasing its share of Europe's total bank tier one capital, as a result of the success of its banks and their acquisitions.[25] Spain has a larger share of Europe's tier one capital than Italy, which has a larger economy.

Table 3-4: EU's biggest banks by tier one capital and country of incorporation, 2002 -2004

	Share of top 300, 2002	Share of top 300, 2003	Share of top 300, 2004
UK	19.6%	18.6%	18.0%
Germany	17.6%	16.3%	15.4%
France	14.0%	14.8%	14.7%
Benelux	11.3%	11.6%	11.5%
Spain	8.1%	8.6%	9.4%
Italy	8.4%	8.5%	8.4%
Switzerland	6.7%	6.6%	6.5%
Scandinavia	5.9%	5.8%	6.1%
Austria	1.4%	1.5%	1.6%
Others	7.1%	7.7%	8.5%

Source: The Banker.

Although the UK accounts for 18% of European banks' tier one capital (which is largely shareholders' equity), it accounts for 30% of its external assets. According to the Bank for International Settlements, in the second quarter of 2005 banks and subsidiaries located in the UK had €3.3 trillion worth of assets in banks or other organisations that were not located in the UK. This compares with €1.7 trillion and €1.3 trillion in Germany and France respectively. The value of cross-border assets of banks in the UK increased from €2.1 trillion in the second quarter of 2005.

[24] *op.cit*
[25] For example Banco Central Hispano Santander bought the UK's Abbey in 2005.

Table 3-5: Bank assets held countries other than the home country, € billion

	Q2 2000	Q2 2005
Austria	99	213
Belgium	335	584
Denmark	63	96
Finland	33	47
France	659	1,304
Germany	978	1,746
Greece	NA	46
Ireland	174	440
Italy	208	304
Luxembourg	537	590
Netherlands	334	609
Portugal	52	75
Spain	134	267
Sweden	73	142
Switzerland	769	768
UK	2,159	3,250

Source: Bank for International Settlements.

Other smaller countries such as Belgium, Luxembourg, Ireland, Netherlands and Switzerland also account for a disproportionate share of Europe's external assets relative to their size, partly because of the fiscal advantages they offer but also because of their financial clusters.

Another important measure of international banking is the degree to which inter-bank transactions cross borders. According to the European Central Bank, most euro cross-border inter-bank payments pass through Germany, France and the UK.[26] In 2000 one quarter of payments transactions passed through Germany's payment system, whilst 18% and 15% passed through the UK and France respectively.

Most euro EU inter-bank payments are through only three clearing systems

Most countries account for a low share of total intra-EU-15 payments, whilst their own payments tend to be largely channelled through a few clearing systems. For instance payments sent by Dutch banks to German and UK banks account for around 61% of the total cross-border payments sent by Dutch banks. However the share of payments received by the Netherlands accounts for 8% of the total EU (15) cross-border payment flow. This suggests that cross-border inter-bank trading is characterised by the existence of the French, German and UK financial centres.

[26] See Table 6-10 in the annex. This presents cross-border inter-bank transactions between countries as a share of total inter-bank transactions through TARGET in 2000. This is the latest data available.

According to the European Central Bank, apart from Germany, which has the largest share of inter-bank payments, "*there are also two other significant countries, namely the UK… – highlighting the importance of London as a financial centre (which also deals in euro) – and France.*"[27] The largest banks, acting as "money centre" banks for the euro market as a whole, essentially carry out the redistribution of liquidity across borders.

The euro market is characterised by a "two-tier" system in which large banks trade among themselves on one level and on another smaller banks trade in their own local market. The EU's large financial centres — London, Frankfurt and Paris — trade among themselves and with all other countries, while other bilateral cross-border flows tend to be limited. This indicates that cross-border transactions are to a significant extent carried out with the major banks of these centres as counterparties.[28]

The table also shows the relative importance of smaller member states: Belgium, Luxembourg and the Netherlands have a high share of total intra-EU payments, relative to the size of their economies.

3.2.b The equity market

The domestic market capitalisation of the equities listed on EU exchanges that are registered with the World Federation of Exchanges stood at €7.6 trillion in 2004.[29] This equates to 25.3% of the domestic market capitalisation of all the exchanges in the world that are registered.

The London Stock Exchange makes up 30.5% of EU exchanges' domestic market capitalisation, whilst the Euronext's four exchanges (Brussels, Amsterdam, Lisbon and Paris) account for a further 26.0%. *Deutsche Börse* accounts for 12.7%. The BME Spanish Exchanges and the *Borsa Italiana* account for a further 18%, and therefore all other bourses account for only 13% of EU domestic market capitalisation.

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[27] See European Central Bank, '*Banking Integration in the Euro Area*', 2002.
[28] *ibid.*
[29] These include all EU exchanges except the Prague Stock Exchange, the Bratislava Stock Exchange and the stock exchanges of Estonia, Latvia and Lithuania.

Table 3-6: Domestic stock market capitalisation (equities)[a] € billion

	1995	2004	Change, 1995-2004	Domestic market capitalisation as a ratio of GDP, 2003
Athens Exchange	12.1	98.2	+86.0	59.9%
BME Spanish Exchanges	115.4	757.2	+641.9	86.6%
Borsa Italiana	160.2	635.6	+475.4	41.9%
Budapest Stock Exchange	11.9[c]	23.0	+10.1[c]	22.8%
Copenhagen Stock Exchange	44.0	125.0	+80.9	55.7%
Deutsche Börse	441.4	961.6	+520.2	44.9%
Euronext[b]	693.2	1,965.3	+1,272.1	76.3%
Irish Stock Exchange	19.8	91.8	+72.1	55.9%
Ljubljana Stock Exchange	0.7[d]	7.8	+7.1[d]	25.8%
London Stock Exchange	1,029.5	2,306.7	+1,277.1	136.8%
Luxembourg Stock Exchange	23.3	40.4	+17.1	142.0%
Malta Stock Exchange	0.7[e]	2.3	+1.6[e]	40.7%
OMX Helsinki Stock Exchange	33.8	147.9	+114.2	105.2%
OMX Stockholm Stock Exchange	131.9	303.3	+171.4	96.1%
Warsaw Stock Exchange	3.5	57.6	+54.1	14.5%
Wiener Börse	24.9	70.7	+45.8	22.3%
Total of these Stock Exchanges[f]	**2,732.9**	**7,561.2**	**+4,828.3**	**72.8%**

Source: World Federation of Exchanges.

[a] Domestic stock market capitalisation is the market capitalisation of listed companies incorporated in the same country as the stock exchange.

[b] Euronext comprises Amsterdam SE, Brussels SE, Lisbon SE and Paris SE which joined in 2000.

[c] Data is for 2000.

[d] Data is for 1996.

[e] Data is for 1998.

[f] Excluding Budapest SE, Ljubljana SE and Malta SE

When compared with the size of the local economy, some relatively small countries have a high stock market capitalisation, such as Finland, Luxembourg, the Netherlands and Sweden. Only two larger European countries – Spain and the UK — have a high equivalent ratio.

The London Stock Exchange is by far the EU's biggest

As discussed in the previous two chapters, because of a high degree of integration in the world's capital markets, stock exchanges are becoming more international, with more companies being listed on foreign exchanges. Table 3-7 overleaf presents the equity trading value across the European Union's major stock exchanges. These data are different to the domestic market capitalisation figures because they represent the value of shares traded rather than listed. In addition they include listed foreign shares, investment funds, rights, convertible instruments, derivatives and companies whose only goal is to hold shares of other listed companies.[30]

Table 3-7: Share trading in equities, 1995 and 2004, € billion

	Total share trading, 1995	Total share trading, 2000	Total share trading 2004	Foreign company share trading as a ratio of all share trading, 2004
Athens Exchange	4.7	102.2	35.7	0.5%
BME Spanish Exchanges	NA	692.8[b]	968.7	0.7%
Borsa Italiana	66.6	1,106.7	780.0	9.8%
Budapest Stock Exchange	NA	13.2	10.8	0.2%
Copenhagen Stock Exchange	21.7	111.4	85.4	2.3%
Deutsche Börse	454.0	2,300.8	1,240.6	8.9%
Euronext[a]	275.3	1,999.7	1,990.7	1.9%
Irish Stock Exchange	9.3[c]	15.6	36.3	2.3%
Ljubljana Stock Exchange	0.3	1.0	1.2	0.0%
London Stock Exchange	881.7	4,948.0	4,161.0	43.1%
Luxembourg Stock Exchange	0.4	1.8	0.5	10.1%
Malta Stock Exchange	0.1	0.2	0.1	0.0%
OMX Helsinki Stock Exchange	14.7	226.1	180.1	1.9%
OMX Stockholm Stock Exchange	72.0	526.7	372.3	10.9%
Warsaw Stock Exchange	2.1	21.0	13.1	1.7%
Wiener Börse	10.2	10.5	19.4	1.7%
Total of these stock exchanges	NA	11,939.2	9,895.6	21.0%

Source: World Exchanges Federation.

[a] Euronext exchanges include Amsterdam, Brussels, Lisbon and Paris Stock Exchanges.

[b] Data is for 2002.

[c] Data is for 1996.

The London Stock Exchange accounts for around 42% of EU share trading[31] with €4.2 trillion of the €9.9 trillion of share trading on all EU exchanges registered with the World Federation of Exchanges. This compares with 20.1% on the Euronext exchanges and 12.5% on the Deutsche Börse.

Three quarters of foreign listed companies in the EU are in London

London's share of EU share trading is high relative to its domestic market capitalisation because it accounts for over 75% of share trading in foreign company listings. Three in four companies that list on foreign exchanges in the EU do so on

[30] Comparisons between stock exchanges must be done with caution because of differences in measuring share trading.

[31] These ratios must be dealt with caution given that some Stock Exchanges measure share trading differently.

the London Stock Exchange. London is the world's largest market for international equities, with around 45% of world foreign equities turnover. The New York Stock Exchange and the NASDAQ together account for a further 32%, whilst the Swiss Exchange accounts for 15%. Deutsche Börse is the fourth largest, but accounts for only 3% of world international equity trade. Foreign equity activity is concentrated in three world financial centres — London, New York and Switzerland.

London's disproportionate share of the EU's stock market activity and world stock market activity reflects its position as the EU's regional centre for the equity market.

3.2.c The bond market

The EU is home to some 32% of the €46.6 trillion global bond market. This includes both domestic and international securities. The EU has become the dominant player within the international securities market, which has grown five fold between 1995 and 2005. In 1995 the EU represented 42% of worldwide international bond issues, whilst today it represents 54%.

Over 90% of growth in EU international bonds is in seven countries

The value of international debt securities issued by EU countries increased from €0.9 trillion in 1995 to €6.1 trillion today. As a result, 41% of debt securities issues are international, compared to just 14% ten years ago.

The UK and Germany, through London and Frankfurt, account for just under half of the EU's international debt securities — the UK accounts for 23% and Germany 22%. Netherlands accounts for 13% and France12%. Of the €5.2 trillion growth in EU international debt securities between 1995 and 2005, 23% was in the UK and a further 23% in Germany. Issuers from the Netherlands, France, Italy, Spain and Ireland contributed an additional 46% of the growth. Therefore just seven of the EU's 25 countries accounted for over 90% of the growth in the EU's total international debt securities issues between 1995 and 2005.

Table 3-8: EU international debt securities,[a] € billion

	International debt securities, 1995	International debt securities, 2005	Share of EU international securities, 2005	Share of international securities to all country/region debt securities, 2005
Austria	49.1	178.5	2.9%	52%
Belgium	19.3	98.9	1.6%	22%
Cyprus	0.4	6.2	0.1%	NA
Czech Republic	1.1	5.2	0.1%	10%
Denmark	26.9	57.0	0.9%	16%
Estonia	0.1[b]	1.7	0.0%	NA
Finland	45.9	73.4	1.2%	46%
France	141.7	722.5	11.8%	31%
Germany	67.4	1,331.8	21.8%	45%
Greece	15.4	83.5	1.4%	33%
Hungary	12.2	15.0	0.2%	28%
Ireland	14.4	312.3	5.1%	81%
Italy	49.2	447.9	7.3%	20%
Latvia	0.2[c]	0.7	0.0%	NA
Lithuania	0.1	2.3	0.0%	NA
Luxembourg	23.0	186.3	3.0%	NA
Malta	0.2	0.2	0.0%	NA
Netherlands	160.8	807.3	13.2%	60%
Poland	4.4	23.0	0.4%	24%
Portugal	8.1	42.4	0.7%	27%
Slovakia	0.2	2.1	0.0%	19%
Slovenia	0.2[d]	1.5	0.0%	NA
Spain	19.4	377.7	6.0%	35%
Sweden	78.8	121.2	2.0%	36%
UK	191.1	1,419.1	23.2%	63%
Total EU	**906**	**6,119**	**100.0%**	**24.4%**

Source: Bank for International Settlements.

[a] Data is for amounts outstanding as at June of each year.

[b] Data is for 1997.

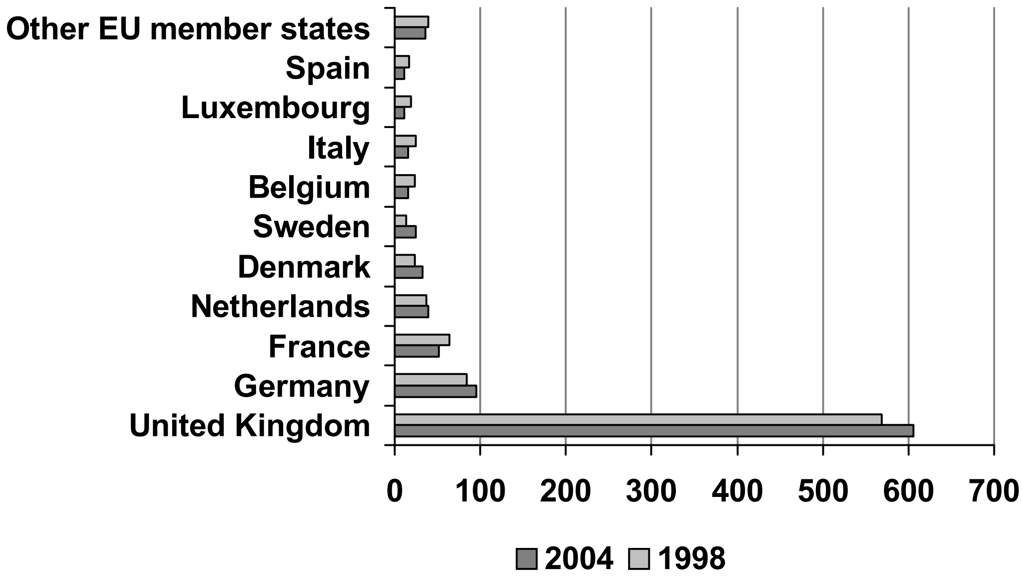
[c] Data is for 1999.

[d] Data is for 1996.

3.2.d The foreign exchange market

The EU is by far the world's largest trader of foreign exchange. In 2004 it traded 49% of all of the world's currency exchanges. The US, the second largest traded, only exchanged 19%. As with the derivatives market and the international bond market, London's status as a world financial centre has made the EU the world leader in these markets.

Figure 3-7: Daily average of foreign exchange turnover net of local inter-dealing double counting, April 2004, € billion



Source: Bank for International Settlements.

The UK, mostly through London, represents nearly two thirds (65%) of all of the EU's dealings in foreign exchange. This share has increased from 62% in 1998. Part of increase in the UK's share of the foreign exchange market is as a result of the creation of the euro, which has caused a decline in the foreign exchange markets in most other large member states.

While Denmark and Sweden have both increased their share of the market, only Germany has increased the value of its currency trade, though its share of the EU market has slipped down to 9% in 2004 from 10% in 1998. Nonetheless the growth in the value of trade in the UK and its share of the market, reflects the concentration of the foreign exchange market in the London cluster.

3.2.e The derivatives market

The derivatives market is divided into two parts: exchange traded and over-the-counter. We only deal with the latter.

The European Union dominates the world's over-the-counter derivatives market enjoying 68% and 53% respectively of the interest rate and foreign exchange derivatives markets. These two sub-markets account for nearly 90% of all the global derivatives market.

London places the EU top of the world's derivatives market

Daily average turnover in the EU's interest rate derivatives market rose to €733.1 million in 2004 from €564.9 million in 2001. The UK has consolidated its position as the largest over-the-counter derivatives centre in the EU and also worldwide. The UK represents 62% of the interest rate derivatives and between 2001 and 2004 accounted for 80% of the growth in EU daily turnover in these types of derivatives. France was another significant contributor to the European growth in this market, accounting for 20% of the increase. On the other hand Germany saw its turnover of such derivatives decline 54% during the same period.

Daily average turnover in the EU's foreign exchange derivatives rose to €747.4 million in 2004 from €687.0 million in 2001. According to the Bank for International Settlements, most of the EU's foreign exchange derivatives turnover originated from London, with two thirds of Europe's daily turnover originating from the UK.

The importance of the London financial cluster in the foreign exchange derivatives market, as with the interest rate derivatives market, increased between 2001 and 2004: the UK contributed to 71% of the growth in EU foreign exchange turnover between 2001 and 2004. Germany, the Netherlands, Denmark and France accounted for a further 20% of the growth.

London is the world leader in the foreign exchange derivatives market and the interest rate derivatives market accounting for 35% and 42% respectively of the global market. This compares with the US' 16% and 24% shares and Japan's 9% and 2% shares respectively.

Table 3-9: Over-the-counter foreign exchange and interest rate derivatives daily average turnover,[a] 2004

	Daily average turnover in foreign exchange derivatives, 2004, € million	Share of EU foreign exchange derivatives, 2004	Share of growth in EU foreign exchange derivatives between 2001 and 2004	Daily average turnover in interest rate derivatives, 2004, € million	Share of EU interest rate derivatives, 2004	Share of growth in EU interest rate derivatives between 2001 and 2004
Austria	7.3	1.0%	1.6%	10.9	1.5%	2.3%
Belgium	11.6	1.5%	2.1%	24.6	3.4%	4.0%
Czech Republic	1.2	0.2%	0.1%	0.5	0.1%	0.1%
Denmark	26.5	3.5%	4.2%	8.7	1.2%	1.2%
Finland	0.9	0.1%	0.0%	0.2	0.0%	-0.1%
France	43.1	5.8%	4.0%	121.8	16.6%	21.2%
Germany	68.1	9.1%	6.1%	34.4	4.7%	-12.6%
Greece	2.6	0.4%	0.1%	0.1	0.1%	0.0%
Hungary	1.7	0.2%	0.6%	0.2	0.1%	0.0%
Ireland	2.2	0.3%	-0.6%	10.0	1.4%	1.6%
Italy	11.9	1.6%	0.8%	30.5	4.2%	3.5%
Luxembourg	9.2	1.2%	0.8%	5.9	2.9%	0.7%
Netherlands	34.1	1.2%	5.4%	15.2	2.1%	-1.3%
Poland	3.7	0.5%	0.4%	0.8	0.1%	0.1%
Portugal	0.7	0.1%	0.0%	0.6	0.1%	0.1%
Slovakia	1.1	0.2%	0.3%	NA	NA	NA
Slovenia	0.0	0.0%	0.0%	NA	NA	NA
Spain	8.2	1.1%	1.5%	9.6	1.3%	-2.1%
Sweden	20.0	2.7%	1.8%	6.0	0.8%	1.0%
UK	493.3	66.0%	70.6%	453.2	61.8%	80.1%
Total EU[b]	**747.4**	**100%**	**100%**	**733.1**	**100%**	**100%**

Source: Bank for International Settlements.

[a] Data is for amounts outstanding as at June of each year.

[b] EU data excludes Cyprus, Estonia, Latvia, Lithuania and Malta for both variables and Slovakia and Slovenia for interest rate derivatives.

3.2.f The funds under management market

The EU manages roughly a third of the world's regulated funds under management, which in 2004 equalled €37.0 trillion.

In 2004 the EU had €11.9 trillion in regulated funds under management, of which €2.5 trillion were in pension funds, €4.9 trillion in insurance funds and €4.6 trillion in investment funds. Total assets under management increased from €10.4 trillion in 2001 — most of the growth was in pension funds and some in investment funds. Because of Europe's ageing population and increased pressure upon state pensions, European trends somewhat contrast global trends where investment funds have been the fastest growing, ahead of insurance funds and lastly pension funds.

Within the EU, the UK has the largest share of pension fund and insurance funds assets, whilst Luxembourg, France and Germany host the most investment fund assets. The Netherlands is the second largest European host of pension fund assets.

The European Union is home to roughly a quarter of the world's hedge fund assets, according to a survey by Hedge Fund Manager Magazine in September 2005. According to EuroHedge[32] the number of hedge fund assets in Europe doubled between 2002 and 2003 alone to €151.3 billion, or 21% of the world's hedge fund assets in 2003.

According to a survey conducted by the European Central Bank, "*the main reasons for dealing with hedge funds are the growth of income and the diversification of income sources…The interest in hedge funds from an investment perspective was driven by their attractive risk-return profile, uncorrelated with other major asset classes*". [33]

London is the home of the European hedge fund market. Roughly 70% of European funds were managed out of the UK in 2003, most of which were in London. According to EuroHedge and International Financial Services London, London's hedge fund assets nearly doubled to €105.9 billion in 2003, or 15% of world assets.[34] However looking forward we expect London's share of European funds to stabilise as hedge funds grow in countries such as France, Germany, Sweden, Netherlands, Spain, Ireland and Italy. We expect Europe's share of world hedge fund assets to grow, with London's share of world assets possible rising to 20% in 2010.

The hedge fund market is continually growing and increasingly clustering. According to the European Central Bank survey, only banks incorporated in "*Germany, Spain, France, Netherlands, Sweden and the UK appeared to have more significant financing and trading links with hedge funds*".

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[32] EuroHedge data sourced through International Financial Services London, *Hedge Funds,* June 2004
[33] European Central Bank, *Large EU Bank's Exposure to Hedge Funds*, November 2005
[34] *ibid.*

Table 3-10: Assets under fund management and investments of insurance corporations, €bn

	Total assets under management by pension funds, 2001	Total assets under management by pension funds, 2004	Total investments of insurance corporations, 2001	Total investments of insurance corporations, 2004	Total assets under management by investment funds, 2001	Total assets under management by investment funds, 2004
Austria	8	10	57	68	98	123
Belgium	14	12	116	164	87	95
Cyprus	NA	NA	NA	NA	NA	NA
Czech Rep.	2	3	5	8	3	4
Denmark	42	378	96	124	38	77
Estonia	2	172	152	311	57	313
Finland	NA	NA	32	38	12	22
France[d]	0	0	837	943[a]	649	799
Germany	100[b]	260	943	1,092	764	862
Greece[d]	0	0	12	12	17	16
Hungary	2	5	3	5	3	4
Italy	7	12	307	397	384	281
Ireland	51	62	56	74[a]	284	436
Latvia	0	0	0	0	0	0
Lithuania	0	0	0	0	0	0
Luxembourg	NA	NA	29	40	854	975
Malta	0	0	0	1	1	1
Netherlands	451	522	297	322	112	98
Poland	6	15	11	14	3	9
Portugal	15	15	27	35	26	31
Slovakia	NA	NA	1	2		2
Slovenia	0	1	1	2	3	2
Spain	45	64	149	204	158	208
Sweden	0	0	0	0	87	117
UK	1,180	1,107	1,740	1,629	362	424[c]
EU-25	**1,670****	**2,468**	**4,721**	**4,867[a]**	**3,974**	**4,585**

Source: European Central Bank, *EU Banking Structures,* October 2005.

[a] Figure is for 2003.

[b] Figure is for 2002.

[c] ECB Estimate.

[d] All French and Greek pension funds are state-owned (reported as 0).

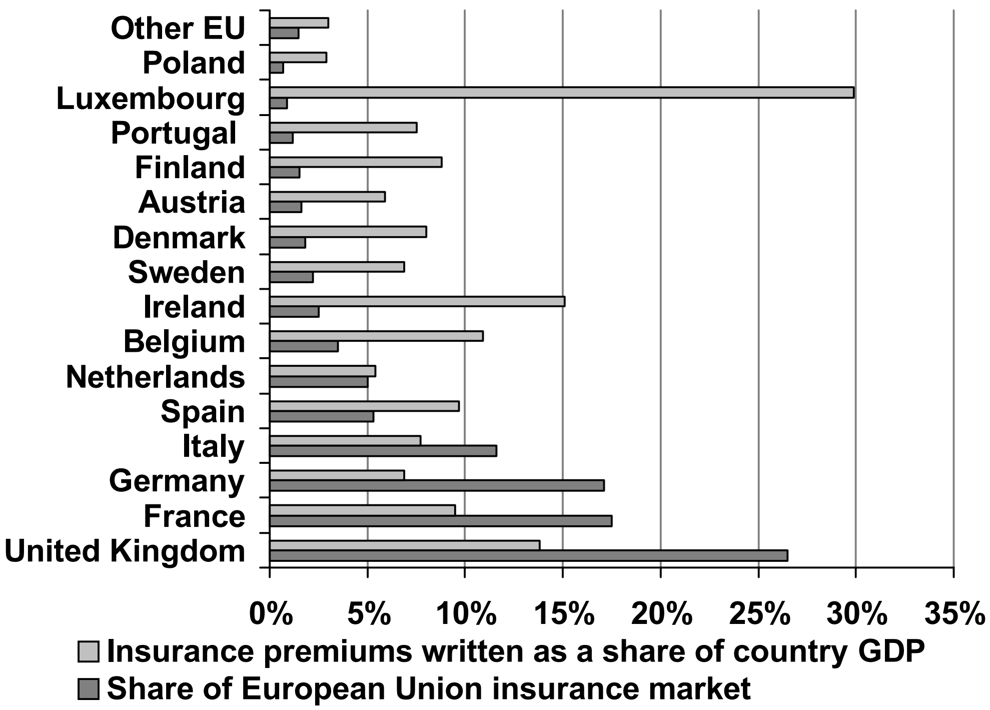
3.2.g The insurance market

The EU accounts for over a third (34.4%) of the world's insurance market which was worth €2.6 trillion in 2004, based on the number of insurance premiums written. It is currently neck and neck with the US that represents 33.8% of the market.

Within the EU, the UK has the highest share of the market, accounting for 26.5% of the EU market, ahead of France and Germany, which have 17.5% and 17.1% respectively. For a country of its size, the UK has a high value of insurance premiums written relative to gross domestic product.

This is because of London's role as the world's leading centre for internationally traded insurance and re-insurance. Even so, the UK has only the third largest ratio of insurance premiums relative to gross domestic product, lagging behind Luxembourg and Ireland, which both have a significant local financial cluster. Belgium also has a relatively important insurance sector, when compared to the size of its economy.

Figure 3-8: Insurance premiums written relative to total EU premiums written and gross domestic product, 2004



Source: Swiss Re, sigma No. 2 2005 and Eurostat.

3.2.h The investment banking market

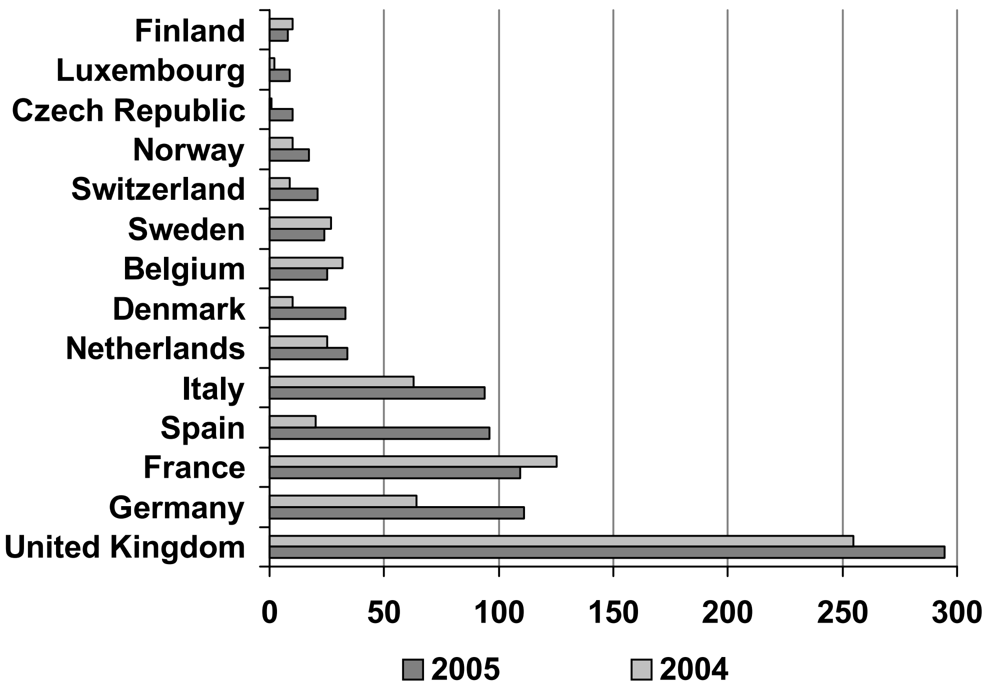
The investment banking market is largely made up of three components: equity, fixed income (bonds) and mergers & acquisitions. In this section we deal with the latter, having already dealt with the former two markets.

Europe saw the value of completed merger and acquisitions deals surge in 2005 by 66%, from $518 billion in 2004 to $861.7 billion. As a result, it has increased its share of the world market from 32% to 40%. The US remains the world leader with 41%.

As presented in Figure 3-9 below, in 2005 the UK remained the most active nation for European deals. It made up 29% of announced deals and 36% of completed deals. Germany emerged as the second most active country ahead of France in 2005. However together, they only make up 22% of announced European deals and 17% of completed deals.

The UK's disproportionate share of European merger and acquisition deals reflects its openness and its contribution to meeting the *Lisbon Agenda.* Clearly if the London cluster did not exist, companies would carry out their deals in other countries, but because of the UK's openness companies carry out such deals in London.

Figure 3-9: Announced European target nation for merger and acquisition deals, $ billion



Source: Thomson Financial, *Mergers and Acquisitions Review,* Fourth Quarter 2005.

The surge in merger and acquisition growth has been partly fuelled by the rapid growth in the private equity market. In the private equity sector (typically) investment banks, together with the management of a company, buy out the company from its shareholders. It is termed private, because the company is de-listed from the stock market and turned into a private limited company.

The sector, like hedge funds, is a US' invention that developed in 1989. Although the US market has grown significantly over this period, it is only now booming in Europe, after struggling as a result of the high-tech bust of 2000.

It is estimated that private equity houses in Europe raised €60 billion in 2005, whilst buyouts totalled more than €130 billion.[35] In the UK buyouts jumped 27% in 2005 to reach €36.4 billion in 2005, above the previous peak of €30.1 billion achieved in 2000.[36]

The European private equity boom has been fuelled by low borrowing rates — which in the euro area remained at 2.0% between June 2003 and December 2005 — by the stock market crash of 2000 and by the possibility of avoiding many of the reporting constraints that public companies have. In addition the growth in the market has been boosted because it provides an alternative source of business for banks after European companies switched away from bank loans and into bonds after the dot.com crash. Finally, the market raises the ability of countering the risks posed by the equity market (by using the knowledge of both banks and company management to identify real value in a company).

An important benefit of the private equity market is that it forces inefficient companies to become more efficient, otherwise they face the risk of being taken over. This reinforces the role finance plays as a tool enabling economic growth.

On the other hand, the private equity sector poses risks: investors do not look at long term strategies, but seek to make a quick profit on a high leverage (using the banks to securitise bond issues), therefore raising financial risks. In addition, the accountability and transparency provided by accountancy regulations is lost.

European wholesale finance is highly clustered

In an increasingly competitive global economy, industries cluster in order to raise economies of scale, such as a sharing a larger pool of skilled labour, easy knowledge transfer and facilitating synergies between companies. European wholesale finance is highly clustered in locations such as London, Paris and Frankfurt. Indeed, through the London cluster, the European Union is the world leader in markets such as international equity, foreign exchange, derivatives and insurance. London is also at the forefront of EU markets such as investment banking, hedge funds and private equity.

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35 Barry Riley writing in *Financial World*, February 2006.
36 KPMG Private Equity Group, through *Financial World,* February 2006.

4 The Future

This chapter draws up a number of scenarios for the future of European wholesale finance and the European Union's economy, given globalisation and the European Commission's targets. It discusses the opportunities and threats to growth in wholesale finance and their implications. The chapter also analyses the financial and economic growth prospects of four emerging markets — China, India, Russia and Turkey — and present scenarios for future growth in wholesale finance.

4.1 The changing economic world

It is well understood that there are a number of key drivers affecting the likely shape of the world economy over the coming years.

Looking out to 2020 we see:

i. Changing demographics – rapidly rising populations in the east; stabilising and falling populations in parts of the west;

ii. The impact of technology – most data on research and development spending indicates rising worldwide investment in technology;

iii. The impact of the spread of education worldwide – areas that previously lagged behind because of limited levels of education and exposure to the advanced world are catching up fast;

iv. The movement toward free market economic policies in large parts of the world, including huge economies like China and India — such economies are being integrated into the advanced world economy for the first time — and limited progress in doing so in the European Union;

v. Renewed importance of resources — the spreading of world economic development has placed renewed focus on the availability of natural resources including energy; and

vi. An increased importance for environmental protection —global climate change has drawn attention to environmental issues that are rising up the global agenda.

We have modelled the impacts of these changes in our base forecasts for world economic output up to 2020. The growth forecasts (at constant prices) are shown in Table 4.2 overleaf.

Box 4-1: Modelling methodology

We have modelled the growth in the world economy and wholesale finance by calculating the long-term growth rate for the EU-25, US, Japan, China and the rest of the world between 1992 and 2005 and extrapolating these trends forward to 2020. We have made adjustments to these trend growth rates in response to how each growth driver (listed above) is likely to affect each region and/or the wholesale finance sector. For example “changing demographics” contributes to a lower long term economic growth rate in the EU-25 and Japan, but raises it in China and the rest of the world.

We have corroborated our forecasts for wholesale finance by constraining the contribution of the sector to the economy as a whole. Our forecasts give an indicative picture of the world economy in 2020, and the impact of the various drivers on the economy and wholesale finance.

Table 4-2: Average annual real growth in gross domestic product between 2004 and 2020

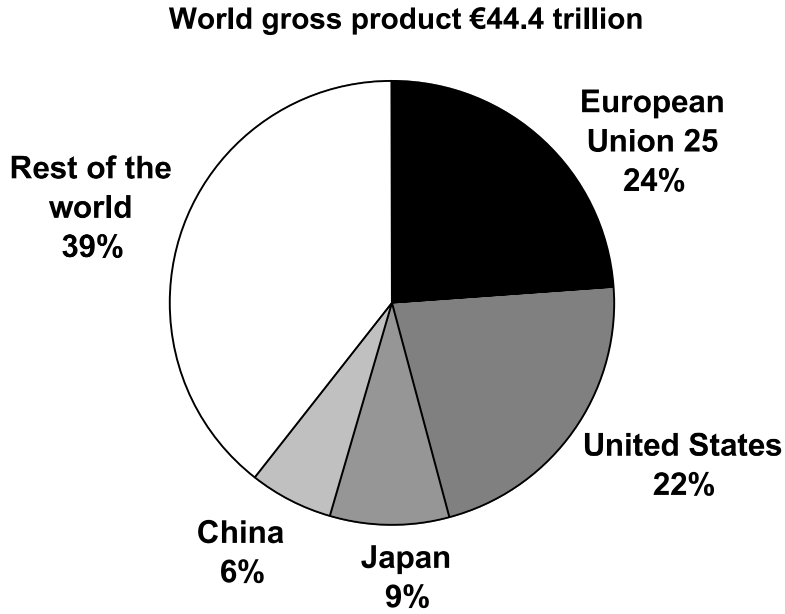
EU-25	1.7%
US	3.1%
Japan	2.1%
China	8.2%
Russia	5.3%
India	6.1%
Turkey	5.4%
Rest of the world	4.0%
World	3.5%

Source: cebr analysis.

The forecasts imply a world economy growing at an annual rate of 3.5% per annum with growth in the EU at about half that rate at 1.7%. As part of the inevitable growth in the east, the EU’s share of world economic activity at constant prices moves from 24.2% in 2004 to 18.3% in 2020. Europe’s poor progress in implementing economic reform across all the economy — such as failing to meet the Lisbon Agenda, failing to adequately reform the labour market, public sector and pensions — will play an important role in constraining Europe’s long-term rate of economic expansion. A certain degree of protectionism in a number of markets, most notably in capital markets, will also limit Europe’s productivity growth and hence economic growth.

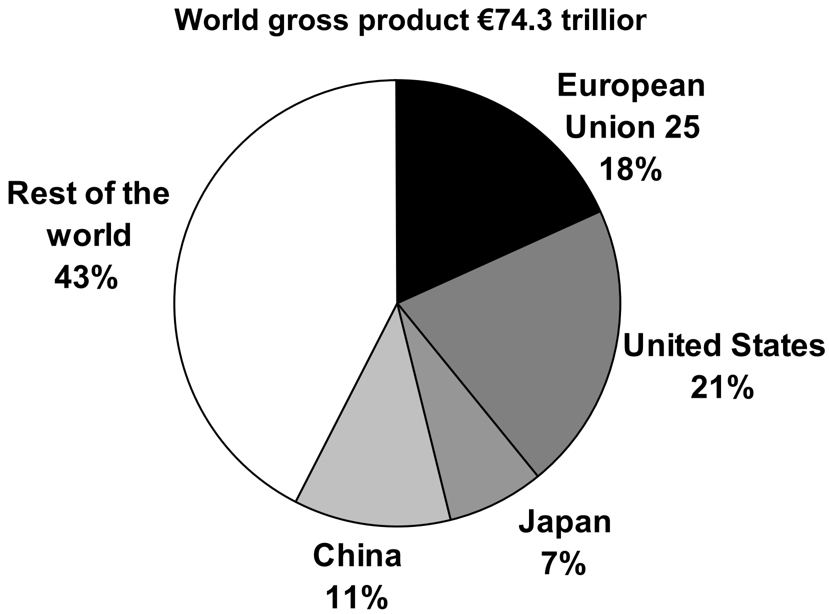
The counterpart of the EU’s falling share will be the rise of China, forecast to grow from 5.6% of gross world product in 2004 to 11.3% at constant prices in 2020. In addition, the rest of the world outside the EU, the US, Japan and China — including India, Russia, Turkey and other dynamic economies — is likely to have a share of world gross domestic product rising from 39.5% in 2004 to 42.5% in 2020. Finally the US will continue to grow faster than all other developed economies, maintaining its share of the world economy. Its economic drivers will be high degree of economic flexibility, a relatively small government, a favourable demography and a large, single integrated market.

Figure 4-1: World gross domestic product in 2004 at 2004 prices



Sources: Eurostat, National Bureau of Statistics of China, US Bureau of Economic Analysis, Japanese Cabinet Office.

Figure 4-2: World gross domestic product in 2020 at 2004 prices



Sources: Eurostat, National Bureau of Statistics of China, US Bureau of Economic Analysis, Japanese Cabinet Office, cebr analysis.

4.2 Emerging economies

Given the pattern of growth described above, the areas where world trade and business opportunities are likely to be expanding most rapidly are clear. We therefore look in some detail at the opportunities for wholesale financial services — and indeed the challenges — related to the growth of the economies in China, India, Russia and Turkey.

4.2.a China

The Chinese economy is undergoing a remarkable transformation. Gross domestic product growth in 2005 was estimated to be 9.9%. Between 2000 and 2004 alone, Chinese exports grew from $200 billion to $600 billion (€483 billion), leaving China as the world's third largest goods' exporter. In services it is the world's ninth biggest exporter with $62 billion (€50 billion). During 2005 China overtook the UK to become the world's fourth largest economy; on present trends China is likely to overtake Germany in early 2007 to become the world's third largest economy.

China's wholesale finance could be 9% of world in 2020

The combination of increasing size and economic dynamism make China impossible to ignore as a market and as a competitor. China has a relatively small wholesale financial services sector at present, which we estimate in 2004 accounted for 0.9% of gross domestic product. This compares with 1.6% in the EU and 2.4% in the US. In 2004 we estimate that it exported €0.5 billion in financial and insurance services or 0.3% of world exports.

The future is not predetermined and will depend on the extent to which the EU — and indeed other economies — can offer a comparative advantage in its exports of financial services. Nevertheless, our base forecasts have China's share of world activity in wholesale financial services growing from 3.9% in 2004 to 9.2% in 2020, implying annual growth (at constant prices) of 11.3%.

This dynamic growth is likely to result from two factors: the rapid growth of the Chinese economy at around 8% per year and the increasing importance of wholesale financial services as the Chinese economy matures: currently some €1.4 trillion worth of private savings resides in deposit accounts in China. Much of this is likely to feed through to equity and bond markets over the next fifteen years, as the wholesale financial market reforms.

4.2.b India

The Indian economy, like China, is also transforming itself. But whereas China is specialising heavily in manufacturing for export markets, Indian growth is based on a range of different activities. In particular, India is establishing a *niche* as a preferred location for outsourcing given its vast cheap pool of English-speaking employees. The consultants, AT Kearney, in their 2004 outsourcing review showed that, as a potential location for outsourced activity, India was substantially ahead of all other locations, outscoring all of them for costs and skill availability.[37] A study by the City of London Corporation has recently shown potential cost savings of up to 60% from off-shoring some activities in investment banking and fund management to India.[38]

Though India's exports of goods stood at €61 billion in 2004, much lower than China's, its exports of services reached €32 billion in 2004 from €5 billion in 1994, making it the eighth biggest in the world excluding intra-EU trade. Gross domestic product grew by 7.7% in the first three quarters of 2005, after annual growth of 8.6% in 2004. Between 2000 and 2004 it averaged 6.1% per annum — slower than China, but large strides nonetheless.

Like the overall economy, India's financial sector is growing at a fast pace — though more in retail than in wholesale finance. The sector as a whole averaged 6.9% annual growth between 2000 and 2004. The banks alone, which have come to make up roughly half the sector, averaged 11.4% growth.

The wholesale financial sector suffered from the 2000 dot.com crash and until 2004 was still struggling to recover. Growth in 'non-bank financial institutions', which includes fund managers and stock brokers, reached 19.5% annual growth in 2000 only to slip to -11.5% and -6.7% in the following two years. Since then the sector has improved slightly, with growth of 2.4% and 5.4% in 2003 and 2004 respectively.

India's stock market booming but structural risks ahead

On the other hand the insurance sector has averaged 10.3% growth per annum between 2000 and 2004 through a boom of 15.2% and 36.0% in 2002 and 2003 respectively. The 'non-bank financial institutions' and 'insurance' sectors contributed 3.6% to the Indian economy in 2000. Because of the finance crash in 2001 and fast growth in other sectors, this share slipped to 2.9% in 2004. As wholesale finance recovers on the back of a booming retail financial sector and becomes more adept at dealing with risks, we expect its size and importance to India's and the world's economy to grow.

The growth in India's stock exchanges — amongst the fastest in the world — partly reflects this. The domestic market capitalisation of India's two exchanges rose from €247 billion in 2001 to €603 billion in 2005. By comparison, domestic market capitalisation on the Hong Kong stock exchange — Asia's second largest after Tokyo — rose from €565 billion to €693 billion over the same period. However India's economic fundamentals are less stable than in China; it is running trade and fiscal deficits that could be unsustainable in the long run. If confidence in India changes in the short term, it could hinder the long-term expansion of the country's real and monetary markets.

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[37] AT Kearney's *2004 Offshore Location Attractiveness Index*

[38] University of Reading Business School for Financial Markets (2005): *Offshoring and the City of London*, City of London, 2005.

4.2.c Russia

The Russian economy grew 6.1% in 2005 and growth has averaged 6.1% every year since 2001. In purchasing power parity terms — taking constant prices across countries — Russia's economy is projected to overtake Italy as Europe's fourth largest economy by 2008.

However most of the growth in the economy is as a result of high demand for oil and gas and high energy prices — the 'mining and quarrying' sector, which includes oil and gas extraction, has gone from contributing 6.8% of the economy in 2001 to 10.6% in 2005. As Russia becomes more of a 'commodity economy', it is becoming increasingly vulnerable to commodity price fluctuations.

Russia becoming a commodity economy

Annual inflation is running at over 11%, though in line with the Bank of Russia's inflation target. The high inflation target reflects the monetary instability still present in the economy eight years after the 1998 crash. The persistent uncertainty has restricted the size of the financial sector, particularly wholesale activities. Financial intermediation only contributes 3.7% of the Russian economy, though this has increased from 3.1% in 2001.

Russia's exports of merchandise surged 35% in nominal terms in 2004 on top of a 27% expansion in 2003 to reach €147 billion — though some 60% of this trade is in fuels and mining. Its commercial services are also growing sharply, reaching €16 billion in 2004. However, of Russia's services exports 65% is in transport and travel and only 1.6% are finance and insurance services.

We estimate that Russia only sells €320 million worth of insurance and financial services to the world, or 0.2% of the world market. The contribution of its wholesale financial sector is roughly 0.2% of its gross domestic product.

4.2.d Turkey

Turkey formally started EU accession talks in October 2005. Turkey is a relatively poor country. With a gross domestic product of just €190 billion in 2005, its economy is as big as Denmark's, and not much bigger than Poland's despite having 65 million more inhabitants than Denmark and 31 million more than Poland.[39] With a population of 70 million, Turkey's growth potential is nevertheless significant and is an important opportunity for the EU.

Turkey's financial sector recovering from 1990s mis-management

Turkey's economic growth has not been impressive for a country at its level of development. Its real annual growth has averaged 4.3% since 1995. However this timeframe includes the economic turbulence Turkey faced as a result of its 1995 inflation crises, with which it only came to terms in 2001. Between 2001 and 2005, economic growth has accelerated to average 6.9%.

As a result of the mis-management of the monetary economy in the 1990s, Turkey has a small financial sector. According to Turkish official statistics the sector grew up to 2000, but has shrunk since because of the restructuring of the financial markets and the economy. In 2004 it accounted for less than 3% of the economy.

Following Turkey's bout of hyperinflation in the 1990s, the wholesale financial sector remains unstable. We estimate activity in this sector to be less than 0.2% of gross domestic product or €380 million. The Istanbul stock market had a domestic market capitalisation of €79 million in 2004 compared to a 2002 low of €30 million. Despite the rise, the stock market remains smaller than that of either Greece or Ireland and barely double that of Luxembourg.

In contrast to China and India, it is difficult to see Turkey as an influential player in the world economy and financial markets fifteen years down the road. Nonetheless the country appears to have turned a corner this decade and if it continues to steer its economy in the right direction, it has the potential to become a significant contributor to Europe's economy and financial markets. For example, Turkey has recently become one of the world's fastest growing major exporters. In 2004 its merchandise exports rose a nominal 32% in 2003 compared with 2002 and 34% in 2004 compared with 2003. Of the world's fifteen largest goods exporters, this growth is second only to China, whose goods exports grew 36% and 37% in 2003 and 2004 respectively. In 2004 Turkey exported €51 billion worth of goods and €19 billion worth of services, though 80% of its services sales to the world are transport and travel.

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[39] However making an adjustment for price differences across countries, Turkey's economy marginally bigger than that of the Netherlands — although the latter has 54 million fewer inhabitants.

4.3 Future scenarios for wholesale finance

We have modelled the outlook for the world wholesale finance market and its implications for the EU's wholesale finance market on a range of scenarios. These are:

- **Base scenario** — our expectations of growth based on current policy and economic structure
- **Adverse regulation** — excessive regulation adds to the cost of doing wholesale financial service business in the EU compared with what otherwise would be the case
- **Lack of clustering —** protectionism and lack of integration in the EU cause it to lose the benefits of its financial clusters
- **High growth** — further integration and clustering, and high overall economic growth, allow Europe's wholesale finance to grow as fast as in the US

In Table 4-3 below we present the average annual growth rate in wholesale finance between 2004 and 2020 in each of the scenarios.

Table 4-3: Average annual real growth in wholesale finance between 2004 and 2020 in each scenario

	Actual growth 1998-2005	Base case	Adverse regulation	Lack of clustering	High growth
EU-25	4.8%	3.5%	1.1%	2.3%	5.1%
US	7.0%	5.3%	5.6%	5.5%	5.1%
Japan	4.5%	3.8%	4.1%	4.2%	3.8%
China	12.1%	11.8%	14.0%	12.1%	11.8%
Rest of the world	7.3%	8.3%	9.1%	8.6%	8.3%
World	6.7%	5.7%	5.9%	5.7%	6.0%

Source: cebr analysis.

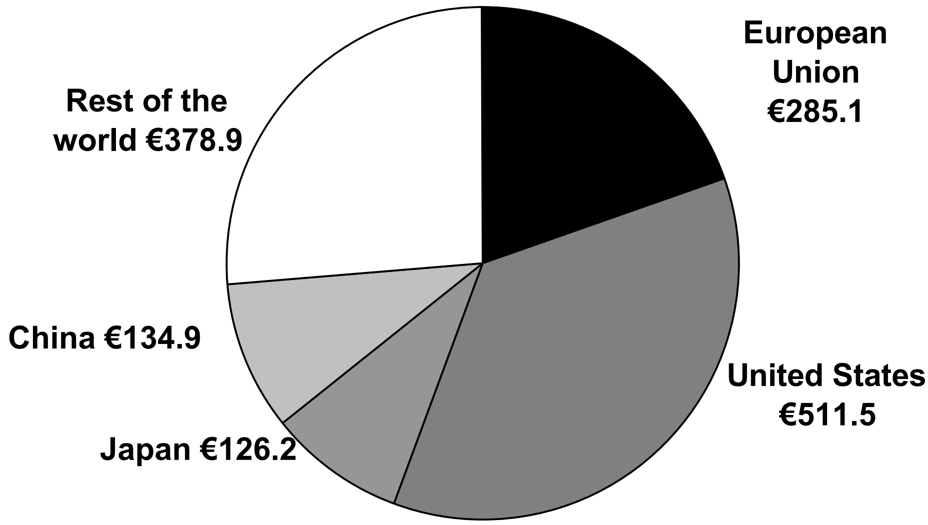
4.3.a Base scenario for wholesale finance

In our base scenario world wholesale finance growth slows slightly over the coming fourteen years, when compared with growth between 1998 and 2005, as the sector matures following the recent boom years.

On current trends and policies EU finance will be just over half US finance in 2020

Growth in the US continues to outpace that of the EU, as it has done over the past eight years, whilst China's growth rate remains roughly constant as its wholesale finance sector continues to boom.

Figure 4-3: World wholesale financial market in 2020 on base case assumptions, 2004 prices, € billion



Source: cebr analysis.

On this scenario, the wholesale finance sector in the EU will grow at an annual rate of around 3.5%, much the same rate as in Japan, but slower than in the US. As a result, EU wholesale finance will only be 55% of the size of the sector in the US in 2020.

Of course the world market, driven by growth in China and other rapidly developing economies, is likely to grow faster than that for the European Union. We are forecasting growth in the world market at an annual rate of 5.7% and in China at an annual rate of 11.8%. As a result, the EU share of world markets is likely to continue to edge down as other emerging markets mature.

We next consider a range of alternative scenarios.

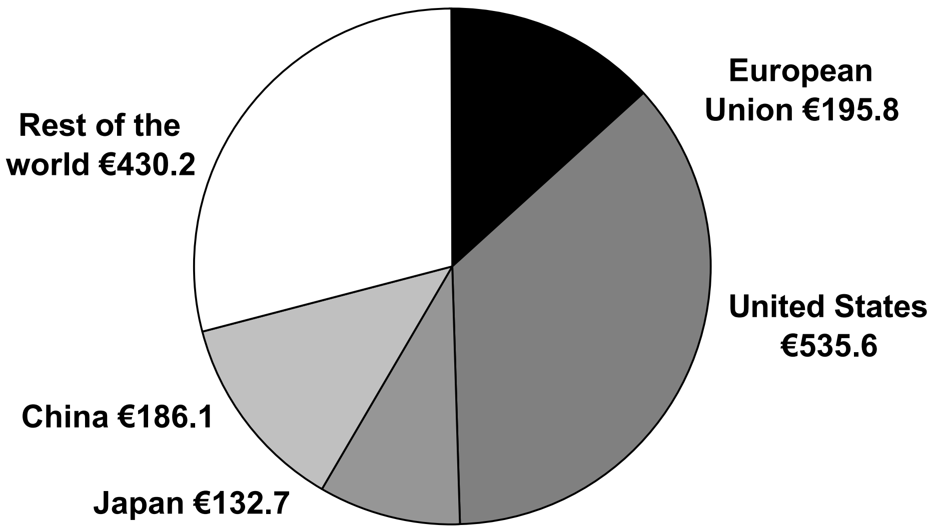
4.3.b Adverse regulation

The first scenario looks at the issue of adverse regulation, which raises the cost of carrying out financial business in the EU. The impact on cost varies by country, since the base level of regulatory costs varies by country – we have assumed an addition to costs of 5% in the UK and 2% on average in the other EU-25 economies. It is assumed that there is no direct impact on costs in other sectors or other countries.

Adverse EU regulation could slow growth by two thirds

Because the impact of adverse regulation is to raise the cost of doing business in the sector, there is a significant impact on the growth of the sector for the EU – this is reduced from 3.5% per annum in the base case to a mere 1.1% per annum on this scenario. As a result of high costs in the EU, business is transferred to other economies with more favourable regulation and lower costs. As such, all other countries benefit but the largest beneficiaries proportionately are China and the rest of the world, whose cost advantages become proportionately more important.

Figure 4-4: World wholesale financial market in 2020 on the adverse regulation assumptions, 2004 prices, € billion



Source: cebr analysis.

4.3.c Impact of lack of clustering

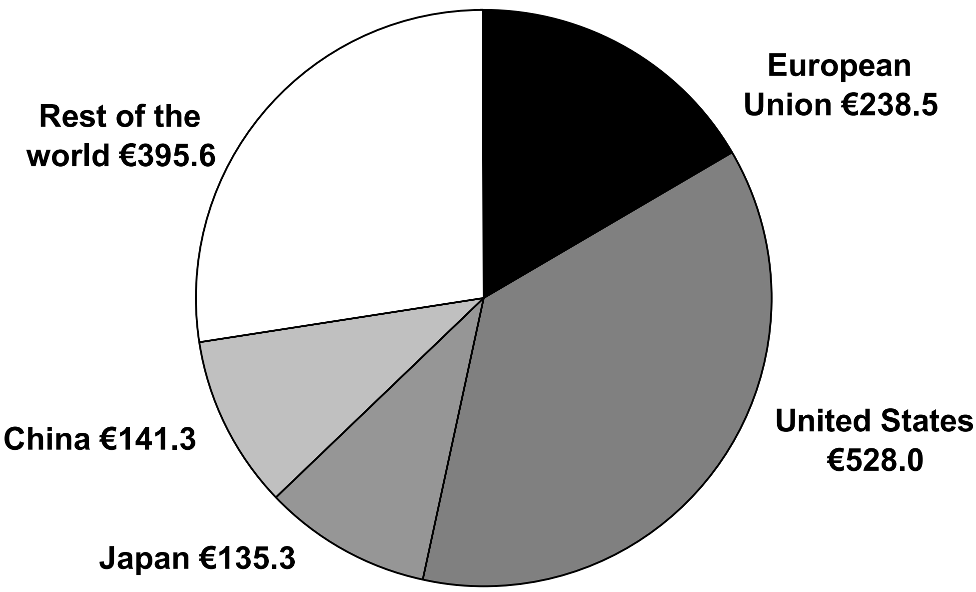
In our third scenario the EU loses the benefits that it currently receives from the clustering of much of its wholesale financial services business in one major location. This might take place if market integration goes into reverse or, more likely, if protectionism in the financial markets is reintroduced.

Technically we have assumed that London's share of total EU wholesale financial service business is halved, with the business moving more or less proportionately to the other centres. The effect of this is to lead the EU to lose economies of scale and scope and hence offer a much less competitive level of service.

Clustering critical for respectable EU finance growth

The impact of this loss of clustering is to reduce EU growth in financial services to 2.3% from 3.5% in the base case. The beneficiaries are similar to those from the higher regulation case — all countries outside the EU gain an advantage but the US gains proportionately more than in some of the other scenarios. This scenario highlights the importance of further clustering of the sector within the EU.

Figure 4-5: World wholesale financial market in 2020 on the clustering assumptions, 2004 prices, € billion



Source: cebr analysis.

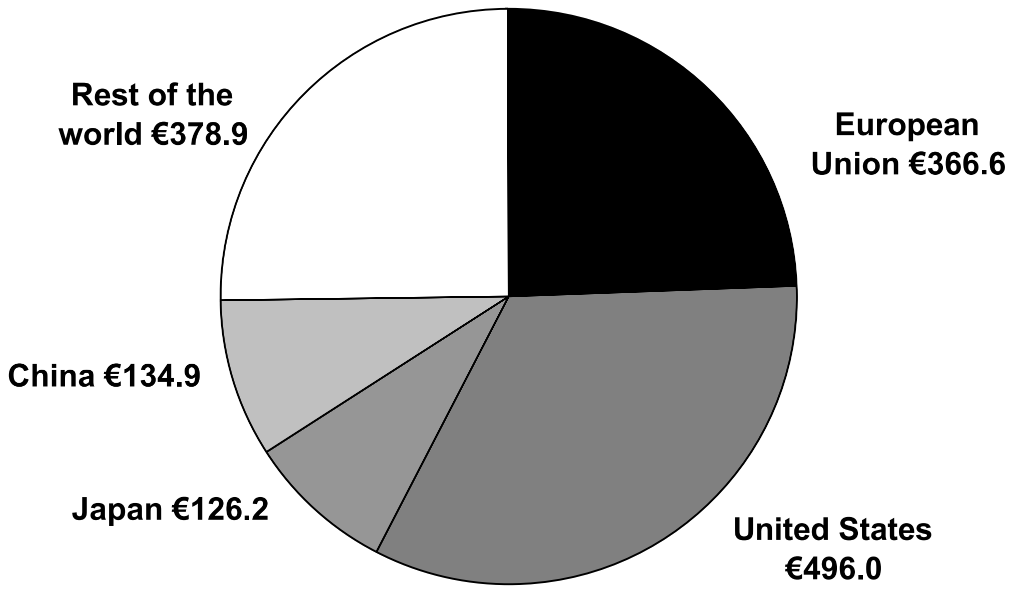
4.3.d High growth

In our final scenario we consider the high growth scenario, in which the EU's wholesale financial sector grows as fast as the US'. In this scenario, the EU will increase its share of world wholesale finance to nearly one quarter in 2020 compared with one fifth in our base scenario.

Correct policies can put EU finance growth on a par with US' growth

A combination of factors may push average annual growth above 5% per annum — continued rapid integration and clustering in the financial sector and in the European economy as a whole, rapid labour market, fiscal and pension reform and high innovation in the wholesale financial sector. Such qualities, which would lower the cost of doing business in the EU, would make the European economy more efficient and strengthen its position as a leader in global finance, lowering slightly average annual growth in wholesale finance in the US.

Figure 4-6: World wholesale financial market in 2020 on the high growth assumptions, 2004 prices, € billion



Source: cebr analysis.

4.4 Trade opportunities in wholesale finance

In the final section of this report we consider growth opportunities for the EU in the trade of wholesale finance.

European wholesale finance is becoming increasingly important to the economic success of the EU, as set out in the *Lisbon Agenda.* Growth in wholesale finance output by far exceeds growth in the European economy as a whole. In addition, the sector eases the flow and access to capital across the Union, thereby helping the growth of other sectors.

In order for the sector to continue to grow, and for Europe-wide growth to reach or improve upon growth in countries such as the US and China, trade in the sector must continue to expand, and at a fast pace, both within the EU and outside of the EU. Intra-EU trade in financial and insurance services contributes to 27% of economic activity in European wholesale finance.

We consider the external and internal trade in financial and insurance services in turn.

4.4.a External EU trade

As presented in Table 4.2 earlier, growth in the EU's domestic economy is much lower than in major economies such as the US, China and India. As a result, and since the EU has a number of important financial centres, such as London, European wholesale finance's dependence upon global markets is increasing — the share of extra-EU trade relative to wholesale finance output rose from 17% in 1998 to 21% in 2004.

In 2004 world trade in financial and insurance services reached €141 billion. Annual nominal trade growth in such services averaged 21% between 1996 and 2000. Because of the dot.com crash, trade growth slowed, averaging 8% per annum between 2000 and 2004. We expect it to recover to over 15% growth over the next few years, as world financial markets continue to integrate.

China's financial services imports could increase ten-fold by 2020

We estimate that China's imports of financial and insurance services grew from €0.7 billion in 1995 to €1.8 billion in 1999 and really kicked off in recent years, rising to €5.0 billion in 2004.[40] Chinese imports of finance and insurance services expanded at an average annual rate of 28% in nominal terms between 2001 and 2004. During the same period the average annual real growth rate in the output of Chinese financial intermediation stood at 8.8%.

[40] In US dollars, therefore eliminating the impact of changing exchange rates, Chinese imports of finance and insurance services rose from $1.0 billion in 1995 to $1.9 billion in 1999 and to $6.3 billion in 2004.

Looking forward, export growth opportunities in finance and insurance services for the EU depend on:

i. the economic growth in major emerging economies such as China and India;

ii. the degree of openness in the EU and in current and potential trading partners, particularly China and India;

iii. the competitiveness of the sector relative to its main competitors, which currently are the US and Japan;

iv. the extent of the linkages with other (current and potential) major financial markets such as the US, Japan, China and India.

If China allowed its financial sector to become integrated into the world markets Chinese imports of finance and insurance will continue to grow. As Chinese financial markets mature, we expect the growth of imports to slowdown from 28% toward the speed of economic expansion of the sector — we expect average annual real growth of 11% to 2020. Based on an unprotected financial market, we estimate Chinese's imports of finance and insurance services to rise to €18 billion in 2010 and €52 billion in 2020. However if the sector were to be protected from the international financial markets, Chinese imports could struggle to reach €20 billion by 2020.

The competitiveness of the EU's wholesale finance sector and the extent of its linkages with the global financial markets are also critical components of future trade opportunities. We estimate that the wholesale financial sector in the US has averaged annual growth of 7.0% between 1998 and 2005, whilst the EU has averaged 4.8%. We expect this growth to slow, as described in our base scenario, because of the maturity of the US market. However if such growth rates are sustained into the longer term, this would represent a threat to European exports.

High rates of growth in the sector, and therefore global competitiveness, require a large growing domestic economy, being at the forefront of the world's financial markets, fostering innovation and being at the centre of the worldwide integration in financial services.

As such, trade opportunities for the EU's wholesale financial sector lie in fostering closer ties with the US, Japan, China and India and globally expanding those services in which it is a world leader or has a strong global position — international equities and bonds, foreign exchange, derivatives, fund management and insurance.

4.4.b Trade within the EU

Growth in extra-EU trade in finance and insurance is important for the long-term expansion of the sector. Yet because of the very nature of the sector and the weak long-term growth expected in the EU's economy, further integration within the EU is as important. This is recognised by the European Commission.[41]

As discussed earlier, the wholesale financial sector in Europe is already highly integrated. However there remain opportunities for growth in intra-EU trade in finance and insurance. Trade within the EU in the sector in 2004 stood at €47 billion, or 10% of all intra-EU trade in services.

Intra-EU trade in financial and insurance services contributes to 27% of economic activity in European wholesale finance. However there is scope for growth in trade within the EU. Between 1998 and 2004, the wholesale finance sector averaged 5% annual growth, whilst intra-EU trade in the sector averaged a nominal 14% growth. As a result, the share of intra-EU trade relative to wholesale finance total economic activity rose six percentage points from 1998's 21% share.

Intra-EU finance trade could equal 47% of sector by 2020

In our base scenario for the future of wholesale finance, the sector expands at an average 3.5% per annum. Our estimates are dependent on growth in intra-EU trade averaging 6.1% per annum. This compares with an estimated 9% real growth in intra-EU trade between 1998 and 2005. Based on our estimates, trade in finance and insurance services within the bloc would reach €121 billion and contribute to 39% of economic activity in EU wholesale finance by 2020.

If integration proceeded at a faster pace, with real growth in intra-EU trade averaging 9%, as in the past six years, trade within the bloc would represent some 47% of the sector, or €173 billion. But if protectionism were to stifle the extent of integration, intra-EU trade would only reach an estimated real value of €85.2 billion in 2020, or 30% of output in the sector.

Wholesale finance in the European Union is facing constraints to its growth

Looking ahead over the coming fifteen years, overall economic growth in the United States, China and India is likely to outperform that of the European Union. As a result, we see wholesale finance in the European Union facing constraints to its growth. As its primary objective, EU wholesale finance should aim to raise its long-term growth rate to at least that of the United States. In order to do this, it should increase its competitive advantage: continuing to cluster and integrate across the European Union while making the most of the growth potential in world wholesale finance trade, given the forthcoming growth in finance in countries such as China and India.

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[41] See the European Commission, '*Green Paper on Financial Services 2005-2010',* May 2005 and European Commission, '*Financial Services Action Plan*', 1999

5 Conclusion

The world economy is becoming more integrated at the same time as new major economies are emerging such as China and India. The implication for the EU is that it must raise its game in order to compete in an increasingly competitive global economy.

Wholesale finance is an important sector, particularly for the EU's economy. In wholesale finance, the EU has a sector that can compete globally, that is three times more productive than the average EU sector and which facilitates economic growth in other sectors of the economy — by facilitating the transfer of capital from potential investors to sectors needing investment.

Wholesale finance is a sector that is highly integrated within the European Union — standing out when compared to other sectors in meeting the EU's *Lisbon Agenda.* However the sector, as with the rest of Europe's economy, is facing a growing global challenge, not only from large emerging economies such as China and India, but also from the US. Because of faster domestic economic growth and a more flexible and integrated economy, wholesale finance in the US has outperformed wholesale finance in the EU over the past eight years. This trend is likely to continue, unless the EU's policies favour faster growth in the sector.

One such policy is continuing to allow the sector to integrate and cluster by further opening Europe's markets. Through the economies of scale gained in the London cluster — the EU's biggest and, together with New York and Tokyo, one of the world's three financial centres — the EU is a world leader in the world's international equity, foreign exchange and derivatives markets. London is also leading the EU in other fast growth markets such as mergers and acquisitions, hedge funds and private equity. As a result of London's global status, the UK accounts for 35% of European Union wholesale finance output.

Further policies that will allow the sector to compete internationally are adequate reform in areas such as labour markets, pensions and public finances, growth-conducive regulation and the integration of the European economy.

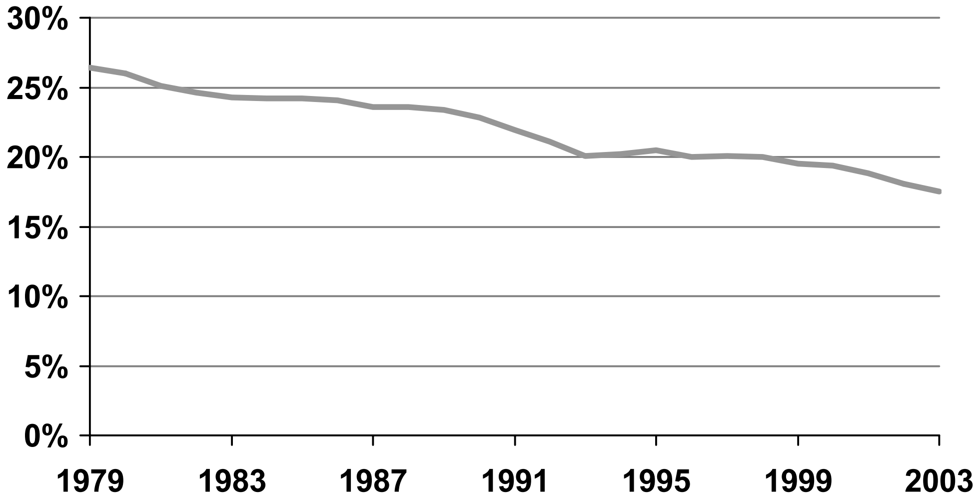
6 Appendix

There are three Annexes to this report:

- Annex A — provides supporting data for Section 1.1
- Annex B — provides supporting data for Section 1.2
- Annex C — provides supporting data for Section 3.2

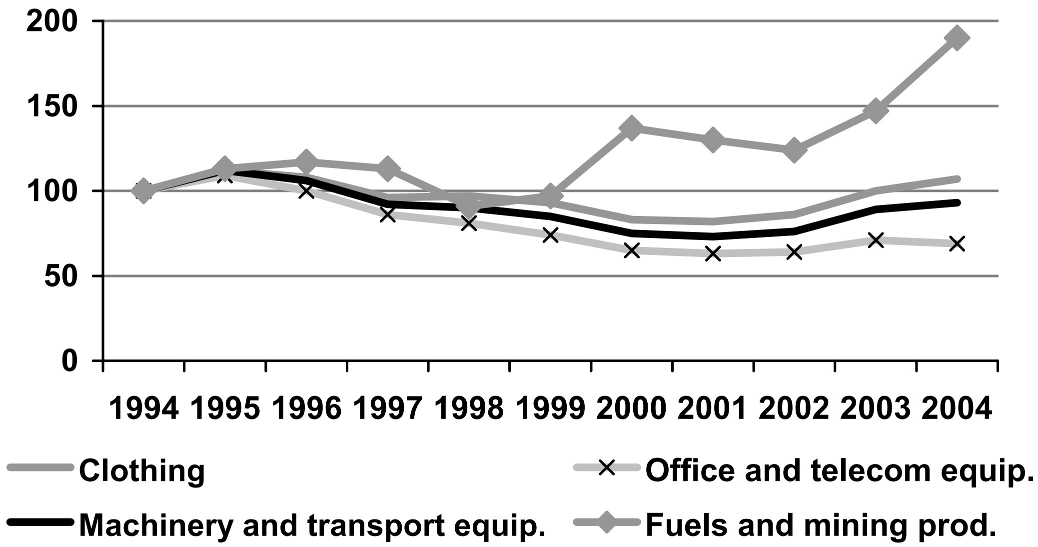
6.1 Annex A

Figure 6-1: Share of manufacturing gross value added in EU 15



Source: Groningen Growth and Development Centre.

Figure 6-2: Germany's import prices, 1994=100



Source: World Trade Organisation, *International Trade Statistics 2005.*

Table 6-1: Trade balance in finance and insurance services, € billion

	1992	1995	2002	2004	2004 all goods and services trade balance
EU-15 (to extra EU-15)	3.3	6.2	24.6	22.5	110.3[c]
Belgium-Luxembourg	0.9	1.2	5.6	NA	8.1[d]
France	-0.5	0.3	-1.0	-1.4	4.8
Germany	0.2	1.3	6.8	0.1	107.1
Italy	-1.3	-0.9	-0.5	-0.9	8.9
Netherlands	-0.3	-0.6	-1.3	NA	24.2
Spain	0.5	-0.1	0.0	NA	-26.6
Sweden	0.0	0.2	0.1	NA	23.3
UK	4.3	5.5	26.5	24.9	-56.4
Czech Republic	NA	-0.1	-0.6	NA	0.0
Hungary	NA	0.0	-0.2	NA	NA
Poland	NA	-0.1	-0.2	NA	-3.2
Switzerland	4.1	5.0	9.5	NA	25.0
Turkey	-0.2	-0.2	-0.8	NA	-8.1
Canada	-0.3	-0.6	-1.8	-1.8	34.6
China[a]	NA	-0.7	-3.3	-4.7	39.4
Japan	-1.6	-1.7	-2.2	-0.5	74.9
South Korea	-0.1	-0.2	0.3	0.5	23.3
US[b]	0.6	1.3	-2.0	-8.2	-486.2

Sources: World Trade Organisation, *International Trade Statistics 2005*, OECD Statistics on International Trade in Services 1993-2002, cebr analysis.

[a] China's deficit in 2004 is mostly made up of a €4.6 billion deficit in insurance services. It had a €44 million deficit on financial services.

b In 2002 the US had a €11.2 billion surplus in financial services and a €13.3 billion deficit in insurance services. In 2004, the financial services surplus stood at €11.8 billion and the deficit in insurance services at €19.9 billion.

[c] This trade balance is for EU 25.

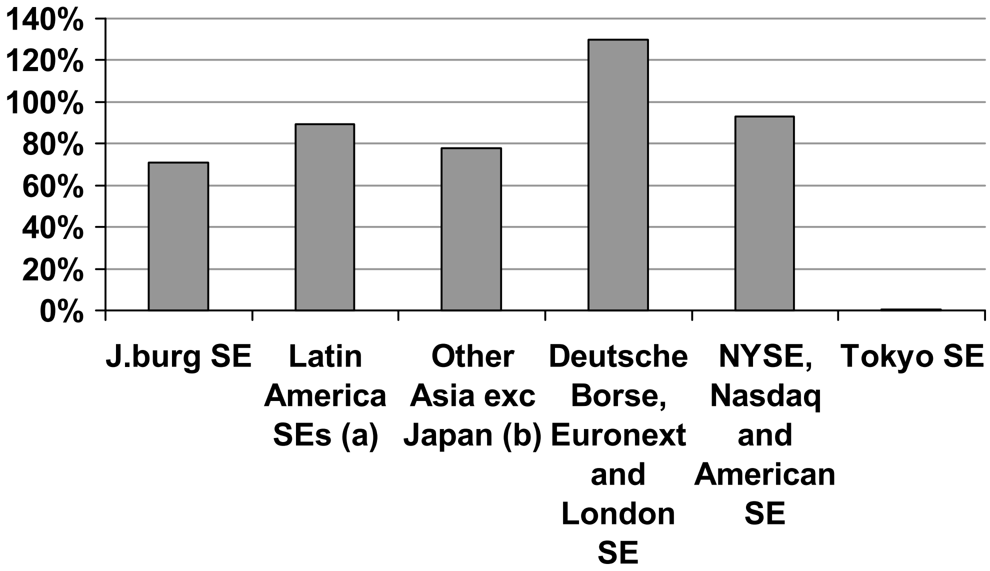
[d] Belgium only.

Table 6-2: Shanghai stock exchange key statistics

	Number of listed companies	Number of listed securities	Capital raised € billion	Market capitalisation € billion
1990	8	30	0.1	0.1
2000	572	657	14	300
2003	780	914	8	406
2004	837	996	7	390

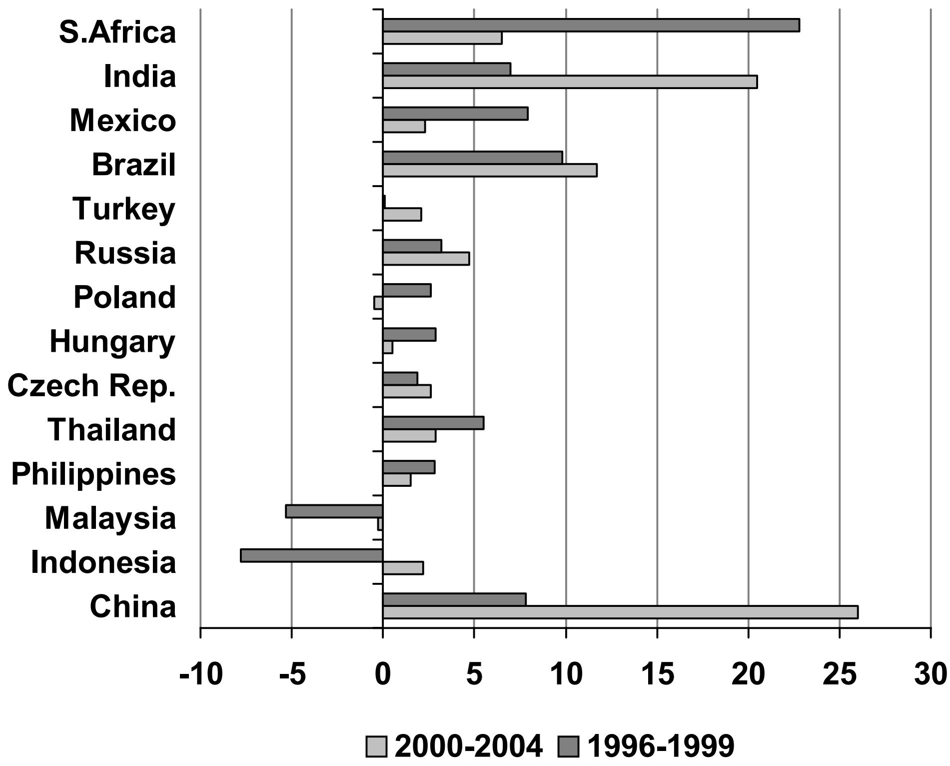
Sources: Shanghai Stock Exchange Factbook 2004.

Figure 6-3: Growth in domestic market capitalisation (equities) between 1995 and 2004, $ billion



Source: World Federation of Exchanges.
[a] Sao Paulo SE, Lima SE, Santiago SE, Buenos Aires SE and Mexican SE.
[b] Bursa Malaysia, Jakarta SE, Korea Exchange, Hong Kong SEs, Singapore SE, Taiwan SE, Thailand SE.

Figure 6-4: Net inward portfolio equity flows in emerging economies,[a] € billion

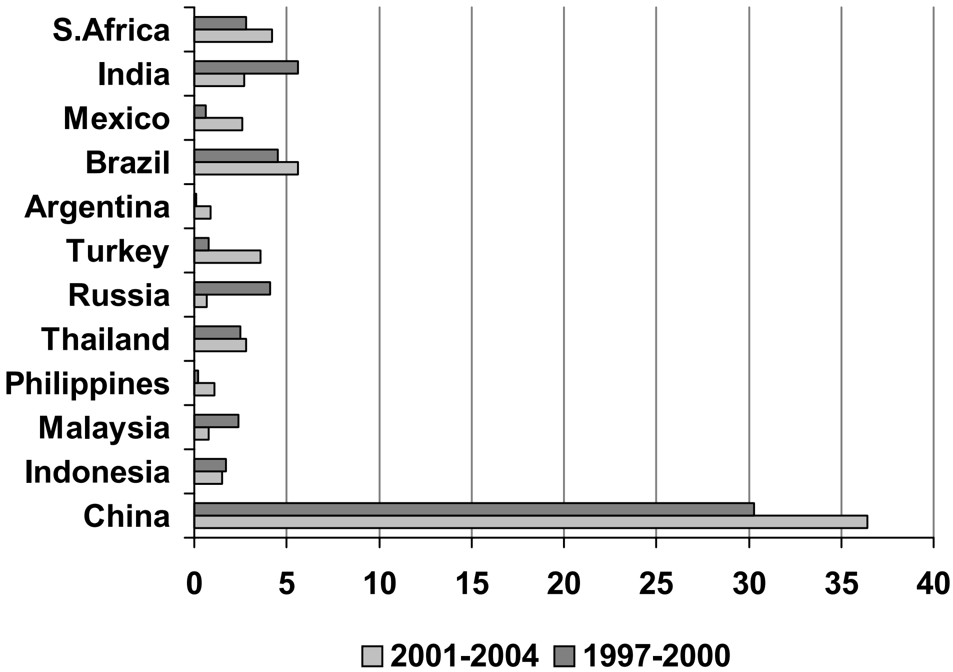


Source: World Bank, *Global Development Finance 2005.*
[a] Note figures are total for period, not yearly averages.

In order to study how foreign capital inflows are helping financial markets to grow one must look at gross flows of capital rather than only net flows. Latin America is the emerging market that is attracting the largest inflows of capital. However a large part of capital flows to the continent are in the form of bonds and international bank lending, and a large part of the inflows are used to finance old debt obligations. On the other hand, most of China's capital inflows — China is the largest gross attractor of capital after Brazil, Mexico and Argentina — are in the form of equity.

Between 1997 and 2004 €67 billion worth of international equity capital flowed into China (see Figure 6-5 opposite). The next largest recipient of gross international equity over the same period was Brazil, which received €10.1 billion. International equity flows to emerging economies are clearly very sensitive to the stock market performance in developed economies. In 2000, before the dotcom crash €22 billion in international equity flowed into China. In 2001 this fell to €3 billion, hampering the growth of the Chinese financial market. In 2004 it rose to €13.4. Continued and sustained growth in equity flows to China will support the Chinese stock markets which in 2004 had an equity market capitalisation of €360 billion.

Figure 6-5: Gross international equity issuance by emerging economies,[a] € billion



Source: World Bank, *Global Development Finance 2005*.
[a] Note figures are total for period, not yearly averages.

6.2 Annex B

In this annex we analyse the markets that make up the world's wholesale finance sector. We do this in order to get a better understanding of the geographical distribution of the sector across the world and to identify the market leaders in each market.

The financial markets that make up the wholesale financial sector are:

- International banking – the international banking of banks
- Equity markets — the trading of shares in company ownership
- Bond markets — the trading of security debt issued by government or companies
- Foreign exchange — the trading of currencies
- Derivatives — the trading of options, swaps, futures and forwards
- Fund management (regulated and unregulated) — managing mutual, pension and insurance pools of money
- Insurance — re-insurance, major corporate insurance, captive insurance and risk-sharing insurance
- Investment banking — tailored banking services to organisations, such as the undertaking of mergers and acquisitions, equity trading, fixed income trading and private equity

We present each in turn, attempting to identify the main players in each market.

6.2.a International banking

International banking refers to banking activities that involve cross-border transactions. In chapter 3, where we consider the EU's financial markets, we analyse cross-border banking dealings to identify the structure of the international banking market. In this section, we try to get an idea of how the activities of the world's largest banks are distributed around the world.

The world's largest banks are evenly distributed across the US, the EU and Japan in terms of their country of incorporation. Within the top 25 banks, ranked by tier one capital,[42] there were two Chinese banks and one Swiss bank in 2004, with the remaining 22 being in the US, EU or Japan. However looking at the country of incorporation only gives a partial picture. Most large banks are trans-national and therefore it is worth analysing the geographical distribution of the banks' activities.[43]

Fifteen of the world's largest banks in 2004 were incorporated in the EU, four in the US and three in Japan. On average, 14% of American bank employees are located outside the Americas whilst 25% of employees of European banks are located outside Europe. European banks have a stronger presence in the US than American banks do in Europe — roughly some 18% of European bank employees are located in the Americas whilst only 7% of American bank employees are located in Europe. Meanwhile the top four American banks have on average 7% of employees in Asia,

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[42] Tier One capital is capital which can absorb losses without the bank ceasing to trade, such as equity, while tier two capital can only absorb losses if the bank were to wind-up, such as debt.

[43] We attempt to build the geographical distribution of the world's largest banks in 2004 by tier one capital. Given the differences in reporting across banks, this exercise does not produce accurate results of the geographical distribution, but is merely indicative. Caution should be exercised when reading into the results.

against Europe's 5%. Therefore whilst EU banks appear to be more international by employee location, this is largely because of a strong presence in the US, which is not replicated in the same manner for the US' top banks in Europe.

The most 'international' bank, judging the distribution of its offices, is HSBC. Although being incorporated in the UK and having its headquarters in London, it has 58% of its offices in the Americas — mostly in the US and Brazil. Citigroup, the world's largest bank by tier one capital, has a strong presence across the time zones — with over 30,000 employees in each of the European and Asia-Pacific regions.

Table 6-3: World's biggest banks by tier one capital 2004, employees and approximate employee distribution[a]

	Home economy	Tier one capital 2004 € billion	Number of employees thousands 2004	Africa and Middle East	North and South America	Asia Pacific	Europe
Citigroup	USA	53.8	294	0.5%	68.7%	15.9%	14.9%
Crédit Agricole Group	EU	44.6	134	0.0%	1.5%	0.0%	98.5%
HSBC Holdings	EU	44.2	260	1.6%	58.0%	7.1%	33.2%
Bank of America Corp.	USA	35.5	177	0.0%	97.1%	1.4%	1.5%
JP Morgan Chase & Co	USA	34.7	161	1.9%	82.7%	4.8%	10.7%
Mizuho Financial Group	Japan	30.4	254	0.0%	8.9%	86.2%	5.0%
Mitsubishi Tokyo Fin. Group	Japan	29.8	38	0.0%	5.2%	91.9%	2.9%
Royal Bank of Scotland	EU	27.9	137	0.0%	19.0%	1.0%	80.0%
Sumitomo Mitsui Fin. Group	Japan	27.6	21	0.0%	4.4%	92.9%	2.7%
BNP Paribas	EU	26.1	95	6.3%	13.9%	5.0%	74.9%
HBOS	EU	23.6	69	0.0%	0.0%	14.6%	85.4%
Deutsche Bank	EU	22.0	64	0.0%	19.4%	7.5%	73.1%
Barclays Bank	EU	21.5	111	33.0%	9.0%	0.0%	57.9%
Wells Fargo & Co	USA	20.2	153	0.0%	95.3%	4.4%	0.3%
Rabobank Group	EU	20.0	50	0.7%	4.6%	0.9%	93.8%

Sources: The Banker; Data as at 17 June 2004; Individual banks' websites; cebr analysis
[a] For all banks this is an approximate distribution using the information available on each bank's website. Where information on employee distribution is lacking we approximate using the distribution of total assets (such as for Mizuho Financial Group) income tax paid (Wells Fargo), expenses distribution (JP Morgan), offices (HSBC) or other anecdotal information available on the website. Data is for all bank employees and therefore includes retail and wholesale financial activities.

6.2.b The equity market

When assessing equity markets it is important to assess both the domestic aspect of the market — the trade of shares of domestically incorporated firms — and the foreign aspect — foreign listed companies. This distinction is important in the context of this report because the size of equity markets depends both on the size of the domestic economy and also on how international a country's financial sector is. We first consider the domestic aspect of the market.

The domestic market capitalisation of the listed equities on all exchanges that are registered on the World Federation of Exchanges reached €29.9 trillion in 2004.[44] The New York Stock Exchange is the largest stock exchange in the world with a domestic market capitalisation of €10.2 trillion in 2004 in equities. Domestic market capitalisation — which is defined as the value of shares of domestic companies listed on an exchange — on the New York Stock Exchange doubled between 1995 and 2004, despite the stock market crash of 2000/2001.

New York exchanges account for 44% of world equity domestic market capitalisation

Adding New York's NASDAQ exchange of high-tech companies, the New York exchanges account for a market capitalisation of €13.0 trillion, or some 44% of the domestic market capitalisation of all exchanges registered with the World Federation of Exchanges. This makes it the largest equity market in the world.

By comparison, Europe's three largest exchanges — the London Stock Exchange, Euronext (which includes the Amsterdam, Brussels, Lisbon and Paris exchanges) and Deutsche Börse — had a domestic stock market capitalisation of €5.2 trillion in 2004. This increased from €2.2 trillion in 1995. Asian exchanges also have an important share of world trading. Tokyo Stock Exchange had a domestic market capitalisation of €2.9 trillion, whilst other Asian and Pacific exchanges add a further €2.8 trillion. Indian and Chinese exchanges, though still in their infancy, together had a domestic market capitalisation of €1.0 trillion.[45] As discussed in section 4.2, India's stock exchange is the fastest growing in Asia in percentage terms, and amongst the fastest growing the world.

Domestic market capitalisation is an important measure when comparing across countries. However in order to understand the importance of the stock exchange domestically one must weigh stock market capitalisation against gross domestic product — the size of the economy. This is presented in Table 6-4 opposite.

Equity markets, and therefore wholesale finance, are critically important to some small economies such as Hong Kong and Switzerland. Likewise, the stock market is also important for bigger countries such as Australia, Canada, South Africa, the UK and the US. Other countries have a lower reliance upon the stock market, such as Germany and Japan, whilst others, such as China, have a very low stock market capitalisation relative to the size of the economy, pointing to the infancy of the equity market — Chinese companies currently tend to access capital through bank loans, more than the stock market — and the room for growth.

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[44] This figure excludes the Osaka Stock Exchange to avoid double counting with Tokyo Stock Exchange.
[45] In India: BSE Mumbai Stock Exchange and the India National Stock Exchange. In China: the Shanghai and Shenzhen Stock Exchanges.

Table 6-4: Domestic stock market capitalisation (in equities)[a] € billion

	1995	2004	Change 1995-2004	Domestic market capitalisation as a ratio of GDP 2003
Australian Stock Exchange	78.9	66.8	-12.0	115.3%
BME Spanish Exchanges	115.4	757.2	+641.9	86.6%
Borsa Italiana	160.2	635.6	+475.4	41.9%
BSE Mumbai and India National SE	247.4[c]	603.4	+356.0[b]	89.3%
Deutsche Börse	441.4	961.6	+520.2	44.9%
Euronext[b]	693.2	1,965.3	+1,272.1	76.3%
Hong Kong Stock Exchange	232.2	693.5	+461.3	456.1%
JSE South Africa	197.7	356.2	+158.5	163.1%
Korea Exchange	139.1	313.5	+174.4	48.5%
London Stock Exchange	1,029.5	2,306.7	+1,277.1	136.8%
Mexican Exchange	69.3	138.4	+69.1	19.6%
NASDAQ	1,155.8	2,844.1	+1,688.3	25.8%
New York Stock Exchange	5,230.9	10,230.0	+4,999.1	103.0%
Sao Paolo Stock Exchange	112.9	265.9	+153.1	46.0%
Shanghai SE and Shenzhen SE	587.0[c]	360.4	-226.7 [c]	36.3%
Singapore Stock Exchange	115.4	175.2	+59.8	190.3%
Swiss Exchange	304.3	665.0	+360.6	227.5%
Taiwan Stock Exchange Corp.	143.1	355.4	+212.2	132.5%
Tokyo Stock Exchange	2,710.5	2,864.0	+153.6	68.8%
TSX Group (Canada)[d]	280.0	947.9	+667.9	102.5%

Source: World Federation of Exchanges.
[a] Domestic stock market capitalisation is the market capitalisation of listed companies incorporated in the same country as the stock exchange.
[b] Euronext comprises Amsterdam SE, Brussels SE, Lisbon SE and Paris SE which joined in 2000.
[c] Figures relates to 2001.
[d] TSX Group was the Toronto Stock Exchange in 1995.

Domestic market capitalisation is only part of the story. Globalisation is making equity markets more international with portfolio capital flowing more easily between stock markets. Table 6-5 overleaf presents the equity trading value across the world's major stock exchanges. These data are different to the domestic market capitalisation figures because they reflect the value of shares traded, rather than listed, and further include listed foreign shares, investment funds, rights, convertible instruments, derivatives and companies whose only goal is to hold shares of other listed companies.[46]

The New York exchanges (New York Stock Exchange and NASDAQ) are still the largest players in the market on the share trading measure with some 39% of the world total. European bourses however have a larger share of the world market on

[46] Comparisons between stock exchanges must be done with caution because of differences in measuring share trading.

the share trading measure than on the domestic market capitalisation measure. This is because 45% of companies listed on the London Stock Exchange are foreign companies. In 2004 its share trading reached €4.2 trillion, compared with €9.3 trillion on the New York Stock Exchange and €7.1 trillion on the NASDAQ. In absolute terms, most of the growth in share trading between 1995 and 2004 has been on these three principle exchanges, as well as on the Tokyo Stock Exchange.

Table 6-5: Share trading in equities, € billion

	1995, € billion	2004, € billions	Proportion of foreign company share trading, 2004
Australian Stock Exchange	75.1	421.6	2.0%
BME Spanish Exchanges	692.8[b]	968.7	0.7%
Borsa Italiana	66.6	780.0	9.8%
BSE Mumbai SE and India National SE	276.1[c]	304.8	0.0%
Deutsche Börse	454.0	1,240.6	8.9%
Euronext[a]	275.3	1,990.7	1.9%
Hong Kong Exchanges	73.3	353.8	0.1%
JSE South Africa	13.3	129.7	28.8%
Korea Exchange	141.8	393.2	0.0%
London Stock Exchange	881.7	4,161.0	43.1%
Mexican Exchange	26.8	36.5	3.0%
NASDAQ	1,833.5	7,057.7	7.2%
New York Stock Exchange	2,360.0	9,352.6	8.5%
Sao Paulo Stock Exchange	43.6	83.7	0.1%
Shanghai SE and Shenzhen SE	551.2[c]	416.4	0.0%
Singapore Stock Exchange	48.9	86.3	N/A
Swiss Exchange	260.0	637.0	93.5%
Taiwan Stock Exchange	297.6	578.6	0.0%
Tokyo Stock Exchange	675.8	2,590.5	0.0%
TSX Group (Canada)	115.9	524.1	0.1%

Source: World Exchanges Federation.
[a] Euronext exchanges include Amsterdam, Brussels, Lisbon and Paris.
[b] Figure is for 2002.
[c] Figure is for 2001.

6.2.c The bond market

The value of the global bond market, measured by the amounts of bonds outstanding, reached €46.6 trillion in June 2005, rising in cash terms from €21.1 trillion in June 1995. Debt securities issued by domestic companies rose from €18.9 in 1995 to €35.2 trillion in 2005, whilst the value of debt securities issued by foreign companies increased five fold from €2.1 trillion to €11.4 trillion during the same period.

EU restores its share of the global bond market in four years

The US holds the lion share of the global bond market. Between 1995 and 2001 it consolidated its position, raising its share of the world market from 37.8% to 46.1%. However it has since been losing market share: in 2005 its share stood at 39.7%. The main cause of this has been a pause in US debt growth since 2000 (after fast growth in the 1990s) and strong growth in EU international debt securities; the latter surged from €0.9 trillion in 1995 to €6.1 trillion in 2005. This compares with growth in domestic debt securities of €3.0 trillion during this ten year period.

Table 6-6: Global bond market by country and region — domestic and international debt securities,[a] € billion

	Share of global securities 1995	Share of global securities 2000	Share of global securities 2005	International securities share of all country/ region debt securities, 1995	International securities share of all country/ region debt securities, 2005
EU[b]	31.2%	26.3%	31.8%	13.8%	41.3%
US	37.8%	43.9%	39.7%	2.6%	14.8%
Japan	20.1%	17.1%	15.4%	4.8%	1.6%
China	0.3%	0.7%	1.0%	18.4%	2.6%
India	0.3%	0.3%	0.5%	4.7%	2.7%
Other Asia/Pacific	2.6%	3.1%	3.5%	20.0%	25.8%
Canada	2.4%	2.2%	1.8%	25.9%	29.3%
Brazil	0.8%	1.1%	1.0%	26.2%	15.0%
Mexico	0.3%	0.5%	0.5%	62.2%	25.5%
Other South America	0.4%	0.6%	0.4%	39.8%	52.3%
Other Europe	1.3%	1.0%	1.2%	10.5%	24.8%
Others	2.6%	3.2%	3.3%	8.4%	22.2%
Total, € trillion	**21.1**	**38.5**	**46.6**	**10.2%**	**24.4%**

Source: Bank for International Settlements.
[a] Data is for amounts outstanding as at June of each year.
[b] EU data excludes Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta and Slovenia.

Company restructuring in Europe over the past few years has caused firms to cut down on bank borrowing and switch to bonds. And because national governments have already flooded European security markets with domestic bond paper, this has fuelled the European international bond market — international debt securities now account for 41.3% of all EU debt securities, as discussed in chapter three. As a result the EU-25 has raised its share of the global bond market to 31.8% in 2005 from 25.2% in 2001. In 1995 it stood at 31.2%. Nonetheless, over the ten years to 2005 US debt securities have risen by €2.3 trillion more than in the EU to stand at €18.5 trillion as against the EU's €14.8 trillion.

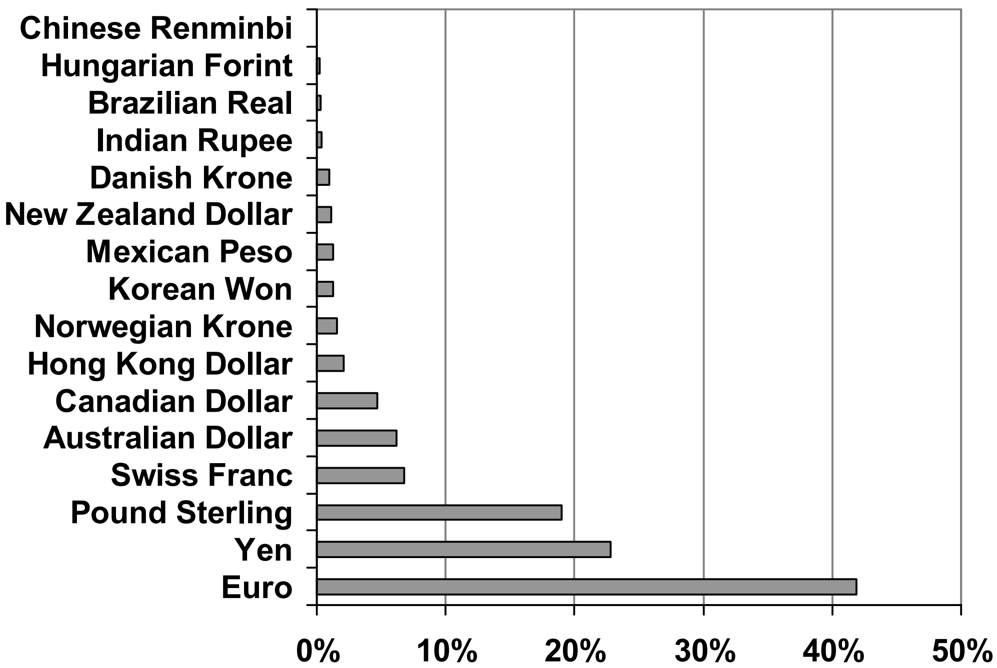
Japan on the other hand has seen its share of the world bond market dwindle from 20.1% in 1995 to 15.4% in 2005. The emerging big economies of Asia, India and China, have as yet not managed to replicate the growth seen in the EU or the US. However they have raised their share of the world bond market to 0.5% and 1.0% respectively in 2005. Most of the growth has been in domestic debt rather than international debt.

6.2.d The foreign exchange market

The US dollar remains the world's most traded and used currency. Average daily turnover on the US dollar stood at $1.6 trillion in April 2004, or €1.3 trillion. The euro is the second most traded currency — its average daily turnover is 42% that of the US dollar. The Chinese renminbi and the Indian rupee only had a turnover of 0.1% of that of the US dollar by 2004.

The most traded currency pair remained unchanged between 2001 and 2004, with dollar/euro transactions accounting for 28% of global turnover in April 2004.

Figure 6-6: Foreign exchange turnover as a share of US$ turnover, April 2004



Source: Bank of International Settlements, *Triennial Central Bank Survey*, April 2004.

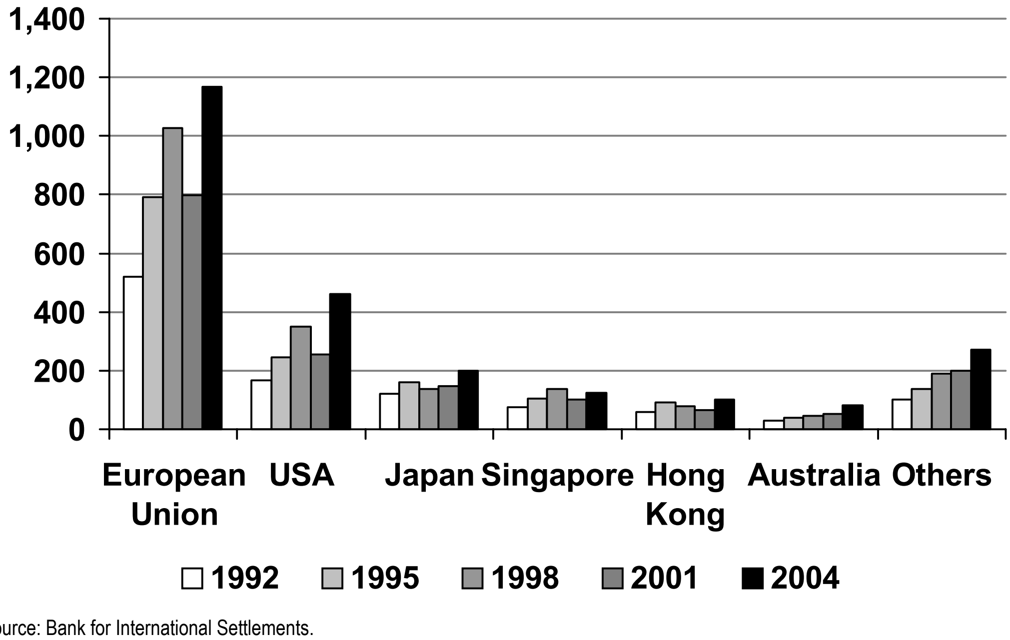
The EU remains the leader of the world foreign exchange market. In 2004 the bloc (excluding Malta and Cyprus) enjoyed 48.5% of the global market which is worth a daily $1,168 billion, or €940 billion. Most of the EU's activity is conducted in the UK, which hosts 64.4% of EU foreign exchange trading and 31.2% of the world's trading. As with the trend in derivatives, bonds and equity markets, the market leader has continued to see the fastest growth in absolute terms.

EU is host to 49% of world foreign exchange trading

However whilst the EU's share of world trading has remained constant between 1992 and 2004, the US has constantly increased its share, raising it from 15.5% in 1992 to 19.1% in 2004. Japan has consolidated its position as third largest foreign exchange trading location, ahead of Singapore and Hong Kong. However the fastest growing large markets in percentage terms have been the US and Australia. Switzerland has been the slowest growing player. Thus in 1989 the daily turnover of foreign exchange transactions in Switzerland and Singapore was roughly equal at some $55 billion. Yet in 2004, Singapore had a daily turnover of $125 billion, whilst Switzerland had $79 billion. The growth in foreign exchange trading in Europe has occurred in a few financial centres markets, whilst in Asia/Pacific it has been spread across a number of financial centres — mostly Tokyo, Singapore, Hong Kong and Australia.

There was a slump in foreign exchange trading in 2001, which was due to the unification of the euro and the growth and sophistication of derivatives trading that allowed hedging against currency risk. This had however been more than reversed by 2004.

Figure 6-7: Daily averages of nominal foreign exchange turnover net of local inter-dealing double counting,[a] US$ billion



Source: Bank for International Settlements.
[a] Figures are as at April of each year.

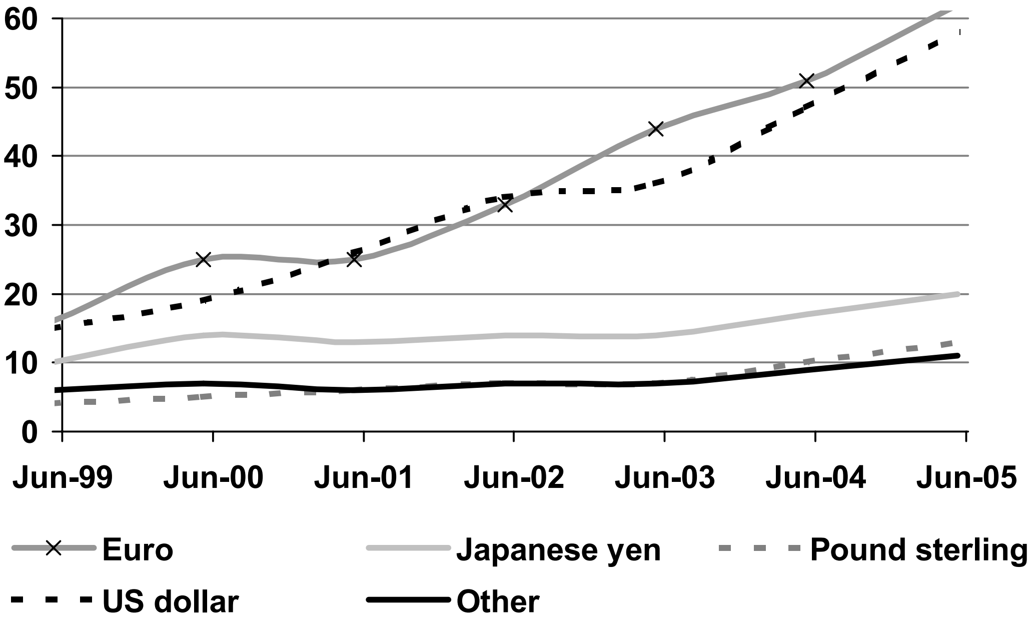
6.2.e The derivatives market

The derivatives market is divided into two parts: exchange traded and over-the-counter. We only deal with the latter.

The notional amount outstanding of over-the-counter derivatives in the world rose to €202.7 trillion in June 2005. Interest rate derivatives contracts account for 76% of these, mostly through interest rate swaps. Foreign exchange contracts account for 12% of all amounts outstanding.

In terms of currencies the interest rate derivatives market is dominated by the euro and the dollar, which have accounted for most of the growth in this market since 2001. The growth in the market came about as a reaction to the 2000 stock market crash as traders sought to hedge their position against interest rate risk.

Figure 6-8: Interest rate derivatives markets, notional amounts outstanding by currency,[a] €bn



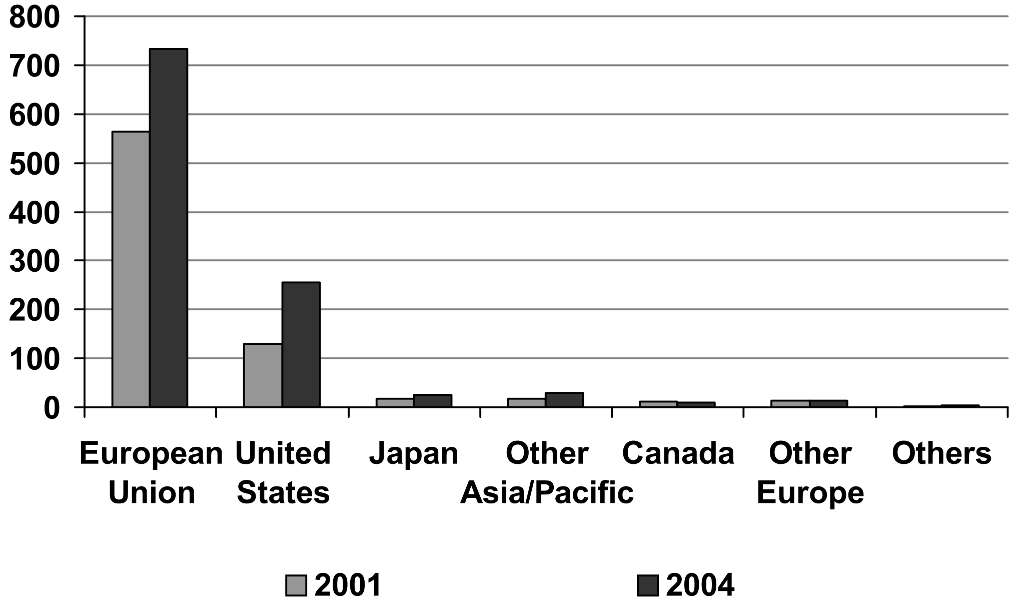
Source: Bank for International Settlements.
[a] Figures are as at June of each year.

The EU dominates the interest rate derivatives market with 68% of the market share. It has seen a reduction in market share from 75% since 2001 because of fast growth in the US interest rate derivatives market between 2001 and 2004 — the daily average turnover on such derivative contracts doubled during this period.

EU dominates the derivatives market

Japan and the rest of the Asia/Pacific region only account for 5% of this market. However their market grew 53% during the same three-year period, compared to 30% growth in the EU.

Figure 6-9: Over-the-counter interest rate derivatives daily average turnover,[a] € million



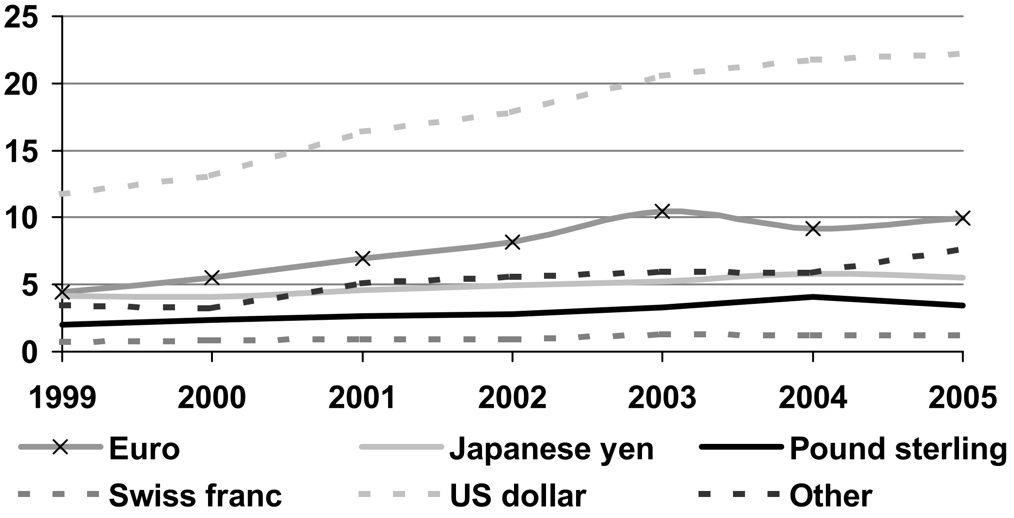
Source: Bank for International Settlements.
[a] Figures are as at April of each year and net of local inter-dealer double counting.

In the foreign exchange derivatives market the dollar remains the most common currency because of its status as the world's currency. In June 2005 €22.2 trillion worth of forwards, swaps, futures and options were traded on the dollar, compared with €10.0 trillion on the euro.

The EU through the UK enjoys the largest share of over-the-counter foreign exchange derivatives' turnover. In April 2004, the latest data available from the Bank for International Settlements, the EU pocketed a daily average of €747 million in turnover, or 52.9% of the world market.

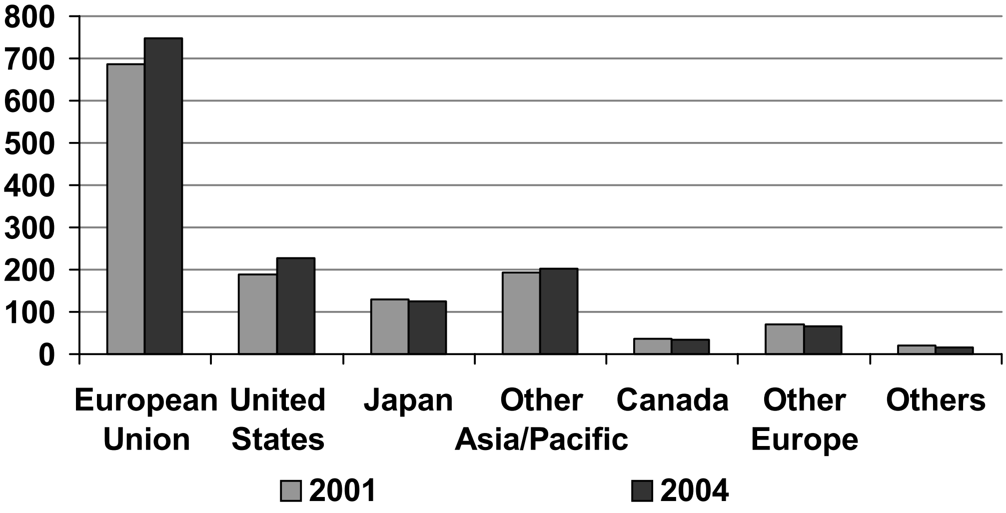
The second largest market participant is the United States which had an average daily turnover of €227 million. Two thirds of the EU's turnover arises from the UK. After the UK, US and Japan, Singapore remains the next largest market for foreign exchange derivatives ahead of Germany, Hong Kong, Switzerland and Australia. However of all these, it is the UK and US which have seen the fastest growth in over-the-counter interest rate derivative turnover between 2001 and 2004.

Figure 6-10: Foreign exchange derivatives markets, notional amounts outstanding,[a] € trillion



Source: Bank for International Settlements.
[a] Figures are as at June of each year.

Figure 6-11: Over-the-counter foreign exchange derivatives daily average turnover,[a] € million



Source: Bank for International Settlements.
[a] Figures are as at April of each year and net of local inter-dealer double counting.

6.2.f The fund management market

The fund management market is the market most commonly used to assess the extent of investment activity in a particular location. The industry is divided into the regulated market and the unregulated market. The former includes insurance funds (covered in the next sub-section) pension funds and investment (mutual) funds, whilst unregulated funds are hedge funds.

We first deal with regulated funds. Global regulated funds under management have continued to recover after the dot.com stock market crash in 2000, reaching a record $46.0 trillion, or €37.0 trillion, in 2004. Total funds under management rose from

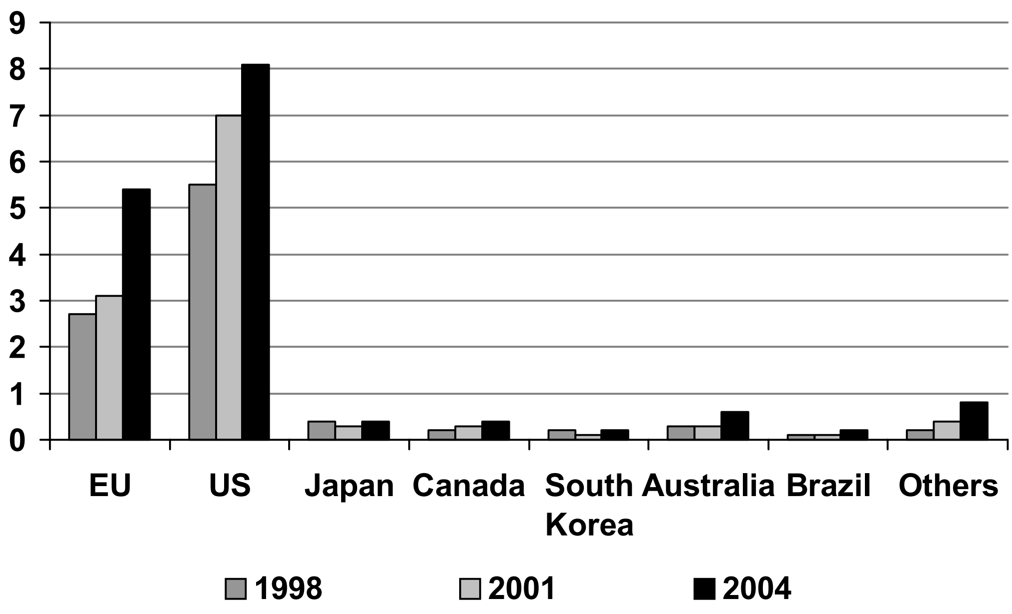
€42.4 trillion in 2003. Assets had fallen during the dot.com stock market crash from $37.4 trillion in 1999 to $32.9 trillion in 2002.

Global investment funds (mutual funds) have been the fastest growing component. The proportion of global funds under management in investment funds rose from 29.9% in 1998 to 35.2% in 2004. Pension funds account for a further 33.3% of all funds, though this share has slipped from 36.9% in 1998, whilst insurance funds account for 31.5% of global funds under management.

The US holds half of the world's €13.0 trillion of investment fund assets. However its share has shrunk from 58% in 1998 to 50% in 2004. On the other hand the EU has raised its share of mutual fund assets from 29% to 33% during the same six years. This is because the European bloc doubled its net assets in this period as the industry matured. The growth in investment fund assets in the EU and the US has by far exceeded the growth in other economies.

Japan's net assets have remained largely flat over the past six years, so that Australia and Canada have overtaken it to become the third and fourth largest holders of mutual fund assets. Hong Kong has also seen strong growth in its investment fund assets on the back of Chinese economic growth and on current trends will soon overtake Japan.

Figure 6-12: Total net assets of mutual funds,[a] US$ trillion



Sources: European Fund and Asset Management Association and the Investment Company Institute.
[a] Figures are at the end of each year.

The asset value of the world's pension funds rose to $15.3 trillion, or €12.3 trillion, in 2004 from $15.0 trillion in 2003. The asset value stood at €11.6 trillion in 1998 (see Table 6-7 overleaf).

The asset value of the world's 300 largest pension funds topped $8.4 trillion, or €6.8 trillion, as at 31st December 2004. Some 45% of these are located in the US, whilst a fifth are located in the EU. Nearly 40% of the EU's pension fund assets are located in the UK. A further 21% of the world's assets are located in Japan, though more than half of this is in the government's pension investment which is by far the largest pension fund in the world. Canada is the fourth largest holder of pension fund assets, whilst China and India account for only 0.2% and 0.3% of the world's assets.

EU manages 36% of world's pension fund assets

Despite having less than a fifth of the world's pension assets, fund managers incorporated in the EU manage 36% of them, according to data on the world's 500 largest pension managers. The US manages 41%, Switzerland 9% and Japan 8%. As at 31st December 2004, UBS, the Swiss bank, was the world's largest manager ahead of Allianz Group of Germany and Barclays Bank of the UK.

Table 6-7: Total assets of world's 300 largest pension funds and 500 biggest fund managers,[a] 2004,[b] $ billion

	World Top 500 Pension Fund Managers	Share of Top 500	World Top 300 Pension Funds	Share of Top 300
EU-25	17,351	35.5%	1,601	19.1%
US	20,087	41.1%	3,748	44.7%
Switzerland	4,297	8.8%	132	1.6%
Japan	3,970	8.1%	1,759[c]	21.0%
Canada	1,294	2.6%	397	4.7%
Australia	445	0.9%	46	0.5%
South Africa	425	0.9%	87	1.0%
South Korea	167	0.3%	135	1.6%
Brazil	151	0.3%	36	0.4%
Norway	106	0.2%	24	0.3%
India	57	0.1%	25	0.3%
Taiwan	47	0.1%	145	1.7%
China	0	0.0%	21	0.2%
Russia	0	0.0%	0	0.0%
Others	321	0.7%	210	2.5%

Sources: P&I/Watson Wyatt World Top 500;

[a] Assets recorded by nationality of fund manager, Numbers related to world biggest 500 pension fund managers only.

[b] Data as at 31st December 2004, except data for Korea and Taiwan, which is as at 31st May 2005, data for Japan, which is as at 31st March 2005, and data for Australia which is as at 30th June 2004.

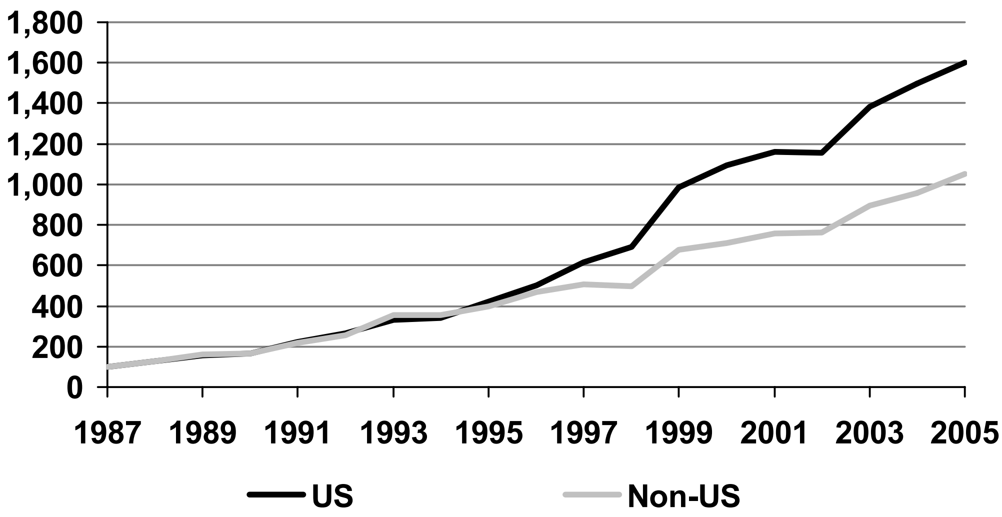
[c] Japan's Government Pension Investment is by far the world's largest pension fund with $ 1,058 billion in assets. The second largest is ABP of the Netherlands on $231 billion.

We now turn to hedge funds.

The term 'hedge fund' has out-grown its original meaning — a fund focussed on absolute returns that was not advertised to private investors and, as a result, was not subject to the same stringent restrictions as other funds. Today it is better to think of hedge funds in the context of their regulatory position in the US — they are supposedly marketed only to very rich and knowledgeable investors and are limited by law to having a maximum of 100 investors per fund. As a result they are exempt from many of the rules that apply to the majority of investment funds and therefore are able to use a number of different strategies that are not open to normal funds, such as selling short, leverage, programme trading and derivatives. Importantly, they focus on absolute returns rather than returns relative to stock market benchmarks. The value of assets in hedge funds rose to $0.9 trillion in 2004 from $15 billion in 1985 and the number of hedge funds stood at 8,050 in 2004, up from 68 in 1985.[47] It is estimated that the number of assets grew to just under $1.4 trillion in September 2005.[48]

Hedge funds are a US based phenomenon. The world's largest hedge funds, such as Caxton Associates, Farallon Capital Management and Angelo, Gordon & Co are all American. And the largest global prime brokers are Morgan Stanley, Bear Stearns and Goldman Sachs. The largest non-US broker is UBS, which is at number four in size. In its survey of hedge fund managers of September 2005, the Hedge Fund Manager Magazine found that 58% of funds are based in the US and 24% in Europe, whilst Asia is currently home to just 5% of hedge fund assets. In recent years European hedge funds have grown fast whilst Hedge Fund Magazine's survey suggests that new investment in hedge funds over the next few years will largely be in Asia.

Figure 6-13: Global Van Hedge Fund Index,[a] 1987=100, 1987-2005



Source: Greenwich Van Hedge Fund
[a] The Global Van Hedge Fund Index only includes funds as generally defined and excludes fund-of-funds and other types of investments such as private equity funds and venture funds.

According to the Global Van Hedge Fund Index, which tracks over a quarter of the world's hedge funds, growth in assets of existing hedge funds (excluding fund-of-funds, which are funds of hedge funds that spread investment across a number of funds) has averaged 16% between 1988 and 2005. This is by far the fastest growing type of fund management. The fastest recorded growth in the market was in 1999 at the height of the dot.com bubble when growth reached 40%. After slowing through the market crash between 2000 and 2002 (though never falling) the index jumped again in 2003 by 20%. In 2005 the 2,000 hedge funds on the index expanded 8.4%.

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[47] Van Hedge Fund Advisors International Inc and Morgan Stanley through International Financial Services London.
[48] Hedge Fund Manager Magazine.

6.2.g The insurance market

In 2004 the world's insurance market was worth $3.2 trillion, or €2.6 trillion, based on the number of insurance premiums written. The majority of these, 57%, are life insurance premiums.

The EU and the US are the largest players in the insurance market, with 34.4% and 33.8% respectively of the world market in 2004. However whilst the EU is by far the biggest player in the life insurance market, the US is the biggest in the non-life market. Japan follows with 15.2%, though 79% of all premiums in Japan are in life insurance, driven primarily by its ageing demographics. China's insurance premiums were smaller than South Korea's in 2004, though as with Japan, the latter has a large life insurance market and ageing demographics.

Table 6-8: World's biggest insurance markets by premiums written, 2004, € billion

	Non-life premiums	Life premiums	Total premiums	Percent of total world premiums
EU-25	367.6	529.3	896.7	34.4%
US	485.4	398.3	883.8	33.8%
Japan	85.0	311.4	396.4	15.2%
Canada	32.4	23.8	56.1	2.2%
South Korea	16.1	39.2	55.2	2.1%
China	13.5	28.5	42.0	1.6%
Australia	19.1	20.7	39.8	1.5%
Taiwan	7.6	27.3	34.8	1.3%
Switzerland	14.4	19.4	33.8	1.3%
South Africa	5.1	19.6	24.7	1.0%
India	3.5	13.6	17.1	0.7%
Brazil	7.9	6.6	14.5	0.6%
Russia	10.3	2.9	13.2	0.5%

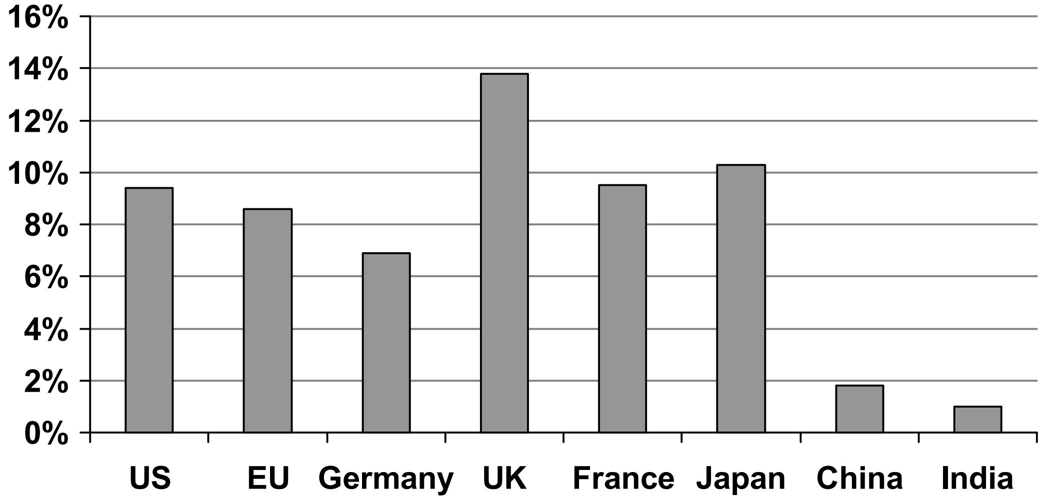
Sources: Swiss Re, sigma study, 2/2005.

Comparing the value of written premiums to the size of the economy gives a benchmark of average insurance market size in the world. This exercise shows that China and India have a low ratio of insurance premiums relative to the size of their economies, when compared with developed economies, suggesting that the insurance market in these countries has a lot of room for growth, as these countries develop and their economies grow.

China and India's insurance markets have huge room for growth

The UK, on the other hand, has an atypical ratio of insurance premiums written relative to gross domestic product. Insurance premiums relative to gross domestic product stand at 13.8% in the UK, compared with 9.4% in the US and 8.6% in the whole of the EU. Indeed due to London being the world's leading centre for internationally traded insurance and re-insurance, the UK is the largest player in the insurance market in the EU and the third in the world with 9% of world market share; Germany and France each hold 6%.

Figure 6-14: Ratio of all insurance premiums written to gross domestic product, 2004



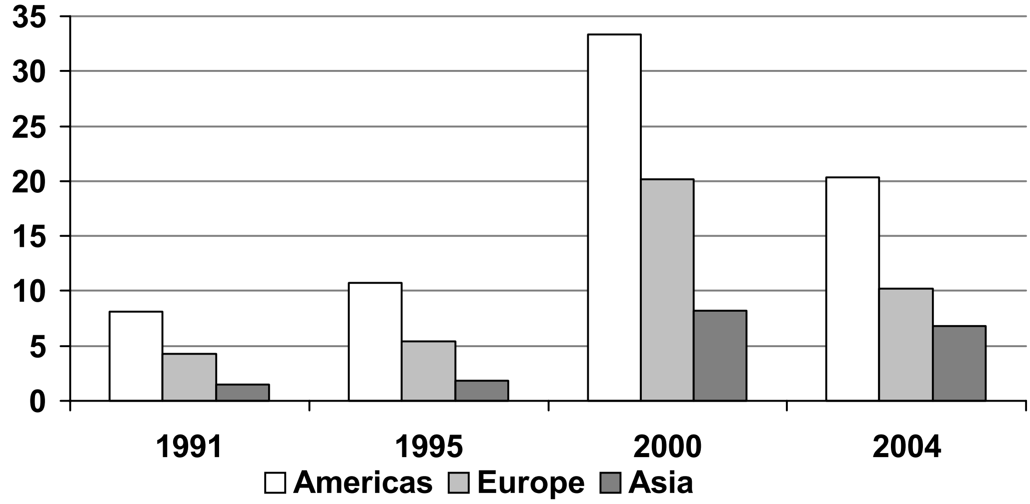
Sources: Swiss Re, sigma study, 2/2005, Eurostat and National Bureau of Statistics of China.

6.2.h The investment banking market

Total revenue in the global investment banking market stood at €37.3 billion in 2004. Revenues in this market remain far below the high of €61.8 billion reached in 2000, at the height of the dot.com boom. However part of the difference between revenues in 2000 and 2004 is due to the depreciation in the dollar. Eliminating currency differences, the market was 81% of the size it was in 2000. With the pick up in merger and acquisition activity and stock markets generally, we expect this ratio to have risen in 2005.

The largest component of investment banking is the merger and acquisition segment, which restored its lead ahead of equities in 2004. Revenues in merger and acquisitions stood at €14.5 billion in 2004. During the same year, revenues in the equity and fixed income (bonds) segments of the market shrunk to €11.7 billion and €9.3 billion respectively.

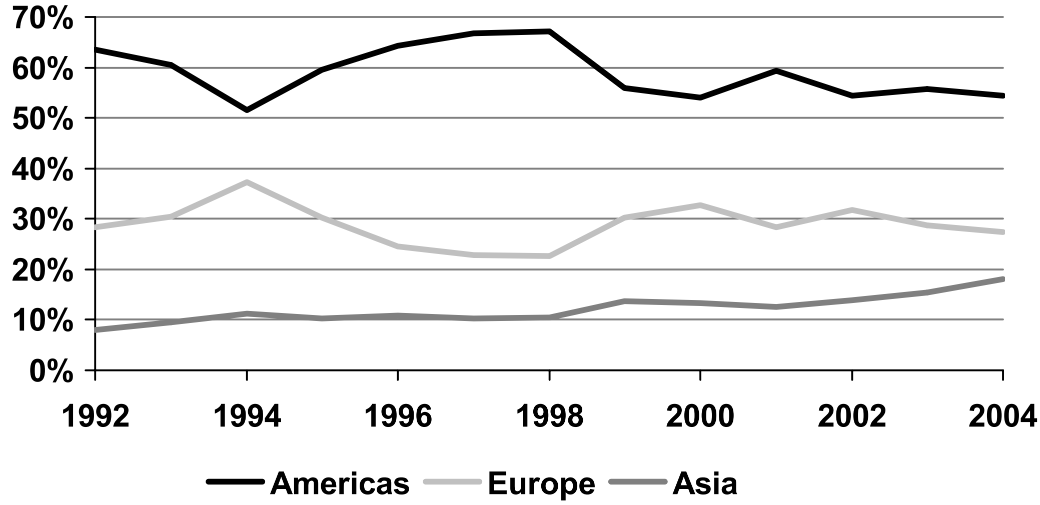
Figure 6-15: Global investment banking revenue, € billion



Sources: Freeman & Co through International Financial Services London.

The Americas is the largest player in the investment banking market, accounting for 54% of revenues. Europe accounts for a further 27%, whilst Asia represents the remaining 18% of the market.

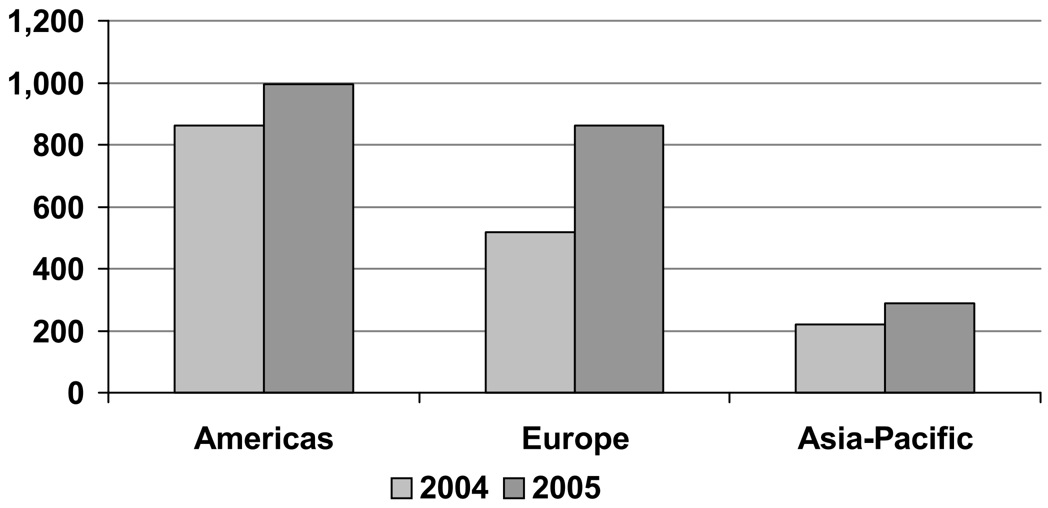
Figure 6-16: Share of global investment banking revenues by region



Sources: Freeman & Co through International Financial Services London.

However Asia is the fastest growing market and the region has increased its share of the market sizeably — it stood at 10% in 1998. This has largely come at the expense of the Americas. Europe has seen its share of the market slip from 33% in 2000 to 27% in 2004; however we expect it to have made up some lost ground in 2005. The value of worldwide merger and acquisitions deals completed surged 34% in 2005 to $2.2 trillion from $1.6 trillion in 2004. The market was supported by the increased demand for energy and the strong growth in private equity. In Europe it jumped 66%, making Europe's merger and acquisition market only slightly smaller than that of the US — the world's largest merger and acquisition market. It was two third's as big in 2004.

Figure 6-17: Completed merger and acquisition deals by region, $ billion



Source: Thomson Financial, *Mergers and Acquisitions Review*, fourth quarter 2005.

The countries that saw fastest growth in the market in 2005 were the UK, which experienced 101% growth and which makes up 36% of Europe's merger and acquisitions market, and Japan which saw the value of deals rise 73%. Although China's market remains small compared with the leading countries, with only $13.2 billion worth of deals in 2005, it is the second most attractive Asian country for acquirers, after Japan. Looking at announced deals, rather than completed deals, it attracted $31.5 billion in 2005, compared with $25.7 billion in the previous year. South Korea saw $22.2 billion of announced deals and India $20.7 billion, up from $13 billion and £5 billion respectively in the previous year.

Table 6-9: Value of completed merger and acquisition deals, $ billion

	Value, 2004	Number of deals, 2004	Value, 2005	Number of deals, 2005
Western Europe	487.3	6,616	795.1	6,653
Of which: France	128.4	819	65.0	873
Germany	57.3	946	82.4	911
UK	152.1	2,131	306.7	2,001
US	777.1	7,133	885.2	7,332
Brazil	11.9	178	10.3	132
Canada	49.8	998	65.2	967
Australia	72.4	1,266	55.2	1,283
China	14.4	775	13.2	498
Hong Kong	9.9	426	14.8	413
Japan	75.0	1,523	130.1	1,549
Worldwide	**1,612.4**	**22,461**	**2,162.9**	**22,503**

Sources: Thomson Financial, *Mergers and Acquisitions Review*, fourth quarter 2005.

6.3 Annex C

Table 6-10: Distribution by country of cross-border inter-bank transactions in EU-15, percentage of daily TARGET flows, December 2000

	From:															
To:	**AT**	**BE**	**DE**	**DK**	**ES**	**FI**	**FR**	**UK**	**GR**	**IE**	**IT**	**LU**	**NL**	**PT**	**SE**	**Total**
AT	-	1.5	4.9	0.8	3.4	5.2	2.3	1.5	5.1	1.5	1.7	3.9	1.3	5.6	2.6	**2.7**
BE	5.2	-	12.4	11.5	9.4	12.0	8.2	6.0	8.7	10.2	9.3	15.7	7.5	10.5	7.2	**8.6**
DE	45.1	28.7	-	24.3	26.3	15.3	35.1	39.0	42.7	25.5	31.2	34.0	30.9	15.1	24.3	**24.6**
DK	0.4	2.8	1.8	-	0.4	14.8	1.6	1.5	0.4	0.3	0.4	4.3	4.1	3.3	14.3	**2.3**
ES	3.4	3.5	4.3	2.9	-	1.4	3.4	2.8	0.4	3.6	6.8	1.0	1.4	12.2	1.6	**3.5**
FI	3.3	2.7	1.0	14.9	1.2	-	0.9	0.7	1.1	1.4	2.7	0.6	1.9	0.1	16.8	**2.0**
FR	11.8	14.1	19.6	5.7	16.4	6.9	-	22.9	5.4	10.0	18.0	10.0	12.8	7.0	6.5	**14.5**
UK	8.9	19.5	26.5	10.0	12.0	6.6	24.9	-	9.5	29.6	17.4	10.6	29.9	12.5	7.7	**17.7**
GR	0.6	0.2	0.6	0.2	0.1	0.0	0.1	0.1	-	0.6	0.1	1.0	0.3	1.8	0.2	**0.3**
IE	1.1	1.8	1.2	1.2	1.5	2.3	0.8	2.4	1.4	-	0.3	0.9	0.9	5.5	3.0	**1.4**
IT	5.8	9.7	11.2	2.1	18.9	11.2	12.3	6.9	3.3	2.0	-	12.3	5.0	17.5	4.4	**8.7**
LU	3.4	4.6	3.7	2.1	1.0	1.0	2.2	1.4	10.1	1.8	4.0	-	1.3	3.1	1.3	**2.7**
NL	3.4	8.0	9.9	12.5	3.3	6.9	6.5	13.0	8.4	4.7	4.6	3.5	-	4.4	9.3	**7.8**
PT	3.4	1.2	0.8	1.9	5.1	0.1	0.7	0.7	3.7	4.2	2.6	0.8	0.8	-	0.7	**1.2**
SE	3.2	1.8	2.1	10.1	1.0	16.4	1.1	1.1	0.0	4.7	1.0	1.6	2.1	1.3	-	**2.1**
Total	**2.7**	**8.6**	**24.6**	**2.4**	**3.6**	**1.8**	**13.8**	**17.1**	**0.4**	**1.5**	**8.9**	**3.0**	**7.9**	**1.4**	**2.2**	**100.0**

Source: European Central Bank, Occasional Paper No.6, Banking Integration in the Euro Area, 2002.

The City of London Corporation

The City of London is exceptional in many ways, not least in that it has a dedicated local authority committed to enhancing its status on the world stage. The smooth running of the City's business relies on the web of high quality services that the City of London Corporation provides.

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Alongside its promotion of the business community, the City of London Corporation has a host of responsibilities which extend far beyond the City boundaries. It runs the internationally renowned Barbican Arts Centre; it is the port health authority for the whole of the Thames estuary; it manages a portfolio of property throughout the capital, and it owns and protects 10,000 acres of open space in and around it.

The City of London Corporation, however, never loses sight of its primary role – the sustained and expert promotion of the 'City', a byword for strength and stability, innovation and flexibility – and it seeks to perpetuate the City's position as a global business leader into the new century.

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