

Would joining EMU create better conditions for firms making long-term decisions to invest in Britain?

The investment test focuses on one of the key potential benefits for the UK economy of EMU membership: higher investment. Productivity growth is central to long-term economic performance and investment is a key driver of productivity. In or out of EMU, the Government places great importance on boosting the quantity and quality of UK investment.

Key points:

- EMU is promoting a deeper, broader and more integrated capital market across the euro area, which could lead to a reduction in the cost of capital for euro area firms. The removal of currency transaction costs and risk through EMU entry would increase access to this capital market for UK firms, although differences in regulation and infrastructure would remain important barriers to access. Progress made on lowering these barriers, for example through the Financial Services Action Plan (FSAP), will be to the benefit of UK investors whether or not the UK joins the single currency.
- The barrier to access to the EMU capital market created by currency transaction costs and risk is relatively more important for small and medium-sized enterprises (SMEs) than for large firms. Easier and cheaper access to euro area financing will mainly benefit those larger SMEs which currently raise funds through domestic capital markets, but are discouraged by exchange rate costs from tapping international markets. EMU will have a limited impact on smaller SMEs, which tend to raise capital through local retail banks. Over the long run, EMU entry could spur competition in the UK retail financial market.
- A lower cost of capital through lower real and nominal interest rates was a key economic benefit of EMU for many euro area countries. Over the medium to long term, euro area interest rates are not expected to be lower than those in the UK, reflecting the expectation that macroeconomic frameworks in both the UK and the euro area will maintain low and stable inflation. Due to the current cyclical positions of the UK and euro area economies, EMU entry at this stage would lead to a fall in UK short-term interest rates. But the assessment of the convergence test shows that this would be likely to come at the cost of greater macroeconomic instability.
- Overall, exchange rate volatility acts as a barrier to cross-border investment. EMU entry on the basis of sustainable and durable convergence, including at a sterling-euro exchange rate consistent with longer-term sustainability, would allow the UK to participate in a more active cross-border investment market, prompting greater foreign direct investment (FDI) flows into the UK from the euro area and greater outflows from the UK to the euro area.
- Over time, EMU is likely to boost FDI in the euro area. There has been a fall in the UK's share of total EU FDI flows coinciding with the start of EMU and a corresponding increase in the share of the euro area. But against the backdrop of many other influences on FDI flows, it is difficult to say with confidence that EMU has boosted FDI within the euro area. There can, however, be confidence that a successfully operating EMU, and UK membership of it on the right basis, would boost FDI over the longer term.
- Investment will be higher if firms have greater certainty about returns. EMU entry would reduce nominal exchange rate volatility and lead to greater certainty about returns, particularly for firms which do business in the euro area. But the assessment of the convergence and flexibility tests has shown that at the present time the achievement of sustainable and durable convergence between the economies of the UK and euro area has not been demonstrated. In such circumstances, EMU entry at this stage would lead to greater macroeconomic instability in the UK which would be damaging for domestic investment.

The overall conclusion of the investment test is:

- **UK productivity has been held back by a legacy of long-term under-investment. EMU entry could reduce the cost of capital for UK firms if long-term interest rates fell further inside the euro area and if membership of a larger financial market reduced the cost of finance. These costs could fall for SMEs in particular if joining EMU lowers the barriers which prevent SMEs accessing euro area financial markets and lowers the cost of bank lending. Over time, EMU is likely to boost cross-border investment flows and FDI in the euro area. There has been a fall in the UK's share of total EU FDI flows coinciding with the start of EMU, and a corresponding increase in the share of the euro area. But against the backdrop of many other influences on FDI flows, it is difficult to say with confidence that EMU has boosted FDI within the euro area. There can, however, be confidence that a successfully operating EMU, and UK membership of it on the right basis, would boost FDI over the longer term. There is a risk that the longer membership of the euro is delayed, the longer the potential gains in terms of increased inward investment are postponed. If sustainable and durable convergence is achieved, then we can be confident that the quantity and quality of investment would increase ensuring that the investment test was met.**

Policy requirements:

In a world of ever increasing cross-border investment flows the UK Government will continue to focus on policies to ensure more long-term and productive investment. In practice this means:

- **the measures outlined in the convergence and flexibility tests aimed at ensuring continued stability and improving flexibility will complement the Government's existing strategy for increasing the quantity and quality of investment by UK firms;**
- **the Government is committed to continuing efforts to create a single European market in financial services through the FSAP; and**
- **the Government will ensure that the UK retains its leading position as a destination for FDI, inside or outside of EMU, by continuing to maintain macroeconomic stability and encouraging flexibility in labour, product and capital markets.**

THE IMPORTANCE OF INVESTMENT

3.1 The Government's central economic objective is to achieve high and stable levels of growth and employment. Increasing the sustainable rate of UK productivity growth is an important driver of long-term economic performance. The investment test addresses the issue of whether EMU membership would be good for investment:

Would joining EMU create better conditions for firms making long-term decisions to invest in Britain?

3.2 Investment in physical and human capital is a key driver of productivity. The UK's investment levels have historically lagged behind those of other major economies, leaving the UK less capital intensive than its major competitors. Increasing investment and reducing this gap between the UK and other major economies is central to achieving the Government's long-term economic objectives. This is why it is vital that joining EMU would create better conditions for domestic and overseas firms making long-term decisions to invest in the UK.

3.3 Public sector investment is important for laying the foundations of a strong, productive economy. The impact of EMU, and in particular the Stability and Growth Pact (SGP), on public investment is covered in the growth, stability and employment test. The investment test concentrates on the impact of EMU on business investment, covering both domestic business investment and foreign direct investment (FDI).

Boosting investment 3.4 In the past, macroeconomic instability and weaknesses on the supply side of the economy have discouraged UK firms from investing for the long term. The Government's strategy for increasing the quantity and quality of investment by UK firms has two broad strands:

- maintaining **macroeconomic stability** to help businesses plan effectively for the long term, improving the quantity and quality of long-term investment in physical and human capital and helping to raise levels of productivity; and
- implementing targeted **microeconomic reforms** to address market failures and boost competition, including improving transport and the planning system, and taking forward the recommendations of the Myners review of institutional investment, the Sandler review of retail savings and the Higgs review of corporate governance.¹

The potential impact of EMU 3.5 EMU membership could complement this strategy and boost investment by firms in the UK. The removal of nominal exchange rate volatility with existing euro area countries would provide greater stability for firms that export goods to euro area customers or purchase inputs from euro area suppliers. By lowering barriers to market integration in the euro area, EMU should increase cross-border investment flows. In the longer term, these developments should boost competition and provide new opportunities for companies to invest. The integration of financial markets prompted by EMU would potentially increase the availability of capital for firms.

3.6 But for these potential benefits to be realised, the UK must join EMU on the basis of having achieved sustainable and durable convergence. If this was not achieved, the UK would be likely to experience greater macroeconomic instability. Firms would face a more uncertain environment, which would be damaging to investment and lead to lower output and growth over the long term.

The UK's investment record

UK investment performance 3.7 Tables 3.1 and 3.2 indicate the relatively low levels of capital investment in the UK and the consequences this has had for productivity. Table 3.1 shows that the UK has a lower capital intensity – the amount of physical capital that labour has to work with – than the US, Germany and France. In 1999, capital per hour worked in Germany and the US was nearly 50 per cent higher than in the UK and in France it was over 75 per cent higher. Table 3.2 shows that UK labour productivity is lower than in Germany, France and the US. This holds whether productivity is measured on the basis of output per worker, which is the Government's central measure of productivity, or on the basis of output per hour worked.

Table 3.1: Capital per hour worked, 1999

UK=100	Total	ICT ¹
US	146	264
France	177	114
Germany	147	105

¹Information and communication technology.

Source: O'Mahony and de Boer, 2002, 'Britain's Relative Productivity Performance: Updates to 1999', NIESR.

Table 3.2: Labour productivity, 2001

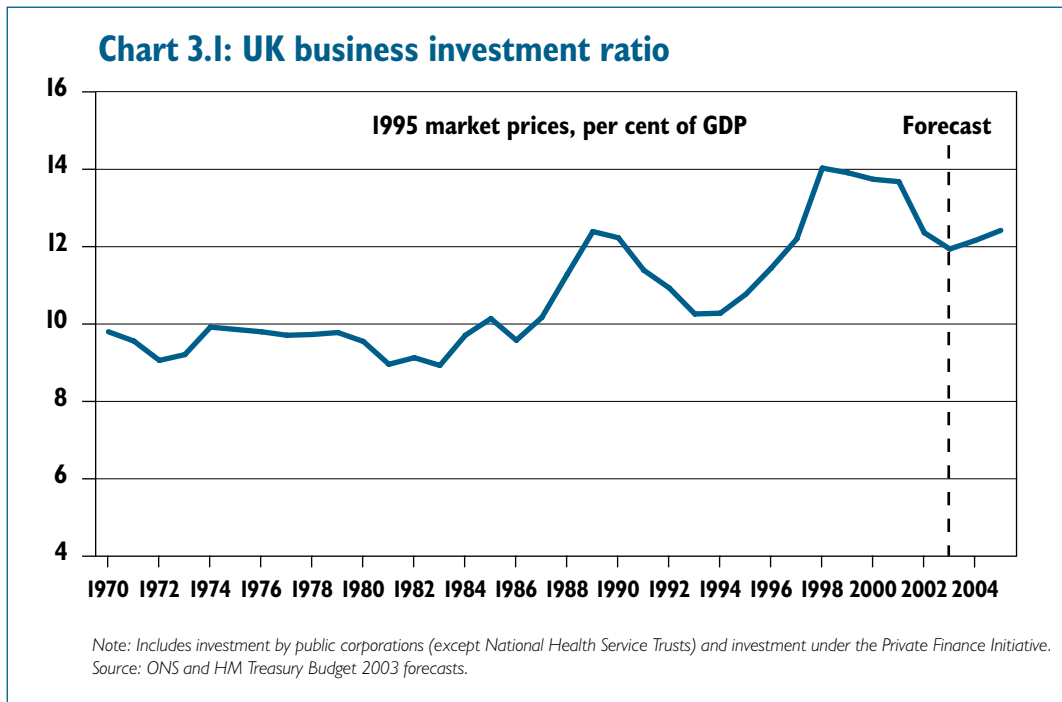
UK=100	GDP per worker	GDP per hour worked
US	131	126
France	116	133
Germany	104	125

Source: HM Treasury and ONS.

¹ Budget 2003 provides details of the Government's strategy to boost investment.

UK investment performance since 1997

3.8 As Chart 3.1 shows, UK business investment as a per cent of GDP has risen over the past 20 years. The combination of a stable macroeconomic environment and targeted reform saw business investment reaching record levels in the late 1990s. But as Table 3.1 shows, this encouraging performance still leaves the UK with lower capital intensity than its major competitors. UK investment is forecast to rise up to 2005 but capital intensity in the UK is likely to remain below that in other major European countries. The Government is determined to continue to target reforms to increase UK investment levels and close this gap. The EMU decision must support this ambition.



3.9 UK business investment fell in 2001 and 2002 due to significantly heightened global uncertainty. Although there have been recent signs of business investment bottoming out, the subdued nature of the global recovery in 2002 together with ongoing international uncertainties have continued to discourage firms from undertaking new investment. The main catalyst for the forecast rebound in business investment in the second half of 2003 is a strengthening of the global recovery. Business investment in the UK is forecast to grow by $4\frac{3}{4}$ to $5\frac{1}{2}$ per cent in 2004 and by $5\frac{1}{4}$ to 6 per cent in 2005.

UK FDI performance

3.10 While the UK's domestic investment performance still needs to improve, the UK has a consistently excellent track record of attracting FDI. The UK has been a leading destination for inward investment into the EU over recent years, though the UK's share of EU FDI flows fell quite sharply after 1998, and the euro area countries saw a corresponding increase. A key issue for this assessment is whether this indicates that being outside EMU has damaged UK FDI flows.

3.11 Despite this fall, as recently as 2001 the UK was the most successful country in the EU at attracting inward investment and the second most successful in the world. Importantly, the UK is also a major investor overseas. Maintaining the UK's strong FDI record is important to the Government's aim of increasing the rate of productivity growth in the UK. Research shows that FDI boosts productivity in domestic firms, as it introduces new technologies, more efficient management practices and greater competition into the domestic economy.

Structure of the investment test **3.12** The assessment of the investment test is divided into two sections: business investment and FDI. In each case, the assessment identifies the key determinants of investment for firms and then considers the potential impact of EMU entry on these determinants.

3.13 The assessment considers both issues on the basis that should the UK stay outside the single currency it would remain a strong and constructive member of the EU. This means that UK industry would continue to have full access to the Single Market in goods and services and to EU capital markets, both now and in the future in an enlarged EU.

- **Implications of EMU for business investment** addresses three questions:

What would be the impact of EMU on the expected returns to investment?

A firm will invest if it expects the returns from the investment to exceed the costs. Expected returns depend on long-term growth prospects and the degree of economic stability. To address this issue, the assessment draws on analysis of the impact of EMU on the business environment from the EMU study *EMU and business sectors*.

What would be the impact of EMU on the cost of capital?

The cost of capital is affected by the stability of the macroeconomic environment and the size and liquidity of financial markets. For this analysis, the assessment draws on the EMU study *EMU and the cost of capital*.

Would small and medium-sized enterprises (SMEs) enjoy cheaper and easier access to finance?

The impact of EMU entry on the cost of capital for SMEs could be different from that for larger firms. Transaction costs and exchange rate risk will be proportionately greater hurdles to accessing cross-border finance for SMEs. The assessment draws on the analysis of these issues in the EMU study *EMU and the cost of capital*.

- **EMU and foreign direct investment** addresses two questions:

What is the impact of the exchange rate on FDI?

By removing exchange rate volatility and transaction costs within the euro area and boosting price transparency, EMU could increase cross-border investment flows. This could have a significant effect on UK FDI inflows and outflows.

Has there been an EMU effect on FDI flows and has the UK suffered?

The UK's share of EU FDI flows fell after 1998. A key issue is whether this indicates that being outside EMU has harmed UK inward investment flows. The assessment examines the impact of EMU on FDI patterns to date, drawing on detailed analysis in the EMU study *EMU and business sectors*.

- The **Conclusions** bring the analysis together to assess whether the investment test is met.

IMPLICATIONS OF EMU FOR BUSINESS INVESTMENT

3.14 To assess the potential implications of EMU entry for investment, it is necessary to identify the key drivers of business investment. The Government's strategy for promoting investment in the UK is focused on maintaining macroeconomic stability and implementing microeconomic reforms targeted at addressing market failures and boosting competition. This strategy is based on the principle that firms need a stable economy in order to plan for the future, and that efficient and flexible capital, labour and product markets allow firms to identify and realise investment opportunities.

3.15 These principles are rooted in economic theories of investment. Box 3.1 outlines theoretical accounts of the determinants of investment, which are also discussed in the EMU study *EMU and business sectors*. Such models suggest firms will invest if the expected returns from investment exceed the cost of capital. Empirical studies often find a weak link between investment and the cost of capital, but a stronger relationship with output and profitability. This suggests that EMU entry would increase investment levels if it were to raise growth and boost UK output. EMU's overall impact on growth is covered in the fifth test on growth, stability and employment.

Box 3.1: Theories of investment

The assessment is underpinned by various theoretical approaches to analysing investment.

Accelerator models assume that there is a desired capital stock for a given level of output and interest rates. A rise in output or a fall in interest rates would prompt investment as firms adjust to reach the new optimal capital stock level.

The **neoclassical theory of investment** suggests that a firm will invest until the marginal return from investment equals the marginal cost of capital. Two factors drive investment in this model: the return from investment, which is governed by the price and volume of output; and the cost of capital, which is determined by factors such as the interest rate, depreciation and tax.

More complicated models of investment recognise that the capital stock cannot always be adjusted immediately to its desired level because of adjustment costs. These include the cost of lost business due to installation of new equipment or the cost of retraining workers. And in some cases these costs may be dynamic, meaning that they increase with the size of the investment, with the result that a too rapid accumulation of capital may be inefficient. Adjustment costs imply that the optimal capital stock predicted under the neoclassical model may not be reached immediately, but will be a longer-run equilibrium that firms attempt to move towards.

They also imply that current investment decisions need to incorporate firms' expectations of future profits. The **Tobin's Q** model of investment embodies this approach. Tobin's Q is the ratio of the stock market valuation of the firm (which can be viewed as the market's estimate of the present value of new investment) to the price of new equipment (which approximates to the marginal cost of capital). This relationship can be viewed as the ratio of the present value of marginal investment to the marginal cost of the investment. If Tobin's Q is greater than one, i.e. if the marginal value of investment exceeds marginal cost, then it makes sense for firms to invest more. The optimal level of investment, which corresponds to the neoclassical optimal capital stock, is where Tobin's Q equals one.

3.16 Recent economic research has extended the theoretical models discussed in Box 3.1 to include a wider range of determinants, such as the level of innovation, the availability of skilled labour, capital market imperfections and uncertainty. The impact of uncertainty on the expected returns to investment is particularly important to this analysis. EMU entry could have a significant impact on expected returns through its impact on macroeconomic stability and the exchange rate.

Uncertainty reduces investment **3.17** In most cases, firms may not recover the full value of an investment if future economic conditions turn out to be worse than expected. For example, the cost of building a new production plant cannot be fully recouped if demand for the plant's output turns out to be lower than expected. This implies that in an unstable and uncertain environment, firms may not undertake some investment projects. Or they may delay them until they have greater confidence in future economic prospects. In the economic literature this effect is captured by 'option value' theory. Firms have the option to delay investment until there is more information on future conditions. This option effectively increases the rate of return which a firm requires to invest. The value of the option increases with economic uncertainty.

3.18 The importance of stability for investment has been confirmed by a series of empirical studies which examine the link between investment and economic uncertainty using data from across countries and business sectors. These studies are considered in more detail in the EMU study *EMU and business sectors*. The result that stability is important for investment is found to stand across a range of different indicators of uncertainty, including inflation, output and exchange rate volatility. Other work has also suggested that more competitive markets reduce the impact of uncertainty on investment. Firms in a competitive market may risk losing business to competitors if they delay investment.

3.19 The CBI Industrial Trends survey provides further evidence that uncertainty about demand is a constraint on investment for UK firms. The survey results for July 2002 to April 2003 show that over 50 per cent of respondents reported that uncertainty about demand was a factor likely to limit their investment plans over the next year.

3.20 Overall, evidence from the UK and other countries suggests that increased uncertainty has a negative long-run effect on fixed capital investment. As Professor Ray Barrell states in his contribution to the EMU study *Submissions on EMU from leading academics*: "In a more uncertain world the level of investment in the stock of capital assets (knowledge, skills and structures and equipment) is likely to be lower, and they will be used less effectively."

The key determinants of investment

3.21 The central message of economic theory and the evidence from economic studies and business surveys is that investment is determined by the relationship between the expected returns from investment and the expected cost of financing the investment:

- the **expected returns from investment** are determined by the demand for and the price of the output generated by the investment and by the costs of production. Expectations of demand, prices and costs over the lifetime of the investment are therefore key determinants of expected returns. The degree of uncertainty attached to these expectations is extremely important; and
- the **cost and availability of internal and external finance** is important, as higher costs of finance require greater returns from the investment to ensure that it is profitable.

3.22 The remainder of this section considers the potential impact of EMU on these two key determinants of investment.

Expected returns to investment

Investment and macroeconomic instability

3.23 If EMU membership does not impair macroeconomic stability, the quantity and quality of investment could increase. In practice, the assessment of the convergence and flexibility tests has shown that sustainable and durable convergence has not been achieved. Box 3.2 discusses the implications of EMU entry for uncertainty in the context of investment, drawing on the analysis in several EMU studies. Because sustainable and durable convergence has not been achieved at the present time, EMU membership would risk leading to increased inflation and output volatility due to the loss of the stabilising role for a UK-specific interest rate and the loss of a shock absorbing role for the exchange rate.

Box 3.2: EMU's impact on uncertainty and investment

The starting point for the assessment is that the quality and quantity of business investment is affected by uncertainty. Two sources of uncertainty relating to EMU membership are particularly relevant to aggregate investment: expectations of macroeconomic stability and expectations of future movements in the relevant exchange rate.

The implications of EMU membership for macroeconomic volatility have already been considered in the assessment of flexibility and are detailed in Box 2.4, drawing on analysis in the EMU study *Modelling shocks and adjustment mechanisms in EMU*.

To recap:

- macroeconomic variability might increase due to the loss of a stabilising role for a UK-specific interest rate and the loss of a shock absorbing role for the sterling-euro exchange rate; but
- the economy may become less volatile if EMU membership involves the removal of shocks to the sterling-euro exchange rate that, outside EMU, had been a source of macroeconomic volatility.

The EMU study *Modelling the transition to EMU* finds that the transition to entry to EMU and the uncertainty associated with the appropriate entry rate have risks for macroeconomic volatility.

The assessment of the convergence and flexibility tests concludes that sustainable and durable convergence has not been achieved at the present time. In other words, macroeconomic volatility would be higher in the UK inside EMU than outside.

Some commentators have highlighted the reduction in uncertainty within EMU for the UK resulting from the elimination of the exchange rate against euro area countries. By itself, this would boost investment in industries which trade with the euro area. But this effect needs to be offset against the impact on investment targeted on domestic sales, and the effect on exchange rate volatility against other currencies.

The causes of volatility in the sterling-euro exchange rate are also important. Analysis in the EMU study *The exchange rate and macroeconomic adjustment* suggests that this volatility reflects underlying shifts in the demand for and supply of goods and services in the UK and the euro area, and as such has been a symptom rather than a cause of the lack of sustainable and durable convergence. Within EMU, the absence of a sterling-euro exchange rate would mean that the effect of such shifts in demand and supply would have a greater impact on output and inflation. Hence the effects of reduced exchange rate volatility cannot be considered in isolation.

Exchange rate uncertainty between the UK and the euro area **3.24** The removal of nominal exchange rate volatility between the UK and the euro area countries would remove one source of uncertainty for firms that trade with the euro area. The value of exports from UK firms to the euro area was 13.3 per cent of GDP on average in 1999-2001. Imports from the euro area accounted for 14.2 per cent of GDP on average over the same period.

3.25 Where part of the return from an investment accrues from trade with the euro area, EMU entry would allow firms to forecast with more accuracy the expected returns from an investment. In principle, by removing this source of uncertainty, EMU entry would benefit these firms.

3.26 The EMU study *EMU and business sectors* examines how the impact of exchange rate volatility on investment varies across industrial sectors. Firms with long lags between production and sale or long production times would benefit from a greater ability to plan ahead if exchange rate volatility were reduced. Reduced exchange rate uncertainty may have less impact on investment by firms with market power, for example where goods are differentiated due to branding or to national preferences. Such firms would have a greater ability to compensate for exchange rate movements by changing prices without losing sales. Empirical studies show that firms which have low profit margins are more sensitive to uncertainty from exchange rate volatility. Small firms may benefit to a greater extent from reduced exchange rate volatility because the costs of hedging are likely to be proportionally higher for them than for large firms.

Overall exchange rate uncertainty **3.27** Firms which are highly exposed to international trade would be affected more by reduced exchange rate volatility inside EMU than those which focus on domestic markets. The impact on firms which trade with non-euro area countries would depend on how EMU entry affected exchange rate volatility with other currencies. The EMU study *EMU and trade* shows that around half of UK goods and services trade was with countries outside the euro area in the period 1999-2001. Some studies have suggested that the elimination of exchange rate volatility with euro area countries could be outweighed by increased volatility of the euro against the US dollar. Analysis in the EMU study *The exchange rate and macroeconomic adjustment* and in the assessment of the convergence test concludes that this is unlikely to be the case, and that overall exchange rate volatility would be lower if the UK were to join EMU. But it is the case that the volatility of the euro against the US dollar has tended to be greater than the volatility of sterling against the US dollar in recent years. If this were to continue, firms which do business with the US or with currencies linked to the US dollar could find that exchange rate volatility would increase if the UK were to join EMU.

Demand expectations **3.28** Expectations of demand are also important to overall expected returns. Reduced barriers to trade and investment across the euro area, driving competition and the more efficient allocation of resources, should prompt increased economic growth. Higher growth in the euro area will benefit the UK economy and boost levels of investment, inside or outside EMU. As approximately half of UK trade is with the euro area, a successful EMU has clear benefits in terms of greater demand for UK exports. The accelerator model of investment, outlined in Box 3.1, shows that a rise in output brings about an increase in investment, as firms add to their capital stock in order to meet the increase in demand. For the UK to reap these benefits, EMU itself must be successful and UK membership of EMU must not impair domestic macroeconomic stability.

Conclusion: what would be the impact of EMU on the expected returns to investment?

3.29 Investment will be higher if firms have greater certainty about returns. EMU entry would reduce nominal exchange rate volatility and lead to greater certainty about returns, particularly for firms which do business in the euro area. But the assessment of the convergence and flexibility tests has shown that at the present time the achievement of sustainable and durable convergence between the economies of the UK and euro area has not been demonstrated. In such circumstances, EMU entry at this stage would lead to greater macroeconomic instability in the UK which would be damaging for domestic investment.

Policy requirements **3.30** The measures outlined in the convergence and flexibility tests aimed at ensuring continued stability and improving flexibility will complement the Government's existing strategy for increasing the quantity and quality of investment by UK firms.

The cost of capital

3.31 Businesses will invest if the returns from an investment exceed its cost. In or out of EMU, the Government aims to boost investment through microeconomic reform designed to improve the conditions in which firms raise capital. The assessment of how EMU entry would affect the cost of raising finance for UK firms draws on analysis in the EMU study *EMU and the cost of capital*.

What is the cost of capital? **3.32** Firms generally raise finance for investment through either internal finance (retained profits) or external finance (debt or equity). The external cost of finance is given by the weighted average of a firm's costs of debt and equity. The costs of both debt and equity can be broken down into two components:

- an economy-wide **credit risk-free rate of return**, determined in part by inflation expectations and inflation risk. Investors will demand a rate of return which compensates for the risk of inflation eroding the value of their investment; and
- the **market risk premium**, which reflects the risk that the market attaches to a specific sector, firm or project. In part this is determined by the size and efficiency of financial markets.

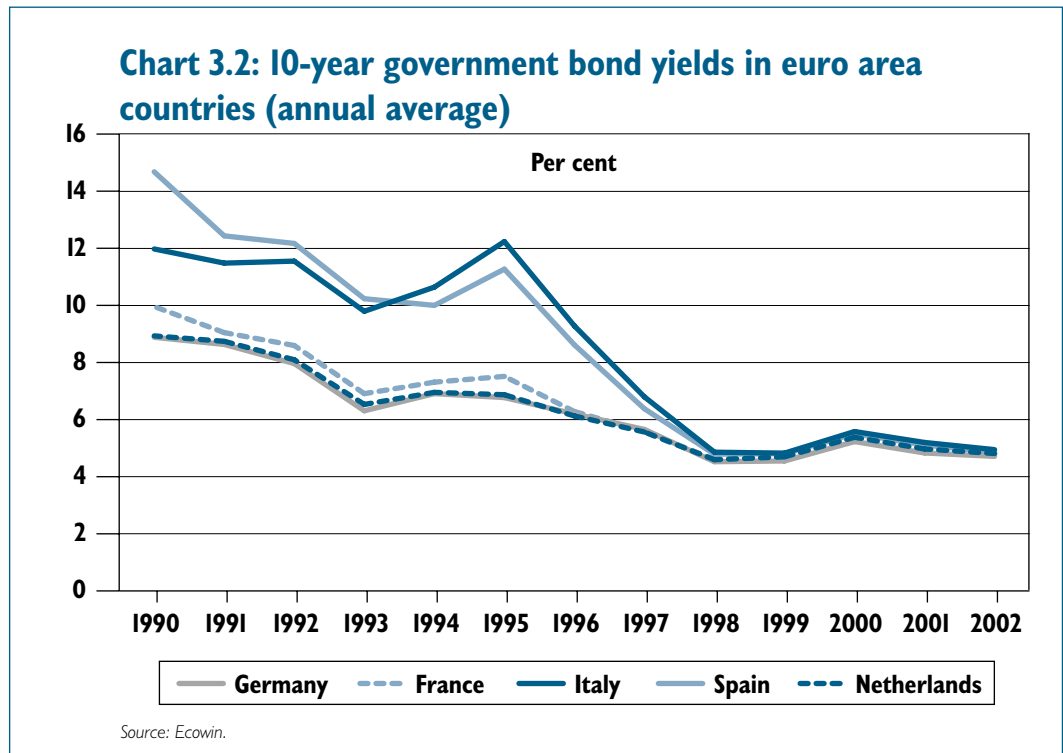
3.33 For example, corporate bonds are often expressed in terms of the spread (the market risk premium) over the national government bond (a proxy for the credit risk-free rate). The cost of equity can also be viewed in this way.

3.34 Observed measures of the cost of capital, such as corporate bond yields, are typically expressed in nominal terms. But there is an important distinction between the real and the nominal cost of capital. It is the real cost of capital – which is the nominal cost adjusted for inflation expectations – which matters for firms' investment decisions.

The credit risk-free rate **3.35** In major industrialised countries with sustainable debt-to-GDP ratios, the credit risk-free rate of return can be proxied by the interest rate on government bonds.² Government bond yields fell sharply in some current euro area countries as they prepared to join EMU. Chart 3.2 shows that euro area nominal government bond yields converged and were very similar by the start of EMU in January 1999.

² The EMU study *EMU and the cost of capital* explains why government bonds may not always be a good proxy for the credit risk-free rate, and considers alternative measures. However, the broad conclusions of the analysis are not affected by the choice of proxy.

3.36 This convergence has lowered nominal credit risk-free rates in those countries, such as Spain and Italy, where inflation expectations had been historically relatively high. The expectation that EMU would deliver more stable inflation in these countries may also have reduced the inflation risk premium and so the real cost of capital. This was a key economic benefit of EMU membership for these countries. As the 1997 assessment noted: “For many countries a lasting fall in nominal and real interest rates is one of the main economic reasons for joining EMU.”



Credit risk-free rates in the UK and EMU

3.37 Current market expectations are that the UK macroeconomic framework will maintain low and stable inflation. This means nominal credit risk-free rates in the UK are already low and close to those of the euro area. This represents a marked change in the situation compared with conditions at the time of the 1997 assessment. In October 1997, there was a significant difference between UK and German bond yields over a range of bond maturities (see Table 3.3). In part, this reflected expectations of lower long-term inflation in Germany than in the UK at that time. Due to the success of the UK macroeconomic framework introduced since 1997, the differential between German and UK bond yields has fallen over all maturities. UK yields are now below those of Germany in 30-year government bonds.

Table 3.3: The differential between UK and German government bond yields

Basis points	5-year	10-year	30-year
May 1997	+226	+133	+63
October 1997	+145	+88	+28
April 2003	+72	+25	-25

Note: Averages for the month. A positive differential indicates higher UK yields.
Source: Bloomberg.

3.38 The EMU study *EMU and the cost of capital* focuses on the implications of joining EMU for the UK cost of capital over the medium and long term, in line with the horizon of most business investment. As shown above, UK nominal credit risk-free rates are low and close to those of the euro area over the medium and long term. The study also examines the impact of EMU entry on the cost of capital by looking at UK forward interest rates. Forward rates are the market's expectation of the short-term interest rates expected to prevail at some point in the future. Forward rates are arguably a better indicator of structural interest rates than the long-term interest rates in Table 3.3, which are partly affected by a country's current cyclical position. UK forward interest rates on government bonds are lower than euro area rates from around five years in the future onwards. This suggests that the market does not expect the euro area to have lower interest rates than the UK in the medium to long term.

3.39 This is not a surprising result. Credit risk-free interest rates are in large part determined by two components, the real interest rate and inflation expectations. Both would be expected to tend broadly to the same level in the UK and the euro area. Free flows of capital should equate real interest rates. Inflation expectations, and any associated inflation risk, should converge, as both the UK and the euro area macroeconomic policy frameworks are expected to deliver low and stable inflation in the future, at around the same average level.

The short-run UK credit risk-free rate in EMU

3.40 While EMU entry would not deliver a significant fall in the cost of capital through its impact on the credit risk-free rate, there would be changes to UK interest rates if the UK were to enter EMU at the current time. Because of the cyclical positions of the UK and the euro area economies, short-term nominal interest rates are currently lower in the euro area. This is highlighted in the discussion of cyclical convergence as part of the assessment of the convergence test. If the UK were to join EMU at the present time, nominal and real interest rates would fall, leading to a lower cost of capital for UK firms over the short run. However, the assessment of the convergence test shows that the transition to lower interest rates would come at the cost of greater macroeconomic volatility.

The market risk premium

3.41 The market risk premium component of the cost of capital reflects the risk that investors attach to a particular market, sector or firm, over a credit risk-free asset. This is determined partly by the size and efficiency of capital markets:

- a **deeper** market, defined as a market where assets are heavily traded, reduces market participants' liquidity risk – the risk involved in finding a counterpart for a desired transaction; and
- a **broader** market, defined as a market where a wide range of assets are traded, allows participants to diversify holdings, so reducing credit risk.

3.42 A deeper and broader market could also allow for the expansion of particular market segments, such as high-risk bonds, which were previously constrained by a narrow investor base. A well-developed market for high-yield bonds would increase access and potentially lower the cost of capital for firms that may not previously have been able to borrow on the bond market.

3.43 Inside or outside EMU, the Government places great importance on the successful integration of EU capital markets through reform programmes such as the Financial Services Action Plan (FSAP), which aims to reduce regulatory and institutional barriers to cross-border financial transactions in the EU. The gains from full financial market integration in the EU are potentially large. A recent European Commission sponsored analysis estimated that full integration of financial services in the EU could lead to a fall in the cost of capital which would boost the level of EU GDP by around 1.1 per cent in the long run.

3.44 To consider the potential impact of EMU entry on the UK market risk premium, two related factors need to be considered:

- the extent to which EMU will promote a **more integrated financial market**, over and above continuing progress that is being made through the FSAP; and
- whether by remaining outside EMU, **UK access to this market** would be restricted.

EMU supports a more integrated financial market

3.45 A single monetary policy and the removal of exchange rate transaction costs and risk on cross-border financial activity will promote financial market integration. Trends in euro financial markets since the start of EMU are analysed in the EMU studies *EMU and the cost of capital* and *The location of financial activity and the euro*. Key developments include:

- the ECB's single interest rate and TARGET cross-border wholesale payment system have led to the convergence of national money market rates around a single yield curve;
- bond and equity issuance rose after 1999 in the euro area, although both have been affected by changes in market sentiment in more recent years;
- there have been a significant number of banking and finance mergers in the euro area, although cross-border mergers have so far been limited; and
- there has been some consolidation of financial market institutions and infrastructure, such as trading and settlement systems.

3.46 Professors Francesco Giavazzi and Carlo Favero in their contribution to the EMU study *Submissions on EMU from leading academics* state: *"The introduction of the Euro has quickened the pace of financial restructuring in the Euro area: the market for corporate bonds, in particular, previously almost non-existent, has grown significantly."*

3.47 There is some evidence that these developments have led to a fall in market transaction costs. Euro-denominated bond underwriting fees have fallen significantly. There is also evidence of falling equity commissions. Another sign of increased market integration is that euro area investment funds have shifted away from domestic holdings to become more heavily weighted in pan-European and euro area assets.

3.48 However, differences in regulation and infrastructure remain a restraint on full market integration. There is still considerable progress to be made on lowering these barriers, which will benefit UK investors and businesses whether or not the UK joins the single currency.

3.49 The EMU study *EMU and the cost of capital* examines the evidence to date on whether the market risk premium in the euro area is now lower than that in the UK by comparing the spread of a range of interest rates on commercial bonds over government bond yields. It also compares measures of risk in equity markets in the UK and the euro area. This analysis does not find conclusive evidence that spreads are lower in the euro area than in the UK. One reason is that numerous factors affect such spreads and isolating an EMU effect is very difficult. Overall, the study finds that, after only a few years of EMU, it is difficult to identify an EMU effect on the market risk premium.

**Access to the
euro area
financial market**

3.50 If EMU entry were to significantly increase access to a more integrated euro area market, this could reduce the cost of capital for UK firms. However, currency barriers are only one of a number of issues that affect cross-border financial transactions. Uncertainty about exchange rates can be hedged through a variety of financial products. Currency risk may not be undesirable; it may enable investors to diversify risk in their portfolio. More important barriers to cross-border financial transactions are the significant transaction and information costs associated with dealing in overseas financial assets. EMU will only reduce transaction and information costs to the extent that it removes currency exchange costs and increases price transparency.

3.51 Indeed, many UK firms are already able to access euro financial markets with little constraint. The EMU study *The location of financial activity and the euro* finds that the City has participated fully in euro financial markets since the introduction of the single currency. Large firms have the knowledge and reputation to tap into international financial markets. They are also able to hedge against exchange rate risk at relatively low cost. For small firms, the costs of hedging against exchange rate risk and the impact of exchange rate transaction costs are likely to be relatively higher. This is an issue returned to below.

Conclusion: what would be the impact of EMU on the cost of capital?

3.52 EMU is promoting a deeper, broader and more integrated capital market across the euro area, which could lead to a reduction in the cost of capital for euro area firms. The removal of currency transaction costs and risk through EMU entry would increase access to this capital market for UK firms, although differences in regulation and infrastructure would remain important barriers to access. Progress made on lowering these barriers, for example through the FSAP, will be to the benefit of UK investors whether or not the UK joins the single currency.

3.53 A lower cost of capital through lower real and nominal interest rates was a key economic benefit of EMU for many euro area countries. Over the medium to long term, euro area interest rates are not expected to be lower than those in the UK, reflecting the expectation that macroeconomic frameworks in both the UK and the euro area will maintain low and stable inflation. Due to the current cyclical positions of the UK and euro area economies, EMU entry at this stage would lead to a fall in UK short-term interest rates. But the assessment of the convergence test shows that this would be likely to come at the cost of greater macroeconomic instability.

**Policy
requirements**

3.54 The Government is committed to continuing efforts to create a single European market in financial services through the FSAP.

Access to finance for small and medium-sized enterprises

3.55 The impact of EMU entry on the cost of capital for SMEs could be very different from that experienced by larger firms. This is an issue considered in the EMU study *EMU and the cost of capital*. The reduction in exchange rate transaction costs and volatility could be of relatively greater benefit to smaller firms. EMU entry could also reduce the cost of capital for small firms if it leads to greater competition in retail banking services.

- 3.56** Exchange rate transaction costs faced by small firms may be proportionately higher:
- because of their relative lack of financial knowledge and expertise, SMEs do not necessarily go to the best provider;
 - the size of deals they require means they have less leverage with financial institutions to negotiate a better deal; and
 - for forward transactions, they may be thought of as worse credit risks than larger firms.

3.57 Smaller SMEs in particular tend to raise funds locally and do not usually access wholesale capital market funding. SMEs tend to rely more heavily than large firms on bank lending, which is the largest source of external SME finance in the UK, accounting for over 60 per cent of the total. Cross-border competition in bank financing may be constrained by the importance of local information in lending to SMEs.

Access to the EMU wholesale capital markets for SMEs

3.58 This suggests there is more scope for EMU entry to affect the cost of finance for those larger SMEs which already access domestic wholesale finance. Such firms have knowledge of raising capital through domestic wholesale financial markets but may have been discouraged from using international markets because of exchange rate costs. The analysis in the EMU studies *EMU and the cost of capital* and *EMU and business sectors* suggests that UK firms generally access more equity and bond finance than firms in other European countries. UK firms would therefore be well placed to take advantage of reduced transaction costs and the removal of currency volatility to access euro financial markets.

Local retail finance in EMU

3.59 EMU entry would be unlikely to have an immediate effect on the majority of smaller SMEs that raise funds through local retail finance. In the longer term, EMU entry could act as a spur to competition in retail financial markets by encouraging euro area firms to enter the UK market, for example through merger and acquisition (M&A) activity, as discussed in the assessment of the financial services test. Retail financial services in the euro area are still largely segmented on national lines and evidence indicates the dominant trend has been toward increased concentration in the domestic banking sector. Professor Jean Dermine's contribution to the EMU study *Submissions on EMU from leading academics* highlights that so far there have been only a few significant cross-border mergers in banking. The importance of local knowledge about domestic economic conditions and national regulations act as barriers to cross-border retail banking. New entrants are also likely to be put off by a reluctance on the part of small firms to switch banks.

Conclusion: would SMEs enjoy cheaper and easier access to finance?

3.60 The barrier to access to the EMU capital market created by currency transaction costs and risk is relatively more important for SMEs than for large firms. Easier and cheaper access to euro area financing will mainly benefit those larger SMEs which currently raise funds through domestic capital markets, but are discouraged by exchange rate costs from tapping international markets. EMU will have a limited impact on smaller SMEs, which tend to raise capital through local retail banks. Over the long run, EMU entry could spur competition in the UK retail financial market.

EMU AND FOREIGN DIRECT INVESTMENT

3.61 The UK has been a leading recipient of inward investment into the EU over recent years. The detailed analysis of FDI data in the EMU study *EMU and business sectors* demonstrates that in 2001 the UK was the most successful country in the EU and the second most successful in the world at attracting inward investment. Importantly, the UK is also a large outward investor in other countries. The UK's success at attracting FDI over recent years can be attributed to its favourable regulatory and tax regime; a stable macroeconomic environment; flexible labour and product markets; innovative capital markets; and a skilled labour force. Many of these factors will not be affected directly by the decision on EMU and will continue to contribute to the attractiveness of the UK to overseas investors.

3.62 Maintaining the UK's strong track record in attracting FDI is important because of the particular benefits of FDI. Analysis shows that firms investing overseas tend to have higher productivity than domestic firms. Research also shows that the presence of foreign firms raises productivity in domestic firms, for example through the dispersion from foreign to domestic firms of new technologies, improved management practices and skilled labour. There may also be indirect spillovers from foreign firms through the creation of greater competition in product markets, increased innovation and improved export performance.

Several drivers of FDI

3.63 The range of factors which make the UK an attractive location reflects the fact that firms invest overseas for a number of reasons. Three main motives for FDI can be identified:

- **resource seeking** – FDI which seeks specific resources which are unavailable in the home country, for example an overseas company investing in North Sea oil production;
- **efficiency seeking** – FDI which aims to produce goods and services more efficiently than in the home country. This could include firms seeking to benefit from spillovers in a specific location or firms seeking a more productive workforce. For example, a bank may locate in London in order to benefit from the critical mass of financial expertise already present in the City; and
- **market seeking** – FDI which seeks to gain access to overseas markets. For example, a US or Japanese car manufacturer investing in an EU country to gain access to the wider EU market.

3.64 Another way of classifying FDI is as either vertical or horizontal:

- **vertical** FDI is where a company splits its production process across a number of locations depending on where costs are lowest, for example locating the labour-intensive part of production in a low-wage country and the research-intensive part where there are high skill levels. Nokia produces mobile phone components and batteries in Hungary and assembles the completed phones in Germany and Finland, where it also has research and development facilities; and
- **horizontal** FDI is where a company locates the same production process in a number of different locations, for example car manufacturers which invest in several European countries. General Motors has car plants in the UK, Germany and Spain, all producing its Vauxhall and Opel brand cars.

3.65 Empirical research has shown that most FDI tends to be horizontal and between industrialised countries.

The exchange rate and FDI

3.66 Membership of EMU would not change many of the factors which underpin the UK's attractiveness as a destination for FDI. However, some factors would be affected:

- the stability of the macroeconomic environment affects FDI in the same way that it affects overall business investment;
- EMU would affect the relative microeconomic attractiveness of the UK, for example by lowering transaction costs and increasing competition; and
- an important impact of EMU on FDI would come from lower exchange rate volatility against the euro area.

FDI and the exchange rate

3.67 The current exchange rate and expectations of its future level are significant determinants of the decision to invest overseas. Two exchange rate issues are important:

- exchange rate volatility, where a currency moves with high frequency around a stable longer-term value; and
- persistent exchange rate deviation from its medium or long-term sustainable equilibrium.

Exchange rate volatility and cross-border investment

3.68 As discussed previously, a number of factors influence FDI flows. Where FDI is undertaken to establish an export base, exchange rate volatility may reduce FDI as it increases the costs of trade. On the other hand, if exchange rate volatility acts as a barrier to trade then firms may choose to use FDI as an alternative way to access markets. Firms may choose to locate production in several different countries specifically in order to diversify risk. In this case, exchange rate volatility might increase FDI. Empirical studies on the link between FDI and exchange rate volatility are inconclusive. Some find that exchange rate volatility is a constraint on FDI but others reach the opposite conclusion.

3.69 This highlights the importance of examining the different sources of exchange rate uncertainty faced by different firms, an issue discussed in the EMU study *EMU and business sectors*. UK membership of EMU would have less impact on the exchange rate risk faced by an overseas firm which invests in the UK solely to serve UK markets; for example, FDI by providers of retail banking services. But membership could have a more significant impact on the exchange rate risk faced by a firm which aims to establish a base for exports to other EU countries. A third-country firm looking to export from an EU base would face currency volatility on exports to the euro area if they located in the UK while it was outside EMU, as well as volatility on their repatriated profits.

3.70 In EMU, reduced volatility through the permanent elimination of exchange rate uncertainty will boost cross-border investment. The permanent elimination of exchange rate volatility is very different from the situation considered in most empirical studies on exchange rate volatility and FDI. This is comparable to some extent to the analysis of the impact of EMU on trade which is a focus of the assessment of the growth, stability and employment test. This notes that research examining the impact of currency volatility on trade finds only a relatively small effect. But more recent studies on the impact of currency unions on trade find a much larger effect.

Prolonged appreciation and FDI

3.71 Economic research suggests that the effect of prolonged exchange rate appreciations and depreciations on FDI is straightforward – a persistent depreciation will increase FDI and a persistent appreciation will decrease it. A lower exchange rate can make a country's assets relatively cheap to overseas firms. Joining EMU at an appropriate exchange rate would therefore be essential to prevent inefficiently low or high flows of inward investment.

EMU could improve the quality of investment **3.72** Overall, the analysis suggests that EMU membership under the right circumstances, including the appropriate exchange rate, would raise the *quality* of inward investment as well as affecting the *quantity* of investment. An increase in trade and competition, induced by a reduction in uncertainty and transaction costs, increases allocative efficiency. This should result in a shift in the pattern of inward investment towards activities where comparative advantage exists, thereby increasing efficiency and welfare. In his contribution to the EMU study *Submissions on EMU from leading academics*, Professor Robert Mundell states that by eliminating exchange rate changes a single currency: “*reduces investment risk and improves the distribution of foreign direct investment.*”

Conclusion: what is the impact of the exchange rate on FDI?

3.73 Overall, exchange rate volatility acts as a barrier to cross-border investment. EMU entry on the basis of sustainable and durable convergence, including at a sterling-euro exchange rate consistent with longer-term sustainability, would allow the UK to participate in a more active cross-border investment market, prompting greater FDI flows into the UK from the euro area and greater outflows from the UK to the euro area.

EMU and FDI flows

3.74 The UK experienced a fall in its share of FDI into the EU in 1999, while some countries in the euro area saw a corresponding increase. This section examines the UK’s FDI performance relative to the EU since the introduction of the single currency, drawing on detailed analysis in the EMU study *EMU and business sectors*, to answer the question of whether there has been an EMU effect on FDI flows and whether the UK has suffered as a result of being outside EMU.

The UK is a strong FDI performer **3.75** The UK’s success in attracting FDI is shown by its large stock of FDI and its continuing record of attracting strong inward flows each year. In 2001, the UK had the second largest stock of FDI in the world and the largest stock of any EU country.³

3.76 The UK received the second largest amount of inward investment flows in the world in 2001. At almost US\$54 billion, this was higher than any other European country and second only to the US. The UK also has an excellent outward FDI record, investing US\$39 billion abroad in 2001. The UK stock of outward investment was over US\$940 billion in 2001; around 14 per cent of global investment stocks and more than a quarter of the total EU outward investment stock.

Global FDI flows have been volatile... **3.77** Examining whether there has been an EMU effect within this overall strong performance is made more difficult by the volatility of FDI. FDI flows surged in the late 1990s, more than trebling between 1997 and 2000, followed rapidly by a sharp downturn as flows halved in 2001. Much of the boom in FDI flows in the 1990s is accounted for by M&A activity, in particular by a few very large deals. The analysis is also complicated by the difficulties involved in interpreting FDI data, which are outlined in Box 3.3.

...with a sharp decline since 2000 **3.78** The recent global downturn in FDI, which saw world investment flows falling by 50 per cent in 2001, has inevitably affected the UK. FDI flows into the UK fell by around half in 2001 and by 60 per cent in 2002. Although full 2002 data are not yet available for all other countries, it is clear that the recent downturn in UK inflows was mirrored in other major economies. For example, the US saw a drop in inflows of 81 per cent in 2002, following a fall of 59 per cent in 2001. German inward FDI rose by around 14 per cent in 2002, but this followed a sharp decline of over 80 per cent in 2001. In France, inflows fell by around 9 per cent in 2002, following a rise in 2001 of around 25 per cent.

³The latest full year of data available from UNCTAD.

Box 3.3: Difficulties with interpreting FDI data

The focus of this section is on FDI flows but where relevant it draws on data on stocks which can give a better indication of the long-term cumulative position. The EMU study *EMU and business sectors* contains a fuller account of the different types of FDI data available.

There are significant lags associated with investment decisions, which means in the short time period since the introduction of the euro it is difficult to draw conclusions about the impact of EMU on FDI.

There are also difficulties with the data on FDI, as 'greenfield' FDI – for example, the construction of new manufacturing capacity – is often not included in the statistics on FDI. In addition, very large M&A deals can often dominate data on FDI flows.

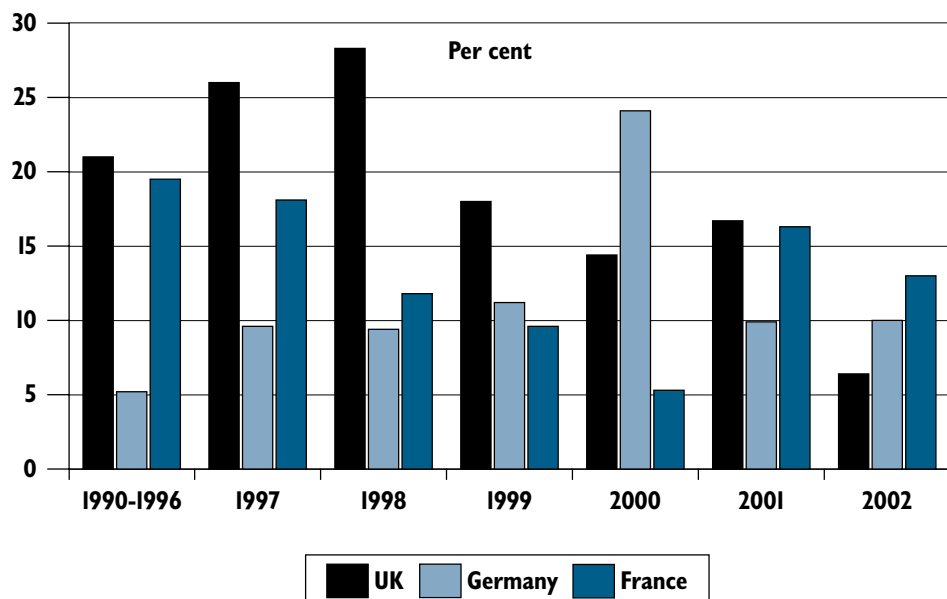
FDI data do not always indicate its ultimate origin, as capital may be routed through another country, for example from a firm's European headquarters. Such countries are typically characterised by large FDI stocks and flows relative to GDP. Belgium and Luxembourg, for example, had inward and outward stocks of more than 300 per cent of GDP in 2000.

Moreover, there are particular difficulties in drawing conclusions from the FDI trends since 1999 because of the short time period involved.

The UK share of EU flows has fallen since the start of EMU

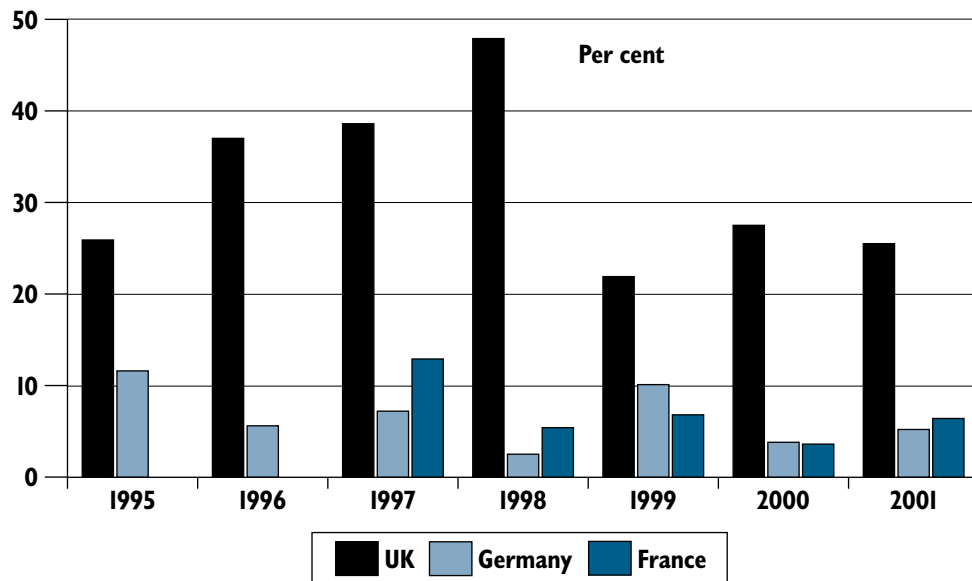
3.79 Against this volatile global background, Chart 3.3 examines the UK share of total EU inward FDI with that of France and Germany. The UK's share fell from 28 per cent in 1998 to an average of 16 per cent over 1999 to 2001, followed by a sharp decline to 6 per cent in 2002. In France, the share fell from an average of 19 per cent between 1990 and 1996 to 5 per cent in 2000 but has since risen and was 13 per cent in 2002. Apart from the strong rise in 2000, reflecting one-off factors, the German share has been more stable at around 10 per cent since 1997. Over and above the general volatility in flows data, recent years have been characterised by particular factors, for example the UK's substantial negative FDI flow in the first quarter of 2002 and strong performance by Belgium and Luxembourg (see Box 3.3) bringing their share of EU inward investment flows to 38 per cent in 2002.

Chart 3.3: Country shares of total EU inward investment flows



Note: UNCTAD data are only available up to 2001; Eurostat data are used for 2002.
Source: UNCTAD; Eurostat; and HM Treasury calculations.

Chart 3.4: Country shares of inward investment flows from outside the EU



Note: French data not available pre-1997.
Source: Eurostat and HM Treasury calculations.

3.80 Disaggregated data, showing FDI inflows from within the EU and FDI inflows from outside the EU, are not yet available for 2002. The latest data on FDI split by source show that the UK's share of investment from within the EU remained broadly constant between 1995 and 2001 and kept pace with that of France and Germany.

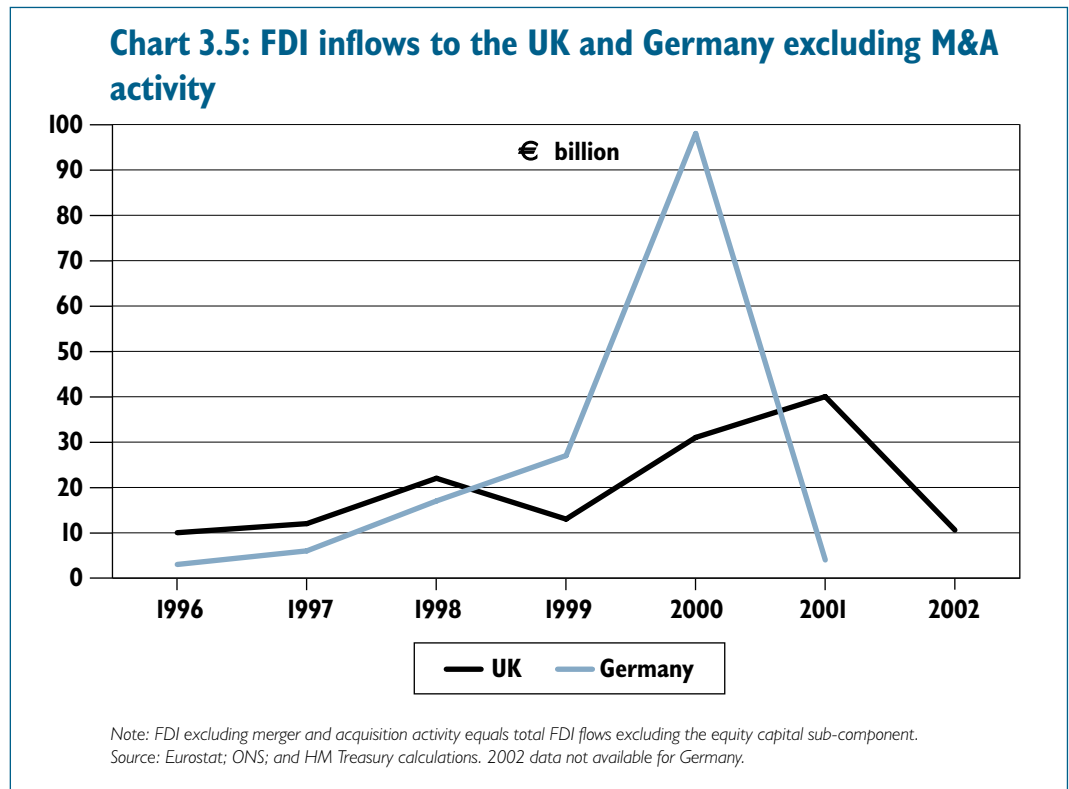
The UK share of non-EU FDI flows since the start of EMU

3.81 The UK is a major recipient of investment from non-EU countries, its share peaking at almost 50 per cent of total outside flows into the EU in 1998, having increased sharply since 1995 (see Chart 3.4). While this share has since been eroded, the bulk of the decline was concentrated in 1999, and from then to 2001 the share appears to have stabilised at around 25 per cent.

3.82 It is unlikely that the UK could have expected to attract around half of all outside investment into the EU over the medium term; even at 25 per cent, the UK's share in 2001 remains large (Germany and France each attracted less than 10 per cent in both 2000 and 2001). In line with global trends, US FDI outflows have fallen significantly from their peak in 1999. The UK's share of US FDI into the EU has fallen back from its peak in 1999, but rose slightly in 2002 to stand at 32 per cent.

Other trends affecting FDI flows

3.83 FDI flows have been increasingly dominated by M&A activity in recent years and individual deals have been significant contributors to volatility. The decline in the UK's share of EU FDI flows also reflects Vodafone's acquisition of Mannesmann in 2000, an extremely large deal which boosted Germany's share of EU FDI. Other M&A deals also affected UK figures, including the purchase of Orange by France Telecom in 2000. While it is not possible, using official statistics, to extract M&A data directly from FDI data, the EMU study *EMU and business sectors* uses proxies for M&A activity and suggests that UK underlying FDI continued to grow in 2001, although it fell back in 2002 reflecting the specific factors discussed in paragraph 3.79 (see Chart 3.5). Of course, the introduction of the euro may itself be a factor in increased M&A activity in the euro area.



Survey evidence 3.84 The assessment takes particular account of qualitative evidence from Japanese, other Asian, US and European investors. Many have said that UK membership of EMU would be beneficial for FDI. Surveys of investors are a further source of qualitative evidence. Some surveys suggest that euro area investors do not view UK entry as an important factor in FDI decisions. In a survey by the German-British Chamber of Commerce in January 2003, nearly 80 per cent of German investors into the UK reported that the UK remaining outside EMU would have no impact on their investment decisions. On the other hand, a survey by AT Kearney in 2001 reported that over half of European executives questioned would be dissuaded from investing in the UK by a decision not to join EMU. More generally, investors typically cite a range of factors which affect their decisions on whether to locate overseas, including issues relating to macroeconomic stability, labour markets, tax and regulation and infrastructure, as well as the exchange rate and EMU.

Conclusion: has there been an EMU effect on FDI flows and has the UK suffered?

3.85 Over time, EMU is likely to boost FDI in the euro area. There has been a fall in the UK's share of total EU FDI flows coinciding with the start of EMU and a corresponding increase in the share of the euro area. But against the backdrop of many other influences on FDI flows, it is difficult to say with confidence that EMU has boosted FDI within the euro area. There can, however, be confidence that a successfully operating EMU, and UK membership of it on the right basis, would boost FDI over the longer term.

Policy requirements 3.86 The Government will ensure that the UK retains its leading position as a destination for FDI, inside or outside of EMU, by continuing to maintain macroeconomic stability and encouraging flexibility in labour, product and capital markets.

CONCLUSIONS: THE INVESTMENT TEST

3.87 EMU is promoting a deeper, broader and more integrated capital market across the euro area, which could lead to a reduction in the cost of capital for euro area firms. The removal of currency transaction costs and risk through EMU entry would increase access to this capital market for UK firms, although differences in regulation and infrastructure would remain important barriers to access. Progress made on lowering these barriers, for example through the FSAP, will be to the benefit of UK investors whether or not the UK joins the single currency.

3.88 The barrier to access to the EMU capital market created by currency transaction costs and risk is relatively more important for SMEs than for large firms. Easier and cheaper access to euro area financing will mainly benefit those larger SMEs which currently raise funds through domestic capital markets, but are discouraged by exchange rate costs from tapping international markets. EMU will have a limited impact on smaller SMEs, which tend to raise capital through local retail banks. Over the long run, EMU entry could spur competition in the UK retail financial market.

3.89 A lower cost of capital through lower real and nominal interest rates was a key economic benefit of EMU for many euro area countries. Over the medium to long term, euro area interest rates are not expected to be lower than those in the UK, reflecting the expectation that macroeconomic frameworks in both the UK and the euro area will maintain low and stable inflation. Due to the current cyclical positions of the UK and euro area economies, EMU entry at this stage would lead to a fall in UK short-term interest rates. But the assessment of the convergence test shows that this would be likely to come at the cost of greater macroeconomic instability.

3.90 Overall, exchange rate volatility acts as a barrier to cross-border investment. EMU entry on the basis of sustainable and durable convergence, including at a sterling-euro exchange rate consistent with longer-term sustainability, would allow the UK to participate in a more active cross-border investment market, prompting greater FDI flows into the UK from the euro area and greater outflows from the UK to the euro area.

3.91 Over time, EMU is likely to boost FDI in the euro area. There has been a fall in the UK's share of total EU FDI flows coinciding with the start of EMU and a corresponding increase in the share of the euro area. But against the backdrop of many other influences on FDI flows, it is difficult to say with confidence that EMU has boosted FDI within the euro area. There can, however, be confidence that a successfully operating EMU, and UK membership of it on the right basis, would boost FDI over the longer term.

3.92 Investment will be higher if firms have greater certainty about returns. EMU entry would reduce nominal exchange rate volatility and lead to greater certainty about returns, particularly for firms which do business in the euro area. But the assessment of the convergence and flexibility tests has shown that at the present time the achievement of sustainable and durable convergence between the economies of the UK and euro area has not been demonstrated. In such circumstances, EMU entry at this stage would lead to greater macroeconomic instability in the UK which would be damaging for domestic investment.

Overall conclusion **3.93** UK productivity has been held back by a legacy of long-term under-investment. EMU entry could reduce the cost of capital for UK firms if long-term interest rates fell further inside the euro area and if membership of a larger financial market reduced the cost of finance. These costs could fall for SMEs in particular if joining EMU lowers the barriers which prevent SMEs accessing euro area financial markets and lowers the cost of bank lending. Over time, EMU is likely to boost cross-border investment flows and FDI in the euro area. There has been a fall in the UK's share of total EU FDI flows coinciding with the start of EMU, and a corresponding increase in the share of the euro area. But against the backdrop of many other influences on FDI flows, it is difficult to say with confidence that EMU has boosted FDI within the euro area. There can, however, be confidence that a successfully operating EMU, and UK membership of it on the right basis, would boost FDI over the longer term. There is a risk that the longer membership of the euro is delayed, the longer the potential gains in terms of increased inward investment are postponed. If sustainable and durable convergence is achieved, then we can be confident that the quantity and quality of investment would increase ensuring that the investment test was met.

Policy requirements **3.94** In a world of ever increasing cross-border investment flows the UK Government will continue to focus on policies to ensure more long-term and productive investment. In practice this means:

- the measures outlined in the convergence and flexibility tests aimed at ensuring continued stability and improving flexibility will complement the Government's existing strategy for increasing the quantity and quality of investment by UK firms;
- the Government is committed to continuing efforts to create a single European market in financial services through the FSAP; and
- the Government will ensure that the UK retains its leading position as a destination for FDI, inside or outside of EMU, by continuing to maintain macroeconomic stability and encouraging flexibility in labour, product and capital markets.