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Euro area

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

This Survey is published on the responsibility of the Economic and Development Review Committee (EDRC) of the OECD, which is charged with the examination of the economic situation of member countries.

The economic situation and policies of the euro area were reviewed by the Committee on 17 May 2005. The draft report was then revised in light of the discussions and given final approval as the agreed report of the whole Committee on 15 June 2005.

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The previous Survey of the euro area was issued in July 2004.

This Economic Survey may not include an examination of certain policies that are relevant to the euro area as the European Community currently insists that the Economic Surveys of the euro area, as well as those of EU member countries who are also members of the OECD, should be limited in their coverage. No limits apply to the policies that can be covered in the Economic Surveys of non-EU countries.

The Commission and the Member States of the European Union are working actively on ways of reviewing EC and EU policies within the context of the EDRC.

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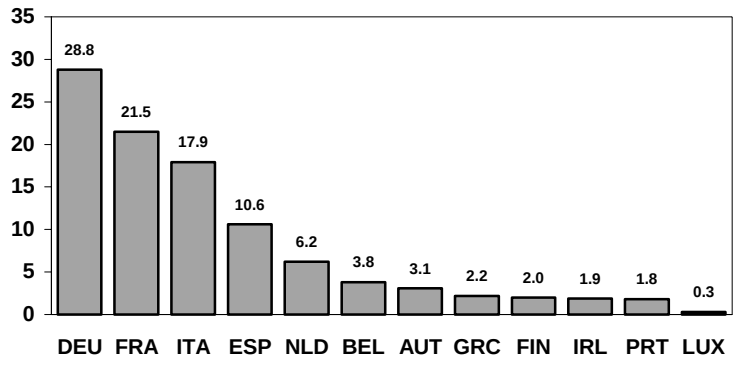
BASIC STATISTICS
2004

	Euro area	United States	Japan
LAND AND PEOPLE			
Area (thousand km^2)	2 456	9 167	395
Population (million, in 2003)	307.9	291.0	127.6
Number of inhabitants per km^2	125	32	323
Population growth (1995-2003, annual average % rate)	0.4	1.2	0.2
Labour force (million)	145.4	147.4	66.4
Unemployment rate (%)	8.9	5.5	4.7
ACTIVITY			
GDP (billion USD, current prices and exchange rates, in 2003)	8 201.9	10 951.3	4 300.9
Per capita GDP (USD, current prices and PPPs, in 2003)	28 402	37 624	26 760
In per cent of GDP:			
Gross fixed capital formation	19.9	19.3	23.8
Exports of goods and services	19.6	10.0	13.1
Imports of goods and services	17.9	15.2	11.2
PUBLIC FINANCE (per cent of GDP)			
General government: Revenue	45.1	31.4	29.9
Expenditure	48.6	36.0	37.3
Balance	-2.7	-4.3	-6.1
Gross public debt (end-year)	78.5	63.4	157.6
EXCHANGE RATE (national currency per euro)			
Year average		1.24	134.4
January		1.26	134.1
December		1.34	139.1

EURO AREA - EXTERNAL TRADE IN GOODS (main partners, % of total flows, in 2003)

	Exports	Imports
Denmark, Sweden, United Kingdom	23.3	18.2
New European Union menber countries	10.9	10.0
Other Europe	16.1	15.6
OECD America	18.2	13.2
OECD Asia/Pacific	5.5	8.6
Non-OECD dynamic Asian[1] and China	7.4	13.1

SHARE IN EURO AREA GDP (current market prices)



1. Chinese Taipei; Hong Kong, China; Indonesia; Malaysia; Philippines; Singapore and Thailand.

Executive summary

Economic policy in the euro area pursues the objectives of achieving solid economic growth, a better performance of labour markets and restoring sound public finances in the context of a single monetary policy which aims at maintaining price stability. Although inflation has remained just above the ECB's definition of price stability, longer-term inflation expectations remain firmly anchored to price stability. However, progress towards the other goals has been disappointing thus far partly owing to adverse shocks such as higher oil prices or exchange rate shifts. On unchanged policies and with population ageing the euro area's potential output growth is set to decelerate over the next decades and eventually stabilises at around 1% per annum by about 2020, as illustrated in the following scenario:

	Average annual growth rate				
Euro area	1995-2000	2000-05	2005-10	2010-20	2020-30
A. Trend employment	0.7	0.8	0.3	-0.3	-0.7
B. Trend labour productivity	1.2	1.2	1.6	1.6	1.6
C. Trend GDP	2	2	1.9	1.3	0.9
D. Population	0.3	0.3	0.2	0.1	0
E. Trend GDP per capita	**1.8**	**1.6**	**1.7**	**1.2**	**0.9**

This would widen the income gap with the United States considerably. Determination in pursuing structural reforms is needed to boost growth prospects and resume economic convergence with the OECD's best performers. At the same time macroeconomic stability needs to be assured:

- ***Monetary policy is expected to remain accommodative as long as the medium-term inflation outlook is in line with price stability.*** The recovery has been sluggish thus far and inflation has responded little to widening slack. Since the start of the recovery, the ECB has kept its main policy rate on hold at 2%. It would seem reasonable for the ECB to hold its rate stable as long as the outlook for price developments remains in line with price stability over the medium term, although policy would need to act if the inflation outlook were to change. Structural reforms would help to reduce inflation persistence and enhance the effectiveness of a stability-oriented monetary policy.

- ***Fiscal policy should be rooted in long-term sustainability goals.*** There is a need to take account now of the heavy longer-term ageing-related spending pressures. It is essential to move to a position where budgets are close to balance or in surplus over the business cycle. The March 2005 decision to shift the focus of EU fiscal surveillance procedures onto medium-term budget balances and onto the debt criterion could help provided that it is accompanied by strong ownership of the rules on behalf of the member states and better control of government spending.

- ***Labour market institutions must be overhauled so as to remove obstacles and disincentives to work.*** To establish a well-functioning labour market across the euro area, reforms should include adapting wage formation systems, easing employment protection legislation, cutting incentives to retire early or claim disability, lowering the tax wedge on labour and removing the obstacles to mobility.

- ***Regulations impeding competition within and trade across countries should be removed and innovation fostered.*** It is particularly important to preserve the core of the provisions of the proposed services directive. Further progress is needed in reducing segmentation in financial and transport markets. Policy settings for innovation should be improved. Changes should comprise implementing the Community Patent and, at the national level, deregulating product markets and basing research funding and researchers' pay on the results achieved.

Assessment and recommendations

Boosting the poor growth performance to date requires stepping up the pace of structural reforms and restoring sound public finances

1. Economic growth in the euro area has been lagging that of the best performing OECD countries since the mid-1990s. Moreover, the euro area has been slow to recover from the 2001-03 downturn, but inflation has hardly eased. This suggests a lack of resilience in the face of shocks but also a longer-term problem since potential growth may also have been declining. Creating conditions that will ensure that the euro area grows more robustly while keeping inflation low will also contribute to raise potential growth and should involve as key measures:

- *Utilising idle labour resources*. Notwithstanding some improvements, high structural unemployment and low labour market participation of older workers have remained the hallmark of the euro area economy. *Labour market reforms, such as reducing the labour cost of the less skilled, have improved performance to some extent, but the politically more difficult areas, such as easing employment protection legislation (EPL) for permanent workers, also need to be tackled.*
- *Boosting productivity gains*. The euro area is lagging in innovation while opportunities for efficiency gains via the integration of services markets are being left unexploited. *It is essential that the thrust of the draft services directive is maintained to prompt greater convergence of service price levels and to exploit the gains from enhanced trade in services. Improved framework conditions and better focused research and development (R&D) could lead to considerable gains from innovation.*
- *Ensuring the long-term sustainability of public finances*. In a context of population ageing, a main challenge is to ensure long-term fiscal sustainability, which is far from assured in a number of countries. Boosting growth by structural reforms will make this easier to achieve. Both fiscal consolidation and structural reforms would boost confidence. *Member countries should maintain, or restore, sound public finances. This requires more realistic and transparent budgeting, greater restraint and better quality of public spending contributing to higher growth.*

The recovery has remained hesitant

2. Activity has been recovering since mid-2003, but growth has remained below the estimated potential of around 2% per annum. With the euro having appreciated considerably since 2002, net foreign trade has lent limited support to economic activity. Household confidence has been recovering hesitantly since early 2003, underpinning a gradual strengthening in consumer demand. Capital formation has finally begun to turn around after its virtually unabated decline since the onset of the downturn in 2001. Employment has remained relatively resilient all along, underpinned by wage moderation and policies to support the employment of the low skilled and temporary work in several

countries. As a result, the unemployment rate has remained virtually stable at just below 9% for almost two years. Inflation, while moderate at close to 2%, has responded little to widening slack and the appreciating currency with energy and administered prices and indirect taxation offsetting some weakening of price pressures for other items owing in part to the absence of second round wage effects so far.

The short-term growth outlook is fragile

3. While a gradual recovery is projected, a combination of new adverse shocks would be challenging. Growth is projected to slow to 1¼ per cent in 2005, slightly less than in 2004, and to firm to 2% in 2006. Domestic demand should be the main engine of growth, with both private investment and consumption picking up further, whereas net exports would contribute little. The unemployment rate is projected to decline slightly to 8¾ per cent in 2006. But there are significant downside risks to growth: on the external side, yet higher oil prices and the unwinding of global current account imbalances, which could result in renewed upward pressure on the euro exchange rate, could dent the recovery; a sharper than expected increase in long-term interest rates in the United States could spill over to the euro area; and on the domestic side, household confidence and business expectations remain fragile. On the other hand, restored corporate profitability and balance sheets could spur business investment more strongly, especially if oil prices ease and consumption could recover once confidence has recovered more forcefully and lead to a lower savings rate than otherwise.

Monetary policy is expected to remain accommodative as long as the medium-term inflation outlook remains favourable

4. With the output gap narrowing only progressively and the impact of the hike in oil prices waning, inflation is projected by the OECD to fall below 2% during 2005 and decline to 1¼ per cent in 2006. But substantial uncertainties surround this inflation outlook. On the one hand, activity is sluggish and the exchange rate strong. On the other hand, inflation has responded little to widening slack, and money and credit growth is buoyant, stimulated by the low level of interest rates. So far the European Central Bank (ECB) has adopted a "wait and see attitude". It has kept its main policy rate on hold at 2% since the start of the recovery in June 2003. Over the same period, long-term interest rates have fallen significantly. It would thus be reasonable for the ECB to hold its rate stable as long as the outlook remains in line with price stability over the medium term. Monetary policy would need to act, if the medium-term outlook for price developments were to change. A significant appreciation of the exchange rate or a substantial weakening of activity that were to change the medium-term outlook for price stability, could lead to a reassessment of the monetary policy stance. At the same time, the ECB should continue to be vigilant to upside risks to price stability, such as those stemming from excess liquidity or second round effects from the oil price increases.

Monetary policy has to take inflation inertia into account

5. Seen in a longer-term perspective, inflation performance in the euro area has clearly improved. As the credibility of monetary policy was quickly established, inflation expectations have become – and remain – firmly anchored to the ECB's objective of keeping inflation below but close to 2% over the medium-term. However, in the recent downturn inflation has failed to come down decisively, and this has limited the scope for monetary policy to support economic activity in the short run. Moreover, the monetary transmission mechanism has been less effective in those countries where secondary mortgage markets play only a minor role. Services, which have a large weight in consumption, show a particularly

high degree of inflation inertia. This inertia is linked to the lack of integration and competition in the internal market for services. There is also evidence of higher wage inertia in the euro area than in other economies, which may be due to high minimum wages, administrative extensions of wage agreements, catch-up clauses in collective agreements and *de facto* indexation of wages. *These sources of rigidity should be removed, not only to lift potential growth, but also to provide more leeway for pursuing an effective monetary policy, and strengthen the area's resilience to adverse shocks. However, further liberalisation of and innovation in mortgage markets must be accompanied by prudent financial market regulation and surveillance to ensure financial stability*.

Fiscal policies should focus on the longer term

6. With ageing-related fiscal pressures building up, a repeat of past policy errors – a weakening or reversal of consolidation efforts amid buoyant cyclical conditions – would be very costly. Fiscal consolidation since the early-1990s had been impressive. But most of it was realised in the run-up to monetary union as countries needed to comply with the convergence criteria stipulated in the Maastricht Treaty. Since the advent of the euro, the deficit bias has re-emerged, though not in all countries. In practice the 3% "reference value" has not been adhered to by a number of euro area countries. The excessive deficit procedure has been invoked (or threatens to be invoked) for half of the euro area countries, but its enforcement ended in a stalemate in November 2003. Since then, the rules have been amended, allowing under certain conditions more time to correct an excessive deficit. Moreover, the amended rules will in future cater for country-specific medium-term budgetary objectives, reflecting sustainability aspects. *To achieve sustainable public finances, reaching and maintaining the medium-term objective of keeping budget balances "close-to-balance or in surplus" over the cycle, as stipulated in the Stability and Growth Pact (SGP), will be essential.*

The fiscal rules suffered from incentive, reporting and enforcement gaps

7. The fiscal rules embedded in the Maastricht Treaty and SGP have been praised for their simplicity, the flexibility in their implementation, their medium-term orientation, the reliance on automatic stabilisers and their explicit enforcement mechanisms. However, a long-standing criticism has been that they suffer from biased incentives: there is a "hard" 3% ceiling for the deficit-to-gross-domestic-product (GDP) ratio, but there are no legal instruments to enforce the "close-to-balance or in surplus" rule embedded in the SGP – which is nevertheless essential to provide the necessary room for manoeuvre in downswings. The rules have also suffered from weaknesses in reporting: in some cases the stability programmes which take stock of countries' fiscal position and outlook have been biased by projections, which have proven too optimistic, by too favourable assessments of the structural fiscal position and by the use of one-off measures and creative accounting. Finally, the implementation of the rules has not been such as to ensure a swift correction of excessive deficits in all cases.

A recent rewrite raises countries' ownership and allows more room for judgement

8. The Stability and Growth Pact has been reformed. Consequent to a decision of the European Council in March 2005, the interpretation of the "exceptional circumstances" clause – which provides a waiver if the rules have been breached – and the adjustment path towards compliance with the rules after a breach, will both become more flexible. Aspects of the reform that have attracted less attention are the

provisions to heighten the surveillance of the fiscal rules by the EU authorities, including during periods of high growth and to reinterpret the close-to-balance or in surplus rule so as to make it tailor-made for individual countries, giving greater weight to the debt (as opposed to the deficit) criterion, long-term sustainability and countries' structural reform efforts. The interpretation and implementation of the SGP is thus increasingly focusing on the longer term, which is welcome. Furthermore, due consideration will be given to relevant factors, such as R&D spending, public investment, or expenditure related to the unification of Europe, when assessing whether an excessive deficit exists. Moreover, these other relevant factors will be important in determining the adjustment path from a deficit above 3% to a deficit below 3% of GDP. Taking into account "relevant factors" in assessing whether an excessive deficit exists is however subject to the overarching principle that the excess of the deficit over the reference value is temporary and that the deficit remains close to the reference value. A rigorous implementation of the amended pact will be key to fostering fiscal sustainability.

Institutional reforms in the pursuit of prudent budgeting is key

9. Inevitably, mechanisms that will ensure fiscal discipline at the national level have become more important. This requires stronger enforcement mechanisms within each country so as to address deficit bias at source. The decision-making rules governing the budget process influence the extent to which the externalities of fiscal policy are internalised so that full account is taken of the costs and benefits of public policy. Deficit bias essentially results from co-ordination failure. *A strong mandate of the finance minister to set deficit, debt and expenditure targets is a way to internalise the externalities resulting from government spending, which commonly benefits specific groups in society while financed from taxes to which all taxpayers contribute. Without such a strong mandate, the externalities are not taken into account and deficit bias results. The targets must be rooted in realistic short-, medium-, and long-term projections of economic growth, public revenues and social benefit entitlements. The stability programmes should be based upon, if not become the centrepiece, of such multi-year budgeting.*

The causes of sluggish performance are mainly structural

10. The adoption of the euro by 12 members of the European Union represented a major step forward in the pursuit of economic integration, building upon and enhancing the achievements of the single market strategy. As a result, the euro area economy is undoubtedly in a better shape than it would have been without the continued progress towards monetary union – not least because it contributed to sustained low interest rates and enhanced financial stability. However, the economic integration that monetary union was seen as bringing has not yet translated into any visible strengthening of trend growth, while the recovery from the global downturn has trailed. *There are causes at play which must be addressed primarily by structural – as opposed to macroeconomic stabilisation – policies*.

With unchanged policies, trend growth would slow down further

11. Assuming no changes in labour force participation rates for relevant age cohorts, in structural unemployment and in labour productivity growth, potential GDP in the euro area is estimated to drop from about 2% in the period 2005-10 to 1¼ per cent in the period 2010-20 and 1% in the subsequent decade. This compares with growth rates of 3¼, 2½ and 2½ per cent in the United States. The euro-area's per capita income gap *vis-à-vis* the United States would widen from about 30% at present to 37½ per cent by 2020. This scenario looks rather bleak against the optimistic EU goal of 3% growth in 2010 and beyond; to reach it, growth would have to at least double against the unchanged-policy baseline. Both productivity growth and labour force participation would have to rise substantially.

Enhancing the functioning of labour markets remains a priority

12. At the start of the 1970s, unemployment in the euro area countries averaged 2% of the labour force, less than half the rate in the United States at the time. The oil shocks in the 1970s, the global recession in the early-1980s and deteriorating supply side conditions dramatically changed this picture, with the unemployment rate in the euro area ratcheting up to around 9%. The euro area is still grappling with the legacy of this episode. There are signs that change is slowly occurring, as reflected in modest falls in structural unemployment and, more significantly, increases in employment rates, especially in some smaller countries. Taxes on low-paid work have been cut, employment protection for temporary work eased and active labour market policies strengthened. However, there remains a large gap with the ambitions of the Lisbon Strategy. *Since the European Union has a restricted mandate in this area, member countries must address the other features of labour market institutions that lead to the persistence of high unemployment and low employment rates. In particular, they should reduce the long duration of unemployment benefits, ease strict EPL for permanent jobs, move away from intervention in wage setting through administrative extension, cut the cost of low-skilled labour further, reduce incentives to retire early or claim disability and lower the high tax wedge on labour. Moreover, obstacles to labour mobility should be removed to promote the efficient allocation of labour resources and enhance the resilience to shocks. The cross-border portability of social benefit entitlements should be allowed and the Health Insurance Card implemented to facilitate health care provision for workers temporarily posted in another member country.*

Integration of service markets could pay large growth dividends

13. Services have become increasingly important for growth and employment in all OECD economies. The examples of the United States and the United Kingdom, where services account for an even higher share of employment than in the euro area, suggest that services offer considerable job creation potential. Services markets in the euro area are still largely segmented, country by country, and this is reflected in trade statistics: internal market integration for services is nowhere near what has been achieved for goods. The potential gains from the integration of services markets fall in two broad categories: *i)* welfare effects associated with the convergence of prices towards the best performers; *ii)* faster trend economic growth by realising economies of scale, better exploiting comparative advantages and improving the allocation of resources. *Regulatory obstacles to an integrated, competitive internal market for services should be removed, notably anticompetitive regulations within countries that act as entry barriers and rules that restrict the provision of services across national boundaries.*

Rapid adoption and implementation of the services directive is crucial

14. The European Commission has identified a large number of obstacles in all parts of business sector services, and their removal is crucial for the completion of the internal market. These include the provision of some services by national monopolies, favourable tax treatment reserved to services purchased from local providers, residence requirements for shareholders, staff and regulated professions, lack of recognition of foreign diplomas, different company tax regimes and accounting rules, complicated rules for the reimbursement of value-added tax to cross-border service providers, restricted reimbursement of medical care provided abroad, and country-specific technical standards. In January 2004 the Commission tabled a draft services directive to remove the major obstacles. The draft directive is aiming at freedom to establish a business in another member state and free trade between member states. In order to reduce obstacles to the free movement of services, the proposed directive lays down a country of origin principle, meaning that service providers are mainly subject to the legal regime of their

country of establishment. However, the host-country principle would continue to apply to employment conditions consequent to the Posting of Workers Directive, thus limiting the risk of "social dumping". The proposal also aims at establishing a right for consumers to purchase services from foreign providers. Despite its anticipated EU-wide benefits, the services directive has met with heavy opposition from some quarters, echoed by a call by the March 2005 European Council to duly consider the social implications of the reform. The European Commission has flagged that it will reconsider the most contentious provisions of the directive. *In revising the directive it should secure the pursuit of the objective of free movement of services within the internal market. Against the backdrop of the call of the Spring 2005 European Council to make the internal market of services fully operational while preserving the European social model, ways should be found that facilitate the political acceptance of the services directive, while resisting a major watering down of its main objectives.*

There also remains unfinished business in financial and transport services

15. The services directive does not cover some activities such as financial services, transport and telecommunications where other Community initiatives are already underway, but where progress varies. The implementation of directives concerning the liberalisation of telecommunication networks varies across countries. The European authorities have urged those countries for which implementation gaps exist to take appropriate action. The Financial Services Action Plan, the Community's central tool to foster financial market integration, is due to be fully implemented by end-2005. *However, it is important that political agreement at the EU level be reached on three proposed Directives relating to cross-border mergers, aspects of company law (including the transfer of headquarters to another EU member state) and capital adequacy. Moreover, the cross-border integration in financial retail markets evolves at a snail's pace. Progress needs to be made to enhance competition and service provision, including in retail mortgage markets*. The air transport sector remains fragmented despite the adoption of the "single European sky" in 2004. EU efforts to liberalise the railways sector are also incomplete. The first railways package, passed in March 2001, established the principle of vertical unbundling between transport providers, infrastructure operators and regulators, but it is still not fully implemented. A second railways package provides that freight services will be fully open to competition as from 1 January 2007. A third railways package, which proposes the opening up of international passenger services as from 2010, is still under discussion in the Council. A directive on liberalising port services, despite a 25-year delay before exposing incumbents fully to competition, has met with fierce opposition and was rejected by the European Parliament in November 2003, even though a new reform package was tabled in late 2004. *The EU authorities should aim for faster progress towards competitive markets for financial and transport services, as this is crucial for the achievement of a fully-fledged internal market.*

Innovation policy should transcend national interests

16. A key to better innovation performance at the EU level is to remove cross-border barriers to diffusion. Relatively weak innovation activity – including but not solely with respect to information and communication technology – is among the factors that have shaped the productivity slowdown in the euro area. As part of its Lisbon Strategy, the European Union has singled out R&D as an important lever for innovation policy, but leaving the primary competence for innovation policy in the remit of the EU member countries. *However, an important key to better innovation performance in the euro area is to remove the sources of market segmentation that currently hamper the diffusion of new technologies. At the EU level, a Community Patent – still not in place due to disagreements on several issues should be implemented, and national research grant competitions should be open to interested parties from across*

the Community, which will create incentives to pool research budgets and thus strengthen the European Research Area. Moreover, a decline in market segmentation in the services sector would help raise the market potential for small innovative firms. At the national level, politically sensitive areas will need to be tackled, including the introduction of merit-based pay and research funding, greater university autonomy and a change of culture towards the commercialisation of research. Financial market conditions for technological development also need to be strengthened, so as to ensure that successful entrants in hi-tech industries are able to expand more rapidly.

The gains from structural reform are considerable

17. Simulations suggest a strong impact of changes in structural policy settings affecting labour markets, product markets and innovation on overall economic performance. Even partial progress would enhance employment and growth prospects significantly. Stronger potential growth would also help to improve fiscal performance so that the tax burden could be prevented from increasing or even eased, while unemployment would fall without rekindling inflationary pressure. Pushing ahead with reforms would launch a virtuous circle where growth and employment are rising and inflation declines, whilst at the same time the fiscal rules are respected. Enhanced ownership of common policy orientations in the aftermath of the Lisbon re-launch would drive forward this virtuous circle.

Chapter 1

Outlook and challenges

The recovery is projected to resume after a soft patch that began in the second half of 2004. But the euro area lacks resilience against adverse shocks amid slow trend growth. Both are likely to be shaped by structural factors, as macroeconomic policy is supportive. Structural policies should aim at completing the EU's internal market, boosting labour market performance and encouraging innovation. Fiscal policy should be rooted in longer-term sustainability goals. Successful structural and fiscal policies should allow monetary policy to remain supportive in a low inflation environment. The first section of this chapter discusses the euro area's short-term performance and outlook. The following section seeks to identify the forces that have shaped the euro area's growth performance in comparison with the best performing parts of the OECD area. The final section briefly reviews the requirements for economic policy, underpinned by analytical work reported in the subsequent chapters of this Survey.

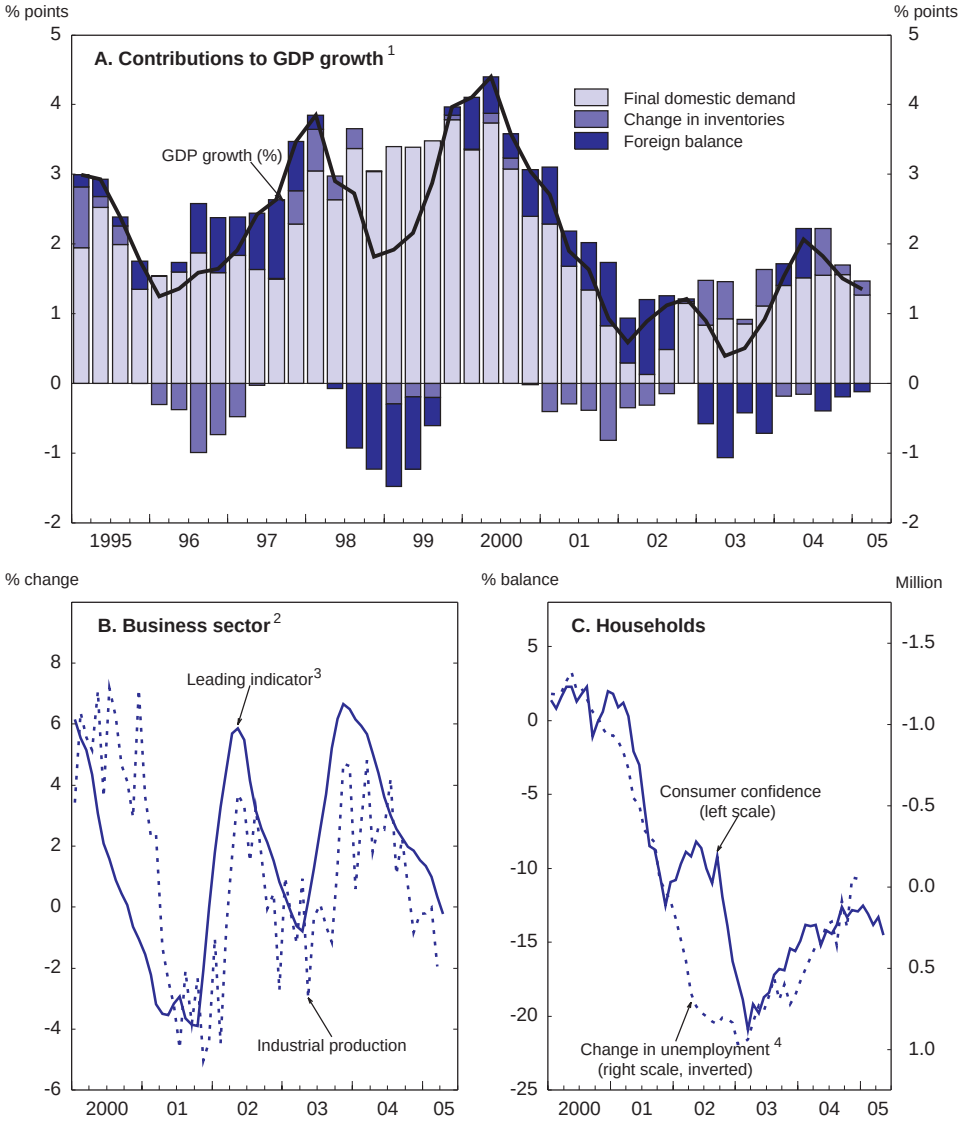
Recent trends and short-term projections

18. When the single currency was adopted on 1 January 1999, the euro area economy was about to reach a cyclical peak which marked the end of the protracted upswing which followed the 1992-93 recession. The downturn that became apparent in 2001 initially looked set to be brief, but growth tumbled further in the aftermath of the collapse of the information and communication technology (ICT) bubble and the September 11 terrorist attacks. Annual average gross domestic product (GDP) growth fell from 2.5% in the period 1993-2000 to a mere 1.1% in 2000-03. Activity has been slowly recovering since mid-2003, but has remained below the estimated growth potential of around 2% per annum when adjusted for the number of working days, which was unusually large in 2004.

19. The recovery has lost momentum since mid-2004, notwithstanding an apparent pick-up in growth in the first quarter of 2005 due mostly to calendar effects. A "soft patch" in the global economy from mid-2004 onwards was compounded by continued losses in market shares associated with the effective appreciation of the euro since 2002. As a result, the net foreign trade contribution to growth moved back into negative territory (**Figure 1.1**). Capital formation finally began to recover in 2004 after

its virtually unabated decline since the onset of the downturn in 2001. But investment growth may have stalled again recently as sentiments have been adversely affected by the high oil price and renewed upward pressure on the exchange rate. Although starting from a low basis, household confidence has been steadily creeping up since early-2003. It has underpinned a strengthening in consumer demand towards the end of 2004, which seems to have continued in early-2005.

Figure 1.1. GDP and short-term indicators



1. GDP in constant 1995 prices, year-on-year percentage change.
2. Percentage changes over six months, annual rate.
3. OECD composite leading indicator.
4. Change relative to previous year.

Source: European Commisssion/Eurostat and OECD, *Main Economic Indicators*.

20. Employment growth has remained surprisingly stable so far, in part due to labour hoarding and also underpinned by wage moderation and policies to support low-skilled and temporary work in several countries. As a result, the unemployment rate has remained virtually stable at just below 9% for almost two years – 1 percentage point above its 8% low in 2001 (**Table 1.1**). Helped also by a cyclical rebound in labour productivity, unit labour cost finally decelerated from its trend 1½ to 2% annual growth since the onset of the downturn to close to nil towards the end of 2004, thus boosting profitability and softening inflationary pressures. As a result, the harmonised index of consumer prices (HICP) excluding food, energy and tobacco, notwithstanding hikes in administered prices, fell from an average of close to the 2% mark in 2004 to about 1½ per cent in early-2005. However, due to soaring energy prices, headline inflation has remained close to the 2% mark.

Table 1.1. **Employment, income and inflation**
Percentage changes from previous period

	2000	2001	2002	2003	2004	Projections 2005	Projections 2006
Employment	2.4	1.5	0.5	0.2	0.8	0.7	1.0
Unemployment rate[1]	8.4	8.0	8.4	8.9	8.9	9.0	8.7
Compensation per employee[2]	2.3	2.6	2.4	2.2	1.7	1.7	1.9
Labour productivity[2]	1.4	0.1	0.5	0.5	1.1	0.6	1.1
Unit labour cost[2]	0.9	2.4	1.9	1.7	0.6	1.1	0.8
Household disposable income	4.8	4.9	3.3	3.0	3.1	2.9	3.2
GDP deflator	1.4	2.4	2.5	2.0	1.9	1.5	1.7
Harmonised index of consumer prices (HICP)	2.2	2.4	2.3	2.1	2.1	1.8	1.3
HICP excluding energy, food, alcohol and tobacco	1.1	1.9	2.4	1.8	1.8	1.5	1.3

1. As a percentage of labour force.
2. In the business sector.
Source: OECD, *Economic Outlook* 77 database.

21. Since the onset of the downturn in 2001, monetary policy has been supportive, but its impact on activity seems to have been significantly weaker than in other parts of the OECD. The European Central Bank (ECB) has kept its main policy rate on hold at 2% since June 2003 and interest rates on benchmark government bonds have been hovering around a historical low of 4% now for over two years and have even declined to 3½ per cent recently (**Table 1.2**). Balance sheet restructuring seems to be near completion, high-grade corporate yield spreads against government bonds have practically evaporated, and stock prices have been recovering in most markets. Yet investment remains hesitant and credit growth remains relatively sluggish, aside from a rebound in lending for dwelling purchases. Strong house price increases have become widespread, supported by low mortgage-interest rates and self-perpetuating price dynamics associated with expectations of capital gains. However, this may merely reflect that households, like businesses and financial institutions, are tilted towards risk-averse behaviour, reflecting uncertainty over the longer-term growth outlook and earnings prospects. There are tentative signs that this is gradually changing, as investment is picking up and house price increases have begun to stimulate consumption.

Table 1.2. **Financial indicators**

	2000	2001	2002	2003	2004	Projections 2005	Projections 2006
Household saving ratio[1]	10.1	10.7	11.1	11.0	11.1	10.8	10.7
General government financial balance[2]	0.1	-1.8	-2.5	-2.8	-2.7	-2.8	-2.7
Cyclically-adjusted financial balance[2]	-1.8	-2.4	-2.5	-2.2	-2.0	-1.8	-1.8
Current account balance[2]	-0.7	0.1	0.8	0.4	0.6	0.1	0.3
Short-term interest rate[3]	4.4	4.3	3.3	2.3	2.1	1.8	1.9
Long-term interest rate[4]	5.4	5.0	4.9	4.1	4.1	3.5	3.6

1. As a percentage of disposable income.
2. As a percentage of GDP.
3. 3-month interbank rate.
4. 10-year government bonds.
Source: OECD, *Economic Outlook* 77 database.

22. The incentive structures built into the fiscal coordination framework enshrined in the Stability and Growth Pact (SGP) – in force since the advent of the euro in 1999 – contributed to an easing of fiscal policy in the early years of the single currency and thus removed all leeway for fiscal stimulus going forward (Chapter 3). A decision by the Council of Ministers (*Ecofin*) in March 2005 has granted countries more time to correct general government deficits in breach of the 3% of GDP reference value stipulated in the Maastricht Treaty if this can be shown to be due to circumstances such as a recession or "other relevant factors". The Pact will be amended so as to allow the latter to include development aid, public spending in the pursuit of European policy goals (*e.g.* research and development (R&D)) and the cost of "European unification". With external pressure on countries to rein in their fiscal balances having thus been somewhat softened, deficits are projected, on the basis of unchanged policies, to remain or move above the 3% of GDP mark in about half of the euro area countries. As a result, the fiscal stance is expected to remain broadly neutral both in 2005 and 2006.

23. Against this backdrop, the *OECD Economic Outlook* No. 77 projects growth to ease from 1¾ per cent in 2004 to 1¼ per cent in 2005, and to firm to 2 % in 2006 (**Table 1.3**). Domestic demand is seen to be the main engine of growth, with both private investment and consumption picking up, whereas stronger exports are likely to be largely offset by strong imports. The unemployment rate is projected to remain at almost 9% in 2005 and to decline slightly to 8¾ per cent in 2006. With the output gap remaining negative and the impact of the hike in oil prices waning – which are assumed to average about $49 per barrel in both 2005 and 2006 – inflation is projected to move below 2% in 2005 and be close to 1¼ per cent through 2006. The projections embodied in the *OECD Economic Outlook* No. 77 assume policy-determined interest rates to be cut from 2 to 1½ per cent this year. They would be raised in three steps in 2006 to 2¼ per cent as the recovery firms and price pressure begins to rebuild. The impact of this profile of short-term interest rates on the projection is likely to be modest as compared to keeping rates unchanged, in particular as long-term interest rates would be largely unaffected, remaining at just below 3½ per cent up to mid-2006 and edging up to 3¾ per cent thereafter. The latest published ECB projections, which assume unchanged short-term interest rates, are broadly similar to those embodied in *OECD Economic Outlook* No. 77.

Table 1.3. **Demand and production**
Percentage changes, volume (1995 prices)

	2000	2001	2002	2003	2004	Projections	
						2005	2006
Private consumption	2.9	1.9	0.7	1.1	1.2	1.3	1.7
Government consumption	2.5	2.6	3.1	1.7	1.7	1.0	2.0
Gross fixed investment	5.3	0.0	-2.2	-0.4	1.9	2.0	3.0
Public	2.8	2.5	2.3	0.4	1.5	2.4	2.2
Residential	1.4	-2.0	-0.9	0.9	1.6	1.0	1.7
Non-residential	7.6	0.4	-3.7	-1.1	2.2	2.3	3.8
Final domestic demand	3.3	1.6	0.6	0.9	1.4	1.4	2.0
Stockbuilding[1]	-0.1	-0.5	-0.1	0.3	0.3	0.1	0.0
Total domestic demand	3.3	1.1	0.5	1.3	1.8	1.5	2.1
Net exports[1]	0.5	0.6	0.5	-0.6	0.1	-0.3	0.0
GDP at market prices	3.7	1.7	0.9	0.6	1.8	1.2	2.0

1. Contributions to changes in real GDP (percentage of real GDP in previous year).

Source: OECD, *Economic Outlook* 77 database.

24. While the baseline scenario remains one of gradual recovery, and even if monetary policy may provide some offset to downside risks, model simulations suggest that a combination of new adverse shocks would be challenging for policy makers (**Table 1.4**). Oil prices are currently very high, as is the uncertainty regarding their future development. Global current account imbalances may prompt an abrupt realignment between the major currencies. This could result in renewed upward pressure on the euro exchange rate at a time when losses in international market shares are already weighing on the area's growth performance – even if this risk now looks remote, as the outcome of the referenda on the Treaty establishing a constitution in the European Union in late-May and early-June in certain euro area countries has been weighing on sentiment in exchange markets and the euro has depreciated against the US dollar. A sharper than expected increase in long-term interest rates in the United States could spill over to the euro area and nip the investment recovery in the bud. A correction in housing markets may induce adverse wealth effects on consumption in those euro area countries where house prices have already reached very high levels. Together with persistent weak job prospects and ageing-related concerns, this may counteract the ongoing return of consumer confidence. On the other hand, accelerator mechanisms, underpinned by restored corporate profitability and balance sheets, could spur business investment to levels above those embodied in the projections.

Table 1.4. **Risks and uncertainties surrounding the projections**

Simulation results

		Year 1	Year 2
Temporary reduction in euro-area internal demand via a ½ per cent lower employment growth and a ½ percentage point higher saving ratio in 2005. Both shocks are reversed in the next year. [1]	GDP[2]	-0.7	-0.0
	Inflation[3]	-0.1	-0.5
	Government lending[4]	-0.4	-0.1
10% appreciation of the euro in nominal effective terms. [1]	GDP[2]	-0.8	-0.9
	Inflation[3]	-0.7	-0.7
	Government lending[4]	0.1	0.0
20% higher oil price. [1]	GDP[2]	-0.2	-0.1
	Inflation[3]	0.2	0.1
	Government lending[4]	-0.1	-0.1
Lower short and long interest rates (by 100 basis points) in the euro area.	GDP[2]	0.4	0.6
	Inflation[3]	0.1	0.1
	Government lending[4]	0.4	0.6

1. Real interest rates are held at their baseline levels.
2. Deviation from baseline level in per cent.
3. Deviation from baseline rate in percentage points.
4. Deviation from baseline ratio to GDP in percentage points.

Weak resilience against a backdrop of slow trend growth

25. The euro area has shown a lack of resilience against adverse shocks while trend growth is slow in comparison with other parts of the OECD area. As argued in the sections below, both are likely to be shaped by structural factors.

Sources of resilience to adverse shocks

26. A number of features of the recent downturn and subsequent sluggish recovery stand out (**Table 1.5**):

- *First*, inflation failed to come down decisively. Although there was some weakening of underlying inflationary pressures recently, inflation has been hovering around 2% and has shown little tendency to fall decisively despite widening slack in product markets – which is all the more striking as the euro exchange rate has been appreciating since mid-2002.

- *Second*, with the unemployment rate rising from about 8% at the peak of the cycle in 2000 to 8¾ per cent in 2003, the increase in joblessness was modest compared to previous downturns. It is nevertheless surprising that wage growth – even if staying moderate – picked up slightly in real terms during the downturn.

- *Third*, the household saving ratio drifted up during the downturn and has remained relatively high since, notwithstanding historically low interest rates.

Table 1.5. **Cyclical developments in the euro area and other OECD economies**

Euro area					
Annual average rate of change	1983-89	1989-93	1993-00	2000-03	2003-05
Real GDP	2.9	1.7	2.5	1.1	1.5
Real GDP per capita	2.7	1.2	2.2	0.7	1.2
Employment	0.9	0.1	1.2	0.7	0.7
Labour productivity	2.0	1.6	1.4	0.3	0.8
Real wage rate	1.3	1.0	-0.1	0.2	-0.2
Inflation	4.5	4.6	2.1	2.3	2.0
Level, per cent	1989	1993	2000	2003	2005
Output gap	1.6	-2.5	1.6	-1.3	-2.1
Saving ratio	16.0	13.9	10.1	11.0	10.8
Unemployment rate	8.1	9.9	8.4	8.9	9.0
NAIRU	8.2	8.3	8.5	8.2	8.0
United States					
Annual average rate of change	1983-89	1989-93	1993-00	2000-03	2003-05
Real GDP	4.3	1.9	3.9	1.9	4.0
Real GDP per capita	3.4	0.6	2.7	0.9	3.1
Employment	2.6	0.6	1.9	0.2	1.4
Labour productivity	1.7	1.3	2.0	1.7	2.7
Real wage rate	0.6	0.8	2.0	1.3	2.1
Inflation	3.7	3.9	2.5	2.2	2.7
Level, per cent	1989	1993	2000	2003	2005
Output gap	1.6	-2.1	1.2	-1.9	0.0
Saving ratio	7.1	5.8	2.3	1.4	0.6
Unemployment rate	5.3	6.9	4.0	6.0	5.1
NAIRU	6.0	5.6	4.9	4.8	4.8
Comparator group[1]					
Annual average rate of change	1983-89	1989-93	1993-00	2000-03	2003-05
Real GDP	3.8	0.5	3.6	2.3	2.8
Real GDP per capita	3.0	-0.2	3.0	1.6	2.2
Employment	2.3	-1.2	1.5	1.3	1.1
Labour productivity	1.4	1.7	2.1	1.0	1.7
Real wage rate	1.4	0.6	1.8	1.3	2.6
Inflation	5.2	4.4	1.8	2.1	1.8
Level, per cent	1989	1993	2000	2003	2005
Output gap	2.6	-4.0	1.1	-0.3	-0.3
Saving ratio	7.4	9.5	3.8	2.8	2.6
Unemployment rate	5.2	8.9	4.9	5.0	4.7
NAIRU	7.1	7.4	5.9	5.9	5.8

1. Includes Australia, Canada, Denmark, New Zealand, Sweden and United Kingdom.

Source: OECD, *Economic Outlook* 77 database.

27. Most observers attribute the pro-cyclical saving behaviour to high perceived inflation with the introduction of the cash euro, the growing uncertainty over the future welfare state in the face of ageing and downbeat sentiment due to terrorism, corporate governance scandals and natural disasters. However, while these factors have undoubtedly weighed, and are still weighing, on sentiment, the United States and other "comparator" countries in the OECD have been exposed to largely the same shocks, but responded differently (**Table 1.5**). Indeed, in the United States, the saving ratio, real wage growth and inflation all fell. As a result, slack in product and labour markets was quickly absorbed, although this was accompanied by a widening of the current account deficit. In the other comparator countries slack never became apparent at all. By contrast, the behaviour of household savings, real wages and inflation in the euro area failed to smooth the cycle – in fact it exacerbated the depth and duration of the downturn.

28. Simulations with a small general equilibrium model developed by the OECD Economics Department, to capture the stylised differences in monetary policy transmission and the degree of flexibility of product and labour markets in the euro area and the comparator countries, can largely explain the observed differences in resilience (Drew *et al.*, 2004). Three stylised differences appear to be prominent in this regard:

- *First*, stock and bond market capitalisation is lower in the euro area than in the comparator countries, competition in financial markets is weaker and the securitisation of mortgages and other consumer loans is also smaller. Securitisation makes interest rates on new borrowing more responsive to financial market developments. It also enhances competition, which lowers the costs of initiating mortgages, eases the access of households to housing equity withdrawal and facilitates refinancing at better terms when interest rates are low whenever such mortgages include advance repayment clauses. Since, moreover, US households hold a higher proportion of their assets in financial instruments (stocks and bonds) that are more sensitive to changing market conditions, wealth effects from lower interest rates are likely to be faster and stronger in the United States than in the euro area.

- *Second*, the euro area economy is still heavily reliant on bank intermediation, which makes it more vulnerable to negative demand shocks insofar as these negatively affect bank balance sheets. If banks have to fund extra loans with other sources of finance, that are imperfect substitutes for deposits, they are likely to face an external premium. As a result, part of their response to a shock will be to cut back on the supply of loans, and borrowers with no or few alternatives to bank loans are hard hit. Moreover, small firms tend to be much more bank-dependent than large ones, and the proportion of such enterprises is comparatively high in the euro area. As a result, following a negative demand shock, investment spending stays low for a longer period. In the course of the downturn the Commission's biannual Investment Survey indeed showed an increasing weight of "financing conditions" as opposed to demand or other conditions to be a constraint on investment (European Commission, 2004). Currently, however, there are no signs that euro area corporations are facing financial constraints. This applies both to large, small and medium-sized enterprises as evidenced also by results of recent bank lending surveys, which indicate that credit standards (which cover price and non-price factors) have been eased for all enterprises. In addition, growth of credit to non-financial corporations picked-up over the past few quarters and measures of spreads on bank rates declined on loans of large and small size.

- *Third*, structural rigidities in product and labour markets, which are particularly marked in the euro area, imply a muted response of inflation and real wage growth to the output and the unemployment gap (Chapter 2). Nominal rigidities lead to longer lags in the responses of prices and real wages, which tends to reduce the amplitude of the cycle arising from a negative demand shock, but also result in a more drawn-out adjustment of output back towards equilibrium. Due to the stickiness of inflation, the monetary authorities cannot reduce nominal interest rates as much, and real interest rates fall by less than they would otherwise do. At the same time, real interest rates have to remain lower for a longer period to move the economy back towards equilibrium.

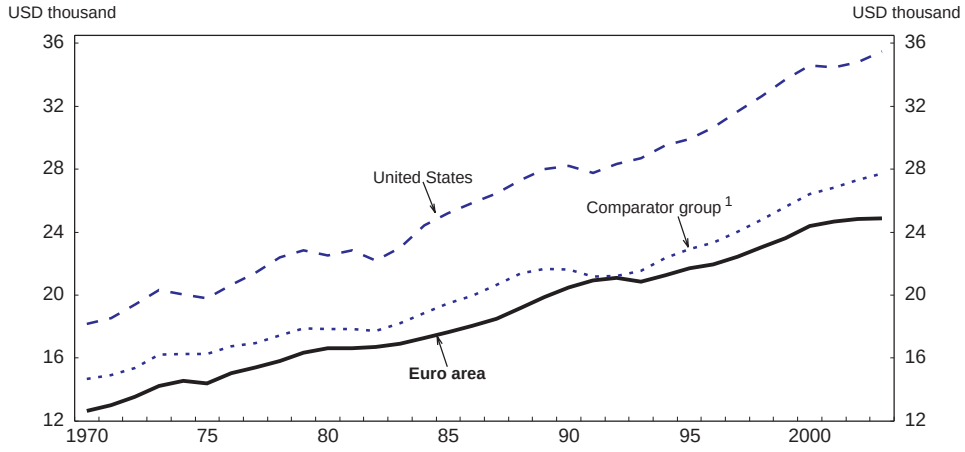
29. The rapid US recovery can be traced back in part to the more pronounced easing in fiscal and monetary policy than in the euro area, and the other comparator countries – most of whom maintain closer trade and financial ties with the United States – may have benefited from this impulse more than the euro area did. However, correcting for the impact of macroeconomic policy does not change the overall picture significantly. Moreover, the euro area has benefited from rapid growth in the new member countries of the European Union through the trade channel. The core of the problem lies with the large euro area countries, which are less well placed to cope with shocks because they are less well integrated in the euro area economy than the smaller ones (Hoeller *et al.*, 2004).

Sources of longer-term growth

30. Over the past two decades the euro area economy has been growing at a significantly slower pace than the economies of the United States or the group of comparator countries. Trend growth in the euro area amounted to roughly 2% per annum as opposed to around 3% in the United States and between 2½ per cent and 3% in the comparator countries. In per capita terms, the difference in GDP growth between the euro area and its peers has been substantially less marked. This nevertheless implies that the income gap between the euro area and the United States – of over one-quarter in terms of real GDP per capita – has persisted (**Figure 1.2**).

Figure 1.2. The income gap

GDP per capita at constant prices and in 2000 PPPs



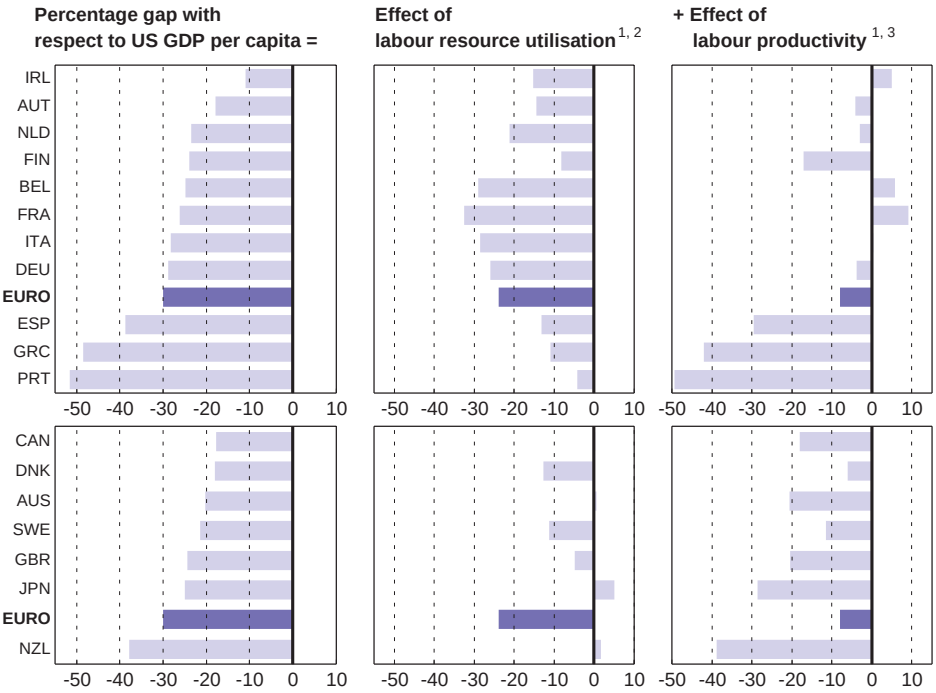
1. Includes Australia, Canada, Denmark, New Zealand, Sweden and United Kingdom.

Source: OECD, *National Accounts*.

31. Apparently, sources of potential economic growth are being left unexploited in the euro area, which raises important issues for economic policy. Comparatively low active labour market participation in the euro area – both in terms of the number of workers as a share of the working age population and the number of hours worked per person – explains about two-thirds of the income gap (**Figure 1.3**). It raises issues about possible distortions embedded in tax and benefit systems and other labour market institutions, although continental Europeans may also value leisure higher than Americans do (Blanchard, 2004).[1] The lower level of labour productivity per hour in the euro area in comparison with the United States explains the remainder of the gap. In fact the technology gap between the United States and the euro area may be larger than measures of hourly productivity levels suggest, because the United States employs marginal workers and hours to a greater extent than the euro area (Bourlès and Cette, 2005). This may point to impediments to realising scale economies and innovation in the euro area.

Figure 1.3. Explaning the income gap

2002, in 2000 PPP terms



1. Percentage gap with respect to the US level.
2. Labour resource utilisation is measured as total number of hours worked divided by population.
3. Labour productivity is measured as GDP per hour worked.

Source: OECD, *National Accounts*, *Labour Force Statistics* and *Economic Outlook* No. 77 database.

32. While the potential growth differential with the United States has widened over the past decade, the sources of the differential have shifted. A simple growth accounting exercise may serve to identify the (proximate) causes of the differences in potential economic growth between the euro area and its peers **(Figure 1.4)**. The findings are largely in line with similar exercises carried out recently by the ECB (Musso and Westermann, 2005) and the IMF (Estevão, 2004).[2]

33. In the euro area, labour productivity growth – here measured per person rather than per hour – has slowed down since the mid-1990s, whereas it sharply rose in the United States. A decomposition suggests the following explanations:

- *Capital deepening diverged*. Growth in the use of capital per worker slowed down in the euro area, while the opposite occurred in the United States. Stronger capital deepening in the United States was associated with a pick-up in real wages as the labour market tightened, and a fall in the user cost of capital owing to rapid technological change in the equipment industry (Lecat, 2004). Conversely, trend real wages decelerated in the euro area, reflecting slack labour markets and structural reform, while the decline of the user cost of capital lagged the US-record. Europe being a net importer and the United States a net exporter of ICT technology, the appreciation of the dollar in the 1990s and early-2000s looks to be part of the explanation (Cette *et al.*, 2004).
- *Total factor productivity diverged*. Technology and skill levels embodied in capital and labour accelerated in the United States whereas they slowed down in the euro area. Most observers explain this by a more rapid diffusion of ICT in the United States than in the euro area. In addition a catch-up in the absorption of low skilled workers in the euro area – partly in response to "make work pay" policies – may have weighed on total factor productivity.

The secular trend decline in the number of hours worked per person has been a long-standing feature of the euro area. It has been tapering off since the mid-1990s, thus providing some offset for the slowdown of hourly productivity.[3] The other comparator countries have portrayed a broadly similar labour productivity development as the United States. However, the pick up since the mid-1990s has been somewhat less pronounced, as hours worked per person declined.

34. The flip side of sluggish trend productivity growth in the euro area has been faster trend growth of employment. This occurred despite slowing growth in the working age population, and owes mostly to growing numbers of female workers. The United States offers virtually the mirror image: despite favourable demographics, trend employment growth decelerated as labour force participation stabilised. The other comparator countries portray a broadly similar picture.

35. Ageing populations are bound to weigh on potential growth going forward (**Table 1.6**). Population growth is projected to virtually halt in the euro area in the coming 25 years or so, whereas it would be sustained at an annual rate of around ¾ per cent in the United States and at around ½ per cent in the other comparator countries. Assuming no change in labour force participation rates by age cohort, in structural unemployment rates and in labour productivity growth relative to the OECD medium-term baseline scenario included in *Economic Outlook* No. 77, the following picture emerges:

- Potential GDP in the euro area would drop from about 2% in the period 2005-10 to 1¼ per cent in the period 2010-20 and 1% in the subsequent decade. This compares to growth rates of 3¼, 2½ and 2½ per cent in the United States and 2¾, 2¼ and 2% in the other comparator countries for the same periods.

- The differences in *per capita* growth would obviously be smaller, in a range of ½ to 1% between the euro area and the United States and ½ per cent between the euro area and the other countries over the entire period. However, the euro area's income gap would be widening by 7½ percentage points *vis-à-vis* the United States and the other comparator countries by 2020. By 2030 these gaps would have widened by another 10 and 5 percentage points, respectively.

36. This result looks rather bleak against the EU-goal of 3% growth in 2010 and beyond; to reach this target, growth would have to at least double against the baseline. Either productivity or labour force participation would have to rise swiftly (the latter may imply an increase in retirement age) and/or structural unemployment would have to fall.

Figure 1.4. Trend growth decomposed

Annual average rate of change, per cent

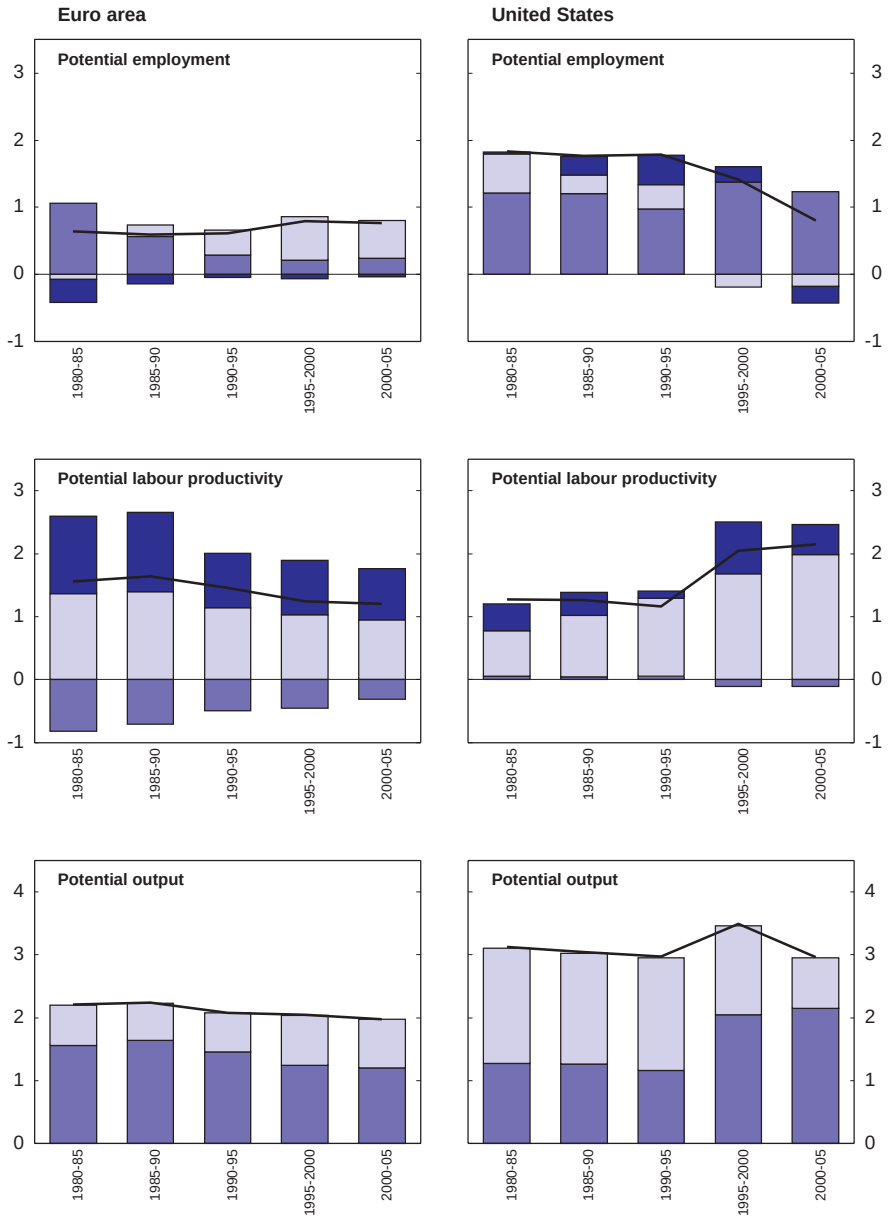
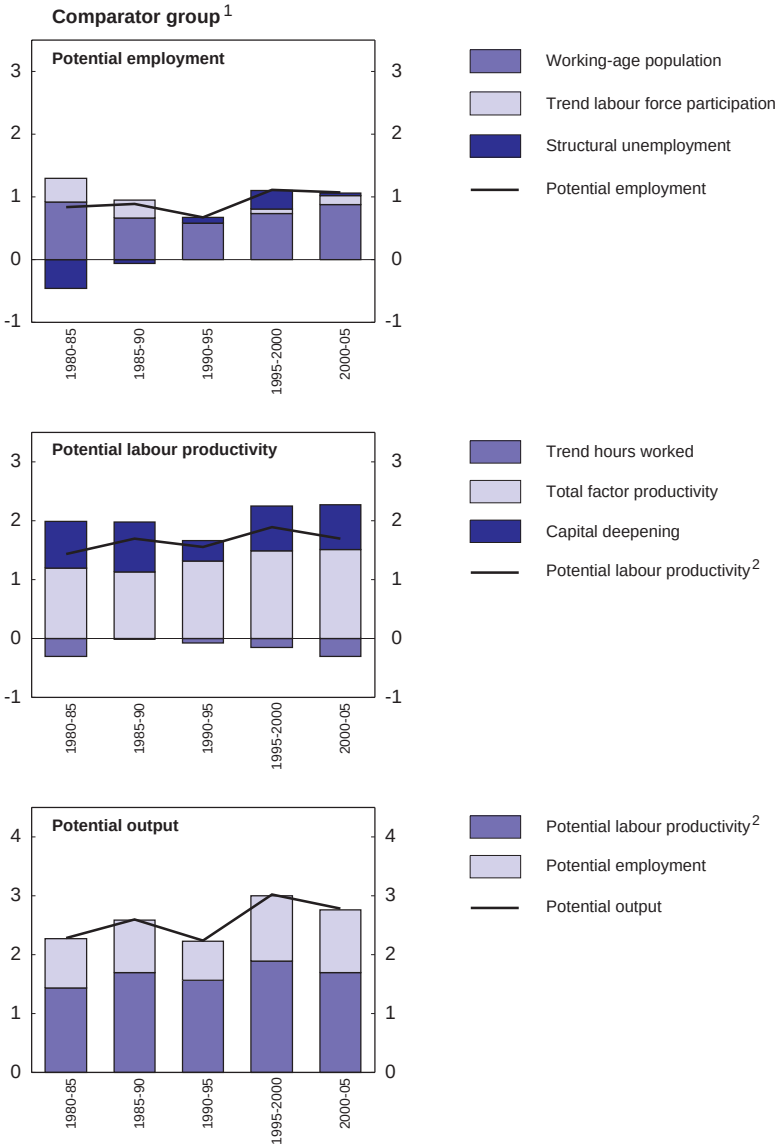


Figure 1.4. Trend growth decomposed (cont)

Annual average rate of change, per cent



1. Includes Australia, Canada, Denmark, New Zealand, Sweden and United Kingdom.
2. Including contribution from the public sector.

Source: OECD, *Economic Outlook* No. 77 database.

Table 1.6. **Long-term scenarios**

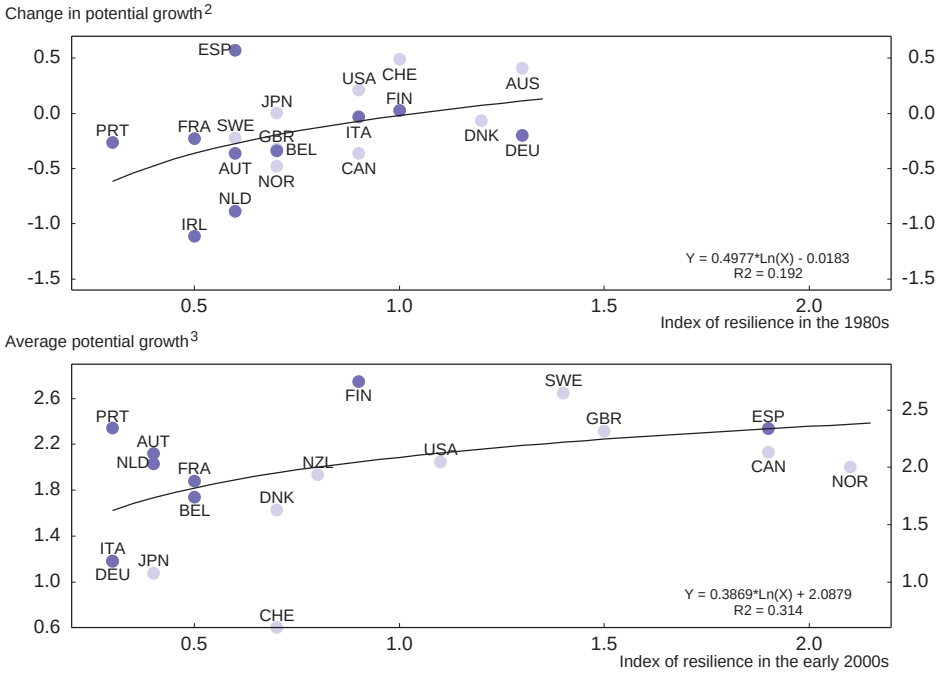
	Annual average rates of change				
	1995-2000	2000-05	2005-10	2010-20	2020-30
Euro area[1]					
A. Potential employment	0.8	0.8	0.3	-0.3	-0.7
Contribution from:					
A1. Working-age population	0.2	0.2	0.1	-0.2	-0.6
A2. Trend labour force participation	0.6	0.6	0.3	-0.1	-0.1
A3. Structural unemployment	-0.1	0.0	0.0	0.0	0.0
B. Potential labour productivity	1.2	1.2	1.6	1.6	1.6
C. Potential GDP	2.0	2.0	1.9	1.3	0.9
D. Population	0.3	0.3	0.2	0.1	0.0
E. Potential GDP per capita	1.8	1.6	1.7	1.2	0.9
United States					
A. Potential employment	1.4	0.8	0.9	0.3	0.4
Contribution from:					
A1. Working-age population	1.4	1.2	1.1	0.3	0.3
A2. Trend labour force participation	-0.2	-0.2	-0.1	0.0	0.0
A3. Structural unemployment	0.2	-0.2	-0.1	0.0	0.0
B. Potential labour productivity	2.0	2.1	2.3	2.3	2.3
C. Potential GDP	3.5	3.0	3.2	2.6	2.6
D. Population	1.2	1.0	0.9	0.8	0.8
E. Potential GDP per capita	2.3	2.0	2.3	1.7	1.8
Comparator group[2]					
A. Potential employment	1.1	1.1	0.7	0.1	-0.1
Contribution from:					
A1. Working-age population	0.7	0.9	0.6	0.1	-0.1
A2. Trend labour force participation	0.1	0.1	0.0	0.0	0.0
A3. Structural unemployment	0.3	0.0	0.0	0.0	0.0
B. Potential labour productivity	1.9	1.7	2.0	2.0	2.0
C. Potential GDP	3.0	2.8	2.7	2.2	1.9
D. Population	0.6	0.6	0.5	0.5	0.4
E. Potential GDP per capita	2.4	2.1	2.2	1.7	1.5

1. Excluding Luxembourg.
2. Includes Australia, Canada, Denmark, New Zealand, Sweden and United Kingdom.
Source: OECD, *Economic Outlook* 77 database and OECD calculations.

Requirements for economic policy

37. The structural policy stances that determine the capacity of an economy to rebound quickly from adverse shocks largely overlap with those that determine its potential growth rate. It is thus not surprising to find that the most resilient economies are by and large also those that show the fastest potential per capita growth. This is a pertinent finding for the recent downturn (**Figure 1.5**). It is less clear-cut for earlier downturns, but there does seem to be an inverse relationship between the estimated degree of resilience and the estimated *change* in potential per capita growth in the wake of the oil shocks in the 1970s.

Figure 1.5. Resilience[1] and trend growth in GDP per capita



1. Measured as the ratio of the average gap in the first half of a downturn to the average gap in the second half. The ratio is divided by the square-root of the average gap over the whole period so as to adjust for the severity of the recessions.
2. Change in potential growth per capita from the second half of the 1970s to the first half of the 1980s.
3. Average potential growth per capita in the period 1999-2002.

Source: OECD, *National Accounts* and *Economic Outlook* No. 77 database.

38. Against this backdrop:

- *The key challenge for economic policy in the euro area is to boost trend growth and enhance the resilience against adverse shocks.* Obviously, structural policies will have to bear the brunt of this challenge.
- *Putting the fiscal house in order is also essential, to make public finances sustainable in the face of ageing populations and restore confidence as well as to create the necessary room for the automatic stabilisers to play their cyclical role in full*. Meanwhile,
- *The effectiveness of monetary policy should be raised by addressing the slow transmission of monetary policy to economic activity and inflation.*

This section briefly reviews these issues.

Getting more bang for the monetary policy buck

39. The impact of monetary policy easing during the downturn has not been as effective as in some other parts of the OECD area (Chapter 2). Monetary policy established its credibility and inflation expectations have become – and remain – firmly anchored in the official policy to keep inflation below but close to 2% over the medium-term. However, since inflation failed to decline when activity fell below potential, the room for monetary policy manoeuvre has been limited. Downward inflation inertia appears to be a long-standing feature of the euro area economy. A dual policy of enhancing competition in the internal market for services and easing labour market rigidities would help address some major sources of downward inflation inertia and thus enhance the effectiveness of monetary policy in downturns.

40. Meanwhile, weak monetary policy transmission through the housing channel has also been weighing on the effectiveness of monetary policy. The impact of monetary policy on consumption in the euro area would be stronger if institutions in mortgage markets, notably in the major countries, would allow the withdrawal of housing equity and the adjustment of mortgage interest rates to benchmark rates to a greater extent. It may be expected that the integration of financial retail services will spur competitive pressure on mortgage lenders to become more innovative. However, so far there is limited evidence that such forces are acting. On the other hand, in response to some shocks with implications for price developments or in the context of bubbles in house prices, a high responsiveness of consumption to interest rate changes via the housing market channel may create unnecessary and undesirable macroeconomic volatility.

41. The effectiveness of monetary policy has been further complicated by the upward pressure on the euro exchange rate. At least part of the recent euro appreciation can be seen as a natural adjustment following the large fall in the exchange rate that occurred in the first two years of the existence of the single currency. However, a further euro appreciation may be inevitable as part of the unwinding of global imbalances, even though the timing and the magnitude of the adjustment are extremely difficult to predict. The capacity of the euro area to absorb the shift in resources it would entail is essential for the area's economic performance going forward. It makes a serious call on structural policies to enhance the flexibility of product and labour markets.

Anchoring budgets in longer term goals

42. As noted, the euro area is set to experience a significant ageing of its population. This will result in a sharp increase in the ratio of ageing-related expenditure (pensions, health care, elderly care, etc.) to GDP from a current level which is on average already considerably higher than in many other OECD economies. Sound public finances during this period of rapid ageing are a prerequisite for success in coping with this problem; higher public savings, along with pension and labour market reform, are needed to reduce public indebtedness. The upshot is that most countries in the euro area would need to keep budgets balanced or in surplus over the business cycle in the coming two decades, irrespective of the requirements stemming from the fiscal rules enshrined in the Treaty and the Stability and Growth Pact.

43. With ageing-related fiscal pressures building up, a repeat of past policy errors – a weakening or reversal of consolidation efforts amid buoyant cyclical conditions – would be even more costly than they have been recently. It is therefore all the more important that governments strengthen their budget institutions, by introducing medium-term budgetary frameworks resulting in hard budget constraints, basing budgets on prudent macroeconomic projections and adopting top-down spending allocation (Chapter 3). Bringing fiscal policies on to a sound footing, while avoiding a rise in the already high tax burden, is vital for confidence and economic efficiency.

Making markets work better

44. Structural reform in the euro area pursues the primary objective, solemnly established in Lisbon in 2000, of turning the European Union into "the most competitive and dynamic knowledge-based economy in the world" by 2010. However, progress towards this goal has been disappointing thus far (Chapter 4). As noted, on unchanged policies, population ageing implies that the euro area's potential output growth is set to decelerate and the income gap with the United States to widen considerably. Determined structural reforms are needed to boost performance and to put the euro area economy on track towards meeting the 3% output growth path set by the Lisbon agenda. Three areas should be tackled with priority: the performance of labour markets, integration in the single market and fostering innovation activity.

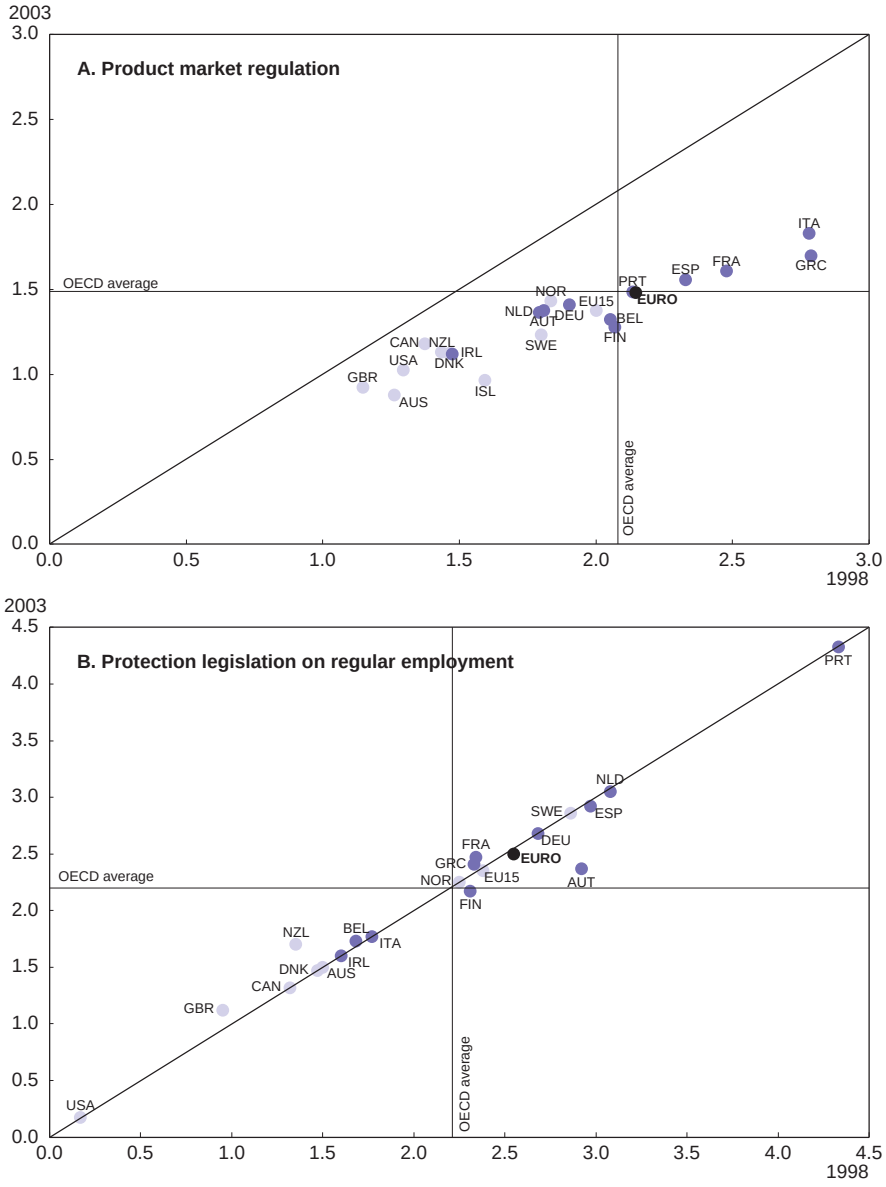
45. Incremental changes in policies aimed at *improving labour market performance* have been common since the mid-1990s, and this appears to have had a noticeable impact on trend employment growth. However, countries have so far progressed most on reforms that bear a relatively low political cost, such as the introduction of in-work benefits or tax credits and the relaxation of employment protection legislation (EPL) for temporary work (OECD, 2005). In politically more contentious areas, such as benefit durations, minimum wages and wage formation systems, progress has been piecemeal and, regarding EPL for full-time workers, there has been virtually no change at all (**Figure 1.6**, lower panel). The latter is particularly damaging as it may hamper efforts to seek efficiency gains through labour re-allocation, which is essential for taking full advantage of new technological opportunities. Decisive progress on all these fronts is necessary to boost trend economic growth, employment and welfare.

46. Progress towards *the completion of the single market for goods and services* has helped boost competitive pressures arising from cross-border activities. Indicators of product market regulation reported in OECD (2005) point to a reduction of regulatory impediments to product market competition since the late-1990s, with the most regulated moving towards the more liberal countries (**Figure 1.6**, upper panel). Much of the improvement in product market competition has been driven by the easing or elimination of command and control measures and price controls, a reduction of controls on public and private business, and the easing of barriers to trade and investment. However, a hard core of regulations persists concerning barriers to entry in services. As long as these remain in place, there are unlikely to be any significant additional effects of regulatory policies on economic performance in the euro area going forward. The draft services directive tabled by the Commission in the spring of 2004 aims at freedom to establish a business in another member state and the freeing up of trade in services between member states. As discussed in Chapter 4, the European authorities should resist pressure to water the main provisions of the directive down.

47. With the launch of the Lisbon Strategy, *innovation* has become a central policy concern in the European Union. The importance of innovation is highlighted in past work by the OECD, notably the Growth Study (OECD, 2003). This identified a clear positive linkage between private sector R&D intensity and growth in per capita GDP. Other research has also shown the importance of the science infrastructure for the absorption of foreign innovation and for productivity growth. The influence of policies for innovation has to be judged against the background of the wider framework conditions in the economy. In the absence of supportive framework conditions, there may be very little that individual science policies can achieve. An important key to better innovation performance in the euro area is to remove the sources of market segmentation that currently hamper the diffusion of new technologies. Politically sensitive areas will need to be tackled, including the introduction of pay and research funding that is merit-based, greater university autonomy, a change of culture towards the commercialisation of research, and the creation of (European) centres of excellence. The potential gains of a successful innovation policy are likely to be substantial (Chapter 4).

Figure 1.6. Slow progress in product and labour market reforms

Index scale of 0-6 from least to most restrictive[1]



1. Simple average of individual countries for the euro area and EU15.

Source: OECD, *Employment Outlook,* July 2004 and Product Market Regulation database.

NOTES

1. More controversially, one observer has drawn a parallel between developments in the valuation of leisure and religiosity in Europe and the United States (Ferguson, 2004).

2. However, the ECB exercise is confined to the euro area and therefore does not provide a comparison with the United States and other OECD economies. The IMF exercise does provide a comparison between the euro area and the United States, but is confined to labour productivity.

3. This offset may not be one-for-one, however, in the sense that longer hours tend to cut into hourly productivity.

BIBLIOGRAPHY

Blanchard, O. (2004), "The Economic Future of Europe", *MIT Economics Department Working Paper Series*, No. 0404.

Bourlès, R. and G. Cette (2005), *Une comparaison des niveaux de productivité structurels des grands pays industrialisés*, Banque de France, Paris, mimeo.

Cette, G., Kocoglu, Y. and J. Mairesse (2004), "The Impact of Diffusion of Information and Communication Technologies on Productivity per Employee in France", *Banque de France Monthly Digest*, Nr. 121/123, Paris.

Drew, A., M. Kennedy and T. Slok, (2004), "Differences in Resilience between the Euro Area and US Economies", *OECD Economics Department Working Papers*, No. 382, Paris.

European Commission (2004), *EU Economic Review*, Brussels.

Estevão, M. M. (2004), "Why is Productivity Growth in the Euro Area So Sluggish?", *IMF Working Paper*, No. WP/04/200, Washington.

Ferguson, N. (2004), "Economics, Religion and the Decline of Europe", *IEA Economic Affairs*, December, Institute of Economic Affairs, Blackwell Publishing, Oxford.

Hoeller, P., C. Giorno and C. de la Maissonneuve (2004), "One Money, one Cycle? Making Monetary Union a Smoother Ride", *OECD Economics Department Working Papers*, No. 401, Paris.

Lecat, R. (2004), "Labour Productivity in the Major Industrialised Countries, the End of the Catch-up Process with the United States?, *Banque de France Monthly Digest*, Nr. 121/123, Paris.

Musso, A. and T. Westermann (2005), "Assessing Potential Output Growth in the Euro Area – A Growth Accounting Perspective", *ECB Occasional Paper Series*, No. 22, January, European Central Bank, Frankfurt.

OECD (2003), *The Sources of Economic Growth in OECD Countries*, OECD, Paris.

OECD (2005), *Economic Policy Reforms – Going for Growth*, OECD, Paris.

Chapter 2

Current issues in monetary policy

Since 2000 inflation has remained close to, but mostly somewhat above the 2% mark, despite weak growth and an appreciating euro. There is little monetary policy can do on its own to boost the euro area economy: interest rate cuts are not the panacea and foreign exchange intervention appears undesirable. However, structural reforms may widen the room for monetary policy action. Greater labour market flexibility, for instance, would reduce the sacrifice ratio – the output cost of controlling inflation. Moreover, better functioning mortgage markets in the largest euro area countries, including easier access to mortgage equity withdrawal and to the refinancing of fixed rate loans, may speed up the transmission of monetary policy.

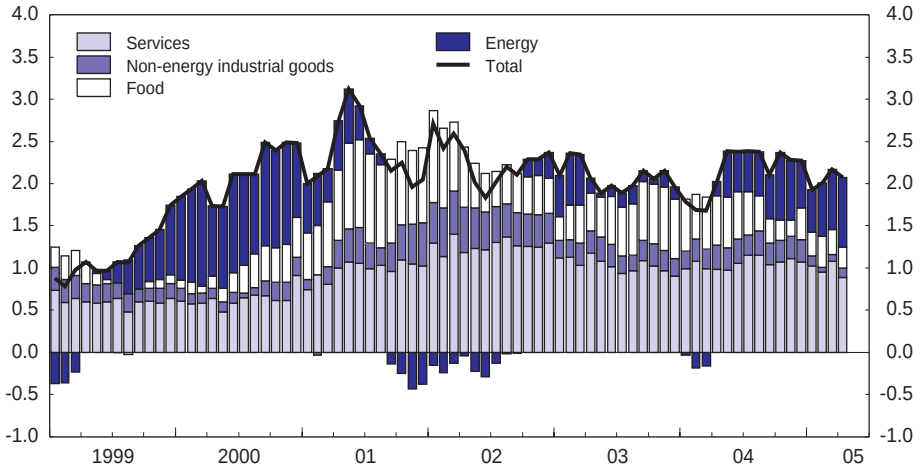
48. The chapter first assesses the stance of monetary policy in the euro area against the backdrop of recent developments in financial markets, inflation and the real economy. This section also assesses how monetary policy is lending support to the recovery while maintaining price stability over the medium term. The chapter then analyses in more depth the causes of the most pressing monetary policy issues at the current juncture: inflation inertia, the (lack of) monetary policy transmission to consumption despite soaring property prices, and the risks from a further sharp appreciation of the euro in view of global current account imbalances.

The policy stance

49. Economic activity, while picking up, is still sluggish whereas inflation has remained stubbornly above the 2% mark – with soaring energy prices offsetting some weakening of underlying inflation pressures (**Figure 2.1**). Furthermore, headline inflation has been pushed up by administrative prices and indirect taxes, which have contributed 0.6 percentage points to HICP inflation in 2004. Tobacco prices, which have been affected by tax hikes, especially in Germany and Italy, alone account for 0.3 percentage points of the 2.1% yearly HICP inflation observed in 2004. Meanwhile, money and credit growth is buoyed by historically low interest rates, which contribute to the housing boom in some member states. Against this backdrop, monetary policy, whose current stance is lending support to economic activity, will need to remain vigilant with regard to the materialisation of risks to price stability over the medium term.

Figure 2.1. Contributions to inflation

Year-on-year percentage change in the harmonised consumer price index [1]



1. Including Greece before 2001.

Source: Eurostat.

Strong money and credit growth

50. Growing at an annual rate of 6½ per cent in the first three months of 2005, the broad money aggregate M3 is well above the ECB reference value of 4½ per cent (**Table 2.1**).[1] The most liquid components of the money stock have been increasing rapidly. This can be explained to a large extent by the low opportunity cost of holding liquidity. It seems to have also emanated to a limited extent from the rebuilding of currency hoardings in- and outside the euro area in the aftermath of the changeover to euro banknotes and coins in 2002 (**Box 2.1**). Strong growth in demand for currency in circulation is finally showing signs of unwinding, but it was still growing by 18% in the first three months of 2005 at annual rate.

51. Looking at the sources of liquidity creation, credit to the private sector provides a strong contribution to M3 growth (**Table 2.1**). Aside from a short stint of strong credit expansion to the non-financial corporate sector when the ICT boom approached its peak in 1999 and 2000, the main driver behind this development has been a strong rise in lending for dwelling purchases (10% in 2004 and in the first quarter of 2005 at annual rate). Only since the third quarter of 2004, credit growth has also been supported by more relaxed lending conditions for the business sector (ECB, 2005a). Portfolio shifts from shares and other non-monetary assets into money-market instruments, which fuelled M3 growth in the period 2001-2003, appear to have reversed somewhat since mid-2003 and have thus been dampening M3 growth since then. However, the dampening impact on monetary dynamics of this reversal of past portfolio shifts has been more than offset by the stimulating effects of low interest rates on M3 growth since mid-2004.

Table 2.1. **Monetary aggregates and their counterparts**

End of period, percentage growth[1]

	Level January 2000 (billion EUR)	2000	2001	2002	2003	2004	2005 March
M0[2]	338.9	-0.9	-32.5	42.6	24.9	17.0	17.8
M1[3]	1 987.3	5.3	6.1	9.9	10.7	8.9	9.3
M2[4]	4 121.6	3.6	6.5	6.7	7.7	6.7	7.1
M3[5]	4 712.6	4.1	8.0	7.0	7.1	6.6	6.5
Contributions to M3 growth from:							
Credit to the private sector	6 264.8	14.1	9.6	6.4	7.7	9.4	10.0
Lending for home purchase	1 739.1	3.1	2.5	2.9	3.0	3.8	..
Credit to general government	2 066.2	-2.9	0.0	0.6	2.3	0.9	0.8
Net external assets	168.7	-2.9	-0.2	3.2	1.7	2.6	1.6
Longer-term financial liabilities	-3 549.8	-3.5	-3.5	-3.4	-4.0	-5.6	-5.8
Other net liabilities	-237.3	-0.8	2.2	0.2	-0.5	-0.7	-0.1

1. Seasonally adjusted data.
2. Currency in circulation.
3. Currency in circulation and overnight deposits.
4. M1 and other short-term deposits.
5. M2 and marketable instruments (repurchase agreements, money market fund shares and units of euro area residents, debt securities with an original maturity of up to two years).

Source: OECD calculations based on ECB data.

Box 2.1. Currency in circulation and the introduction of the cash euro

Demand for currency in circulation declined sharply in 2001 and then soared in the aftermath of the introduction of the cash euro on 1 January 2002. This can be partly attributed to the rebuilding of currency hoardings in the aftermath of the changeover to euro banknotes and coins in 2002. Fischer *et al.* (2004) recently observed that banknotes are primarily used as a store of value and that only one third of the currency in circulation is held for the purpose of domestic transactions. The run-up to the cash euro changeover also saw the euro decline against the dollar in a way that most models referring to fundamentals were at pains to explain (see *2001 Economic Survey: Euro area*). Using a portfolio balance model, Sinn and Westermann (2001) argue that sales of euro area national banknotes by non-euro area residents and black economy participants can explain a large part of the euro depreciation prior to the changeover. According to this hypothesis, the introduction of euro banknotes was to be followed by high growth rates in the amount of currency in circulation (M0) and by an appreciation of the euro as non-euro area residents and shadow economy participants reconstituted their holdings of euros. Even though this explanation can cast some light on the large swings observed in M0 and the exchange rate since 2000, these developments were also driven by other factors (see the discussion on the exchange rate below).

52. The ECB interprets the buoyancy of M3 as a sign of heightened inflation risks over the medium-term (ECB, 2005b). The ECB reaches this conclusion on the basis of a wide set of indicators ranging from cumulative deviations from the reference value to residuals of money demand models. A recent addition to the ECB framework of monetary analysis is a measure of M3 corrected for portfolio shifts (ECB, 2004*a*). The published indicators used by the ECB for monetary analysis all point to excess liquidity in the euro area. Against this background, the ECB continues to see upward risks to price stability.

53. Many observers, as well as the ECB, explain the excess liquidity that built up since early 2001 by a combination of two temporary factors: *i)* a flight to liquidity in response to heightened uncertainty in the wake of the stock market slump in 2000/01; and *ii)* the historically low level of interest rates and hence low opportunity cost of holding liquidity. If this assessment is correct, growth in M3 should return to (and perhaps initially undershoot) the reference value once uncertainty surrounding the stock market has diminished and interest rates return to their equilibrium level.

54. However, the strength of mortgage lending raises the question as to whether the housing boom in many euro area countries should now be seen as a cause – rather than a result – of strong money growth (**Table 2.2**). Clearly, the prevailing low level of interest rates has contributed to both phenomena. The convergence of mortgage rates to German levels with the introduction of the euro has been an important driver of house price rises, especially in countries with histories of high inflation. Financial market liberalisation and increased competition in mortgage markets, especially in France, Greece and Italy, have also contributed to easing households' access to borrowing for a home purchase as it prompted banks to offer longer mortgage repayment periods. Since the advent of the euro, dwelling prices have risen at double digit annual rates in Greece, Ireland, the Netherlands and Spain.[2] House prices have also been rising rapidly in Belgium, France and Italy, outpacing consumer price inflation by a wide margin. On the other hand, house prices have remained broadly stable in Austria and Germany. Empirical work indeed shows a positive effect from rising property and equity wealth on money demand (**Box 2.2)**.

Table 2.2. **House price developments and mortgage lending by country**

Average annual change, per cent, 1998-2004

	House prices	Outstanding mortgages
Austria	0	14
Belgium	7	10
Finland	6	14
France	10	9
Germany	0	4
Greece	8	29
Ireland	12	24
Italy	9	20
Netherlands	9	13
Portugal	6	14
Spain	15	18

Source: European Central Bank, European Mortgage Federation, The Economist and Royal Institution of Chartered Surveyors.

Box 2.2. Wealth and money demand

Since the advent of the single currency, the year-on-year growth rate of broad money (M3) has been exceeding the "reference value" of 4½ per cent which the ECB uses as the benchmark for a prudent, non-inflationary expansion of the money stock (**Figure 2.2**). Aside from a short spell between mid-2000 and mid-2001 when growth of M3 fell short of the reference value, M3 growth in excess of the reference value has hovered in a range of 2 to 4 percentage points per annum. This has raised concerns that the excess liquidity could at some point trigger inflation (ECB, 2004*a*).

Figure 2.2. Growth of M3 in the euro area

Year-on-year percentage change

Source: OECD, *Main Economic Indicators*.

The standard specification for money demand equations comprises nominal income and a rather narrow range of opportunity cost variables:

$$(1) \quad M = M(\overset{+}{P}, \overset{+}{Y}, \overset{+}{irs}, \overset{-}{irl})$$

In this standard specification money demand (M) varies with the volume of activity or transactions (Y) and the price level (P) in line with the quantity theory of money. In addition, money demand is assumed to rise if the short-term interest rate (irs) increases, because of a higher return on short-term deposits, and to decrease if the long-term interest rate (irl) rises, because the opportunity cost of holding liquidity as opposed to bonds increases.

This specification has been used frequently as a starting point for estimating money demand equations to explain developments of M3 in the euro area. Variants include Fagan and Henry (1998) and Coenen and Vega (2001) who suggest to enter the difference between irs and irl (*i.e.* the yield curve) in the equation, thus restricting the coefficients of irs and irl to be the same. In a more recent study, Brand and Cassola (2004) remove irs and only retain irl, whereas Avouyi-Dovi *et al.* (2003) and Bruggeman *et al.* (2003) emphasise the importance of irs as a measure of the "own rate of money", *i.e.* the yield on near-money included in M3. Artis and Beyer (2004) remove irs and retain irl as well, but argue that irl should represent the German bond rate, this being the relevant benchmark rate in the euro area. Inflation is sometimes introduced in the equation as a proxy for the capital loss of holding money and to capture the impact of inflation on real interest rates.

Developments in M3 may also be explained by opportunity cost variables for holding money beside its "own rate of interest on money", including a range of yields and prices for assets that may be considered as substitutes for liquidity (Nelson, 2003). The basic idea is that a gain in wealth will exert an influence on the demand for money through two channels. One channel is the substitution effect (Friedman, 1988): a rise in asset prices, if associated with expectations of further rises, makes these assets more attractive alternative investment vehicles in comparison with money. The other channel is the income effect: as wealth increases, part of the additional wealth may be stored in liquid instruments. Moreover, as the turnover of financial transactions increases with the higher level of asset prices,

the demand for money for transaction purposes will rise. The substitution effect of wealth on money demand is negative and the income effect is positive, hence a priori the sign of the net impact of wealth on money demand is undetermined. This leads to the following specification:

(2) $M = M(\overset{+}{Y}, \overset{+}{P}, \overset{+}{irs}, \overset{-}{irl}, \overset{?}{W})$

Fase and Winder (1998) have found empirical evidence for a positive sign of the wealth variable in this relationship for the European Union prior to the adoption of the euro in 1999, with net financial wealth derived from balance sheet data. In a more recent study, Bruggeman *et al.* (2003) reject a relationship between money demand and share prices for the euro area, including observations for the period after the adoption of the single currency. Moreover, they find that interest rates are not well determined. There are also recent studies which aim to estimate the impact of the volatility in share prices. The Institut für Weltwirtschaft (2003), for example, finds a positive correlation with M3, the rationale being that volatility and the associated increased uncertainty leads to a flight to low-risk liquid assets that are included in M3. However, the relevance of a broader wealth variable that includes property prices along with share prices has not been tested to date.

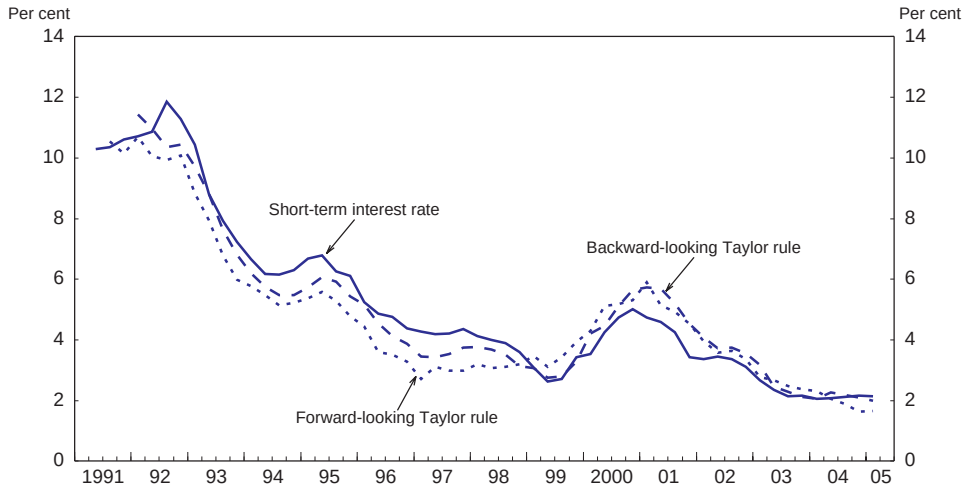
The effect of asset prices can be appraised jointly with the more traditional determinants of money demand: output, prices, short-term and long-term interest rates. Boone *et al.* (2004) estimate a co-integration relationship between M3 and the aforementioned variables for the 1971-2003 period using data from the *OECD Economic Outlook No.* 75 and the wealth index compiled by the Bank for International Settlements (BIS) and documented in Borio and Lowe (2002). The BIS wealth index combines price information on shares and property (both residential and commercial). Econometric tests suggest that the relationship has been stable over the full period and, in particular, shows no detectable break in early 1999 and that rising wealth is positively associated with stronger money demand. The estimated relationship including the wealth effect could account for about half of the M3 growth overshoot between 1999 and 2003, but the uncertainty margins are wide.

55. If part of the recent surge in money demand is attributable to wealth effects induced by house price rises, M3 abundance is not necessarily bound to fuel future inflation in full as it may peter out once the housing boom unwinds. House price developments nevertheless should be carefully analysed. Asset price movements need generally not be a concern for monetary authorities insofar as they are not included in the headline price index. The price of financial assets does not directly affect the value of money which is defined by the volume of goods and services that can be bought with one currency unit. Financial assets are a claim on future resources: the price of financial assets is the discounted value of the future prices of these resources. The corresponding discount factor is the real interest rate in the case of real assets and the nominal rate in the case of nominal assets. Since monetary authorities already look at expected inflation, they need not target asset prices even if they can use them as a means to improve their judgement on the future path of the price level (Bean, 2003). The situation of housing is, however, fundamentally different because a sizeable chunk of the services associated with house prices do affect the purchasing power with regard to current consumption – even if they are at present not included in the price index (**Annex A2.2**).

Low interest rates

56. Now close to zero, short-term real rates are well below any plausible estimate of neutral interest rates (see **Box 2.3**) A convenient – though imperfect – way to asses the monetary policy stance is provided by Taylor rules for policy-determined short-term interest rates, which synthesise output and price developments. The minimum bid rate in the ECB's main refinancing operations – the ECB-set key interest rate – is broadly in line with the level indicated by both forward- and backward-looking Taylor rules, although it should be recognised that different Taylor rules can be constructed using different assumptions which can lead to very different results (**Figure 2.3**).[3]

Figure 2.3. Taylor-rule and actual interest rate



Source: Adema, Y. (2004), "A Taylor Rule for the Euro Area based on Quasi-Real Time Data", *DNB Staff Reports*, No. 114 and OECD, *Economic Outlook* No. 77 database.

57. Taylor rules must, however, be interpreted with a degree of caution. The rule plotted in **Figure 2.3** follows Taylor's original framework (1993) and is a function of inflation deviations from target, the output gap and a steady state real interest rate.[4] The two latter are subject to sizeable margins of uncertainty. The deviation of inflation from target raises the question of the appropriate inflation measure. To avoid fluctuations caused by non-fundamental factors, the Taylor rule is based on a measure of core inflation but the ECB price stability objective refers to headline inflation and the objective itself is not a given value but defined as inflation "below, but close to 2%". Moreover, the output gap is unobserved and different estimation methods yield different results (Cotis, *et al.*, 2003). Moreover, the margin of uncertainty on output gap estimates is greatest at business cycle turning points, which is precisely when the cost of inappropriate policy decisions based on mis-measured indicators is highest (Orphanides and van Norden, 2002). Besides, the steady state real interest rate also raises serious issues of definition and estimation including the question as to whether it should be constant or rather time-varying, which opens the possibility that it may have shifted downwards recently (**Box 2.3**).

58. Monetary conditions indices provide an alternative although imperfect and simplistic assessment of the policy stance. The appreciating real exchange rate has a bearing on exports. When it is weighed together with the short-term real rate, the resulting monetary conditions index shows that overall monetary conditions have been tightening since 2002 but are still fairly relaxed (**Figure 2.4**). However, the index combines two variables (the short-term real interest rate and the real effective exchange rate) which affect price developments at different speeds. Moreover, one of these variables is closely related to an exogenous policy instrument (the short-term real interest rate) while the other one is an endogenous, market determined variable (the real effective exchange rate). All in all, monetary condition indices are a gross simplification of reality and meaningfully assessing the monetary policy stance thus requires a much more broad-based, ideally comprehensive, economic and monetary analysis.

Box 2.3. Is the neutral rate of interest an operational concept for monetary policy?

Defined as the real short-term interest rate compatible with stable prices and full capacity utilisation, the "neutral" (or equivalently "natural") rate is potentially an important benchmark for gauging the monetary stance. Conceptually, the natural rate is equal to the equilibrium real rate of return on capital – the rate that would be observed if prices were fully flexible.[1] The sign of the difference between the natural rate and the actual short-term real rate – the interest rate gap – indicates whether monetary policy is tight or easy. Correspondingly, the neutral rate is the intercept of Taylor rules, the purpose of such rules being to assess how far to depart from neutrality when inflation and output deviate from equilibrium.

The simplest approach to estimating the neutral rate is to use an historical average over one or several full economic cycles. For instance, averaging short-term real interest rates for the euro area over the period 1994 to 2001 yields an estimate of 2½ per cent. To abstract from the difficulty and potential arbitrariness of dating cycles, another approach is to estimate a time-varying natural rate as a moving average or a trend, for instance by a Hodrick-Prescott filter.

Univariate averages and trends have been criticised as they do not adjust when real shocks affect the equilibrium rate of return of capital or do so only with a lag. For instance, in the years following the 1973 oil shock, univariate estimates of the natural rate initially do not budge from their low values and may lead to underestimate the degree of monetary policy accommodation in this period. In addition, univariate estimates based on historic real rates presuppose that monetary policy is on average neutral at the horizon at which averaging or smoothing operates. This may not always be the case as for example in the early 1980s when disinflationary policies implied tight monetary conditions over the cycle.

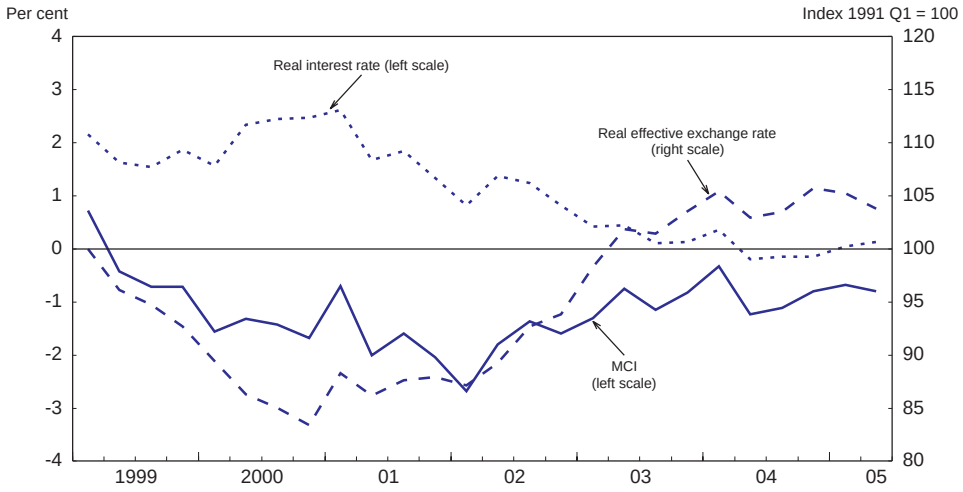
To take real disturbances into account more effectively, the natural rate can be estimated simultaneously with the output gap and other variables in the context of an economic model.[2] The options for modelling, calibration and estimation strategies are large so that point estimates differ substantially. For instance, for the first quarter of 2001, point estimates range from 2% in Cuaresma *et al.* (2003) to 3¾ per cent in Mésonnier and Renne (2004). All studies conclude that point estimates should be regarded with caution as confidence bands around them are quite large. For example, the 90% confidence interval in the 3¾ per cent estimate reported by Mésonnier and Renne (2004) is 4 percentage points wide.

The concept is therefore hardly operational. Only when the actual short-term real interest rate clearly lies outside confidence intervals for estimates of the neutral rate the sign of the interest rate gap can be identified unambiguously. This is the case at this juncture for the euro area where, at a level of close to zero, the short-term real rate is clearly below neutral. However, even in this case, the fact that the short-term real interest rate lies outside estimates' confidence intervals is by itself of little use for assessing the pace, or even the direction, of needed interest rate movements. Such an assessment should always be based on the full set of information in the economic and monetary analysis (ECB, 2004*b*).

In practice, most central bankers are wary about providing estimates for the natural rate of interest when communicating with financial markets (see for instance Duisenberg, 1999 and Greenspan, 2004). Monetary authorities usually describe the neutral rate as a useful concept to understand monetary developments and calculate estimates to inform their judgement. Because of the uncertainty surrounding any numeric value and of the potentially high volatility of the neutral rate, central banks prefer not to take explicit commitments in this regard.

1. This is Wicksell's original definition (1898).
2. For a recent survey of this strand of the literature, see Mésonnier and Renne (2004).

Figure 2.4. Short-term real interest rate and monetary conditions index[1]

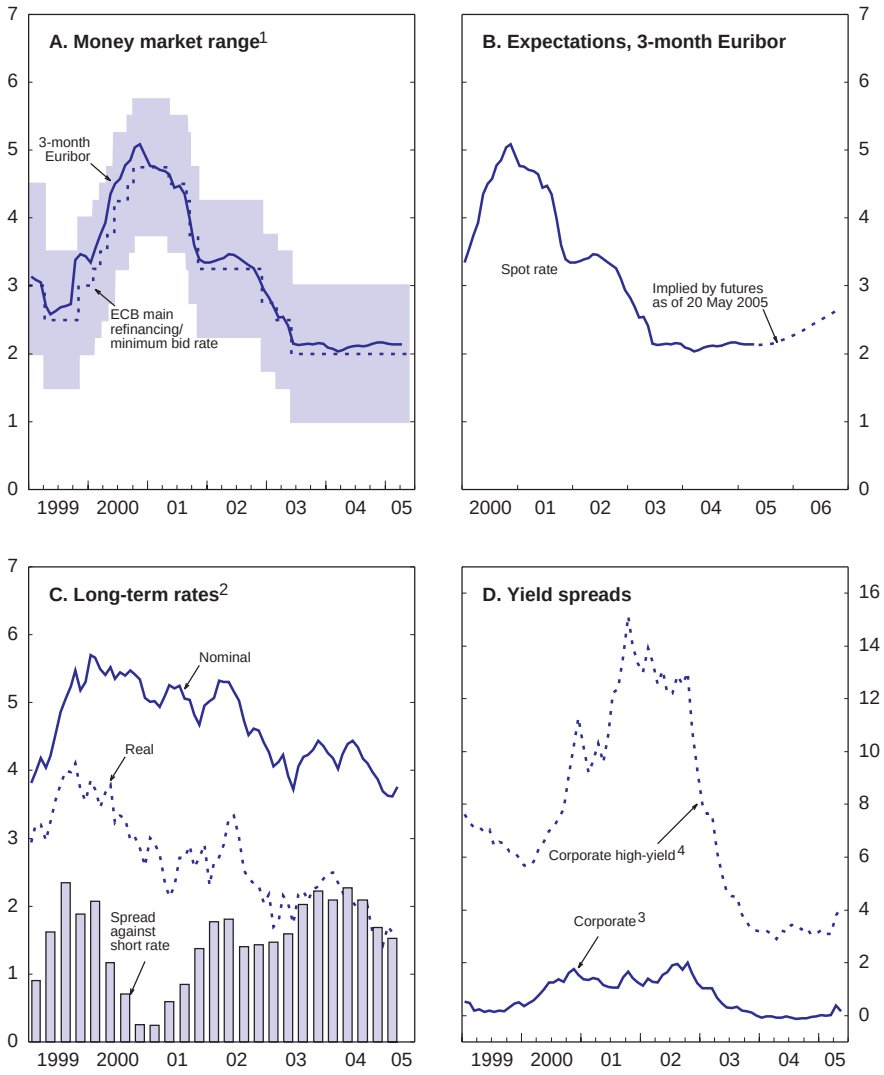


1. Weights used in calculation are 1 for the real interest rate and 0.15 for the real effective exchange rate.
Source: OECD, *Economic Outlook* No. 77 database.

59. Cheap short-term money has been accompanied by inexpensive long-term borrowing for governments and firms (**Figure 2.5**). Down to 3.4% in May 2005, nominal interest rates on benchmark government bonds are at historical lows. Real long-term interest rates, as measured by nominal rates deflated by the HICP, are also low in a historic perspective. In addition, the yield spread of corporate bonds over government securities has been nearly zero since the end of 2003. This remarkably low spread reflects the conjunction of weak business investment, balance sheet restructuring and high government deficits amid a reversal of portfolio shifts to money-market instruments in favour of higher-yield, longer-term assets. Since the end of 2003, in net terms, firms have stopped tapping capital markets for euro denominated long-term financing while governments increasingly did so. In the period from January 2004 to February 2005, new issues of long-term euro bonds by non-financial corporations were €2.6 billion lower than redemptions while at the same time government net borrowing from capital markets totalled €325 billion.

Figure 2.5. Interest rate developments

Per cent



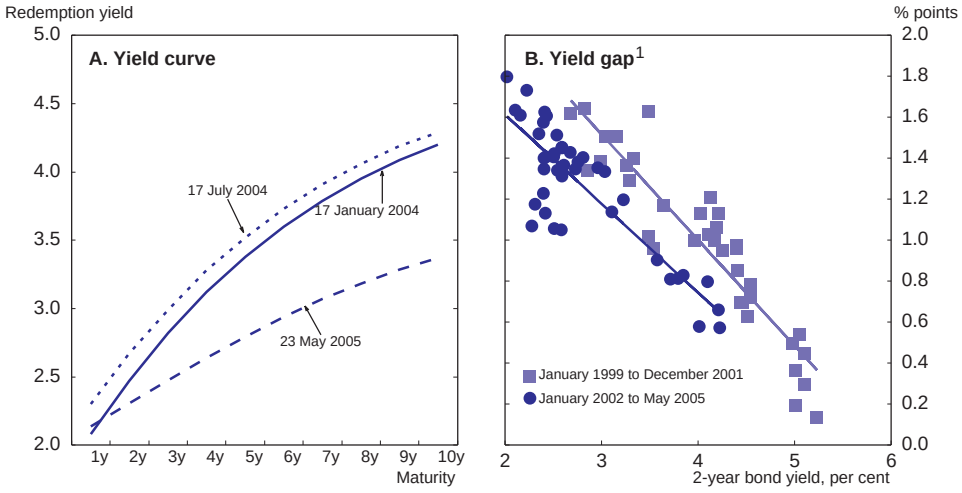
1. The boundaries of the shaded 'corridor' correspond to the ECB's standing lending and deposit facility rates.
2. 10-year government bond rates. The real interest rate is deflated by HICP inflation over the last 12 months.
3. Lehman euro Baa and 10-year government benchmark bond yield.
4. Spreads of high yield bonds (Merrill Lynch indices) over 10-year government benchmark bond yield.

Source: ECB, *Monthly Bulletin*, Datastream, Euronext/Liffe and OECD, *Main Economic Indicators*.

60. The recent flattening of the yield curve, which plots yields on benchmark government bonds of different maturities, is rather unusual for recoveries (**Figure 2.6**). The yield spread summarises the anticipated path of short-term rates relative to their current level, which itself is a function of expected inflation and output developments, plus a risk premium. Given that measures of inflation expectations are broadly stable, the flattening of the yield curve can be interpreted as reflecting the anticipation of weaker growth. The flattening of the yield curve may also be related to stronger demand for long-term assets as a consequence of pension reforms.

61. The stability of inflation expectations suggests that investors trust that the oil price hike will not be accommodated and that inflation will be kept in check. This confidence acquired by monetary authorities explains why recent developments in bond markets are in stark contrast with the aftermath of the 1979 oil shock when long-term interest rates soared.

Figure 2.6. Euro yield curves and spreads



1. Yield gap between 30-year and 5-year German government bonds, as a function of the 2-year yield.
Source: Datastream.

62. There is, however, a distinct possibility that part of the flattening of the yield curve is explained by a reduction in the steady-state risk premium (arising from inflation uncertainty) because the institutions in charge of the euro have built credibility over time regarding their capacity to keep inflation in check. Looking at the long end of the yield spread, which is mainly influenced by the inflation risk premium (Ang *et al.,* 2004), suggests that investors may have reduced their claims for price level risk when purchasing euro-denominated assets. The curve relating the long-term part of the yield spread to the medium-term rate appears to have shifted downward after the Eurosystem proved its ability to manage the downturn and confidence shock of 2001 (**Figure 2.6**). OECD calculations using the data plotted in Figure 2.6 suggest that the risk premium on long-term German government bonds has fallen by an estimated 40 basis points. The ECB *Survey of Professional Forecasters* database also points to reduced inflation uncertainty as the dispersion of inflation forecasts has been declining since 1999.

63. With the output gap narrowing only progressively and the impact of the hike in oil prices waning, inflation is projected by the OECD *Economic Outlook* No. 77 to fall below 2% during 2005 and decline to 1¼ per cent in 2006. Two-tenths of the decline in 2006 reflects the expected statistical effect of a planned health-care reform in one euro area country, the Netherlands. This effect should be excluded from the assessment of the medium term outlook for price stability. Regarding the rate of increase in euro area GDP and consumption deflators into 2005 and 2006, they are expected to fall more moderately than HICP inflation. Substantial uncertainties surround the baseline inflation outlook in the OECD projections. On the one hand, activity is sluggish and the exchange rate strong. On the other hand, inflation has responded little to widening slack, and money and credit growth is buoyant, stimulated by the low level of interest rates. So far the European Central Bank (ECB) has adopted a "wait and see attitude". It has kept its main policy rate on hold at 2% since the start of the recovery in June 2003. Over

the same period, long-term interest rates have fallen significantly. If the medium-term outlook for price developments were to change, monetary policy would need to act. On this basis, since it projects inflation to fall to 1¼ per cent in 2006, the OECD *Economic Outlook* No. 77 assumes a 50 basis point cut in 2005. At the same time, the ECB should continue to be vigilant to upside risks to price stability, such as those stemming from excess liquidity or second round effects from the oil price increases. Furthermore, developments in the euro exchange rate in late May and early June 2005 also point to the need for vigilance with respect to upside risks to inflation.

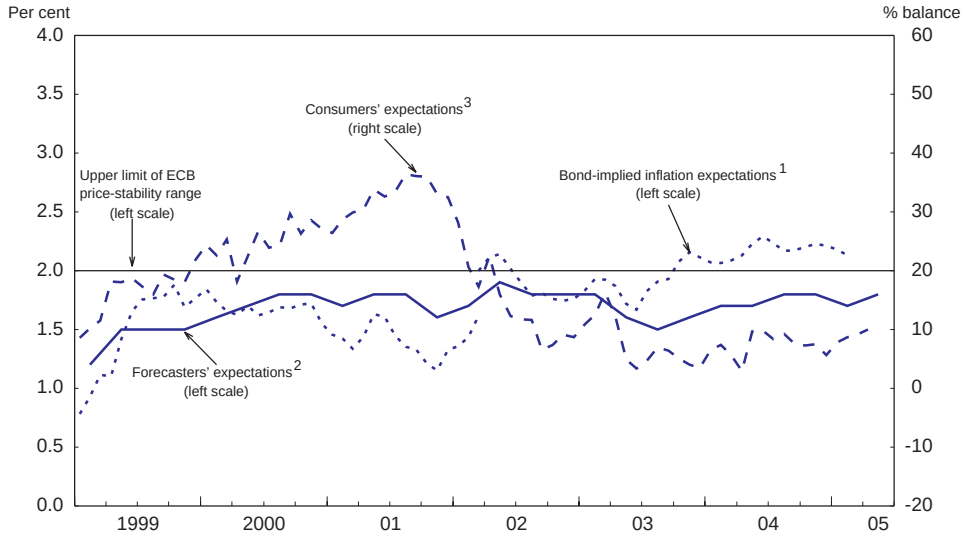
64. At some stage interest rates will have to rise. The timing of interest rate rises has to be carefully devised so as to keep inflation expectations low and, without prejudice to the objective of price stability, also to avoid hindering the recovery before it is firmly established. These requirements call for engaging on a path of gradual interest rate increases at some point in time.

65. It is rather unfortunate that monetary policy easing during the downturn may not have been as effective in terms of supporting the recovery as in some other parts of the OECD, in particular the "English speaking" countries. A number of reasons may be identified: inflation inertia which limited the scope for reducing interest rates; weak monetary policy transmission through the housing channel; and the appreciation of the exchange rate which offset some of the stimulus provided by low interest rates. The sections below discuss these issues in more detail.

Inflation responds little to slack

66. Since the inception of the single currency on 1 January 1999, inflation has mostly been slightly above the 2% limit of the ECB's operational definition of price stability. However, seen in a longer-term perspective inflation performance has clearly improved. Inflation expectations have become – and remain – firmly anchored in the objective of keeping inflation below but close to 2% over the medium-term (**Figure 2.7**). Professional forecasters surveyed by the ECB continue to anticipate inflation below 2% at the one-, two- and five-year horizon. The break-even inflation rate for price index-based government bonds is slightly above the 2% mark but this rate includes a risk premium over and above the anticipated inflation rate.

Figure 2.7. Inflation expectations

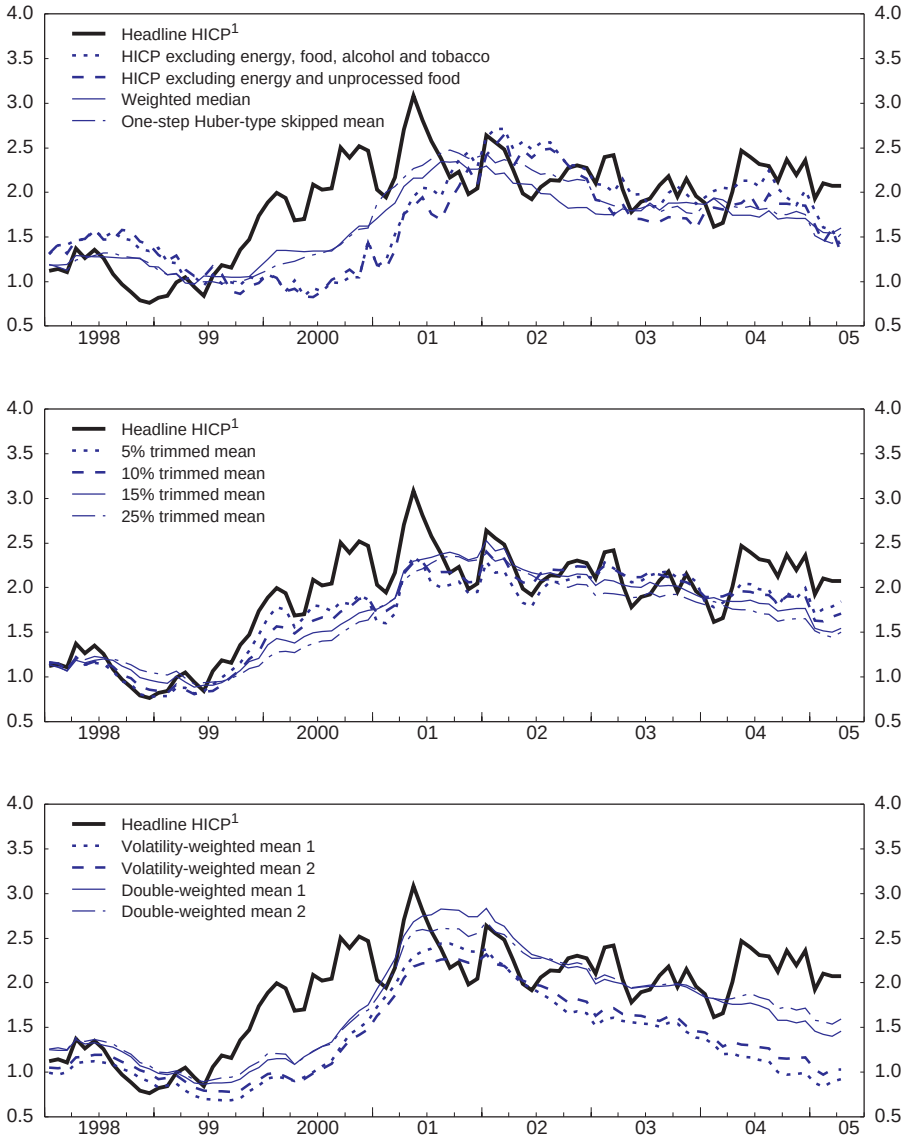


1. Break-even inflation rate between the nominal yield of French government bonds and the real yield of French index-linked bonds. Up to March 2002, government bonds linked to the French consumer price index with a maturity up to 2009; from March 2002, government bonds linked to the euro area HICP with a maturity up to 2012.
2. One-year ahead expected HICP inflation rate from the ECB survey of professional forecasters.
3. Percentage balance of consumers' answers relative to their perception of inflation in the next 12 months in the EC Consumer Survey.

Source: European Central Bank, *Survey of Professional Forecasters*; Agence France Trésor; OECD, *Main Economic Indicators*.

67. Indicators of underlying inflationary pressures are in line with direct measures that show inflation expectations close to the monetary policy objective (**Figure 2.8**). Inflation measured as the HICP excluding food, energy, alcohol and tobacco has remained stable below 2% as well, edging down to 1½ per cent in the first quarter of 2005. The HICP excluding food and energy includes high-volatility components which can reduce its predictive power compared with other indicators which specifically aim at eliminating such volatile items. Catte and Sløk (2005) assembled a set of inflation indicators which were shown to perform better than traditional measures in predicting future inflation. These indicators also point to underlying inflation being close to but below 2%.

Figure 2.8. Indicators of underlying inflationary pressures
Year-on-year percentage change

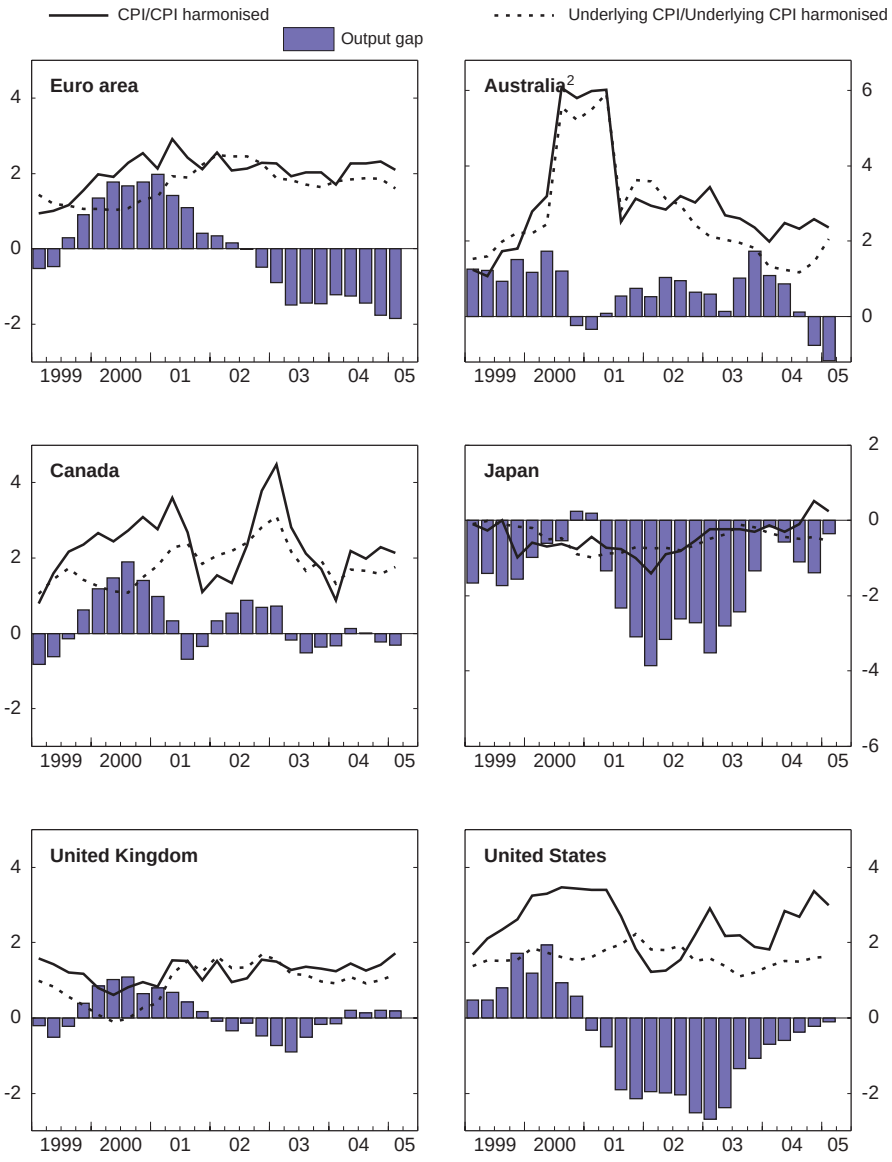


1. Harmonised index of consumer prices.

Source: Eurostat, Aucremanne, L. (2000), "The Use of Robust Estimators as Measures of Core Inflation", National Bank of Belgium, *Working Papers*, Research Series, No. 2 and OECD calculations.

68. However, prices decelerate particularly slowly when cyclical slack builds up in the euro area (**Annex A2.1**). By most measures including the HICP and the GDP deflator, inflation has persistently remained above or close to the 2% mark since end 2000 and did not decline much even when activity fell unambiguously below potential (**Figure 2.9**). This situation hampers monetary policy as it limits the scope for reducing interest rates in times of slack, because inflation only diminishes slowly, and thus reduces the euro area's resilience to adverse shocks (**Chapter 1**). Identifying and addressing the causes of price inertia is therefore an important challenge, as emphasised *inter alia* by Issing (2004) and the European Commission (2003).

Figure 2.9. Indicators of price inertia[1]



1. Year-on-year percentage change for the price indexes and level in per cent for the output gap.
2. Inflation rates in 2000-01 are distorted by the introduction of the General Sales Tax.

Source: OECD, *Economic Outlook* No. 77 database.

69. Despite the fact that prices have become less responsive to output conditions in most countries that moved to low inflation environments (Bean, 2005), the failure of inflation to decelerate is more pronounced in the euro area than in other major economies. In recent years, most of them recorded declining inflation when output declined below potential (**Figure 2.9**). The United Kingdom is an exception, but its economy went below potential only for a short period and to a very limited degree and inflation is below that of the euro area nonetheless. Econometric evidence, summarised in **Annex A2.1**,

confirms that the decline in inflation when slack accumulates is significantly lower in the euro area than in English-speaking countries. This conclusion is made after controlling for common temporary shocks such as strongly rising energy prices. These have fuelled overall inflation in 2004, as they did in 2000, but they cannot account for the unusual failure of prices to decelerate that has been observed in the euro area.

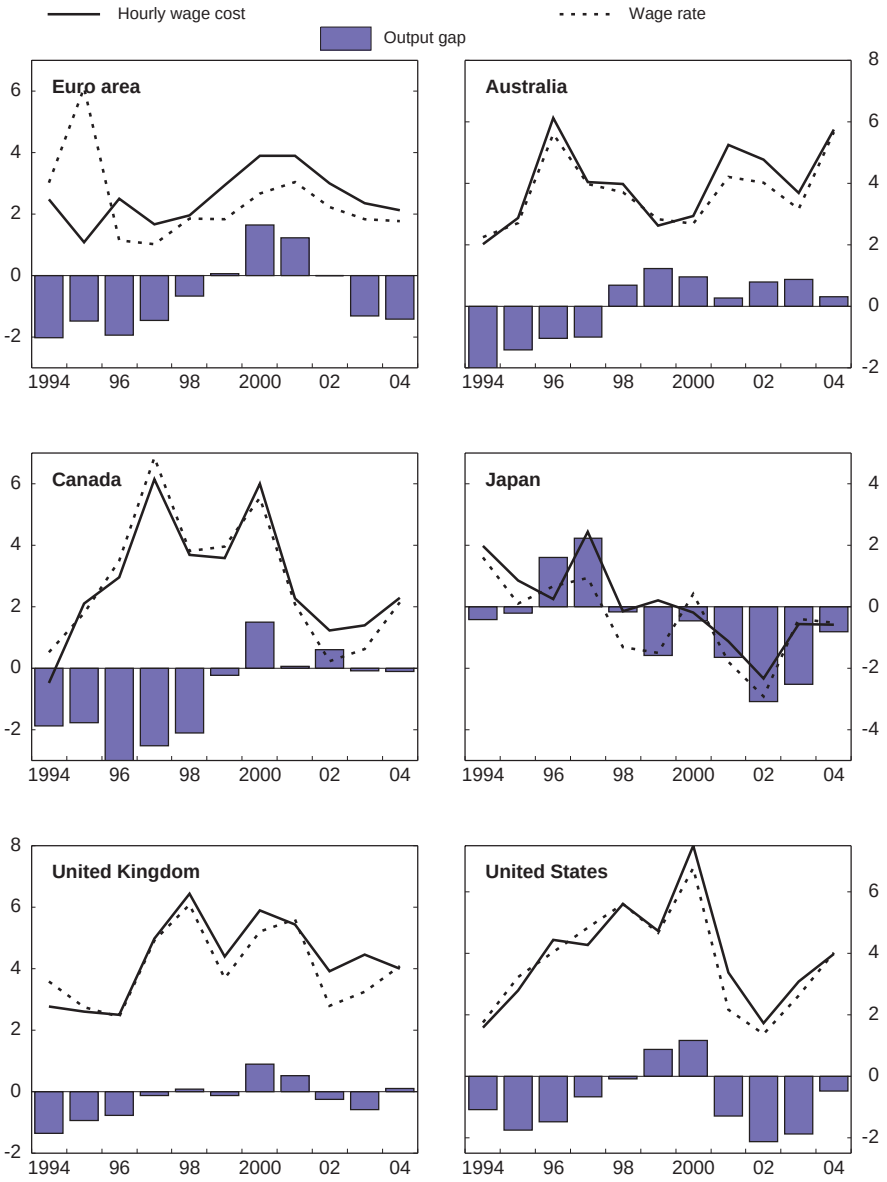
70. Related findings pointing to rigidities affecting price dynamics in the euro area have been obtained by the Eurosystem's Inflation Persistence Network. This research programme defines inflation persistence as "the tendency of inflation to converge slowly (or sluggishly) towards its long run value" after a shock. One of the main empirical findings is that consumer price adjustment is half as frequent in the euro area as in the United States where retail prices change on average every two quarters (Dhyne *et al.*, 2004). Secondly, the Eurosystem finds that implicit pricing contracts and strategic interactions among competing firms are the main sources of price stickiness for producer prices (Fabiani *et al.*,2004). Thirdly, the degree of inflation persistence increases with the level of aggregation and, finally, the most persistent sectors such as services drive the persistence of nation-wide indices (Angeloni *et al*., 2004).

71. Decomposing inflation into its main items shows that services account for an important part of overall inflation and are its most persistent component (**Figure 2.1** above). The inertia of service prices is likely to be linked to the lack of integration and competition in the internal market for services. Moreover, the weak cyclical sensitivity of consumer prices for non-energy industrial products (and their failure to decelerate when the euro appreciated despite their high import content) can be related to weak competition in retail services. Many distribution markets remain subject to a heavy regulatory burden at the national level – an issue highlighted in Chapter 4. Further analysis suggests a strong link between inflation inertia and the labour market. Wage inflation in the business sector barely decelerated when activity fell below potential, in stark contrast with Canada, Japan and the United States (**Figure 2.10**). This observation is robust to the measure used, holding for hourly wages and for the compensation rate.

72. Econometric analysis has been conducted to relate inflation developments to the output gap and its interaction with institutional variables (**Annex A2.1**). The upshot is that stronger labour and product market rigidities are associated with a smaller decline in inflation when the output gap moves into negative territory. As a result, the estimated response of inflation to a widening negative output gap is much weaker in euro area countries, which score higher on structural rigidity indicators, than the English-speaking countries present in the sample (**Table 2.3**). The rigidity indicators used in the regressions are the degree of concentration in wage bargaining, the strength of EPL and the tightness of product market regulations in seven energy and services industries. The indicators have a statistically significant effect on the response of inflation to a negative output gap.

Figure 2.10. Indicators of wage inertia[1]

Per cent



1. Year-on-year percentage change for the wage rate and cost and level in per cent for the output gap.

Source: OECD, *Economic Outlook* No. 77 database.

Table 2.3. **The impact of slack on inflation**
Simulated inflation fall induced by a -1% output gap[1]

	Structural indicator used in the regression		
	Employment protection legislation	Concentration in wage bargaining	Product market regulation
Euro area countries			
Austria	0.1	0.1	0.2
Belgium	0.4	0.1	0.2
Finland	0.2	0.1	0.3
France	0.2	0.3	0.1
Germany	0.1	0.1	0.3
Italy	0.4	0.3	0.1
Netherlands	0.0	0.1	0.2
Spain	0.0	0.3	0.2
Other countries			
Australia	0.5	0.4	0.3
Canada	0.5	0.6	0.4
Denmark	0.4	0.1	0.2
Japan	0.2	0.1	0.3
New Zealand	0.5	0.4	0.3
Norway	0.0	0.1	0.2
Sweden	0.1	0.3	0.3
United Kingdom	0.6	0.6	0.4
United States	0.8	0.6	0.4

1. Inflation relates to the annualised quarterly change in the consumer price index. The sources for the data and indicators underlying the calculations are described in Annex A2.1. The results shown here are based on the coefficients drawn from regressing inflation on the previous period output gap, on its interaction with the corresponding rigidity index, on expected inflation and on other variables. See Annex A2.1 for further details.

73. Since higher rigidity is associated with a lower decline in inflation when output drops below potential, more flexible structural settings are desirable in the euro area not only to underpin the goal of lifting potential growth but also for their added benefit of providing more leeway for monetary policy. Better functioning markets are associated with lower sacrifice ratios for monetary policy since less of an output deceleration is needed to curb inflation. This observation and the supporting evidence are in line with a substantial volume of literature, both theoretical and empirical, following Gordon (1982) and Ball (1994).

Weak monetary transmission despite soaring house prices

74. There is considerable debate about the overall strength of monetary policy transmission in the euro area. Studies undertaken by the Eurosystem estimated with vector autoregression techniques suggest that the overall effects of monetary policy on activity in the euro area are similar to those observed in the United States, with the consumption channel found to be more predominant in the United States in comparison with a strong investment channel in the euro area (see the volume edited by Angeloni *et al.*, 2003). The latter finding on euro area investment responsiveness is somewhat at odds with the wide

consensus in econometric studies that business investment does not respond much to changes in interest rates (see Carnot, Koen and Tissot, 2005 for a recent survey). Using compact economic models, Drew *et al.* (2004) find that monetary policy transmission is weaker in the euro area than in the United States.

75. The root cause of weak monetary policy transmission in the euro area thus appears to be a weak consumption channel. A large body of recent empirical research concurs that the effect of monetary policy on consumption is much stronger in the United States than in the euro area (Boone *et al.*, 2001; Angeloni *et al.*, 2003). This is supported also by studies that have examined the institutional features of housing and mortgage markets in Europe (Catte *et al*., 2004). Broad, liquid secondary markets for mortgages are important for an effective transmission from interest rates to consumption because, for many households, housing is the main channel whereby they can smooth consumption over the cycle.

76. The possibility for owner-occupiers to borrow against housing wealth ("mortgage equity withdrawal") is an important determinant of the strength of monetary policy transmission to consumption. In countries where fixed mortgage rates are widespread, easy access to refinancing increases the effect of interest rate cuts on consumption. Mortgage equity withdrawal and refinancing are more frequent in the United States and in "small" euro area countries than in France, Germany or Italy – three countries which have among the lowest correlation of private consumption with real house price changes in the OECD area (Catte *et al.*, 2004).

77. The differences within the euro area offer the possibility to test whether house price movements have different effects on aggregate demand depending on the nature of mortgage markets. After controlling for the real exchange rate and real interest rates, van den Noord (2004) confirms that changes in house prices have a bigger impact on output in "small" euro area countries than in the "big" ones. In this light, in addition to its own merits, creating greater scope for equity withdrawal and refinancing in the largest countries' banking markets could increase monetary policy transmission via a stronger housing channel. Specific regulations, such as maximum loan to value ratios, stamp duties and tax provisions that penalise the realisation of capital gains also work as impediments to mortgage equity withdrawal and hamper monetary policy transmission. Structural settings in housing markets and ways to make them more conducive to the smooth transmission of monetary policy are explored in ECB (2003a) and Catte *et al.* (2004). Nevertheless, it is important not to create incentives, especially through the tax code, that can artificially inflate property prices and may lead to property bubbles (van den Noord, 2005). Moreover, to ensure financial stability, the liberalisation of mortgage markets must be accompanied by prudent financial market regulation and surveillance.

78. As noted, house prices also affect the user cost of capital associated with home-ownership, but since this does not enter the HICP directly (**Annex A2.2**), a special allowance needs to be made to gauge its impact on households' purchasing power. The negative effect of higher house prices on the cost of living is clear for renters and for prospective home owners who forgo any wealth effects. It is real for existing owner-occupiers too. Even though they see their wealth increase when residential property is booming, they are also confronted with a higher cost of living as they face a higher opportunity cost of capital for a given level of housing services.

79. OECD estimates suggest that taking account of owner-occupied housing costs can have a sizeable impact on inflation measures (**Box 2.4**). Illustrative results, obtained with conservative assumptions, show a "complete" inflation rate that exceeds the HICP inflation rate by two-thirds of a percentage point in 2004 for the euro area. Differences are much greater at the country level as for instance in the case of France where the estimated complete inflation rate is 1.2 percentage points above

HICP inflation in 2004. In Germany, the sluggishness of the housing market meant that complete inflation was only 0.5% in 2003, half the 1.0% rise recorded by the HICP.

80. If the housing boom were to continue near its recent pace, the effects on complete inflation would be more dramatic than they were before 2004. In 2002 and 2003, the strong house price rises recorded in countries such as Ireland or Italy did not translate into massive increases of housing costs because they occurred in conjunction with sharp reductions in mortgage rates. The situation changed in 2004 when house prices kept booming while mortgage rates stabilised and this explains why the difference between HICP and complete inflation widened in 2004. In a context where mortgage rates have little room to fall further, continued house price rises would dent the value of money more. At the same time, the expectation that mortgage rates are going to remain stable or increase should induce a moderation in residential property markets – provided no speculative bubble inflates them.

81. Cross-country differences imply that the geographic dispersion of the estimated complete inflation rate is higher than recorded by the HICP. This indicates that the adjustment of real exchange rates following the misalignments present at the inception of the euro have been proceeding more quickly than is usually thought. In this regard, it is particularly telling that, in the 1999-2004 period, the estimated complete price index for Germany added up to a cumulated (negative) difference of 3% relative to the German HICP. However, the use of the incomplete HICP (or of national price indices that are also excluding owner-occupied housing costs) for wage bargaining hampers cross-country adjustment.[5]

Box 2.4. Illustrative estimates of the impact of owner-occupied housing costs on inflation

A direct method based on the concept of user costs has been used to assess the impact of home-owners' housing costs on inflation. The implicit price of housing services for owner-occupiers is estimated by calculating the user cost associated with their housing capital valued at market prices. Examples of official price indices incorporating owner-occupied housing costs calculated in this way include the US private consumption deflator and the Icelandic CPI. Another method used by statistical agencies consists of imputing rents to home-owners on the basis of rental market data. Such measures of owner-occupied housing costs have weaker conceptual foundations than the user cost approach because they are affected by the frequent disequilibria between rental and owner-occupier markets (Verbrugge, 2004). In addition, time series for rental market conditions are missing in several euro area countries and when they exist, the data on paid rents have to be adjusted for the important differences between rented and owned housing (Kurz and Hoffman, 2004). For a majority of euro area countries, the information needed to perform this operation is not publicly available.

The user cost of owner-occupied housing is calculated following a method proposed by Poterba (1992) and summarised below in equation (1). *UC* stands for user costs, i^e for the effective, after-tax nominal mortgage interest rate, τ for the property tax rate on owner occupied houses, *d* for the depreciation rate, *m* for the ratio of maintenance cost to property value, *r* for the risk premium on residential property and π for the expected rate of increase in dwelling prices. The primary data source for house prices (*P*) and mortgage rates is the European Mortgage Federation (2000-04 issues) with the *OECD Economic Outlook* No. 77 database used as the source for interest rates. Property tax rates are taken from ECB (2003). The calculation of effective, after-tax mortgage interest rates follows the method outlined by van den Noord (2005). Parameter values for *d, m* and *r* and the estimation of π as a moving average of consumer price inflation are taken from Poterba (1992). *OECD Economic Outlook* No. 77 data underlie the calculation of π.

$$UC = \left(i^e + \tau + d + m + r - \pi\right)P \qquad (1)$$

Owner-occupied housing user costs are then combined with the HICP to produce an illustrative estimate of "complete" consumer price inflation. The indices for the HICP and estimated user costs have been weighed together using the breakdown of household final consumption expenditure in the *OECD Annual National Accounts* database.

Table 2.4. Complete inflation estimates

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Austria												
HICP	3.2	2.7	1.6	1.8	1.2	0.8	0.5	2.0	2.3	1.7	1.3	2.0
Estimated complete inflation	2.6	3.0	1.9	1.5	0.7	0.9	0.8	2.7	0.8	1.2	0.7	1.2
Belgium												
HICP	2.5	2.4	1.3	1.8	1.5	0.9	1.1	2.7	2.4	1.6	1.5	1.9
Estimated complete inflation	1.7	4.3	0.2	1.0	2.1	-1.7	6.7	3.4	1.6	2.5	2.1	2.0
Finland												
HICP	3.3	1.6	0.4	1.1	1.2	1.4	1.3	3.0	2.7	2.0	1.3	0.1
Estimated complete inflation	-1.8	0.3	-1.1	1.5	5.7	3.0	1.8	3.8	1.1	1.1	1.0	1.9
France												
HICP	2.2	1.7	1.8	2.1	1.3	0.7	0.6	1.8	1.8	1.9	2.2	2.3
Estimated complete inflation	0.4	2.2	1.9	1.1	1.0	0.2	2.1	3.2	1.7	2.4	2.5	3.5
Germany												
HICP	4.4	2.7	1.7	1.2	1.5	0.6	0.6	1.4	1.9	1.3	1.0	1.8
Estimated complete inflation	4.0	5.4	0.9	1.1	1.6	0.3	2.1	1.5	1.1	1.0	0.5	1.2
Greece												
HICP	14.4	10.9	8.9	7.9	5.4	4.5	2.1	2.9	3.7	3.9	3.4	3.0
Estimated complete inflation	14.1	10.7	6.5	9.7	6.3	6.0	2.7	1.2	3.9	5.3	3.8	2.4
Ireland												
HICP	1.4	2.3	2.5	2.2	1.2	2.1	2.5	5.3	4.0	4.7	4.0	2.3
Estimated complete inflation	0.4	3.3	3.4	2.8	4.0	3.5	2.9	8.5	1.8	3.6	2.7	3.1
Italy												
HICP	4.5	4.2	5.4	4.0	1.9	2.0	1.7	2.6	2.3	2.6	2.8	2.3
Estimated complete inflation	5.4	3.5	6.8	0.5	-0.1	0.6	3.9	4.6	2.0	3.1	3.2	3.2
Netherlands												
HICP	1.6	2.1	1.4	1.4	1.9	1.8	2.0	2.3	5.1	3.9	2.2	1.4
Estimated complete inflation	1.1	2.4	2.2	2.2	2.8	2.4	4.4	3.7	4.4	3.6	2.2	2.0
Portugal												
HICP	5.9	5.0	4.0	2.9	1.9	2.2	2.2	2.8	4.4	3.7	3.3	2.5
Estimated complete inflation	3.8	3.7	5.7	2.2	0.9	1.3	2.6	4.7	3.2	3.4	2.5	3.5
Spain												
HICP	4.9	4.6	4.6	3.6	1.9	1.8	2.2	3.5	2.8	3.6	3.1	3.1
Estimated complete inflation	3.3	4.5	6.0	2.0	2.2	2.1	3.1	6.3	3.1	3.4	4.1	4.0
Euro area												
HICP	3.4	2.8	2.6	2.3	1.7	1.2	1.1	2.1	2.4	2.3	2.1	2.1
Estimated complete inflation	3.1	4.0	3.0	1.5	1.5	0.9	2.8	3.4	2.0	2.5	2.4	2.7

The methodology underpinning the results shown in **Table 2.4** involves a certain number of questions which would have to be looked at carefully before any decision to implement it operationally. First, the results have been derived after making a number of methodological choices detailed in **Annex A2.2** and the numerical values are partly dependent on these choices. Secondly, in the absence of harmonised data, the mortgage rates and house price statistics underlying the calculations are not directly comparable across countries. Thirdly, since such inflation measure factors in the costs of housing services to owners who are servicing variable rate mortgages, it is directly affected by interest rate changes.

The exchange rate – ever higher?

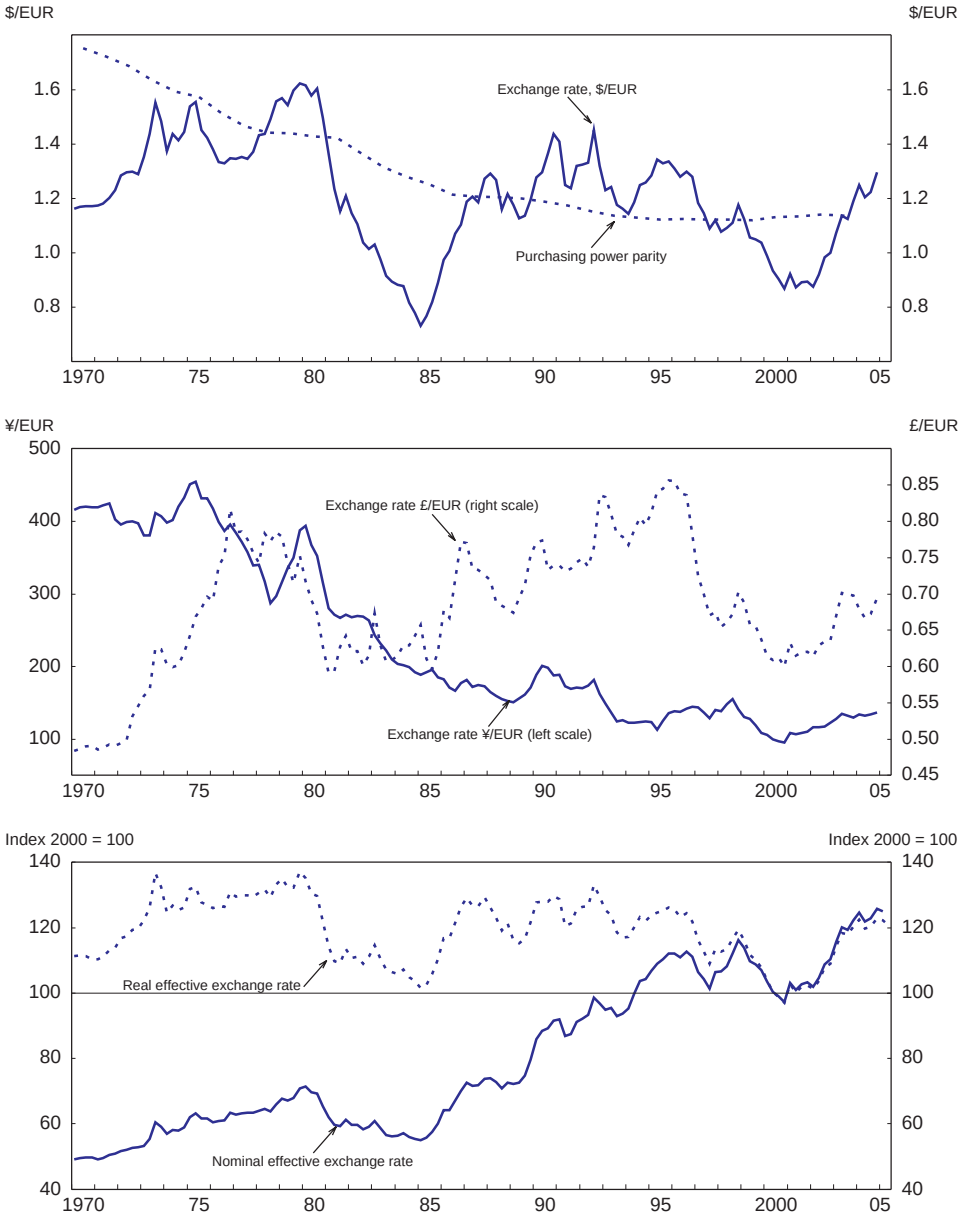
82. The euro's steady ascent against the US dollar since the end of 2000 has attracted a lot of attention (**Figure 2.11**) – not least because international imbalances may point to a risk of a strong further depreciation of the dollar. The main concern is that this development will weigh on the euro area's capacity to sustain the recovery, although sluggish domestic demand rather than weak external demand is at the root of the euro area's lack of resilience (Chapter 1).

83. From a trough of $0.85 per euro in October 2000, the single currency rose to a peak value of $1.34 in December 2004 before edging down to $1.27 in May 2005 and falling to $1.22 in early June 2005. The euro appreciated against the British pound and the Japanese yen between October 2000 and May 2005, albeit more moderately, implying that the euro nominal effective exchange rate rose by 31% over that period (**Figure 2.11**). After correcting for inflation differentials, the euro shows a more limited 20% rise. In fact, in May 2005, the euro real effective exchange rate was still only 3% above its level at the time the euro was introduced. The rise of the euro can, to a large extent, thus be viewed as a correction of its 1999-2000 slide, which was widely regarded at the time as not justified by fundamentals (see the 2001 *Survey*). In late May and June 2005, however, the outcome of the referenda on the Treaty establishing a Constitution of Europe in certain euro area countries has been weighing on sentiment in foreign exchange markets and the euro has depreciated against the US dollar.

84. Recent advances in econometric research lend increasing support to the view that the probability of a correction is high after exchange rates move markedly against the direction implied by purchasing power parities (PPP). After a period of qualified scepticism in the economic literature, the validity of the so-called relative PPP hypothesis has been revived by studies following a seminal paper by Taylor (2002) using long time series and more powerful statistical tests (see also Liew, 2003; Koedijk *et al.*, 2004; Gadea *et al.*, 2004). Quite recent advances in unit root tests for panel data further reinforce the case for seeing real exchange rates as mean reverting processes (Kapetanios and Shin, 2003; Chortareas and Kapetanios, 2004). Estimating the half-life of real exchange rate deviations from trend – that is defining what "long-term" means – is still a subject of research but there is a growing support for Taylor's estimates of around three years for most euro area countries in the post-Bretton Woods era (Chortareas and Kapetanios, 2004). Also against this background, at least part of the recent euro appreciation can be seen as a natural adjustment following the large fall in the real exchange rate that occurred in 1999 and 2000.

85. At shorter horizons, a variety of drivers can explain short- to medium-term fluctuations. However, exchange rate theories have not shown much success in explaining or predicting currency movements at short frequencies – despite considerable research on the subject.[6] To take just one example, elementary theory indicates that, in the short-term, exchange rate anticipations should equalise expected returns on foreign and domestic money markets. But, in line with the "exchange rate puzzle" identified by Meese and Rogoff (1988), recent data show that short-term exchange rate expectations fluctuate markedly around the values indicated by uncovered interest rate parity even in the deep and liquid euro-dollar market. A recent body of literature is attempting to resolve the "exchange rate puzzle" by assuming that central banks' reaction functions vary over time and that foreign exchange traders are learning about it in an adaptive manner. Models of this nature developed by Engel and West (2004) and Mark (2005) can explain part of the deutschmark-US dollar exchange rate historic movements but their forecasting power remains to be tested.

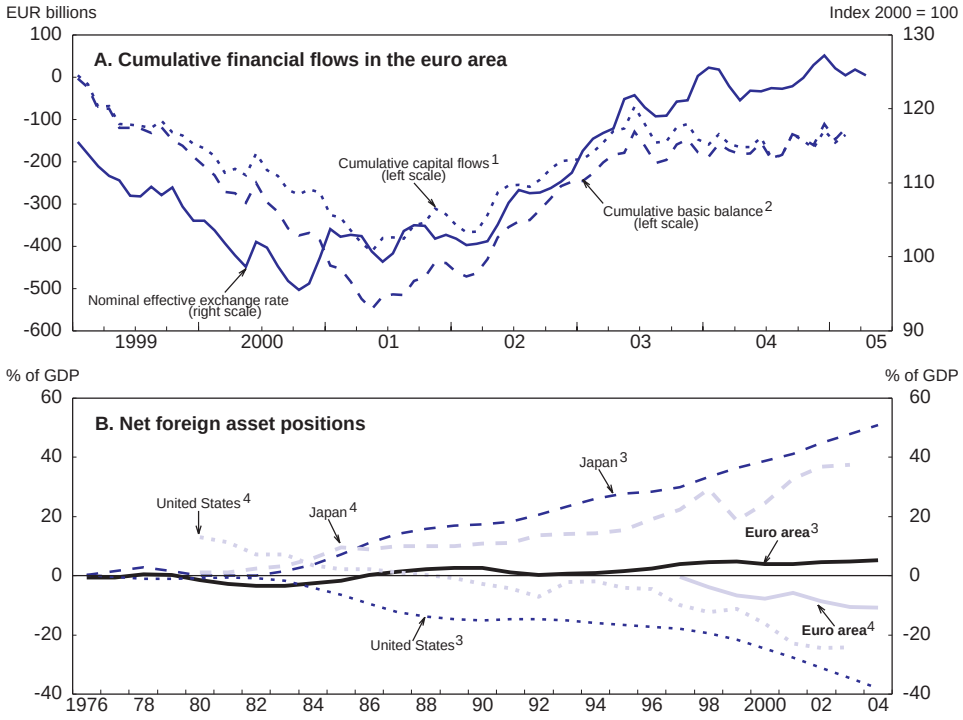
Figure 2.11. Exchange rate developments



Source: OECD, *National Accounts* and *Economic Outlook* No. 77 database.

86. Since the inception of the euro, its exchange rate has moved closely in step with capital flows. Since January 1999, the nominal effective exchange rate shows a strong correlation with cumulative net capital flows as well as with the basic balance (**Figure 2.12**). The difference between the two investment position indicators is small since the current account is close to balance and shows lower variance than capital flows. This suggests that, relative to goods and services trade developments, investors' preferences play a pivotal role in jointly determining the euro exchange rate and capital flows (Hau and Rey, 2003). From the starting point of a new currency with no established track record, investors may also have developed a gusto for euro-based assets only gradually as the ECB established its credibility. Using Bayesian techniques, Gomez and Melvin (2003) argue that such a trust building process can explain the initial weakness of the euro and the timing of the subsequent appreciation.

Figure 2.12. Exchange rate and portfolio balances



1. Cumulative capital flows are the accumulated sum of net direct and portfolio investment flows.
2. The cumulative basic balance is equal to cumulative capital flows plus accumulated current account balance.
3. Calculated as the cumulated current account balances, starting in 1976.
4. Net international investment positions.

Source: ECB, *Monthly Bulletin*; IMF, *Balance of Payments Statistics* and OECD, *Economic Outlook* No. 77 database.

87. In this vein, the euro appreciation can be related to private investors shifting to euro-denominated assets to limit their exposure to the capital losses on US dollar-denominated securities. This shift is corroborated by the decreasing share of private investors and the growing share of Asian central banks in the financing of the US current account deficit. The purchase of US dollar assets by central banks that pursue bilateral exchange rate stability objectives also helps explain that long-term interest rates have remained at historically low levels in the United States despite the increasing risk of capital losses on dollar-denominated assets. In other terms, Asian central banks are preserving the demand for US dollar-denominated assets by compensating for the fall in private demand (Blanchard *et al.*, 2005).

88. However, the rapidly growing net indebtedness of the United States (**Figure 2.12**), may lead to investors losing their appetite for dollar assets and buying more euro-denominated securities, thus sustaining the appreciation of the euro. Given the current predominance of Chinese and Japanese monetary institutions as buyers of US treasuries, their behaviour is central in this regard. Signs that the Chinese economy is overheating and that inflationary risks are building up suggest that the current policy of sterilising most of dollar purchases may have reached its limits. An appreciation of the renminbi, be it through re-evaluation or free float, may well occur, implying a shift in world investors' preferences away from dollar-denominated assets. As an illustration of the consequences from such a possible change in Asian central bankers' preferences, Blanchard *et al.* (2005) estimate that a halving in their dollar holdings would roughly chop an eighth off the US dollar's effective exchange rate. How much of this would take place against the euro is unclear but reduced appetite for dollar-based securities is bound to raise the demand for euros. A sign of rising uncertainty about the financing of the US current account deficit is that US long-term interest rates have been diverging upwards relative to the euro area since April 2004. The spread between US and German government bonds reached 75 basis points in May 2005.

89. However, portfolio diversification effects provide a natural balancing mechanism. When the euro appreciates, the share of non-euro denominated assets decreases mechanically in value in portfolios. This means that any continued rise of the euro is going to meet headwinds when euro-denominated assets start to be seen as taking an excessive share in portfolios. A change in investors' preferences can have a one-off effect, possibly raising the value of the desired share of euro assets, but it does not alter the process whereby any appreciation ultimately meets the diversification objectives of portfolio managers. It is difficult to assess where this frontier is given the lack of comprehensive, global data on portfolio holdings.

90. A further euro appreciation seems likely in the unwinding of global imbalances. There is widespread agreement that some narrowing of the US current account deficit is bound to occur even though the timing and magnitude of the adjustment are extremely difficult to predict. Other factors than exchange rate movements can contribute to lowering the US current account deficit such as fiscal consolidation in the United States, improvement in the non-price competitiveness of US exports and higher growth outside the United States. Nevertheless, some dollar depreciation is most likely to be part of the adjustment. Upward pressure on the euro-dollar exchange rate could also be reduced by the revaluation of Asian currencies.

91. Considering the illustrative case where the dollar falls uniformly against all other OECD currencies by 30% (and stays put against the renminbi), Brook *et al.* (2004) estimate that the US current account deficit narrows by only 1.4 percentage points over a five-year horizon. Such a fall in the bilateral exchange rates of the dollar *vis-à-vis* other OECD currencies would imply a 7% rise in the euro nominal effective exchange rate. These results are obtained under the assumption that the exchange rate shock occurs in isolation with no monetary policy reaction. When the simulation builds in reactions of monetary authorities, such a dollar slide is estimated to improve the US current account by almost 3% over a six-year horizon (**Table 2.5**). Simultaneously, the simulation shows that the dollar adjustment would take a heavier toll on output in the euro area than in the United States, despite the assumption that the ECB would react to lower inflation by cutting its key policy rate to the zero bound. The estimated effects are larger, nearing 2% of GDP in the year following the shock, in the case of "financial contagion" whereby higher long-term interest rates in the United States spill over to the euro area.

Table 2.5. **The effects of a "hard landing" of the US dollar**[1]

	No financial contagion				Financial contagion			
	Year 1	Year 2	Year 3	Year 6	Year 1	Year 2	Year 3	Year 6
Euro area								
Real GDP[2]	-1.0	-1.5	-1.2	0.0	-1.3	-2.0	-1.6	-0.2
Unemployment rate[3]	0.2	0.5	0.5	0.2	0.3	0.7	0.7	0.2
Inflation[3]	-0.3	-0.7	-0.6	-0.1	-0.3	-0.8	-0.8	-0.4
Current account[4]	-1.3	-2.1	-2.5	-2.4	-1.2	-2.0	-2.3	-2.2
Short-term interest rate[3]	-2.0	-2.0	-2.0	-0.5	-2.0	-2.0	-2.0	-0.5
Long-term interest rate[3]	-0.9	-0.7	-0.5	0.0	1.2	1.1	1.0	0.0
United States								
Real GDP[2]	-1.2	-1.0	-1.0	-0.2	-1.3	-1.0	-1.0	-0.3
Unemployment rate[3]	0.6	0.8	0.8	0.1	0.6	0.7	0.8	0.1
Inflation[3]	2.2	0.5	0.2	0.1	2.2	0.4	0.2	0.1
Current account[4]	0.7	2.9	2.9	2.8	0.7	2.8	2.8	2.8
Short-term interest rate[3]	1.5	1.1	0.7	0.0	1.5	1.1	0.7	0.0
Long-term interest rate[3]	2.4	2.2	2.1	0.0	2.4	2.2	2.1	0.0

1. The simulation assumes that the US dollar depreciates by 30% against all OECD currencies and stays put against the renminbi. Demand-side effects and monetary policy reactions are built into the simulation. Financial contagion means that higher long-term interest rates in the US spill over to the euro area.
2. Deviation from baseline level in per cent.
3. Deviation from baseline rate in percentage points.
4. Deviation from baseline ratio to GDP in percentage points.

Source: OECD Economic Outlook No. 77 database.

92. Despite the potential harm from further appreciation, it appears advisable for the European monetary authorities not to intervene on foreign exchange markets to stabilise the currency. Sterilised intervention, that is buying or selling foreign exchange while keeping short-term interest rates constant through selling bonds, may in theory affect the exchange rate. Taking the topical example of stopping an appreciation, the main potential impact channels are:

- domestic investors buy foreign assets to rebalance their portfolios following their euro bond purchases;
- monetary authorities' foreign exchange intervention may herald a change towards loosening the future policy stance; and
- their intervention can provide a co-ordination signal for traders to deviate from trend-following behaviour if the trend goes against fundamentals.

93. In practice, the empirical literature generally holds the view that sterilised intervention has very limited, if any, impact in the medium-term (Sarno and Taylor, 2001). Fatum and Hutchinson (2003) and Neely (2004) argue that intervention can however be effective at speeding the process whereby misalignments are corrected, especially when it is internationally co-ordinated. On the other hand, theory and recent empirical evidence also suggest that foreign exchange interventions may be destabilising (in the sense that they can make the real exchange rate switch for some time to a random walk regime) when they are undertaken close to equilibrium or against fundamentals (Taylor, 2004). Given the absence of strong evidence that the euro is overvalued at its current level, intervention would necessarily imply

propping up the dollar against the euro, thus delaying necessary adjustments to the US current account and hence increasing the likelihood that the eventual correction will include some severe overshooting (Blanchard *et al.*, 2005). In such conditions, Humpage (2004) compares sterilised intervention to "trying to stop the sun from setting".

94. A more effective way to weigh on the nominal exchange rate is to conduct non-sterilised intervention but such a course of action would make the monetary policy stance more expansionary. The appropriateness of such operations has therefore to be examined in the context of the monetary policy stance itself and not on the sole basis of foreign exchange considerations. It is also worth noting that the effect of non-sterilised intervention on the real exchange rate might be partly compensated by an increase in inflation.

95. Even though foreign exchange intervention by the Eurosystem does not appear to be advisable, the ECB should stand ready to adjust the monetary policy stance in case a euro appreciation were to bear on aggregate demand and lower inflation. In such a situation, a cut in policy-determined interest rates might be appropriate, although the reasons underlying the exchange rate move and their potential implications on the outlook for price developments over the medium term would need to be taken into account. Here again, structural reforms to increase competition in product markets would give the ECB more scope for action as they would increase the extent to which an appreciating exchange rate translates into lower prices. However, recent exchange rate developments (in late May and early June 2005) do not point in this direction, at least over the shorter term, since the euro has depreciated against the US dollar.

NOTES

1. The reference value specifies the growth rate of the broad monetary aggregate which – over the medium term – is consistent with price stability. Its value of 4½ per cent for the annual growth rate of M3 is derived using the ECB's definition of price stability (*i.e.* an annual increase in the HICP for the euro area of below 2%), and assuming trend output growth in the range of 2 to 2½ per cent per annum and the decline in the medium-term trend in M3 income velocity in the range of ½ to 1% per annum.

2. The main source of the house price statistics reported here is the series of annual Hypostat reports published by the European Mortgage Federation, which come with the caveat that cross-country comparability is limited. The various national indices are not harmonised. The main differences affect the type of dwellings included in the indices and the presence or not of quality adjustment. Efforts to compile harmonised indices are still ongoing at the European level. For these reasons, Table 2.2 complements the indications given by house price statistics with ECB data on the outstanding amounts of mortgage debt, which offer a higher degree of quality.

3. The Taylor rule computes the amount whereby interest rates should be raised above (reduced below) their equilibrium level if either inflation rises above (falls below) its target or the output gap turns positive (negative) in order to maintain a neutral policy stance. The formula for the (two) Taylor rules shown in this graph have been taken from a recent study by Adema (2004). It reads:
$$i_t = \lambda i_{t-1} + (1-\lambda)[i^* + \gamma(\pi_{t+k} - \pi^*) + \beta GAP_t]$$
In this formula i stands for the three month money market rate, π is the inflation rate and GAP is the output gap. π^* is the reference or target inflation rate (2%) and i* is the equilibrium interest rate. In the case of a forward looking Taylor rule (k = 4), the coefficients are i* = 3.95, λ = 0.65, γ = 2.09 and β = 1.25. In the case of a backward looking Taylor rule (k = 0), the coefficients are i* = 4.41, λ = 0.75, γ = 1.92 and β = 1.66.

4. See for instance Woodford (2003) for a description of various “Taylor rules”.

5. In addition to the HICP (which is mandatory under Council Regulation No 2494/95/EC of 23 October 1995), all euro area countries accept Luxembourg compute specific consumer price indices (CPI). National CPIs exclude owner-occupied housing costs in Belgium, France, Greece, Italy, Portugal and Spain.

6. See the 2001 Economic Survey for a more detailed description of potential drivers and a taxonomy of “fundamental effective exchange rate” theories.

ANNEX A2.1. STRUCTURAL SETTINGS AND THE RESPONSIVENESS OF INFLATION TO ECONOMIC SLACK

Identifying differences in inflation responsiveness to economic slack

96. Econometric analysis has been conducted to identify cross-country differences in inflation responsiveness to cyclical slack over a longer time period than plotted in **Figure 2.9**. Following a wide strand of the economic literature looking at the responsiveness of prices to output conditions in low inflation environments *e.g.* Tobin (1972), Holden (1994, 2004), Akerlof, Dickens and Perry (1996, 2000) and Mourougane and Ibaragi (2004), the methodology is largely inspired by the framework proposed by Honohan and Lane (2003, 2004). Inflation is regressed on the output gap and a number of other variables for a panel of countries while time fixed effects capture common movements so as to focus on the effect of idiosyncratic changes in the explanatory variables.

97. An important departure from Honohan and Lane (2003, 2004) is that different coefficients are allowed on the output gap depending on whether it is positive or negative. The distinction is made primarily because the focus is on explaining why inflation responds so weakly to cyclical slack in the euro area. Importantly, the distinction also ensures that the estimated equation takes proper account of the effects of downward nominal rigidities on price developments.

98. Another refinement of the methodology is the introduction of inflation expectations in the set of explanatory variables. The difference between long- and short-term rates (the yield gap) is used to approximate expected inflation changes. The rationale is that expected changes in inflation over the maturity period are the main component of deviations of the yield gap from its historical average (Mishkin, 1990). Therefore, inflation plus the deviation of the yield gap from its historical average can be used as a proxy for expected inflation. The historical average of the yield gap has been omitted in the estimated equations below because it is captured by the country fixed effects included in the regressions.

99. As observed by Mehra (2004), controls must be included for supply shocks which otherwise obscure the effect of the output gap. This has been done here by including import prices, trend labour productivity, indirect taxes and time dummies in the regression. Besides, the set of explanatory variables includes the logarithm of the lagged real effective exchange rate to account for the tendency of prices to correct deviations from relative purchasing power parity.[1]

100. In a first specification, output gap coefficients are region-specific, with four geographic groupings:

- the euro area (except Greece, Ireland, Luxembourg and Portugal) denoted by €,
- English-speaking countries (Australia, Canada, United Kingdom, New Zealand and the United States) denoted by *Eng*,

- Scandinavia (Denmark, Norway and Sweden) denoted by *S*, and
- Japan (*J*).

The following equation has been estimated on quarterly data from the OECD *Economic Outlook* No. 77 database, except where otherwise mentioned, starting in 1985 and ending in 2004:

$$\pi_t^i = \sum_j \alpha_j^{\pi} (\pi_{t-j}^i + \gamma_t^i) + \sum_{R \in \{€; Eng; S; J\}} (\alpha_R^+ \; GAP^{+\,i\,R}_{t-1} + \alpha_R^- \; GAP^{-\,i\,R}_{t-1}) + \sum_k (\alpha_k^m \; m_{t-k}^i + \alpha_k^b \; b_{t-k}^i + \alpha_k^l \; l_{t-k}^i + \alpha_k^r r_{t-k}^i) + c^i + d^t + \varepsilon_t^i \quad (1)$$

101. In (1), notations are as follows:

- π_t^i stands for annualised quarterly consumer price inflation.
- γ_t^i stands for the yield gap between 10-year government bond and money market rates.
- r_t^i denotes the logarithm of the real effective exchange rate, multiplied by 100, taken from the OECD *Main Economic Indicators*.
- $GAP_t^{-i\,R}$ is by definition equal to the output gap of the country considered at time *t* if the country belongs to region *R* and the gap is negative and zero otherwise.
- $GAP_t^{+i\,R}$ is the output gap of the country considered at time *t* if the country belongs to region *R* and the gap is positive, and zero otherwise.

102. The regression includes controls for country and time varying supply shocks:

- m_t^i denotes the import price inflation, at annualised quarterly rate, scaled by the share of imports in total domestic expenditure.
- b_t^i denotes the change in the ratio of indirect taxes to private consumption in percentage points, annualised.
- l_t^i denotes trend labour productivity growth of the business sector, at annualised quarterly rate.

103. Period fixed effects d^t are introduced in the equation to capture the impact of common supply shocks such as oil price movements. Country fixed c^i effects capture cross-country time-invariant differences in inflation responsiveness. The symbol ε_t^i stands for the error term. The equation has been estimated using panel least squares and White's (1980) heteroskedasticity consistent covariances.

104. The main result from equation (1) is that consumer price inflation responds significantly more weakly to output gap changes in the euro area than in English-speaking countries (**Table 2.A1.1**). A Wald test confirms that the difference between the two coefficients (before $GAP^{-\text{€}}_{t-1}$ and GAP^{-Eng}_{t-1}) is statistically significant at the 1% level.

Table 2.A1.1. **Estimated price equation with country group-specific output gap coefficients**

1985Q1 – 2004Q4

Explanatory variable	Coefficient	Standard error
$\pi^{i}_{t-2} + \gamma^{i}_{t}$	0.17***	0.03
$GAP^{+i}_{t-1}{}^{\text{€}}$	0.28***	0.10
$GAP^{-i}_{t-1}{}^{\text{€}}$	0.13***	0.05
$GAP^{+i}_{t-1}{}^{Eng}$	0.91***	0.33
$GAP^{-i}_{t-1}{}^{Eng}$	0.58***	0.10
$GAP^{+i}_{t-1}{}^{S}$	0.52*	0.29
$GAP^{-i}_{t-1}{}^{S}$	0.23*	0.12
$GAP^{+i}_{t-1}{}^{J}$	0.49**	0.25
$GAP^{-i}_{t-1}{}^{J}$	0.19	0.28
m^{i}_{t}	0.11***	0.03
m^{i}_{t-1}	0.06**	0.03
b^{i}_{t}	0.20**	0.10
l^{i}_{t-2}	-0.31***	0.06
l^{i}_{t-3}	-0.41***	0.06
r^{i}_{t-1}	-1.54*	0.93
Adjusted R^2	0.46	

Note:
*** Statistically significantly different from zero at the 1% level.
** Statistically significantly different from zero at the 5% level.
* Statistically significantly different from zero at the 10% level.

Relating differences in inflation responsiveness to structural policy settings

105. Econometric analysis has been conducted to gauge to which extent differences in inflation responsiveness may be related to dissimilarities in structural policy settings. In a fashion similar to the investigations by Nunziata and Bowdler (2005), quarterly inflation has been regressed on its own lags, on the output gap and on an interaction term aimed at capturing the effect of structural policies on the inflation response to the output gap. Unlike Nunziata *et al.* (2005), the output gap has been separated in two variables which respectively cover its positive and negative values to account for asymmetries in the way institutional settings interact with the inflation process. While rigidities in product and factor markets are anticipated to fuel inflationary pressures when the economy is growing above potential, they are expected to weaken the extent to which prices decelerate at times of slack. Equation (2) has been estimated for a panel of 17 OECD countries including eight euro area countries.

$$\pi_t^i = \sum_j \beta_j^{\pi} \left(\pi_{t-j}^i + \gamma_t^i\right) + \beta^{G-} GAP^{-i}_{t-1} + \beta^{P} \nabla POL^i_t \cdot GAP^{-i}_{t-1} + \beta^{G+} GAP^{+i}_{t-1} + \sum_k \left(\beta_k^m m^i_{t-k} + \beta_k^b b^i_{t-k} + \beta_k^l l^i_{t-k} + \beta_k^r r^i_{t-k}\right) + c^i + d^t + \varepsilon_t^i \quad (2)$$

106. The variables are the same as in equation (1) and are denoted by the same symbols except that:

- GAP^{+i}_{t-1} stands for the previous quarter's output gap if it is positive,
- GAP^{-i}_{t-1} stands for the previous quarter's output gap if it is negative,
- ∇POL^i_t denotes the normalised deviation of the structural policy indicator value from the full sample average (over *i* and *t*) denoted $\overline{POL}$; in other words $\nabla POL^i_t = \dfrac{POL^i_t - \overline{POL}}{\underset{i,t}{Max}\left|POL^i_t - \overline{POL}\right|}$

107. The following structural policy indicators, which take higher values in less competitive settings, have been used:

(i) The OECD index of employment protection legislation for regular workers, taken from the *OECD Employment Outlook 2004*,

(ii) An index of concentration in wage setting, which measures the degree of coordination and centralisation in wage bargaining, constructed using data from the *OECD Employment Outlook 2004* and

(iii) An indicator of the stringency of product market regulations in seven energy and service industries, constructed by Nicoletti and Scarpetta (2003).

108. The equations have been estimated by panel ordinary least squares (POLS). Robustness checks have been performed with the generalised method of moments (GMM) and two-stage least squares (2SLS), using lags of the regressors as instruments, and yield similar results. The number of lags is optimal for both Akaike's and Schwarz's criteria. The significance levels reported below are based on White's (1980) heteroskedasticity consistent covariances.

Table 2.A1.2. **Estimated price equations**
1985Q1 – 2004Q4

Explanatory variable	Without structural policy indicator	Structural policy indicators used		
		Concentration in wage setting	Employment protection legislation	Product market regulation
$\pi^{i}_{t-2} + \gamma^{i}_{t}$	0.16***	0.17***	0.16***	0.16***
$GAP^{+}{}^{i}_{t-1}$	0.51***	0.52***	0.50***	0.51***
$GAP^{-}{}^{i}_{t-1}$	0.22***	0.27***	0.29***	0.26***
$\nabla POL^{i}_{t} \cdot GAP^{-}{}^{i}_{t-1}$	. .	-0.27***	-0.48***	-0.29***
m^{i}_{t}	0.10***	0.10***	0.10***	0.10***
m^{i}_{t-1}	0.05*	0.06**	0.05**	0.05**
b^{i}_{t}	0.20*	0.19*	0.20*	0.20*
l^{i}_{t-2}	-0.31***	-0.29***	-0.32***	-0.33***
l^{i}_{t-3}	-0.42***	-0.41***	-0.44***	-0.44***
r^{i}_{t-1}	-0.02*	-0.02*	-0.02*	-0.02*
Adjusted R^2	0.44	0.45	0.45	0.44

Note:
***Significance at the 1% level.
** Significance at the 5% level.
* Significance at 10% level.

109. The main result is that the data exhibit a statistically significant link between more rigid structural policy settings and a weaker response of prices to a negative output gap (**Table 2.A1.2**). The coefficient on the interaction variable at times of slack ($\nabla POL^{i}_{t} \cdot GAP^{-}{}^{i}_{t-1}$) is negative and statistically different from zero at the 1% confidence level in all estimated equations.[2] This means that a higher rigidity index translates into a lower overall coefficient on negative output gaps, thereby indicating reduced inflation responsiveness when the output gap is negative. In other terms, when output is below potential and falling, inflation abates more in flexible countries than in rigid economies, which gives more leeway to monetary authorities to boost the economy without compromising price stability.

110. Because serious methodological issues surround the estimation of potential GDP (see Cotis *et al.*, 2005 for a recent survey), the regressions have been rerun with an alternative, univariate estimate of the output gap. The aim was to check whether the results reported above might be dependent on the production function-based measure of the output gap in the OECD *Economic Outlook* No. *77* database. As detailed in Cournède, Janovskaia and van den Noord (2005), the above findings are robust to this change with the only exception of the regression using the indicator of product market regulations. However, this structural policy index raises specific, technical estimation issues because it exhibits a common, downward trend across countries. When this common trend is removed, which is in line with the focus on cross-country differences, the results obtained with the regulatory reform index hold for both measures of the output gap.

Inflation persistence

111. The above investigations, which find weak inflation responsiveness in euro area countries and relate it to structural rigidities, should be distinguished from the related issue of inflation persistence. Broadly speaking, inflation is described as persistent when it is primarily determined by its previous rate. Defining the concept technically is still a subject of academic debate. Probably the most straightforward definition of inflation persistence is that inflation is highly auto-correlated with its own lags (European Commission, 2003). Similarly, many authors define persistence as in Andrews and Chen (1994) by examining whether the sum of autoregressive coefficients is close to one. In technical terms, the test checks whether inflation can be described as a unit root process. Using this approach, Benati (2004) shows that euro area inflation is persistent in a statistically significant way at high confidence levels for the three price indices he examines (HICP, the private consumption deflator and the GDP deflator).

112. A related but thus far inconclusive way to look at inflation persistence is to compare the explanatory power of lagged inflation and a forward-looking supply-side indicator in a price equation – usually called a New Keynesian Phillips Curve (NKPC). Implementing analysis of this nature on euro area data for the period 1970-97, McAdam and Willman (2004) conclude that their forward-looking composite supply-side measure has a significant effect on price developments. Using direct measures of inflation expectations, Adam and Padula (2003) and Paloviita (2004) find a strongly significant forward-looking component. However, after estimating various NKPCs on euro area data for 1971-98, Bardsen *et al.* (2004) caution that slight changes in the estimation methodology can very quickly result in the forward-looking term being found not significant. This divergence of views is far from being specific to the euro area as the debate on fitting NKPCs on US inflation data has spawned a wide body of literature which remains largely inconclusive due to largely unresolved estimation difficulties (Henry and Pagan, 2004).

113. Another potential issue when defining inflation persistence by means of time-invariant coefficients drawn from single-country regressions is that they may not be robust to the occurrence of structural changes, in which case they lead to overestimating persistence (Perron, 1989). Judging it unrealistic to assume that changes in the macroeconomic framework such as modifications in the monetary policy regime do not affect the inflation process, Cogley and Sargent (2003), Levin and Piger (2003) and Benati (2004) have argued that structural breaks should be allowed in such regressions. This means that the coefficients are not fixed over time but can change. Estimating a single-country regression model of this nature, Marques (2004) finds a low level of persistence in the euro area and in the United States. Benati (2004) and Levin and Piger (2003) come to the same conclusion for several European countries but not for the euro area, which is absent from their data set.[3] In contrast, the euro area evidence in favour of structural breaks and hence low persistence may be econometrically weak. O'Reilly and Whelan (2003) conclude that tests for structural breaks in the inflation process suffer from small-sample bias in the euro area. When this bias is corrected, they reckon that the hypothesis of no change cannot be rejected, which in turn implies strong persistence. On the other hand, this study does not take into account additional information about the timing of changes in the monetary policy regime and may therefore underestimate the probability of a break.

114. The ECB's Inflation Persistence Network (IPN) defines persistence as "the tendency of inflation to converge slowly (or sluggishly) towards its long run value" (Angeloni *et al.*, 2004). Most of the studies conducted under the auspices of the IPN do not find much higher inflation persistence in the euro area than in the United States (Ciccarelli, 2004; Doosche and Everaert, 2004).

115. To test the possibility of the coefficients of past inflation to sum to unity in equation (2) above, regressions were run where this constraint was imposed. Although a Wald test rejected this constraint, the coefficients on the output gap and its interaction (in the case of negative gaps) with structural indicators proved robust to this constraint. This suggests that inflation persistence in the euro area –as defined above – is indeed limited, whereas the lack of inflation response to slack does appear to be a distinct feature of the euro area.

ANNEX A2.2. HOUSING COSTS AND INFLATION MEASUREMENT

116. The main inflation measure used by the ECB, the HICP, does not take housing costs for owner-occupiers into account. This exclusion may influence assessments of price stability, a situation in which expectations of falling or rising prices have little bearing on the decisions of households, as housing cost developments clearly affect inflation expectations. This Annex briefly presents the treatment of housing in the HICP and the main reasons behind the exclusion of owner-occupiers' housing costs. It then moves on to examine the advantages of building an additional inflation measure that takes account of these costs and highlights the results of the approach.

Why does the HICP not take owner-occupiers' housing costs into account?

117. As far as housing costs are concerned, the HICP only includes rents actually paid by tenants and light maintenance expenditure by renters and owner-occupiers.[4] The main reason for this choice lies in the very divergent treatment of owner occupied housing across countries. For instance, only four of the 12 euro area countries include estimates of owner occupied housing costs in the national consumer price indices and these four countries use three different methods. It proved therefore impossible to agree on and implement a measure for owner occupied housing when the HICP was first introduced. Furthermore, the scope of the HICP has been defined as actual monetary transactions undertaken for final private consumption purposes, which in principle excludes imputations (Eurostat, 2004). The final monetary private consumption approach warrants that the purchase of assets, including dwellings, lies outside the scope of the index.

118. The goals of cross-country comparability and verifiability are important motives for restricting the HICP to actual transaction prices (Eurostat, 2001). Using tangible prices limits the need for imputed values which can be perceived as being more difficult to audit and to compare. However, even with actual prices, a recurrent co-ordinating process is needed, and is indeed operating, to harmonise the methods used to adjust collected price information for changes in quality – an operation which is, in fact, an imputation.

119. Another reason for excluding home-owners housing service cost developments is that the HICP is officially defined as a "pure inflation index" or as "not being a cost of living index" (Eurostat, 2004). Despite the brevity of its definition, the pure inflation concept clearly refers to measuring changes in prices of goods and services purchased by means of monetary transactions.[5] From a conceptual point of view, this suggests that the "pure inflation index" should broadly correspond to the deflator of household real money balances. Such an approach warrants excluding imputed costs but, symmetrically, it calls for taking into account changes in the prices of assets purchased by households, as advocated by Fisher (1911). A choice of this nature would raise considerable measurement issues, make the index very different from cost of living indices (Diewert, 2002) and also deviate from the final consumption approach the HICP is simultaneously based on. Furthermore, the pure inflation approach underpinning the HICP is in tension with the recommended adjustment of prices for quality changes that imply "a significant difference in utility to the consumer" (Eurostat, 2001). Indeed, the use of quality adjustment lacks conceptual foundations outside the theory of cost of living indices (Cecchetti and Wynne, 2003).

The potential drawbacks of this choice

120. A limitation of the HICP is that its underlying basket of goods and services ignores a sizeable part of private consumption. On very conservative estimates, national accounts data value imputed rentals for owner occupiers at more than 10% of euro area household final consumption in 2002. Following Marshall (1898), the System of National Accounts foresees that "the imputed values of the housing services are recorded as final consumption expenditures of the owners" (Inter-Secretariat Working Group on National Accounts, 1993). Major repairs and improvements, another expenditure item not covered in the HICP basket of goods and services, made up around 1% of household final consumption in the euro area in 2002.

121. As pointed out by the System of National Accounts, another difficulty with the HICP is that excluding owner-occupied housing costs reduces cross-country comparability since "*The ratio of owner-occupied to rented dwellings can vary significantly between countries…, so that both international and intertemporal comparisons of the production and consumption of housing services could be distorted if no imputation were made for the value of the own-account housing services*" (Inter-Secretariat Working Group on National Accounts, 1993). However, the System of National Accounts also points to the drawbacks of this method if extended to "*the production of domestic and personal services for consumption within the same household such as the preparation of meals, care and training of children, cleaning, repairs, etc"*, noting that "*it is clear that the economic significance of these flows is very different from that of monetary flows. For example, the incomes generated are automatically tied to the consumption of the goods and services produced; they have little relevance for the analysis of inflation or deflation or other disequilibria within the economy*" (Inter-Secretariat Working Group on National Accounts, 1993).

122. Given the importance of owner-occupied housing services in private consumption, changes in their prices will affect household decisions. For instance, increasingly expensive owner-occupied housing services imply a higher cost of living which will influence wage-setting behaviour and then potentially other prices through wage-price spiral effects. The effect of higher owner-occupied housing unit costs is clear and instantaneous for prospective first-time buyers and for existing home-owners looking for more spacious dwellings. For other existing home-owners, such a rise in the price of housing services is accompanied by an increase in property income in the form of higher imputed rents. Therefore, wage claims following an increase in the price for owner-occupied housing services may take more time to materialise than for other prices. However, as it still corresponds to a fall in the value of money, such a price rise will eventually bear on household decisions in the same way as other forms of inflation (Goodhart, 2001).

123. In practice, when making economic decisions, households pay attention to housing costs. The absence of owner-occupied housing costs from the HICP may also help explain the emergence of a debate on a disconnect between recorded and perceived inflation. In the case of Italy, Marini *et al.* (2004) estimate that more than 6 percentage points must be added to the HICP inflation rate each year since 2002 to make survey-based measures of changes in households' financial situation match national accounts data on household disposable income deflated by the HICP. Even if this estimate appears to be on the high side and if other factors are likely to be at play,[6] it gives substance to the view that the HICP may diverge to some degree from the cost of living as perceived by European households.

124. In other countries, the majority of central banks are relying on price indices which include the cost of owner-occupied housing (**Table 2.A2.1**). This is notably the case in the United States where the two main price measures examined by the Federal Reserve take housing costs into account. In the euro area, Eurostat, supported by the ECB, identified the inclusion of owner-occupied housing in the HICP a priority in 1997 and a task force was set up in 1998 to devise its implementation but the project is still at the pilot stage. There are indications that Eurostat may choose to integrate owner-occupied dwelling prices in the HICP, on an acquisition basis, net of land prices. The choice of an acquisition basis would imply a consistent treatment of housing and other consumer durables as the index would reflect actual price changes in the housing market to the extent that they influenced household decisions at a given point of time. This choice would also make it easier to achieve high standards of cross country comparability while maintaining the principle that the index should be based on the prices of market transactions. Nonetheless, as for all other options that exist on this field, it has some potential drawbacks. House purchases may be regarded as investment in fixed capital and therefore excluded from consumption expenditure. The intrinsic difficulty is to separate the investment and consumption elements. The rationale behind the acquisition approach proposal is to regard the cost of the land as representing the investment and the cost of the structure as representing the consumption element. However, such an approach would imply that the owner-occupied component of the new HICP would only reflect a fraction of housing costs since land typically represents about half of house prices in European countries (Calmfors *et al.*, 2005). Moreover, land prices are also the most volatile component of house prices since they represent the scarcity value of a non-reproducible asset. Therefore, excluding land from the new measure is a controversial issue when incorporating owner-occupied housing costs into the extended HICP.

Table 2.A2.1. **The treatment of housing in price measures used by central banks in major monetary areas**

Monetary policy authority	Price measure	Compiling agency	Treatment of owner-occupied housing costs
US Federal Reserve	Personal consumption deflator	Bureau of Economic Analysis	User costs calculated by applying a mortgage-rate dependent rent-to-value ratio to house prices.
	Consumer price index	Bureau of Labour Statistics	Imputed rents based on actual rents adjusted for quality differences between owner-occupied houses and other dwellings.
European Central Bank	Harmonised index of consumer prices (HICP)	European Commission (Eurostat)	Not included in the index.
Bank of Japan	Consumer price index excluding fresh food[1]	Statistics Bureau	Imputed rents based on actual rents.
Bank of England	Consumer price index (national name for the HICP)	National Statistics	Not included in the index.
Bank of Canada	Consumer price index excluding food, energy and indirect taxes	Statistics Canada	User costs consisting of mortgage interest cost, depreciation, property taxes, maintenance, insurance premiums and other fees.

1. Country where price stability is not the primary target pursued by monetary authorities.

NOTES

1. This is a departure from Honohan and Lane (2003, 2004) who assume absolute PPP (*i.e.* convergence to the same price level across countries) and thus directly introduce countries' purchasing power parities relative to the euro area average in the equation. The justification is that relative PPP is better established in the empirical literature (see for instance Krugman and Obstfeld, 1994). Despite the conceptual difference between *absolute* and *relative* PPP, this choice has very limited importance in the methodological framework of this study. The inclusion of country fixed effects and the choice of a logarithmic form for the real effective exchange rate together imply that all estimated coefficients (other than those on the country dummies) are invariant to country-specific, time-invariant shifts in the level of PPPs. In order to ensure that the coefficients are approximately comparable to those in Honohan and Lane (2003, 2004), the logarithm of the real effective exchange rate is multiplied by 100.

2. The interaction with positive output gaps was never significant and therefore removed. Regressions in which all the structural indicators were interacted with the output gap in one equation performed badly. This may reflect multi-collinearity as the structural indicators are highly correlated.

3. A recurrent problem when examining longitudinal features of euro area data is that the period from January 1999 to the present is too short to estimate models with many parameters while longer samples aggregating pre-1999 national data are somewhat artificial.

4. Major repairs and improvements are not included in the HICP.

5. A "pure inflation index" could also be understood as an Austrian school-type inflation measure endeavouring to trace only those price developments that are caused by changes in money supply and not by real factors. Measures of this nature have been constructed for the United Kingdom by Quah and Vahey (1995) and for the euro area and the Netherlands by Fase and Folkertsma (1999). Notwithstanding being defined as a "pure inflation index", the HICP clearly does not belong to this category as it is calculated as a consumption-weighted mean of observed price changes with no attempt at filtering out real effects.

6. Inflation perceptions may also have been distorted by the fact that price increases after the changeover were unusually large for low value but frequently purchased items (ECB, 2003b and Del Giovane and Sabbatini, 2004).

BIBLIOGRAPHY

Adam, K. and M. Padula (2003), "Inflation dynamics and subjective expectations in the United States", *ECB Working Paper*, No. 222, Frankfurt am Main.

Akerlof, G., W. Dickens and W. Perry (1996), "The Macro-economics of Low Inflation", *Brookings Papers on Economic Activity*.

Akerlof, G., W. Dickens and W. Perry (2000), "Near-rational Wage and Price Setting and the Long-run Phillips Curve", *Brookings Papers on Economic Activity*.

Adema, Y. (2004), "A Taylor Rule for the Euro Area Based on Quasi-Real Time Data", *DNB Staff Reports*, No. 114, Amsterdam.

Andrews, D., and H.-Y. Chen (1994), "Approximately Median-Unbiased Estimation of Autoregressive Models", *Journal of Business and Economic Statistics*, Vol. 12.

Ang, A., S. Dong and M. Piazzesi (2004), "No-arbitrage Taylor rules", mimeo, downloaded from www.gsb.columbia.edu on 2 March 2005.

Angeloni, I., L. Aucremanne, M. Ehrmann, J. Gali, A. Levin and F. Smets (2004), "Inflation Persistence in the Euro Area: Preliminary Summary of Findings", paper presented at the ECB conference on inflation persistence held in Frankfurt-am-Main on 10-11 December 2004, available at www.ecb.int.

Angeloni, I., A. Kashyap, B. Mojon and D. Terlizzese (2003), "Monetary Policy Transmission in the Euro Area: Where do we Stand?", in Angeloni, I., A. Kashyap and B. Mojon (Ed.), *Monetary policy transmission in the euro area*, Cambridge University Press, Cambridge.

Artis, M. and A. Beyer (2004), "Issues in Money Demand", *Journal of Common Market Studies*, Vol. 42.

Avouyi-Dovi, S. *et al.* (2003), "Estimation d'une fonction de demande de monnaie pour la zone euro : une synthèse des resultats", *Bulletin de la Banque de France*, No 111, Paris.

Ball, L. (1994), "What Determines the Sacrifice Ratio?", in N.G. Mankiw (ed.), *Monetary Policy*, University of Chicago Press, 1994.

Bårdsen, G., E. Jansen and R. Nymoen (2004), "Econometric Evaluation of the New Keynesian Phillips Curve", *Oxford Bulletin of Economics and Statistics*, Vol. 66.

Bean, C. (2003), "Asset Prices, Financial Imbalances and Monetary Policy: Are Inflation Targets Enough?", *BIS Working Papers*, No. 140, Basel.

Bean, C. (2005), "Monetary Policy in an Uncertain World", *World Economics*, Vol. 6.

Benati, L.(2004), "International Evidence on the Persistence of Inflation", paper based on a presentation to the 2003 North American Summer meetings of the Econometric Society, downloaded from www.ssrn.com.

Blanchard, O., F. Giavazzi and F. Sa (2005), "The US Current Account Deficit and the Dollar", mimeo, downloaded from www.aeaweb.org.

Boone, L., N. Girouard and I. Wanner (2001), "Financial Market Liberalisation, Wealth and Consumption", *OECD Economics Department Working Papers*, No. 308, OECD, Paris.

Boone, L., F. Mikol and P. van den Noord (2004), "Wealth Effects on Money Demand in EMU: Econometric Evidence", *OECD Economics Department Working Papers*, No. 411, OECD, Paris.

Borio, C. and P. Lowe (2002), "Asset Prices, Financial and Monetary Stability: Exploring the Nexus", *BIS Working Papers*, No. 114, Basel.

Brand, C. and Cassola, N. (2004), "A Money Demand System for Euro Area M3", *Applied Economics*, Vol. 36.

Brook, A.M., F. Sedillot and P. Ollivaud (2004), "Channels for Narrowing the US Current Account Deficit and Implications for other Economies", *OECD Economics Studies*, Vol. 38, Paris.

Bruggeman, A., Donati, P. and Warne, A. (2003), "Is the Demand for Euro Area M3 Stable?", *ECB Working Paper*, No. 255, Frankfurt am Main.

Calmfors, L., G. Corsetti, S. Honkapohja, J. Kay, W. Leibfritz, G. Saint-Paul, H.-W. Sinn and X. Vives (2005), *Report on the European Economy*, CESIFO, Munich.

Carnot, N., V. Koen and B. Tissot (2005), *Economic Forecasting*, Macmillan.

Catte, P., N. Girouard, R. Price and C. André (2004), "Housing Markets, Wealth and the Business Cycle", *OECD Economics Studies*, Vol. 38, Paris.

Catte, P. and T. Sløk (2005), "Measures of Core Inflation", *OECD Economics Department Working Papers*, Paris, forthcoming.

Cecchetti, S. and M. Wynne (2003), "Defining Price Stability", *The Economic Journal*, Vol. 490.

Ciccarrelli, M. (2004), "Inflation Persistence in the Euro Area - Discussion of aggregate and sectoral results", ECB Conference on Inflation Persistence in the euro area, Frankfurt, 10-11 December 2004, available from http://www.ecb.int/events/pdf/conferences/inflationpersistence.

Chortareas, G. and G. Kapetanios (2004), "Getting PPP Right: Identifying Mean-Reverting Real Exchange Rates in Panels", *Queen Mary University Working Paper*, No. 517.

Coenen G. and Vega J.-L. (2001), "The Demand for M3 in the Euro Area", *Journal of Applied Econometrics*, Vol. 16, No. 6.

Cogley, T., and T. J. Sargent (2003) "Drifts and Volatilities: Monetary Policies and Outcomes in the Post-WWII U.S.," New York University, mimeo, downloaded from ideas.repec.org.

Cotis, J.P., J. Elmeskov and A. Mourougane (2005), "Estimates of Potential Output: Benefits and Pitfalls from a Policy Perspective", in Reichlin, L., ed., *The Euro Area Business Cycle: Stylized Facts and Measurement Issues*, Centre for Economic Policy Research, London.

Cournède, B., A. Janovskaia and P. van den Noord (2005), "Sources of Inflation Persistence in the Euro Area", *OECD Economics Department Working Papers*, Paris, forthcoming.

Cuaresma, J. C., E. Gnan and D. Ritzberger-Gruenwald (2003), "Searching for the Natural Rate of Interest: a Euro Area Perspective", *Oesterreiche Nationalbank Working Papers*, No. 84, Vienna.

Del Giovane, P. and R. Sabbatini (2004), "L'Introduzione dell'euro e la Divergenza tra Inflazione Rilevata e Percepita", *Tema di Discussione*, No. 532, Rome.

Dhyne, E., L. Alvarez, H. Le Bihan, G. Veronese, D. Dias, J. Hoffmann, N. Jonker, P. Lünneman, F. Rumler and J. Vilmunen (2004), "Price Setting in the Euro Area: Some Stylised Facts from Individual Consumer Price Data", Paper presented to the ECB Conference on Inflation Persistence in the euro area, 10-11 December 2004, Frankfurt am Main, available from www.ecb.int/events/pdf/conferences/inflationpersistence

Diewert, E. (2002), "Harmonised Indices of Consumer Prices: their Conceptual Foundations", *ECB Working Papers Series,* No. 130, Frankfurt am Main.

Dolado, J., R. Maria-Dolores and M. Naveira (2005), "Are Monetary Policy Reaction Functions Asymmetric? The Role of Nonlinearity in the Phillips Curve", *European Economic Review*, Vol. 49.

Dossche, M. and Everaert, G. (2004), "Measuring Inflation Persistence: a Structural Time Series Approach", ECB Conference on Inflation Persistence in the euro area, Frankfurt, 10-11 December 2004.

Drew, A., M. Kennedy and T. Sløk (2004), "Differences in Resilience between the Euro Area and the US Economies", *OECD Economics Department Working Papers*, No. 382, OECD, Paris.

Duisenberg, W. (1999), Transcript of the ECB press conference on 9 November 1999, downloaded from www.ecb.int on 26 January 2005.

Engel, C. and K. West (2004), "Taylor Rules and the Deutschmark-Dollar Real Exchange Rate", *NBER Working Paper Series*, No. 10995.

ECB (European Central Bank) (2003*a*), *Structural Factors in the EU Housing Markets,* Frankfurt am Main.

ECB (2003*b*), *Monthly Bulletin*, October, Frankfurt am Main.

ECB (2004*a*), *Monthly Bulletin*, October, Frankfurt am Main.

ECB (2004*b*), *Monthly Bulletin*, May, Frankfurt am Main

ECB (2005*a*), *Bank Lending Survey*, January, Frankfurt am Main.

ECB (2005*b*), *Monthly Bulletin*, February, Frankfurt am Main.

European Commission (2003), *The EU Economy: 2003 Review*, Brussels.

Eurostat (2001), *Compendium of HICP Reference Documents*, Luxembourg.

Eurostat (2004), *HICP: a Short Guide to Users*, Luxembourg.

Fabiani, S., M. Druant, I. Hernando, C. Kwapil, B. Landau, C. Loupias, F. Martins, T. Mathä, R. Sabbatini, H. Stahl and A. Stokman (2004), "The Pricing Behaviour of Firms in the Euro Area: New Survey Evidence", Paper presented to the ECB Conference on Inflation Persistence in the euro area, 10-11 December 2004, Frankfurt am Main, available from www.ecb.int/events/pdf/conferences/inflationpersistence

Fagan, G. and J. Henry (1998), "Long Run Money Demand in the EU: Evidence from Area-Wide Aggregates", *Empirical Economics*, Vol.23.

Fase, M. and Winder, C. (1998), "Wealth and the Demand for Money in the European Union", *Empirical Economics*, Vol. 23.

Fase, M. and C. Folkertsma (1999), "Measuring Inflation: an Attempt to Operationalize Carl Menger's Concept of the Inner Value Of Money", paper presented to a BIS conference on Measures of underlying inflation and their role in the conduct of monetary policy held in Basel in June 1999, available from www.bis.org.

Fischer, B., P. Köhler and F. Seitz (2004), "The Demand for Euro Area Currencies: Past, Present and Future", *ECB Working Papers Series*, No. 330, Frankfurt am Main.

Fisher (1911), *Purchasing Power of Money*, Macmillan, New York.

Fatum, R. and M. Hutchinson (2003), "Is Foreign Exchange Intervention Effective after all? An Event Study Approach", *The Economic Journal*, Vol. 113.

Friedman, M. (1988), "Money and the Stock Market", *Journal of Political Economy*, Vol. 96, No. 2.

Gadea, M.D., A. Montanes and M. Reyes (2004), "The European Union Currencies and the US Dollar: from post-Bretton-Woods to the Euro", *Journal of International Money and Finance*, Vol. 23.

Gomez, M. and M. Melvin (2003), "Explaining the Early Years of the Euro Exchange Rate: an Episode of Learning about a New Central Bank", mimeo, available from www.public.asu.edu.

Goodhart, C. (2001), "What Weight Should be Given to Asset Prices in the Measurement of Inflation?", *The Economic Journal*, Vol. 111.

Gordon, R.J. (1982), "Why Stopping Inflation May be Costly: Evidence from Fourteen European Episodes", in Robert E. Hall (ed.), *Inflation: Causes and Effects*, Chicago, Illinois, Chicago University Press.

Greenspan, A. (2004), Testimony to the US House of Representatives on 21 July 2004, reported on www.economist.com, accessed on 26 January 2005.

Hau, H. and H. Rey (2003), "Exchange Rate, Equity Prices and Capital Flows", *CEPR Discussion Papers*, No. 3735.

Henry, S. and A. Pagan, "The Econometrics of the New Keynesian Policy Model: Introduction", *Oxford Bulletin of Economics and Statistics*, Vol. 66.

Holden, J. (1994), "Wage Bargaining and Nominal Rigidities", *European Economic Review*, Vol. 38.

Holden, J. (2004), "The Costs of Price Stability: Downward Nominal Wage Rigidity in Europe", *Economica*, Vol. 71.

Honohan, P. and P. Lane (2003), "Divergent Inflation in EMU", *Economic Policy*, Vol. 37.

Honohan, P. and P. Lane (2004), "Exchange Rates and Inflation under EMU: an Update", *CEPR Discussion Paper Series*, No. 4583.

Humpage, (2004), "On the Rotation of the Earth, Drunken Sailors, and Exchange Rate Policy", *Economic Commentary*, February 15.

Institut für Weltwirtschaft (2003), "Exkurs: Zur Stabilität der Geldnachfrage im Euroraum", Thesen zum Kieler Konjunkturgespräch, No. 68, September.

Inter-Secretariat Working Group on National Accounts (1993), *System of National Accounts*, United Nations, New York City.

Issing, O. (2004), Address to the ECB conference on inflation persistence in the euro area, Frankfurt am Main, 10 December 2004, downloaded from www.ecb.int on 20 Dec 2004.

Kapetanios, G. and I. Shin (2003), "Unit Root Tests in Three-Regime SETAR Models", paper based on a presentation to the 57th ESEM Conference held in Venice, Italy in 2002, available from http://ideas.repec.org.

Koedijk, K., B. Tims and M. van Dijk (2004), "Purchasing Power Parity in the Euro Area", *Journal of International Money and Finance*, Vol. 23.

Krugman, P. and M. Obstfeld (1994), *International Economics*, Third Edition, Harper Collins.

Kurz, C. and J. Hoffmann (2004), "A Rental-Equivalence Index for Owner-Occupied Housing in West Germany 1985 to 1998", *Bundesbank Discussion Paper*, No.08-2004.

Levin, A. and J. Piger (2003), "Is Inflation Persistence Intrinsic in Industrial Economies?", *Working Papers of the Federal Reserve Bank of St. Louis*, No. 2002-023.

Liew, V. (2003), "The Validity of PPP Revisited: An Application of Non-linear Unit Root Test", mimeo, available from http://ideas.repec.org.

Marques, C. R. (2004), "Inflation Persistence: Facts or Artefacts", *ECB Working Paper Series*, No. 371, Frankfurt am Main.

Mayes, D. and M. Viren (2002), "Asymmetry and the Problem of Aggregation in the Euro Area", *Empirica*, Vol. 29.

Maria-Dolores, G., A. Montanes and M. Reyes (2004), "The European Union Currencies and the US Dollar: from Bretton-Woods to the Euro", *Journal of International Money and Finance*, Vol. 23.

Meese, R. and K. Rogoff (1988), "Was it Real? The Exchange Rate-Interest Differential Relation over the modern Floating Rate Period", *The Journal of Finance*, Vol. 43.

Marini, G., A. Piergallini and P. Scaramozzino (2004), "Inflation Bias after the Euro: Evidence from the UK and Italy", *CEIS Tor Vergata Research Paper Series*, No. 60.

Mark, N. (2005), "Changing Monetary Policy Rules, Learning, and Real Exchange Rate Dynamics", *NBER Working Paper Series*, No. 11061.

Marshall, A. (1898), *Principles of Economics*, Macmillan.

McAdam, P. and A. Willman (2004), "Supply, Factor Shares and Inflation Persistence: Re-Examining Euro Area New Keynesian Phillips Curves", *Oxford Bulletin of Economics and Statistics*, Vol. 66.

Mehra, Y. (2004), "The Output Gap, Expected Future Inflation and Inflation Dynamics: Another Look", *Topics in Macroeconomics*, Vol. 4 Issue 1.

Mésonnier, J.S. and J.P. Renne (2004), "A Time-Varying Natural Rate of Interest for the Euro Area", *Banque de France Working Paper Series*, No. 115, Paris.

Mishkin, F. (1990), "The Information in the Longer Maturity Term Structure About Future Inflation", *Quarterly Journal of Economics*, Vol. 105, No. 3.

Mourougane, A. and H. Ibaragi (2004), "Is there a Change in the Trade-Off Between Output and Inflation at Low or Stable Inflation Rates? Some Evidence in the Case of Japan", *OECD Economics Department Working Papers*, No. 379, OECD, Paris.

Neely, C. (2004), "The Case for Foreign Exchange Intervention: The Government as a Long-term Speculator", *Federal Reserve Bank of St Louis Working Papers Series*, No. 2004-31.

Nelson, E. (2003), "The Future of Monetary Aggregates in Monetary Policy Analysis", *Journal of Monetary Economics*, Vol. 50.

Nicoletti, G. and S. Scarpetta (2003), "Regulation, Productivity and Growth: OECD Evidence", *OECD Economics Department Working Papers*, No. 347, OECD, Paris.

Nunziata, L. and C. Bowdler (2005), "Inflation Adjustment and Labour Market Structures: Evidence from a Multi-Country Study", *IZA Discussion Paper*, No. 1510, Bonn.

van den Noord, P. (2004), "Cyclical Divergence in the Euro Area: The Housing Channel", *OECD Economics Department Working Papers*, No. 400, OECD, Paris.

van den Noord, P. (2005), "Tax Incentives and House Prices in the Euro Area: Theory and Evidence", *Economie Internationale*, Vol. 101, CEPII, Paris.

OECD (2005), *Economic Policy Reforms: Going for Growth*, Paris.

O'Reilly, G. and K. Whelan (2003), "Has Euro Area Inflation Persistence Changed over Time?", *ECB Working Paper Series*, No. 335, Frankfurt am Main.

Orphanides, A. and S. van Norden (2002), "The Unreliability of Output Gap Estimates in Real Time", *Review of Economics and Statistics*, Vol. 84.

Paloviita, M. (2004), "Inflation Dynamics in the Euro Area and the Role of Expectations: Further Results", *Bank of Finland Discussion Paper*, No. 21, Helsinki.

Poterba, J. (1992), "Taxation and Housing: Old Questions, New Answers", *American Economic Review, Vol. 82*.

Perron, P. (1989), "The Great Crash, the Oil Price Shock and the Unit Root Hypothesis", *Econometrica,* Vol. 57.

Quah, D. and S. Vahey (1995), "Measuring Core Inflation", *The Economic Journal*, Vol. 105.

Sarno, L. and M. Taylor (2001), "Official Intervention in the Foreign Exchange Market: Is It Effective and, If so, How Does It Work?", *Journal of Economic Literature,* Vol. 39.

Sinn, H.W. and F. Westermann (2001), "Why Has the Euro Been Falling? An Investigation into the Determinants of the Exchange Rate", *NBER Working Papers*, No. 8352.

Taylor, J. (1993), "Discretion versus Policy Rules in Practice," *Carnegie-Rochester Conference Series on Public Policy*, Vol. 39.

Taylor, M. (2002), "A Century of Purchasing Power Parity", *The Review of Economics and Statistics,* Vol. 84.

Taylor, M. (2004), "Is Official Exchange Rate Intervention Effective?", *Economica,* Vol. 71.

Tobin, J. (1972), "Inflation and Unemployment", *American Economic Review*, Vol. 62.

Verbrugge, R. (2004), "The Puzzling Divergence of Aggregate Rents and User Costs, 1978-2001", mimeo, downloaded from www.ipeer.ca on 8 February 2005.

White, H. (1980), "A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity", *Econometrica,* Vol. 48.

Wicksell, K. (1898), *Interest and Prices,* Macmillan, London.

Woodford, M. (2003), *Interest and Prices*, Princeton University Press, Princeton.

Chapter 3

Putting the fiscal house in order

This chapter examines the experience with the EU's fiscal framework, as laid down in the Maastricht Treaty and the Stability and Growth Pact. The main finding is that failure of several euro area countries – including the three major ones – to abide by the rules results from blurred incentives, and weak surveillance and enforcement. Addressing these problems requires greater ownership of the fiscal rules by the member countries, underpinned by solid budget institutions.

125. While monetary policy has done relatively well and established its credibility, fiscal policies have fared less well. Many euro area governments failed to take advantage of the last upturn to establish better budgetary positions, which left them in a difficult position in the subsequent downturn. Fiscal policy was also not made consistent with the longer-term requirements stemming from ageing populations. Meanwhile, calls by the major euro area countries to modify the fiscal coordination framework in some respects have been endorsed by the European Council in March 2005. This will make compliance with the fiscal rules easier – as recurrent conflicts between the member countries and the European Commission as the guardian of the fiscal rules would be less likely. But it could also increase the risk of budgets overrunning targets, unless the underlying causes of deficit bias are addressed.

The framework

126. Fiscal policies in the Economic and Monetary Union (EMU) have remained decentralised, but are subject to rules and co-ordination. The rules were drawn up in order to commit member countries to fiscal discipline while allowing them to respond, within certain bounds, to the cycle. The provisions are detailed in the SGP. They contain a "preventive" and a "corrective" arm:

- The *preventive arm* stipulates that governments achieve and maintain budgetary positions *close- to-balance or in surplus* over the medium-term. Sticking to this rule allows the automatic stabilisers to play freely while respecting the 3% of GDP deficit ceiling stipulated in the Treaty. The annual updates of the stability programmes submitted by the governments to the European

Commission take stock as to how far they have progressed in moving towards close to balance or in surplus and provide a policy trajectory in the pursuit of this goal over the medium-term.

- The *corrective arm* draws on the "Excessive Deficit Procedure" (EDP) embedded in the Treaty. The Treaty defines "excessive deficits": deficits that exceed 3% of GDP or fail to ensure convergence towards gross public debt of 60% of GDP. The SGP specifies when a waiver due to "exceptional circumstances" may be granted.[1] It also details the timetable countries should respect in the pursuit of ending the excessive deficit, and the sanctions to be imposed when a country fails to respect this timetable.[2]

127. The implementation of this framework has evolved over time. Concerning the preventive arm, a significant step has been the adoption of a clause stipulating that countries should include long-term scenarios in the stability programmes in order to allow the Commission, in its role as guardian of the fiscal rules, to assess the long-term sustainability of public finances. Another major step has been the agreement by the Council in March 2003 through which countries committed to meet the close-to-balance or surplus rule not only in nominal terms over the medium-term but also in cyclically-adjusted terms each year, with the cyclical adjustment underpinned by independent Commission estimates of potential output (European Commission, 2002a, 2002b). It was also agreed that euro area countries who do not yet meet the close-to-balance or surplus rule should cut their cyclically-adjusted fiscal deficit by at least ½ per cent of GDP per annum.[3] The corrective arm, in contrast, ended up in a stalemate in November 2003, when the Council decided to "hold the Excessive Deficit Procedure in abeyance for the time being" after Germany and France went back on their earlier commitments to rein in their "excessive deficits" on time.[4]

128. From the outset the fiscal framework was seen as vital to underpin the single currency. It was designed to address one key concern, namely that once exchange rates within the area ceased to exist, financial markets would no longer act as a discipline on fiscal policy. Growing deficits in one country, rather than being reflected in wider yield spreads, would spill over into area wide interest rates and crowd out economic activity in other member countries. Worse, moral hazard could heighten the risk of occasional financial crises, which could expose the ECB to pressure to bail out the country concerned, even though bailouts are prohibited by the Treaty. This line of argument has been given less weight over time for several reasons. First, as the ECB established its credibility, concerns over possible bail-outs look increasingly far-fetched. Second, the net spill-over effects of fiscal stimulus are ambiguous, since the trade channel may offset the interest rate channel. Third, the behaviour of sovereign risk *premia* has hardly changed since the advent of the euro, suggesting that financial market discipline has not weakened – in fact it has never been strong except in cases of extreme misbehaviour (Bernoth *et al*., 2004).

129. Obviously financial market constraints could nevertheless begin to bite if debt starts ballooning with ageing. Therefore the arguments in favour of rules-based fiscal coordination have shifted towards longer-term issues amid ageing-related concerns. Several countries participating in the euro area required a "stick" to encourage fiscal consolidation, *i.e.* to "externalise the internality" of fiscal sustainability (as opposed to "internalising the externality" of crowding out). For example, the annual stability programmes were deemed to play a useful role, by providing an anchor for annual budget appropriations and obliging governments to recognise the implications of current budget decisions for government finances in the future. They also oblige governments to take account of changes in structural and demographic factors as well as the evolving cyclical situation. Over time, this consideration has gained prominence over the concerns regarding spill-over effects and fiscal stabilisation policy, and is now seen as the primary motivation for fiscal co-ordination in the euro area.

The experience to date

130. The experience with the framework has been mixed, at best. The latest vintage of stability programmes, presented in the winter of 2004/05, pushed back the move towards close-to-balance or in surplus by yet another year, as has been the pattern all along since the start of the 2001-03 downturn (**Figure 3.1**, Panel A). Indeed, the latest two vintages do not even envisage a return to balance some five years out. Yet the outturn is likely to be worse. The latest projections in the OECD *Economic Outlook* No. 77 indicate that, in the absence of corrective measures, no reduction of the fiscal deficit may be expected in 2005 or in 2006 (**Table 3.1**). Enforcement of the rules should have kicked in, but it did not, or only partly. Five countries in the euro area are, or have been, subject to an EDP consistent with the relevant provisions in the Maastricht Treaty (the Procedure was abrogated for Portugal – see **Box 3.1**). However, the Procedure was suspended for France and Germany in November 2003.

131. It is fair to state that the SGP raised transparency, awareness of longer-term fiscal issues and peer pressure. But in practice the 3% "reference value" has not been adhered to by a number of euro area countries. Recurrent disagreements between the European Commission and a qualified majority of the Council of Ministers over the appropriate measures to correct deficits in excess of the 3% threshold have gradually eroded the credibility of the Pact.[5] This has eventually culminated in a Commission proposal to reform the Pact in an effort to re-establish the "ownership" of the fiscal rules by the member countries. Based on this proposal a reform was adopted by the European Council in March 2005. Before discussing this reform, the sections below review some of the issues that have plaid a major role in shaping it.

Box 3.1. Tracking the enforcement of the fiscal rules

February 2002. Council rejects a Commission recommendation to pursue an Early Warning Procedure against Germany and Portugal, who were found to be at risk of breaching the 3% of GDP budget deficit limit.

October 2002. Council decides that an excessive deficit exists in Portugal, after the 2001 deficit turned out at 4.1% of GDP.

January 2003. Council decides that an excessive deficit exists in Germany, after the 2002 deficit turned out at more than 3% of GDP. Council pursues an Early Warning against France as its deficit was estimated to have reached 2.8% of GDP in 2002.

June 2003. Council decides that an excessive deficit exists in France, after the 2002 deficit turned out at more than 3% of GDP.

November 2003. Council decides to "hold in abeyance" the EDPs for France and Germany "for the time being", and rejects Commission recommendations to give notice to France and Germany to take measures to remedy the excessive deficit (this is the final stage after which sanctions can be imposed).

May 2004. Council abrogates the EDP against Portugal after its deficit was found to fall below 3% of GDP in 2002 and 2003.

June 2004. Council decides that an excessive deficit exists in the Netherlands after its 2003 deficit was estimated at 3.2% of GDP.

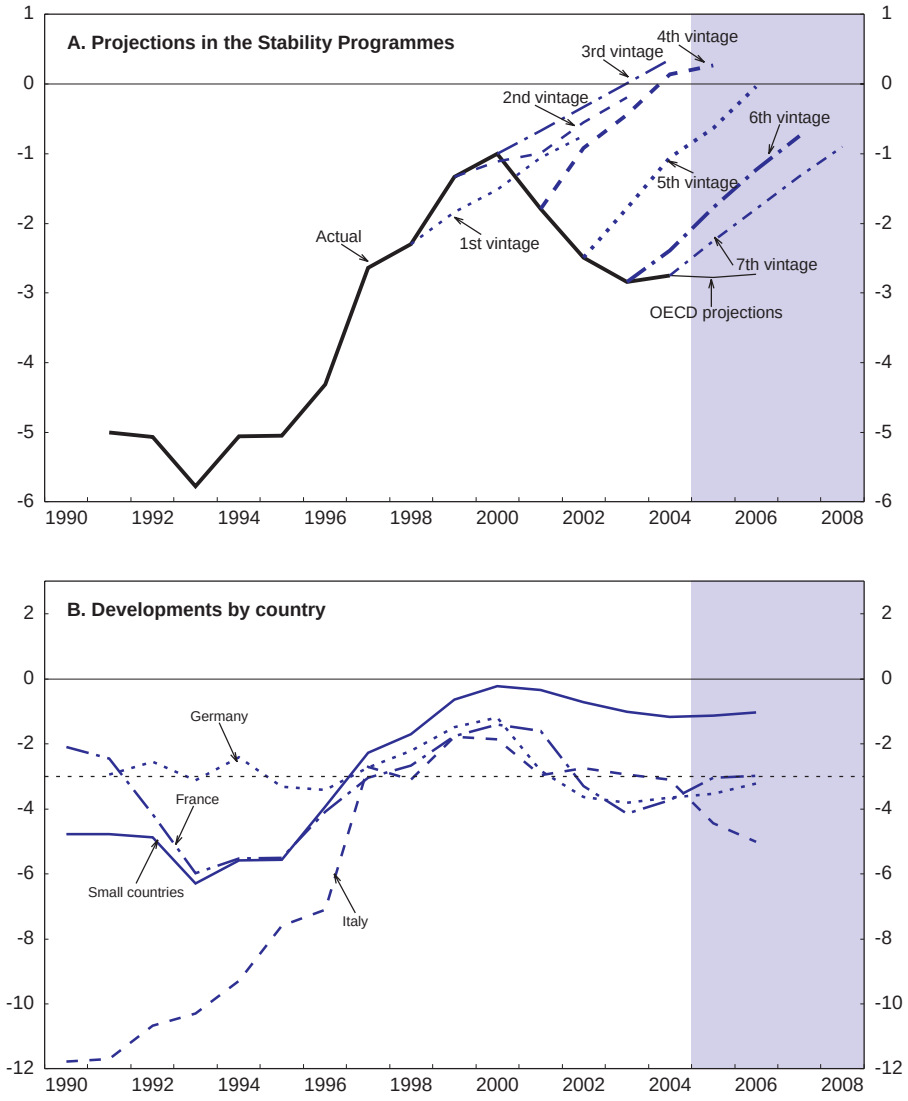
July 2004. Council decides that an excessive deficit exists in Greece after its 2003 deficit was estimated at 3.2% of GDP. Council rejects a Commission recommendation to adopt an Early Warning against Italy in light of its commitment to take measures to keep the 2004 and 2005 deficit below 3% of GDP.

February 2005. Council gives notice to Greece to take measures to remedy the excessive deficit (this is the final stage after which sanctions can be imposed).

March 2005. Council agrees on a reform of the SGP (see Box 3.3 for further details).

Figure 3.1. Fiscal consolidation: Moving targets[1]

General government balance in the euro area as a per cent of GDP[2]



1. The various vintages of the Stability Programmes were released over the following periods: 1st 1998/99, 2nd 1999/2000, 3rd 2000/01, 4th 2001/02, 5th 2002/03, 6th 2003/04, 7th 2004/05.
2. Excluding UMTS licence proceeds

Source: European Commission/Eurostat and OECD, *Economic Outlook* No. 77 database.

Table 3.1. **Euro area fiscal indicators**
In per cent of actual/potential GDP

	1999	2000	2001	2002	2003	2004	Projections[1]	
							2005	2006
Financial balances[2]								
Net lending	-1.3	-1.0	-1.8	-2.5	-2.8	-2.7	-2.8	-2.7
Net primary balance	2.5	2.6	1.7	0.7	0.2	0.2	0.1	0.1
Cyclically-adjusted balance[3]	-1.4	-1.8	-2.4	-2.5	-2.2	-2.0	-1.8	-1.8
Primary cyclically-adjusted balance[3]	2.5	1.9	1.1	0.7	0.8	0.8	1.1	1.0
Gross saving	0.3	0.6	0.0	-0.9	-1.6	-1.4	-1.5	-1.2
Government gross debt[4]	72.9	70.4	69.6	69.5	70.8	71.3	72.2	72.1
Spending and revenue								
Total primary expenditure[2]	45.1	44.5	44.8	45.3	46.0	45.7	45.6	45.5
Debt interest payments	3.8	3.6	3.5	3.2	3.1	2.9	2.9	2.9
Net capital expenditure	-0.5	0.6	-0.4	-0.5	-0.9	-0.8	-0.8	-0.7
UMTS licence proceeds	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Total revenue	47.0	46.6	46.0	45.5	45.2	45.1	44.9	44.9

1. OECD projections.
2. Excluding UMTS licence proceeds.
3. The cyclically-adjusted primary balance excludes debt interest payments. The change in this balance over time aims to gauge the impact of discretionary action on fiscal positions, but covers a broader set of factors, including the impact of erratic movements of specific taxes, variations in take-up of social benefits other than unemployment insurance and unintentional over or underspending.
4. Maastricht definition.

Source: OECD, *Economic Outlook* 77 database.

Why did small countries perform better?

132. With hindsight, it is as if the larger countries targeted a deficit of 3% of GDP over the cycle rather than close to balance or in surplus (**Figure 3.1**, Panel B). The proximate cause of this phenomenon is that these countries had not fulfilled the requirement of their fiscal position being close to balance or in surplus – despite economic boom conditions in the late 1990s – upon entry into the euro area and failed to correct this situation after the adoption of the euro. As a result, there was not sufficient room for the full operation of automatic stabilisers without incurring excessive deficits when the 2001-03 downturn unfolded: Germany and France have breached the 3% limit since 2002 while Italy has been slightly above the threshold in 2003 and 2004. While it is true that the Netherlands also breached the 3% limit, it can rightly claim this to be of a cyclical nature, whereas the three major countries eased their fiscal

policies in the period 2000-01 and found it difficult to reverse this when their economies entered a protracted period of slow growth (**Figure 3.2**). Greece's excessive deficit is largely structural, but it remained hidden for several years due *inter alia* to a misclassification of military expenditure. Portugal strongly tightened fiscal policy after it was found to have breached the 3% limit in 2002, but is expected to again breach the limit in 2005. Both Italy and Portugal are poised to enter the EDP this spring.[6]

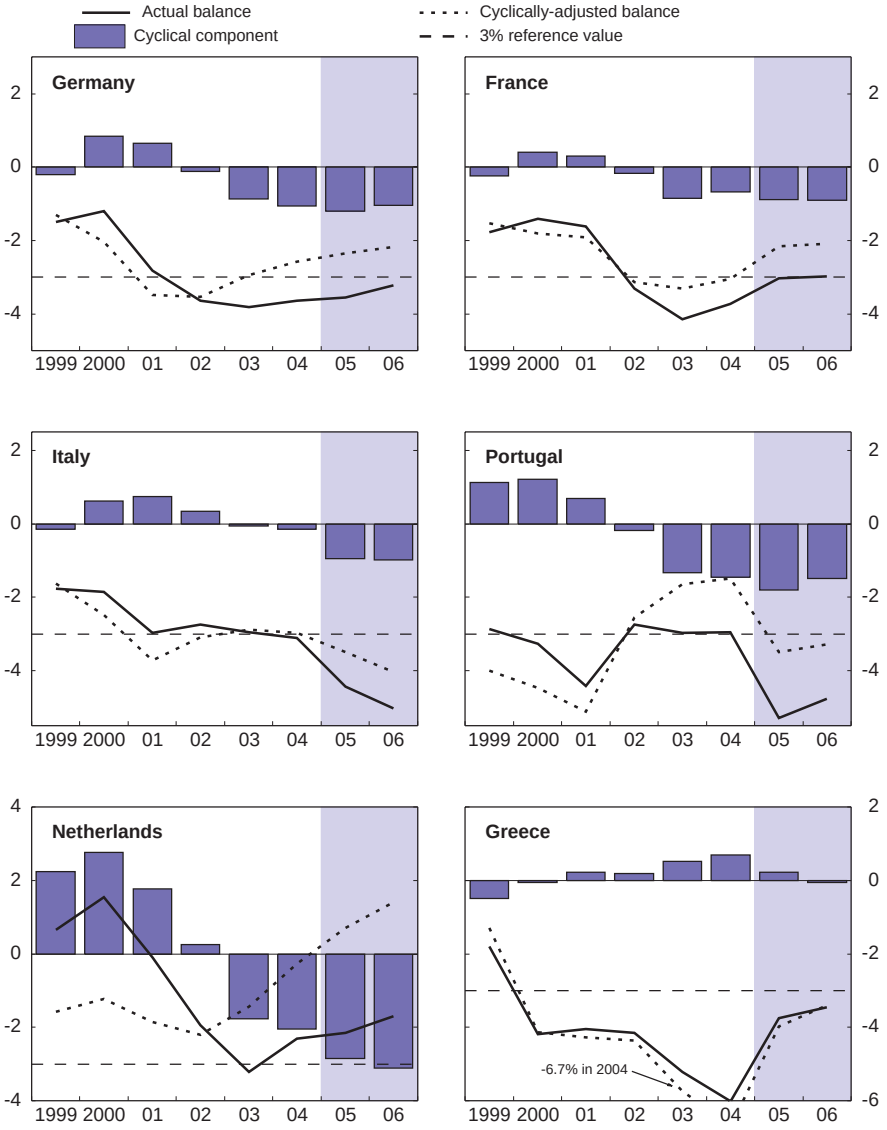
133. The question of why fiscal behaviour changed for the worse when the Pact came into force, and why this affected larger countries more than smaller ones, is pertinent. To answer this question, it is important to underscore the profound change in regime the Pact represented. There are several dimensions to it (Buti and Giudice, 2002; Buti and van den Noord, 2004a; de Haan *et al*., 2004):

- The Treaty rules in force since 1993 set clear deadlines for moving to the final stage of EMU. Countries that were willing to join the euro area in the first wave had no choice but to make the required consolidation effort to meet the Maastricht convergence criteria in accordance with the timetable. The convergence criteria became the centrepiece of government strategies in most EU countries, with the 3% of GDP deficit criterion providing a visible benchmark for success, especially in countries which entered the 1990s with high deficits and debt.

- The incentive structure crucially changed with the move to the single currency. The only "stick" left to the EU authorities was the less tangible risk of uncertain and delayed pecuniary sanctions and loss of reputation. Since the SGP stipulated that fiscal positions have to be close to balance or in surplus "over the medium run", there was no clear timetable for compliance. As noted, the Council remedied this shortcoming by its agreement in March 2003 to commit countries to meet the close-to-balance or in surplus rule in cyclically-adjusted terms each year. However, the jury is still out as to whether this measure has actually changed fiscal behaviour.

Figure 3.2. Fiscal policy indicators

Per cent of actual/potential GDP[1]



1. Actual balance excludes UMTS licence proceeds and is in per cent of GDP, cyclically-adjusted balance is in per cent of potential GDP and the cyclical component is the difference between the two.

Source: OECD, *Economic Outlook* No. 77 database.

134. At first sight it may be puzzling why the larger countries were more prone to this change in behaviour than most of the smaller ones. With hindsight this may be less surprising. A number of issues stand out.

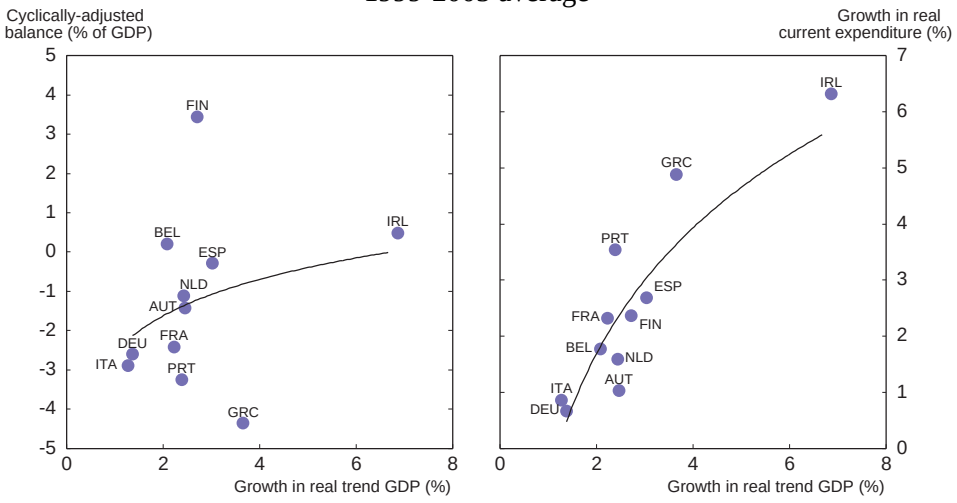
135. *First*, the Maastricht convergence criteria were strongly supported by Germany and France. Germany regarded macroeconomic stability as an essential precondition to accept dilution of its monetary sovereignty. France was keen to satisfy the German demands, as it had *de facto* given up monetary sovereignty by pegging its currency to the Deutschemark and expected to recover some of this loss via its voice in the common monetary policy. However, with the advent of the euro the political ownership of the rules shifted towards the smaller countries, whose fiscal positions were sound in most cases but had less weight in the surveillance process.

136. *Second*, the timing of general elections in the major countries has surely played a role. Germany and France held general elections in 2002 and Italy in 2001. In the run-up to these elections fiscal policy was considerably eased, spurred also by favourably biased fiscal positions – owing to the UMTS licence proceeds and revenue windfalls stemming from the economic upswing of the late-1990s. Econometric evidence shows that the fiscal rules embedded in the Pact did not curb the political business cycle in the euro area (Buti and van den Noord, 2004b). The shift towards "short-termism", typical in the run-up to general elections, also weighed on the peer pressure process, as illustrated by the lack of support in the Council for an "early warning" procedure against Germany and Portugal in February 2002 when these countries were found at risk of breaching the 3% limit (**Box 3.1**).[7]

137. *Third*, it is easier to keep structural fiscal balances in check if the economy is growing fast. In the period 1999-2005 trend growth was only 1½ per cent per year on average in the three major countries against 3¼ per cent in the smaller countries (**Figure 3.3**, left panel). Econometric work provides evidence that fiscal consolidations are more likely to be successful if trend economic growth is high (von Hagen *et al*., 2002a). Many smaller countries were able to maintain relatively robust growth in public expenditure while keeping their fiscal deficits in check (**Figure 3.3**, right panel).

Figure 3.3. Trend growth and fiscal policy

1999-2005 average



Source: OECD, *Economic Outlook* No. 77 database.

138. *Fourth*, there are political economy reasons why country size matters for fiscal behaviour. Fiscal multipliers are typically larger in the major (less open) countries; hence fiscal activism pays. Partly for this reason, it may prove more difficult to gain political acceptance of external fiscal rules in larger countries than in small ones (Buti and Pench, 2004). Moreover, large countries typically maintain electoral systems that are wholly or partially majoritarian, implying that a single political party or stable coalition of parties will normally have the absolute majority in Parliament. This will likely entail a strong political mandate for the government, at least initially (this mandate can be vulnerable to a shift in majority in local elections). In such a system the finance minister is normally vested with strong discretionary power which indeed is the basis for his authority. Such a political system may be less receptive to a rules-based fiscal framework (Hallerberg *et al*., 2004). By contrast, small countries typically maintain proportional electoral systems which commonly lead to coalition governments with varying compositions. The budget minister's hands are often tied by a written agreement among the political parties participating in the coalition; hence rules-based fiscal policy is rather common and external rules are more easily accepted.

Sources of hidden deficit bias

139. Deficit bias essentially results from co-ordination failure: budgetary institutions may fail to internalise the externalities resulting from government spending, which is commonly targeted at specific groups in society while financed from taxes to which all taxpayers contribute. Governments that discount time more heavily than society does will be inclined to run down public assets (in the broadest possible sense, including the present value of future tax revenues) in order to finance the highest possible amount of present expenditure. Numerical fiscal rules will never entirely remove this incentive and may cause hidden forms of deficit bias. Such hidden deficit bias may take several forms. The ones considered here are growth optimism, favourable cyclical adjustment and one-offs or creative accounting.

140. Perhaps the commonest form of circumventing a deficit rule is for the government to forecast relatively robust GDP growth, which boosts projected receipts and helps contain estimates of some types of projected spending. In the period 2001-03 growth projections were undershot by as much as 1½ percentage points on average each year and fiscal positions turned out on average each year more than 1% of GDP worse than those projected in the stability programmes (OECD, 2004). The downturn and the extent of its impact on fiscal outcomes contained a genuine element of surprise (OECD projections for the euro area in 2001-03 overestimated growth by on average ¾ per cent per year)[8] and shortfalls associated with the turnaround in stock markets may have been particularly large (Jaeger and Schuknecht, 2004; Girouard and Price, 2004). Even so, there is evidence that euro area governments burdened with large deficits deliberately presented a too favourable picture in their stability programmes (Milesi-Ferretti and Moriyama, 2004).

141. A more sophisticated form of hidden bias concerns cyclically-adjusted flows rather than headline fiscal balances. It has involved the use of favourable methodologies and assumptions in the estimation of potential output.[9] As a result, fiscal policy stances turned out easier (and structural deficits higher) than they looked when projections were made (Larch and Salto, 2003; Jonung and Larch, 2004). This phenomenon was one of the motivations for the European Commission to pursue its own estimates of potential growth and cyclically-adjusted budget balances.

142. A third way to formally meet, or to come closer to meeting, deficit rules is to add a more favourable gloss to the reported fiscal position by one-offs and creative accounting, affecting headline as well as cyclically-adjusted fiscal balances. Accounting conventions usually leave some room for judgment. Governments may be tempted to take advantage of this wriggle room when fiscal rules bite or threaten to do so, through:

- Cuts in public investment projects that carry a high social return, which deprive taxpayers from prime investment opportunities and hence represent a net cost to society;
- Cuts in operations and maintenance spending which, unless they seek to achieve efficiency gains, lead to faster wear and tear of public infrastructure;
- Shifting expenditures and revenues over time, typically by accelerating the collection of future tax liabilities or postponing the payment of subsidies or benefits;
- Real estate transactions, insofar as they are driven by a desire to replenish the treasury;
- Eating into the net present value of contributions and benefits of an entitlement programme, such as public pensions, *e.g.* by forcing a public pension scheme to lend to the government at favourable rates.

143. In practice, several of the above accounting elements may be combined. For example, the privatisation of a public agency may be motivated in part by the possibility to cut down outlays on operations and maintenance, to bring revenues forward in time (by cashing the present value of future user fees) and to cut public investment. Such operations may disconnect the accounting relationship between the fiscal deficit and debt; von Hagen and Wolff (2004) find evidence that since 1998 "stock-flow" adjustments (increases in public debt unrelated to the deficit) have been systematic. Koen and van den Noord (2005) find evidence of a large incidence of one-offs and creative accounting operations (**Table 3.2**). In many cases the (large) amounts involved were eventually included in the headline fiscal deficit. However, they were usually omitted in the deficits as reported in the "first notifications" used in the Commission's assessments of the stability programmes, and in the case of, for example, misreported military expenditure in Greece remained "hidden" for several years.

144. The observed shift from overt to hidden deficit bias does not argue against fiscal rules. Fiscal rules may foster genuine fiscal consolidation if the social cost attached to window-dressing is high and the probability of the true nature of these measures being discovered is also high (Milesi-Ferretti, 2000). This calls for strong surveillance by the authorities vested with this responsibility, namely the Commission. Against this backdrop, some observers have suggested putting the surveillance process in the hands of a high level group of fiscal experts, nominated by the European Parliament to underpin their independence and legitimacy (Buiter, 2003; De Haan *et al.*, 2003). The experts group would have the right to make its judgment public and declare a member state in excessive deficit. However, it is not obvious that creating a new institution side by side with the Commission would make a fundamental difference. Others have argued to set up national independent budget agencies or task existing ones to perform independent audits and to report to the experts group (Annett *et al.*, 2005 and Wyplosz, 2005).

Table 3.2. **One-offs, "creative accounting" operations and reclassifications affecting the fiscal balance**[1]
In per cent of GDP

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Austria	0.1	0.5	0.5		0.1			0.3			
Belgium	0.4	0.2		0.9					0.3	0.2	1.9
Finland		1.3		0.3	0.3			0.3			
France		0.2		0.3	0.5		0.1				
Germany					0.2						
Greece	3.7	0.5	1.7	1.3	2.8	1.9	1.8	3.4	2.6	3.4	2.8
Ireland	0.4			0.5	0.4			0.4	0.4	0.7	
Italy	0.9	0.6	0.7	0.4	1.4				0.7	0.9	1.7
Luxembourg									1.8		
Netherlands	1.1	1.1	0.9	0.4	0.1						
Portugal		0.7	1.0		0.5	0.2			0.6	1.7	2.3
Spain	1.3		0.4	0.4	0.4						0.3
Denmark			0.1		0.2						
Sweden	0.2	0.2	0.5		0.6	0.9					
United Kingdom					0.6	0.3					

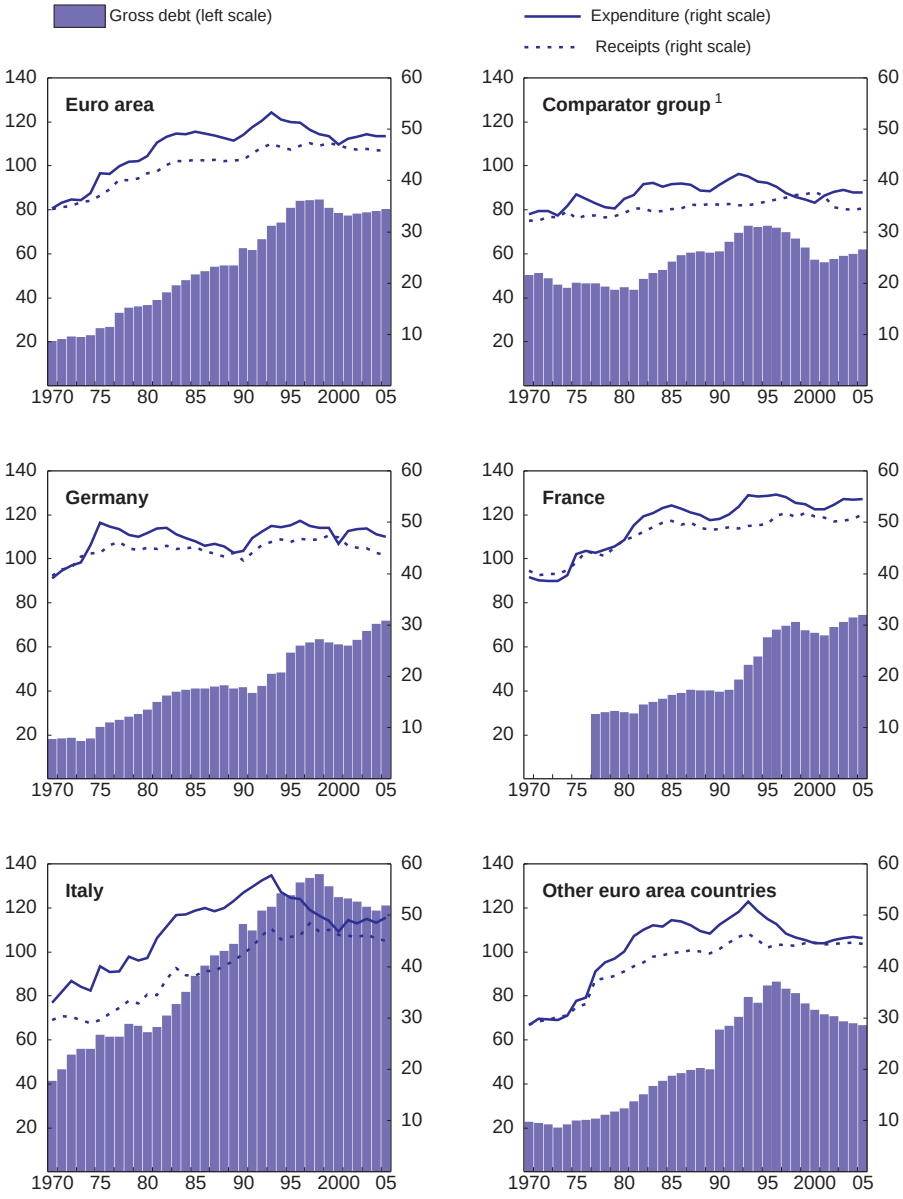
1. Abstracting from UMTS license receipts, operations amounting to less than 0.1% of GDP and one-offs that temporarily worsen rather than improve the recorded fiscal position.
Source: Koen, V. and P. van den Noord (2005), "Fiscal Gimmickry in Europe: One-off Measures and Creative Accounting", *OECD Economics Department Working Papers*, No. 417, OECD, Paris.

Upward expenditure pressure

145. Although the Pact was not designed to contain expenditure or taxes (both are considered to be subject to the subsidiarity principle given that the relevant decision power is vested at the national level), it may nevertheless be instructive to examine their evolution. Having risen steadily over several decades the ratio of public spending to GDP has declined modestly from its peak in 1993, but progress stalled during the 2001-03 downturn (**Figure 3.4**). The reduction in the expenditure to GDP ratio since the mid-1990s largely reflects "one-offs" which mask more persistent underlying pressures on public spending. Most importantly, debt-servicing costs fell as interest rates converged to the low German level. This phenomenon was especially important in countries with high initial debt to GDP ratios – *i.e.* Italy, Belgium and Greece (**Figure 3.5**).

Figure 3.4. General government accounts

Per cent of GDP

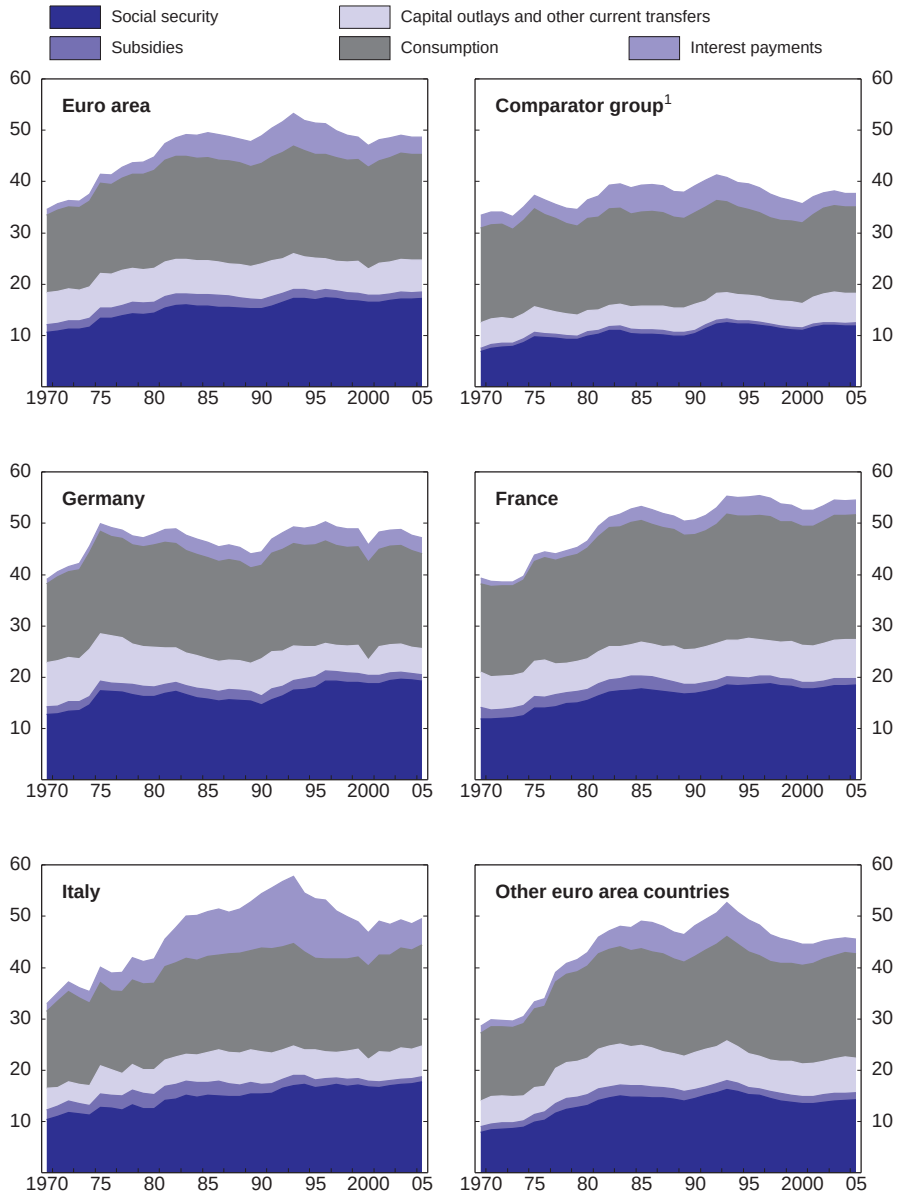


1. Includes Australia, Canada, Denmark, New Zealand, Sweden, United Kingdom and United States.

Source: OECD, *Economic Outlook* No. 77 database.

Figure 3.5. General government expenditure by economic category

Per cent of GDP



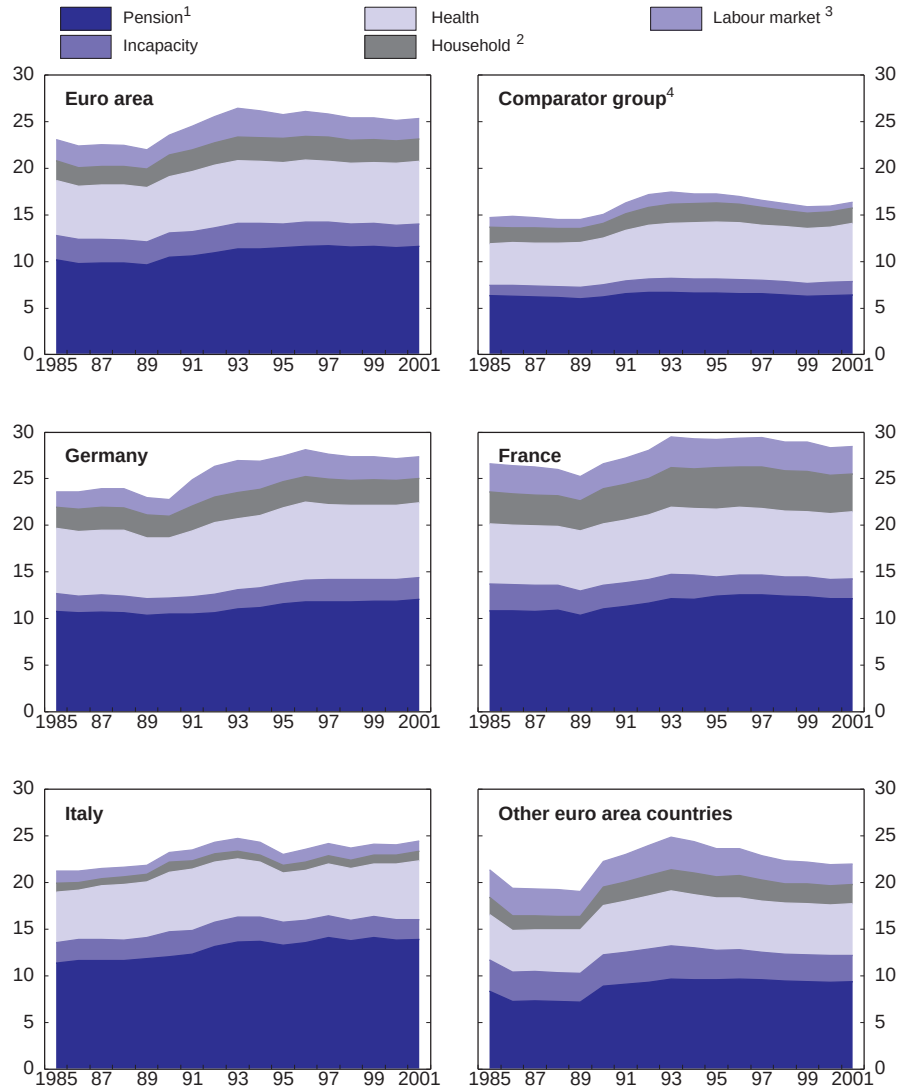
1. Includes Australia, Canada, Denmark, New Zealand, Sweden, United Kingdom and United States.

Source: OECD, *Economic Outlook* No. 77 database.

146. The decline in primary expenditure as a ratio of GDP has been much less pronounced, and has also benefited from one-offs, such as public enterprise restructuring, the "peace dividend" in the wake of the collapse of the Soviet Union, wage freezes and deferral of capital outlays. Meanwhile, demands on social transfer systems have remained intense (**Figure 3.6**). Demographic pressures, early retirement, disability and unemployment programmes are still being used as a means of premature exit from the labour force (Chapter 4). In the health care sector, technological changes and increased demands for access to the new forms of care they generate have added to the upward pressure from population ageing. Public education spending has also continued to rise.

Figure 3.6. Public social expenditure

Per cent of GDP



1. Old-age and survivors' benefits.
2. Family, housing and other social expenditure.
3. Unemployment benefits and active labour market policies.
4. Includes Australia, Canada, Denmark, New Zealand, Sweden, United Kingdom and United States.

Source: OECD (2004), Social Expenditure database.

147. The proximate causes for this upward drift in expenditure reside in the growing demands for public spending as income per capita grows, the fiscal impact of demographics and calls on the government to protect groups that are vulnerable to shocks in economic activity. Why public expenditure in the comparator group of countries in the OECD has been much less affected by these forces may give a clue about the fundamental causes (Figures 3.5 and 3.6). Aside from demographic developments, which have been more favourable for public finances than in the euro area, "differences in culture and social preferences" certainly are important. But, in addition, in these countries labour is much more geographically mobile, and this may restrict tendencies towards excessive government spending and taxation.[10]

148. Looking ahead, euro area countries are set to experience a significant ageing of their population. This will result in rising dependency ratios and a further sharp increase in demography-related expenditure. Even on optimistic assessments it will be very challenging to contain the tax burden, but the cost of failing to do so will be high. This is all the more challenging as the tax burden in the euro area is already very heavy by OECD standards. Tax revenues average 40% of GDP, with ratios of around 45% observed in Austria, Belgium, Finland and France. In a globalising economy with highly mobile capital and outsourcing to low wage countries becoming an attractive option for labour-intensive activities, euro area governments are under increasing pressure to contain the tax burden. Expenditure control will thus become the key to fiscal sustainability.

149. Since long-run sustainability of public finances is a growing concern of member countries, reflecting this concern in the EU fiscal rules would in principle enhance their legitimacy. A key question is to what extent the close-to-balance or in surplus rule is consistent with the requirement of long-term sustainability of public finances in view of the increase in ageing related public spending. Analytical work reported in the previous OECD *Economic Survey* of the euro area, suggests that the fiscal policy rule prescribed in the SGP – *i.e.* balanced budgets or small surpluses of about ½ per cent of GDP – is the minimum needed during the transition period to the new demographic steady state until around 2020. In fact this rule may be far too lenient for some countries and perhaps too tight for others. The upshot is that for the close-to-balance or in surplus rule to be consistent with the sustainability criterion for all countries, it will have to be converted into a set of country specific rules. As discussed below, the recent reform of the Pact indeed goes in this direction.

Stronger budget institutions at the national level

150. The following institutional features have been identified as crucial for effective expenditure control and sustainability (Blondal, 2003):

- *Medium-term budgetary frameworks*. Budgets are enacted for one year and are notorious for their short-term focus. Medium-term budgetary frameworks serve to clearly state the government's targets – such as the level of revenue, expenditure and the balance for several years – beyond the fiscal year. These should result in hard budget constraints for individual ministries and programmes. Obviously changes could be made on the way, but it is imperative that such changes be clearly identified and explained.

- *Prudent macroeconomic projections*. Deviations from the projection of key macroeconomic variables underlying the budget pose a key fiscal risk. Great care must be taken in making these projections and disclosing them. The establishment of an independent body to provide the economic projections to be used in the budget may be considered.

- *Top-down budgeting*. The traditional bottom-up principle of budgeting means that agencies and spending ministries submit requests for funding to the Finance Ministry which are negotiated until some common ground is found. This process has an inherent bias for increasing spending because new programmes or expansion of existing programmes are funded by new requests rather than by reallocation within the spending ministries. This manner of budgeting is being abandoned progressively and replaced with a top down approach, but it can take considerable time to establish because of the entrenched traditions that work against it.

151. Other requirements for effective expenditure control include: *i)* relaxing micro management at the top to encourage efficiency gains; *ii)* using results-based management to hold managers accountable; and *iii)* enhancing budget transparency. According to the OECD's *Best Practices for Budget Transparency*, governments should outline the fiscal projections in a pre-budget statement several months prior to the release of the government's budget proposal, provide explicit detail on contingent liabilities, and use the annual financial statements as a compliance report for accountability purposes to be certified by a national auditor.

152. Initially, the EU fiscal rules were intended to serve as a safety net for "gross errors", on the presumption that national governments build up budget institutions that prevent deficit bias in the first place. Countries that have been experiencing the smallest deficit bias are, indeed, generally those that have the most solid budget processes (Von Hagen *et al.*, 2002b). Based on an extensive survey, updating earlier work by von Hagen (1991), Hallerberg *et al.* (2004) find evidence that the EU fiscal rules have contributed to the adoption of better budget institutions among the member states. Starting points at time of the inception of the EU fiscal rules were very different, but there has been a distinct convergence towards best practice. For example, countries that scored poorly on implementing hard-budget constraints and top-down budgeting in 1991 (most small countries and Italy), scored close to or above average in 2001. Similar observations can be made for other aspects of budget institutions, such as the information content and transparency of the budget, the consistency of the budget with long-term constraints and the possibility of parliament influencing the execution of the budget once adopted.

153. However, this (again) indicates that progress has been strongest among the smaller countries (**Box 3.2**). Moreover, countries still differ considerably with respect to their ability to control state and local government spending and deficits – although several have adopted "state or local stability pacts" (Belgium, Germany, Italy and Spain).

Box 3.2. Reform of budget institutions

Budget reforms have mostly concerned the smaller euro area countries:

- Starting in 1996 *Ireland* introduced multi-annual budgeting, whereby the consequences of budgeting decisions for the next two years have to be taken into account. The budget process starts with an annual "Estimates Circular" that calls upon the spending departments to make expenditure demands complying with these targets. The role of the finance minister is to negotiate adjustments of the individual demands to ensure consistency with the overall targets.

- In *Belgium* important steps were taken while turning the country into a federal state. The High Council of Finance, which includes representatives of the regions, the central government, the central bank and outside experts, sets fiscal targets for each level of government. Since 1992 it has played an important role of monitoring the compliance of all parts of government with Belgium's convergence programmes and became the enforcing agent of a fiscal contract that involved all levels of government.

- *The Netherlands* adopted a multi-year budgeting framework in 1994, covering the cabinet term in office. Expenditure ceilings are determined for each year in real terms for the central government budget. Spending overruns have to be compensated by lower expenditure on other items within the same sector. Windfalls may be spent only to the extent that they do not result from better than expected cyclical conditions. Revenue windfalls or setbacks fully affect the fiscal balance except if the deficit came close to the Maastricht Treaty's 3% ceiling, which would call for discretionary fiscal tightening.

- In *Spain* the convergence criteria were written into local government agreements in the 1990s. Targets for the annual budget deficit are derived from macroeconomic forecasts and proposed by the finance minister to the cabinet, which takes a decision on these targets. The finance minister checks the consistency of the spending ministries' bids with the numerical targets set by the cabinet.

- *Austria* and *Finland* also changed their budget processes significantly in the mid-1990s in the pursuit of the fiscal convergence criteria of the Maastricht Treaty, and broadly along the same lines.

- To address endemic overspending of local governments, *Italy* largely abolished the grant system and gave regions a larger share of tax collections in 1992, while local election procedures were changed to increase the accountability of local politicians to their constituencies. At the national level the former budget ministry was incorporated in the treasury, which received a leading role in the budget process. The budget process was reorganised, making it harder for committees and legislators to introduce additional spending into the budget proposal. However, a switch to a multi-year budget framework has not yet been made.

- In *France*, stringent controls exist at the State level, but this represents only 35% of total spending. While the State covers revenue shortfalls of the social security system, the administration of the system is in the hands of the social partners, and neither the government nor the social partners have the exclusive means to control spending. This feature, coupled with the mandatory and politically sensitive nature of social security spending, is a recurring source of conflict between the government and the social partners. It severely complicates the government's capacity to engineer a reallocation of outlays or a reduction in overall spending levels.

- In *Germany* budgetary institutions are traditionally strong, but federal relations make it difficult to find the necessary political consensus for fiscal reforms, often involving complicated mediation processes between the two chambers of Parliament, whose outcomes are hard to predict.

Reforming the Pact

154. Calls to reform the Pact, notably to make it more "flexible" by allowing more country differentiation in the implementation of the rules, have proliferated in recent years. Some of these calls have been motivated by the specific needs of the new member countries, which need to fill large public infrastructure gaps but have generally more favourable public debt positions than the existing euro area countries.[11] Others have been motivated by concerns over the distortions emanating from the Pact, as it could discourage structural reforms with an up-front fiscal cost.

155. Some observers have argued in favour of the "golden rule".[12] The golden rule splits the government appropriation account into a current account and a capital account, and obliges the government to maintain at least a balanced current account, while allowing it to borrow for net investment. However, a salient feature of the golden rule is that it will only result in sustainable public finances if simultaneously some prudent rule for the development of net debt is satisfied. This is how the golden rule is applied in the United Kingdom: the public sector is allowed to borrow for net investment provided that the ratio of net debt to GDP stays below 40%. Most euro area countries fail to satisfy this net debt criterion; hence, if adopted in combination with this criterion, the golden rule would remain a dead letter in the euro area. In addition the golden rule may give rise to distortions and induce creative accounting.

156. Other rationales for countries to be allowed to run larger deficits on a temporary basis have also been put forward. First, structural reform may yield long-term economic gains but entail up-front costs. The estimates of the benefits from structural reform are often uncertain whereas the immediate political and budgetary costs – such as compensation schemes to offset redistributive effects – are perceived with greater precision. This information asymmetry may hamper structural reforms, especially with regard to labour market reforms which entail the highest up-front costs. Allowing governments to run temporary deficits to finance structural reform may therefore be welfare enhancing (Beetsma and Debrun, 2005).

157. Similarly, a move towards privately funded pension schemes would lead to deficits in the public scheme but initial surpluses in the private schemes as contributors transfer to them. Pre-funding public schemes is a more "SGP friendly" option as it would generate surpluses in the public scheme. However, such a pre-funding strategy for public pensions has several disadvantages (IMF, 2003). Most importantly, it does not directly address the adverse efficiency and distribution problems inherent in large-sized public pension schemes and it also raises governance issues. The upshot is that the momentum for efficiency enhancing pension reforms is not necessarily helped by the close-to-balance or in surplus rule. More flexibility in interpreting this rule would yield a less distorted incentive structure.

158. In September 2004, the Commission put forward a proposal that encapsulates most of these concerns (EC, 2004). It aimed to enhance the political ownership of the rules by the member countries, while strengthening the surveillance and enforcement by the Commission. Specifically:

- To raise the "ownership" of the rules, their implementation would become more tailor-made, giving greater weight to the debt criterion (as opposed to the deficit criterion) and long-term sustainability. Moreover, the up-front budgetary costs of countries' structural reform (including pension reform) would be taken into consideration when assessing the fiscal situation. The interpretation of the exceptional circumstances clause and the adjustment path towards compliance with the rules after a breach would both become more lenient.

- The Commission hoped to offset the asymmetric incentive balance by introducing a dissuasive mechanism in the hands of the Commission: it would issue an "early warning" also in good times, if a country fails to take out insurance against bad times. It also urged member countries to enhance the quality and transparency of their budgetary statistics – surely not a luxury given the recent embarrassing record of some countries.

159. In the Commission's view, the interpretation and implementation of the SGP would thus increasingly move away from year-by-year compliance to focus on the longer term, which is welcome because it allows for more flexibility in the short run while taking better account of the government's inter-temporal budget constraint. There has been resistance to suggestions made by some member countries apparently seeking to exclude certain expenditure items – such as R&D, public investment or contributions to the EU budget – from the relevant deficit measure. The reform that was eventually adopted by the European Council in March 2005 went a long way towards adopting the Commission's proposal (**Box 3.3**).

160. Under the heading "Improving the implementation of the excessive deficit procedure", the Council has decided to grant a waiver under the EDP to countries on the basis of "exceptional circumstances". According to the Treaty, "other relevant factors" shall be taken into account by the Commission in its report triggering the excessive deficit procedure, but those "factors" were not specified. In its new incarnation, the Pact does specify these factors and the conditions under which they are taken into account. Although phrased in coded language in the agreed text, these are well understood to include high levels of public expenditure for R&D, development aid, the cost of German unification and contributions to the EU budget. The new Pact stipulates that the Council will take these factors into consideration in each step of the procedure, except for the abrogation. However, for these "other relevant factors" to be taken into account, the excess over the reference value must be temporary and the deficit must remain close to the reference value. In addition, the definition of a "severe economic downturn" has been modified from "an annual fall in real GDP of at least 2%" to "a negative growth rate" or a "protracted period of very low growth relative to potential growth". However, again, the excess over the 3% of GDP reference value should be temporary and the deficit ratio must remain close to that value.

161. Aspects that have attracted less attention are the provisions to heighten the surveillance of the fiscal rules by the EU authorities ("improved governance") and to reinterpret the close-to-balance or in surplus rule so as to make it tailor-made for individual countries ("strengthening the preventive arm"). Yet these are the elements that are best underpinned by economic rationale and therefore welcome. Meanwhile, the Council's room for judgement concerning the application of the rules has been made more explicit.

162. One fundamental lesson from the recent episode is that the fiscal rules need to focus on the prevention of fiscal slippage in upturns while ensuring that fiscal policy remains anchored in medium- and long-term objectives. The excessive deficit provisions in the Treaty in principle offer the necessary "stick" to induce fiscal discipline, provided that these are credibly enforced in a pre-emptive fashion. This requires not only that the surveillance capacity of the competent authority is sufficiently strong, but also that enforcement is impartial. With the reform the only potentially effective instruments currently available are moral suasion, peer pressure and negative publicity.

163. Inevitably, the burden of enforcement shifts from the European to the national level – except in extreme cases of fiscal misbehaviour. This requires stronger enforcement mechanisms at the national level. The obvious question then is whether euro area countries are ready to assume this responsibility. The observed progress in national budget institutions is encouraging, but it is not evident that all sources of fiscal profligacy have been removed.

Box 3.3. Council decisions in March 2005

On 20 March 2005 the Council of Finance Ministers (*Ecofin*) reached agreement on a review of the implementation of the SGP. Its conclusions were endorsed by the European Council on 22-23 March and spelled out in the Presidency Conclusions.[1] The agreement maintains the nominal anchors of the Pact – the 3% of GDP reference value for the deficit and the 60% of GDP reference value for general government gross debt – which are enshrined in the Treaty. However, the implementation of the Pact would be changed in important respects, under three headings:

- *"Improved governance"*. The Council acknowledges the need to improve the reliability of fiscal statistics and projections and proposes a number of measures in this regard. It highlights the need to strengthen "peer pressure and peer support" at the euro area level carried out in the Eurogroup and the need to develop national budgetary rules and institutions that are complementary to the EU fiscal rules. Countries are also invited to incorporate fiscal targets endorsed by the Council on the basis of the previous update of their stability programme in the current update, even if there has been a change in government on the way. Finally, to raise political ownership of the rules, countries are committed to submit their stability programme or Council opinions thereon for a reading to their national parliaments.

- *"Strengthening the preventive arm"*. The Council recognises that the past failure to reach the medium-term budgetary objective of close-to-balance or in surplus calls for a strengthening of the preventive arm. In this context, the Council decision mentions that the draft Constitutional Treaty will provide the Commission with the right to launch an "Early Warning" if it considers that there is a risk of an excessive deficit. However, since there is no legal basis for it for the time being, the Commission is encouraged to issue "policy advice" to prompt fiscal adjustment if needed. Meanwhile, the interpretation of the close-to-balance or surplus objective itself has become more flexible in three respects. *First*, countries with low debt and/or high potential growth will be allowed to target a cyclically-adjusted deficit – net of one-off and temporary measures – of 1% of GDP. However, implicit liabilities will not be taken into consideration in this context until an "appropriate" methodology to estimate these is agreed by the Council. *Second*, while the adjustment towards close-to-balance or in surplus must amount to ½ per cent of GDP per annum in cyclically-adjusted terms and net of one-offs and other temporary measures, some variation is allowed dependent on the cycle (the adjustment should be more ambitious in "good times" and may be "more limited" in "bad times"). *Third*, countries are allowed to temporarily deviate from close-to-balance or in surplus, or the adjustment path towards this objective, if there is a need to finance the upfront cost of structural reform or a move towards a multi-pillar old-age pension system that includes a mandatory, fully-funded pillar is underway.

- *"Improving the implementation of the excessive deficit procedure"*. Based on the principle that the EDP is "to assist rather than to punish", it modifies the interpretation of the procedure as laid down in Article 104 of the Treaty. First, the Council redefines "a severe economic downturn" that may qualify countries for a waiver as "a negative growth rate" or a "protracted period of very low growth relative to potential growth", as opposed to "an annual fall of real GDP of at least 2%" as stipulated in the original provisions. *Second*, the Council now explicitly defines "other relevant factors" that may qualify a country in breach of a waiver. These include a country's efforts to pursue the Lisbon agenda, to foster R&D or "a high level of financial contributions" to fostering the "unification of Europe" and "international solidarity" (development aid). Consideration would also be given to pension reforms. *Third*, the deadline for correcting an excessive deficit after its identification would be extended from one to two years if "special circumstances" can be identified. All these provisions, however, apply only if "an excess over the reference value is temporary" and if the deficit ratio "remains close to the reference value", as stipulated in Article 104(2) of the Treaty.

1. Council of the European Union, *Presidency Conclusions*, 7619/04 CONCL 1, Brussels, 23 March 2005.

NOTES

1. The Pact stipulates that a deficit above 3% is not excessive if real GDP has fallen by 2% or more. The Ecofin Council may also grant a waiver if GDP has fallen by less than 2% in view of the abruptness of the downturn or the accumulated loss of output relative to past trends, but member states have committed themselves not to invoke this possibility if the drop in GDP is less than 0.75%.

2. The excessive deficit should be corrected in the year following its identification by Eurostat unless there are special circumstances. If, in the opinion of the Ecofin Council, a state fails to take sufficient measures to correct an excessive deficit, and after giving a further notice it may impose measures, including the obligation of a deposit with the Commission. The SGP specifies that this deposit initially consists of a fixed amount equivalent to 0.2% of GDP and a variable amount equal to one tenth of the difference between the actual deficit and the reference value, with an upper limit of ½ per cent of GDP. If the subsequent year shows again an excessive deficit, another deposit according to the same formula for the variable amount can be required. If after two years the excessive deficit is still found to exist, the deposit will "as a rule" be converted into a fine. The fine and the interest on the deposit will be distributed among the other member states according to their share in area wide gross national product (not GDP).

3. This was subsequently codified in the euro area section of the 2003-2005 Broad Economic Policy Guidelines.

4. The Commission challenged these Council decisions before the European Court of Justice, which ruled that – while the Council was found to have made a procedural mistake – the Treaty entrusts the Council with the legal authority to exercise discretion on the EDP.

5. With hindsight the following statement by Eichengreen and Wyplosz (1998) proved to have prophetic value: "Our assessment is that enforcement of the pact will be relatively loose, but still tight enough to affect some member states' deficits. EU officials will be reluctant to levy fines and lose goodwill. Member states will be reluctant to incur fines and suffer embarrassment. As in most EU affairs, a negotiated settlement just acceptable to both sides is the likely outcome. EU decision-makers will compromise, allowing the 3% ceiling to be violated. Governments will compromise, eliminating deficits that egregiously violate the Stability Pact. They will modify their fiscal policies just enough to avoid forcing their neighbours to impose fines."

6. On 7 June 2005 the Commission adopted a report pursuant to Article 104(3) of the Treaty indicating that Italy has not fulfilled the Treaty requirements concerning the deficit and debt criteria.

7. The three major countries are again facing general elections in 2006-07, and this may explain some of their reticence to embark on major fiscal consolidation in the near term.

8. This is based on the projections for the Economic Outlook put together in the autumn of the year before the forecasting year.

9. Specifically, Hodrick-Prescott filtering of real GDP, coupled with "back to average growth" forecasting, has provided euro area policy-makers with an overly rosy estimate of potential output growth and structural budget positions during the upswing of the late 1990s, hiding the extent of underlying fiscal fragility (Cotis *et al.*, 2005). The mechanics are as follows. When projections for the stability programme were made in the late 1990s and early 2000s, actual growth typically exceeded trend growth. Actual growth was projected to return to trend growth towards the end of the projection period. The "end point"

GDP level subsequently fed into the estimated potential output, with the resulting output gap close to zero at the end of the projection period.

10. This benign form of tax competition is different from "harmful" tax competition that is discriminatory or aims to capture mobile tax bases by enabling companies or individuals to reduce their tax liability without actually moving their residence away from a jurisdiction with high public provision (OECD, 2001).

11. Only Cyprus, Malta and Hungary have debt levels around or exceeding 60% of GDP.

12. Article 104(3) of the Maastricht Treaty stipulates that: "If a Member State does not fulfil the requirements under one or both of these [debt and deficit] criteria, the Commission shall prepare a report. The report of the Commission shall also take into account whether the government deficit exceeds government investment expenditure and take into account all other relevant factors, including the medium term economic and budgetary position of the Member State." According to some interpretations (viz. Blanchard and Giavazzi, 2003), this would leave open the possibility of adopting a golden rule.

BIBLIOGRAPHY

Annett, A., J. Decressin and M. Deppler (2005), "Reforming the Stability and Growth Pact", *IMF Policy Discussion Papers*, No. PDP/05/2, Washington.

Beetsma, R. and X. Debrun (2005), "Implementing the Stability and Growth Pact: Enfrocement and Procedural Flexibility", *IMF Working Papers*, No. WP/05/59, Washington.

Bernoth, K., J. von Hagen and L. Schuknecht (2004), "Sovereign Risk Premia in the European Government Bond Market", *ECB Working Paper Series*, No. 369, June, Frankfurt am Main.

Blanchard, O. and F. Giavazzi (2003), "Improving the SGP through a Proper Accounting of Public Investment", paper presented at seminars on the Stability and Growth Pact organised by the Bundesbank and DIW-Berlin, revised version, February.

Blondal, J.R. (2003), "Budget Reform in OECD Member Countries: Common Trends", *OECD Journal on Budgeting*, Vol. 2, No. 4.

Buiter, W.H. (2003), "Ten Commandments for a Fiscal Policy Rule in the EMU", *Oxford Review of Economic Policy*, Vol. 19, No. 1.

Buti, M. and G. Giudice (2002), "Maastricht Fiscal Rules at Ten: An Assessment", *Journal of Common Market Studies*, Vol. 40.

Buti, M. and L. Pench (2004), "Why Do Large Countries Flout the Stabilty Pact? And What Can Be Done About It?", *Journal of Common Market Studies*, Vol. 42, Nr. 5.

Buti, M. and P. van den Noord (2004a), "Fiscal Policy in EMU: Rules, Discretion and Political Incentives", *Moneda y Crédito*, No. 218.

Buti, M. and P. van den Noord (2004b), "Fiscal Discretion and Elections in the Early Years of EMU", *Journal of Common Market Studies*, Vol. 42, No. 4.

Cotis, J.-P., J. Elmeskov and A. Mourougane (2005), "Estimates of Potential Output : Benefits and Pitfalls from a Policy Perspective", in Reichlin, L. (ed), *The Euro Area Business Cycle: Stylized Facts and Measurement Issues*, CEPR, London.

De Haan, J., H. Berger and D. J. Jansen (2003), "The End of the Stability and Growth Pact?", *CESifo Working Papers*, No. 1093, Munich.

De Haan, J., H. Berger and D. Jansen (2004), "Why Has the Stability and Growth Pact Failed?", *International Finance*, Vol. 7, Nr. 2.

Eichengreen, B. and C. Wyplosz (1998), "The Stability Pact: More than a Minor Nuisance?", *Economic Policy*, No. 26.

EC (European Commission) (2002a), "Production Function Derived Output Gains", *Information Note to the Members of EPC*, ECFIN/528/02, Brussels.

EC (2002b), "Strengthening the Coordination of Budgetary Policies", *Communication by the Commission*, COM(2002)668, Brussels.

EC (2004), "Strengthening Economic Governance and Clarifying the Implementation of the Stability and Growth Pact", *Communication by the Commission*, COM(2004)581, Brussels.

Girouard, N. and R. Price (2004), "Asset Price Cycles, 'One-off' Factors and Structural Budget Balances", *OECD Economics Department Working Papers*, No. 391, OECD, Paris.

von Hagen, J. (1991), "A Note on the Empirical Effectiveness of Formal Fiscal Restraints", *Journal of Public Economics*, Vol. 44, No. 2.

von Hagen, J., A. Hughes Hallett and R. Strauch (2002a), "Quality and Success of Budgetary Consolidations", *in* Buti, M., J. von Hagen and C. Martinez-Mongay (eds), *The Behaviour of Fiscal Authorities: Stabilization, Growth and Institutions*, Basingstoke: Palgrave.

von Hagen, J., A. Hughes Hallett and R. Strauch (2002b), "Budgetary Institutions for Sustainable Public Finances", *in* Buti, M., J. von Hagen and C. Martinez-Mongay (eds), *The Behaviour of Fiscal Authorities: Stabilization, Growth and Institutions*, Basingstoke: Palgrave.

von Hagen, J. and G. Wolff (2004), "What do Deficits Tell Us About Debts? Empirical Evidence on Creative Accounting with Fiscal Rules in the EU", *CEPR Discussion Paper Series*, No. 4759.

Hallerberg, M., R. Strauch and J. von Hagen (2004), "Budgeting in Europe after Maastricht: Patterns of Reform and their Effectiveness", *Hacienda Pública Española – Monografia*, 2004.

IMF (International Monetary Fund) (2003), "Ageing and the SGP", in *Euro Area Policies: Selected Issues, IMF Country Report*, No. 03/298, September.

Jonung, L. and M. Larch (2004), "Improving Fiscal Policy in the EU: the Case for Independent Forecasts", *European Economy – Economic Papers*, Nr. 210, Brussels.

Jaeger, A. and L. Schuknecht (2004), "Boom-Bust Phases in Asset Prices and Fiscal Policy Behavior", *IMF Working Papers*, No. WP/04/54, Washington.

Koen, V. and P. van den Noord (2005), "Fiscal Gimmickry in Europe: One-Off Measures and Creative Accounting", *OECD Economics Department Working Papers*, No. 417, OECD, Paris.

Larch, M. and M. Salto (2003), "Fiscal Rules, Inertia and Discretionary Fiscal Policy, *European Economy – Economic Papers*, Nr. 194, Brussels.

Milesi-Ferretti, G.M. (2000) "Good, Bad or Ugly? On the Effects of Fiscal Rules with Creative Accounting", *IMF Working Paper*, No. 00/172, Washington.

Milesi-Ferretti, G.M. and K. Moriyama (2004), "Fiscal Adjustment in EU Countries: a Balance Sheet Approach", *IMF Working Paper*, No. 04/143, Washington.

OECD (2001), "Tax and the Economy", *OECD Tax Policy Studies*, No. 6, OECD, Paris.

OECD (2004), *OECD Economic Surveys: Euro Area*, Vol. 2004/5, OECD, Paris.

Wyplosz, C. (2005), "Fiscal Policy: Institutions Versus Rules", *National Institute Economic Review*, No. 191, January.

Chapter 4

Going for growth and resilience

Structural policy settings have to be improved to make the euro area more resilient against adverse shocks and to boost its potential growth. This chapter discusses the policies that have shaped the euro area's short- and long-term growth as well as the policy changes that would boost growth performance. It focuses on labour market policies and the need to better integrate services markets, which are still largely segmented by country and hence leave important growth opportunities unexploited. Improving the framework conditions for innovation is also important for boosting growth. The final section quantifies the potential benefits from sustained structural reform in the aforementioned domains.

Enhancing the functioning of labour markets

164. Since the oil shocks in the 1970s and with the global recessions in the early-1980s and 1990s, the unemployment rate in the euro area has been ratcheting up from 2% of the labour force to around 10%. Since then, the unemployment rate has been on a modest downward trend, but the variation in unemployment performance across euro area countries has remained large. Strikingly, the euro area countries with a strong labour market performance are all small countries.

165. Several key features of labour market institutions in the euro area are particularly prone to raising the persistence of high unemployment (Blanchard and Wolfers, 2000; Daveri and Tabellini, 2000; Elmeskov *et al*., 1998):

- *Long duration of unemployment benefits* reduce search intensity and raise the bargained wage at a given rate of unemployment, which combine to increase the level and duration of unemployment.

- *Strict employment protection legislation* decreases the flow of workers through the labour market and again increases the duration of unemployment. This makes for a more stagnant labour market, with a higher proportion of long-term unemployed.

- *Collective bargaining* reflects primarily the preferences and labour market prospects of prime age workers and hence mutes the response of wages to unemployment.

- *Wage floors stemming from high unemployment benefits and a high minimum wage* perpetuate high unemployment of the young and low-skilled. Because the minimum wage mostly affects these groups, any effect of unemployment on wages fails to draw them back into employment.

- The high *tax wedge on labour* which is needed to sustain high social expenditure has detrimental effects on both labour demand and supply.

Transcending national interests

166. There are signs that change is slowly occurring. This is reflected in a modest fall in structural unemployment and, more significantly, increases in employment rates. For example a recent econometric study (Mourre, 2004) detects a structural break in aggregate employment in the euro area in the late-1990s, explained by lower labour tax rates, less strict EPL and a shift towards services. However, there remains a large gap with the ambitions of the *Lisbon Strategy* (**Table 4.1).** In order to achieve the target for the employment rate of 70% by 2010, it would have to increase by almost a percentage point per annum from 2004 onwards, which looks unrealistic in view of the record to date. While no targets were formulated for youth unemployment, its sharp rise in recent years is clearly at odds with the spirit of the Lisbon Strategy. By contrast, increases in the employment rates for older and female workers have continued even during the economic downturn, and the relevant targets for 2010 look attainable.

167. A critical report on progress towards achieving the Lisbon objectives, drawn up in 2004 by a high-level experts group chaired by former Dutch Prime Minister Wim Kok, attributes mixed progress to "a lack of sense of political urgency among the EU-member states". While acknowledging the impact of adverse developments in the international economic environment since 2000, the Kok Report notes that Lisbon's "disappointing delivery is due to an overloaded agenda, poor coordination and conflicting priorities." This suggests that the resistance to far-reaching labour market reform has remained deep, notably in the larger euro area countries where labour market institutions have been less under strain from globalisation forces than in the smaller euro area countries (Bertola, 2004). Apparently the "open method of co-ordination" adopted by the Lisbon Process has had limited success, even though the subsidiarity principle was meant to be two-way: too much centralisation is suboptimal but so is the attachment to national prerogatives that make reaching a commonly agreed goal difficult (Pelkmans and Casey, 2004; Sapir *et al.*, 2003).

Table 4.1. **Key EU labour market targets and indicators**

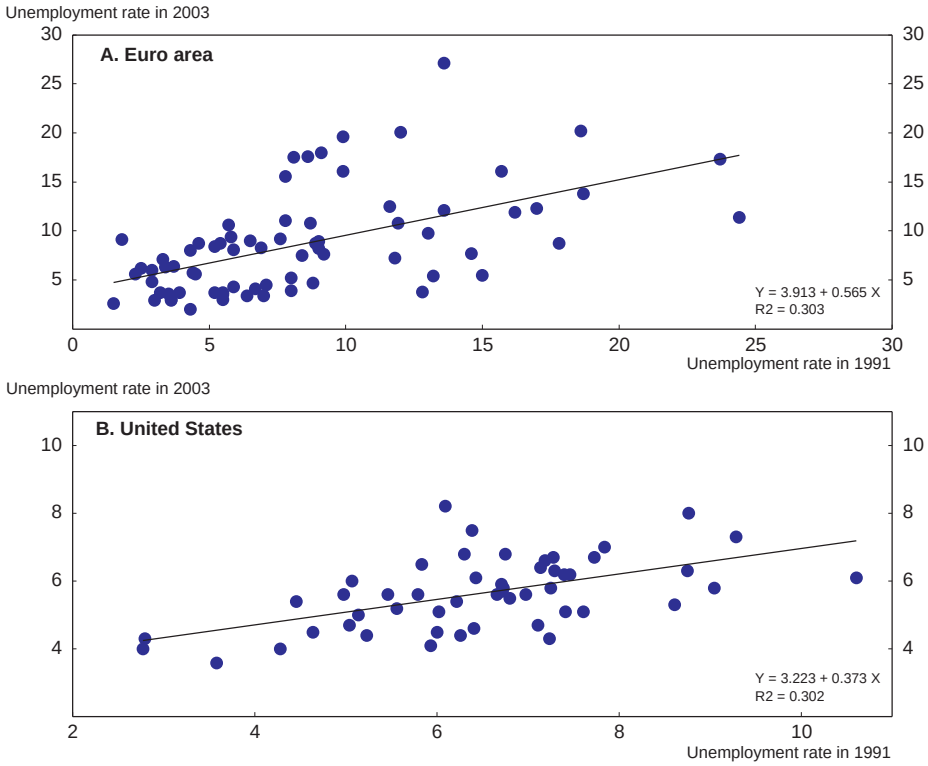
	EU benchmark	1997	2001	2003
Targets				
Employment rate				
Total	70% (2010 - Lisbon)	60.5	63.9	64.4
Age 55-64	50% (2010 - Stockholm)	36.3	38.5	41.5
Female	60% (2010 - Lisbon)	50.6	54.9	56.1
Indicators				
Unemployment rate				
Total	2.7% (average 3 best performers)	10.1	7.4	8.1
Long-term	0.8% (average 4 best performers)	5.1	3.3	3.6
Youth (15-24)	8.4% (average 3 best performers)	21.1	14.0	15.5
Female	3.0% (average 3 best performers)	11.7	8.7	8.9

Source : European Commission.

168. Yet the functioning of labour markets should be considered as a "club good", as there are spill-over effects on the economic performance of the area as a whole. A comparison with the United States is illuminating. The dispersion of unemployment rates among the US states occasionally spikes up during periods of economic stress, but returns relatively quickly to modest levels as imbalances unwind – helped by geographic labour mobility and to a lesser extent by changes in relative wages. By contrast, in the euro area the dispersion of unemployment rates across countries, and regions within them, proves to be much more persistent (**Figure 4.1**). Labour markets in the euro area are still segmented, country by country. Intra-area real wage adjustment in the face of shocks eventually occurs, but the lags are long, especially among the large euro area countries (Hoeller *et al*., 2004). Moreover, relative wages within countries respond only little, if at all. Removing the sources of persistence would promote the efficient allocation of labour resources and enhance the resilience to shocks (Allsop and Artis, 2003; Greenspan, 2004).

Figure 4.1. Persistence in regional unemployment[1]

In per cent of the labour force



1. NUTS 1 for the euro area except for Italy NUTS 2.

Source: European Commission/Eurostat; US Department of Labor, Bureau of Labor Statistics.

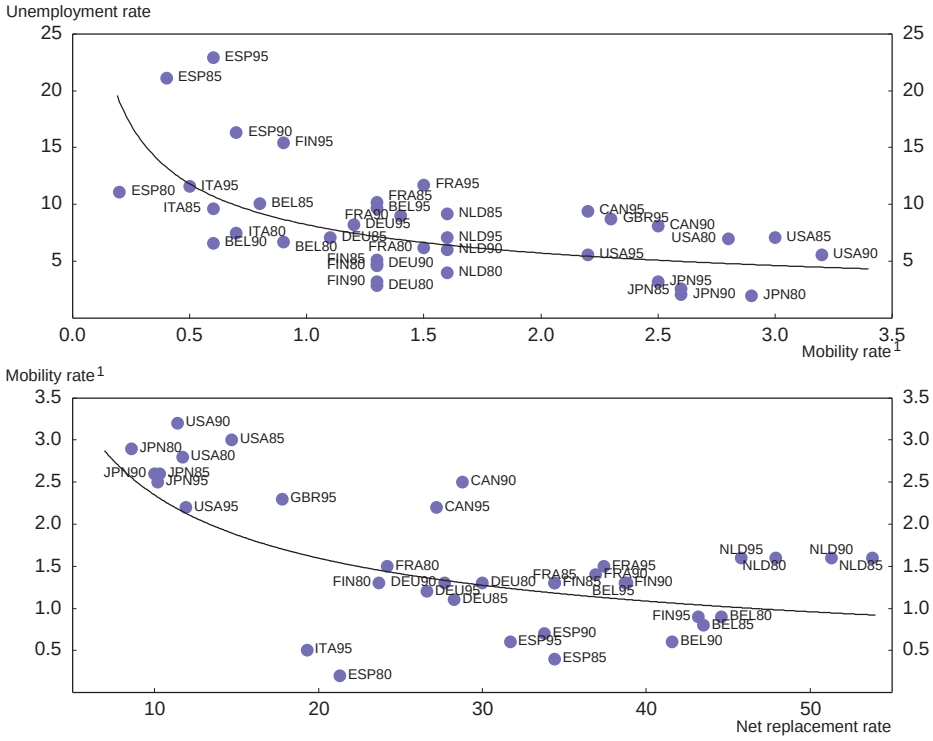
169. A number of policy issues related to the persistence of regional and cross-country dispersion stand out:

- Geographic labour mobility in the euro area is hampered, *inter alia*, by the social benefit systems in place. Generous unemployment insurance and social assistance impinge on both regional unemployment and mobility (**Figure 4.2**). Social benefits are typically linked to residency and the receipt of an unemployment benefit usually does not require the beneficiary to take up a job in a distant location. The lack of cross-border portability of benefit entitlements also affects mobility: most benefits are conditioned on contribution periods to a national system, reducing incentives to move cross border.

- Regional differences in unemployment persist because wages are not always in line with labour market conditions prevailing at the regional, local and firm level. In regions where productivity is low, but labour costs are bound by a national wage floor, returns to investment may be too low compared to other regions, thereby deterring capital inflows. Combined with low labour mobility, this contributes to divide regions, with some being more dynamic with high employment and others being less dynamic, with high unemployment.

- The objective of EU cohesion policy is to foster convergence by speeding up the catch-up of lagging regions, thus leaning against the institutional forces that tend to perpetuate dispersion. The experience to date suggests that the success of this policy is rather mixed and depends largely on synergy effects arising from effective human capital policy, a lean tax and benefit system and a high take-up of cohesion aid – the Irish catch-up experience being a case in point.

Figure 4.2. Geographical mobility, unemployment rates and unemployment insurance



1. Ratio of the total number of persons who changed region of residence over one year to the total population.
Source: OECD (2004), *OECD Economic Surveys: Euro area*.

170. To foster greater labour mobility in the European Union, the Commission adopted in 2002 an *Action Plan for Skills and Mobility*. The Action Plan aims to raise occupational mobility and to facilitate geographic mobility and the exchange of information. Initiatives include: the introduction of the European Health Insurance Card to facilitate health care provision for workers temporarily posted in another EU-member country (planned for June 2004, but still awaiting implementation); a review of the existing regulation on the co-ordination of social security schemes; and greater European cooperation in vocational education and training aimed at more transparency for the recognition of qualifications and competencies. Moreover, a pan-European Job Mobility Information Portal (EURES) – connecting and disclosing information of national public employment services – is being implemented.

171. However, aside from these useful pan-European initiatives, most key issues to be tackled remain in the remit of the member states. Against this backdrop, the assessment below focuses on national policy settings. It draws on ongoing work in the Secretariat in the framework of the OECD *Jobs Strategy* (OECD, 2004a). The main finding is that progress has been piecemeal in most countries, while virtually no progress has been made on the politically most sensitive reforms.

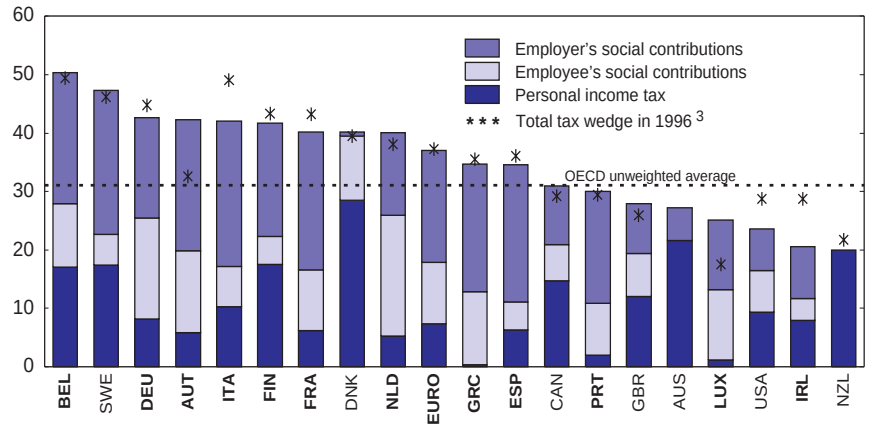
How can member countries contribute?

Slashing the tax wedge on labour

172. As has been extensively analysed in the framework of the OECD *Jobs Strategy* (OECD, 1995, 1999) the heavy taxation of wage earnings in the euro area drives a large wedge between the labour compensation as paid by employers and take-home pay per worker (**Figures 4.3 and 4.4**). To the extent that industrial relations, regulatory constraints or transfer schemes prevent the burden of this wedge from being borne by the workers, firms will be induced to scale back labour inputs (Daveri and Tabellini, 2000). This may take the form of substitution of (typically low-skilled) labour with other production factors, downsizing or outsourcing of activity to countries that offer lower labour costs for a given level of skills and competencies. At the same time, where tax and social security contributions are shifted back into wages they may generate disincentives to seek work or raise work effort. If tax enforcement is weak, firms and workers may drift into the "informal" economy.

Figure 4.3. Tax wedges on labour[1]

As a percentage of gross labour costs,[2] 2003



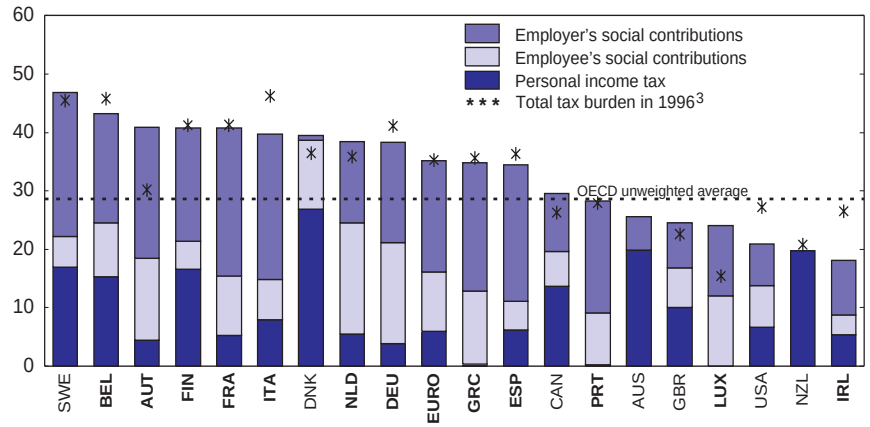
1. For a married couple with two children at the income level of 167% of an average production worker.
2. Gross wages plus employer's contributions.
3. Comparable data for Australia in 1996 is not available.

Source: OECD (2004), *Taxing Wages, 2003/2004*.

173. The cross-country variation in labour tax wedges is largely explained by the variation in social security contributions, most prominently employers' contributions. This is a concern as employers tend to bear the brunt of the incidence of their contributions. The reason is that higher employee taxes initially reduce the after-tax wage, as gross wages may be slow to respond, while, in contrast, employer payroll taxes will raise the labour costs of firms immediately. Therefore employers' contributions are expected to have stronger adverse employment effects than other forms of labour taxation, especially for workers for whom remuneration is close to the wage minima. Countries that rely mostly on employers' social security contributions – all euro area countries, except Ireland and Luxembourg – seem to have little scope for exploiting this tax base to a larger extent. Indeed, some countries have opted for cuts in such contributions, financed by a shift in the tax mix towards consumption taxes.

Figure 4.4. Tax burden on lower-wage earnings[1]

As a percentage of gross labour costs,[2] 2003



1. For a married couple with two children at the income level of 133% of an average production worker.
2. Gross wages plus employer's contributions.
3. Comparable data for Australia in 1996 is not available.

Source: OECD (2004), *Taxing Wages, 2003/2004*.

174. In most countries the statutory progressiveness of combined income and social security taxation is low at the higher end of the pay schedule. This is due, in most cases, to ceilings on social security contributions or tax deductibility of social security contributions offsetting part of the statutory progressiveness of income taxation. Another concern is that greater reliance on social security contributions, which are usually flat rated without a tax free threshold, can make it particularly unprofitable for employers to hire workers on a part time or temporary basis. In some countries (Austria, Spain) this problem is heightened by nominal floors in the social security system, with a fixed minimum amount of contributions levied irrespective of the number of hours worked or income earned. Importantly, as there has been increased reliance on social security contributions to finance the expanding social transfer systems, these mechanisms have become more pervasive over time.

175. To stimulate labour demand, several countries have reduced the wedge between the wage paid by the employer and the take-home pay of employees in recent years. Cuts in tax wedges at the average earnings level have been modest, but more pronounced for lower earnings. Some countries were frontrunners and cut labour taxes for low-paid workers already in the second half of the 1990s. This has been the case notably in France, Italy and Ireland, where cuts have been significant. Italy cut its employers' contributions, France both employees' and employers' contributions and Ireland its personal income tax and employees' contributions. However, the total tax wedge, including employers' social security contributions at average earnings levels still amounts to over 40% in the euro area. The tax wedge is generally lower in the best-performing countries, and in some by a considerable margin. The variation within the euro area remains substantial, ranging from more than 50% in Belgium and Germany to less than 30% in Ireland, the country that has the strongest job creation record in the euro area.[1]

176. Further reductions of the tax disadvantages to employment are clearly needed. Although recent reforms have been going in this direction, governments should aim to reduce the high tax wedges affecting low income earners – preferably combined with a cut in marginal taxes and broadening of the tax bases of those workers that are at the upper end of the income distribution to reduce tax planning and avoidance activities that go against objectives of both economic efficiency and equity. Such changes would be instrumental in raising the chances of lower skilled workers finding gainful employment while avoiding an increase in marginal tax rates of middle income earners.

Making work pay

177. The decision of an individual of working age to participate in the labour market occurs in two steps: whether to participate in the labour market at all and how many hours to work once working. Taxes may have important effects on both decisions, and the effects may differ markedly for main or single earners in a family, secondary earners or lone parents. Single or primary earners often have little choice about labour participation, hence normally work fulltime so that tax considerations should have little effect on their labour supply (though not so in quality since this depends on the return on human capital invested). However, this situation may change considerably as workers approach the age of retirement as there may be tax incentives to retire early. Secondary earners are likely to be particularly sensitive to taxation, both in their decision to work and in the number of hours worked, as they normally face a wider set of options. Importantly, in countries where the basis of taxation is the household, the marginal tax rate applying to the first unit earned by a secondary worker is equal to that of the last unit earned by the primary worker. In those countries, secondary earners' labour supply response to taxation crucially depends on their partner's earnings.

178. Concerns about disincentives to work associated with high tax rates, especially for low-skilled workers, have prompted several countries to introduce employment-conditional tax credits. The objectives of these credits (akin to in-work social benefits) are to increase both employment and the incomes of disadvantaged groups. The political attraction is that such policies aim to achieve both employment and distributional objectives. However, the evidence on their effectiveness is rather mixed on both counts (**Box 4.1**).

Box 4.1. Pros and cons of employment-conditional tax credits

Employment-conditional credits now exist in Belgium, Finland, France, Ireland and the Netherlands and, outside Europe, in Canada and New Zealand, following the example of the United Kingdom and the United States (**Table 4.2**). France introduced the *prime pour l'emploi* in 2001, which has a fixed element that depends on family composition and a variable element that increases with hours worked but falls as the hourly wage exceeds the statutory minimum wage (SMIC). It is similar to most schemes in that it has both a phase-in and phase-out provision, but unusual in that it is individual (although the family composition matters). Belgium introduced a similar tax credit based on the individual with a phase-in and phase-out range.

Employment-conditional tax credits may be expected to be effective in terms of encouraging labour market participation if combined with a minimum wage at a reasonable level, as this limits the extent to which the incidence of the tax credit might be transferred from the worker to their employer. Obviously this is most relevant in countries where labour supply rather than labour demand is a major bottleneck. Most European countries have a minimum wage (either statutory or as part of collective agreements). A drawback is that incentives for additional work effort at income levels in the abatement range are reduced. Careful design can help avoid this, but much depends on the shape of the earnings distribution – if this is narrow, the phase-out problem is markedly more difficult to deal with – as well as the overall level of taxation – if this is high, marginal effective rates in the phase-out range may become prohibitive. They also reduce the incentive for individuals to increase their human capital through training, as any increase in wage rates is offset in part by a reduction in benefit payment or tax credits.

Unfortunately, the empirical evidence on the success rate in terms of employment creation of employment-conditional tax credits is relatively limited. In the Unites States, the earned-income tax credit is generally found to promote employment, and this is also true for the Working Families' Tax Credit in the United Kingdom. Participation and hours worked rose and the number of households where nobody worked was reduced in the United Kingdom. However there is some evidence that two-earner families may become one-earner families as married women or married men drop out of the workforce, but the proportion of couples affected is very small and outweighed by the much larger positive labour supply impacts on lone parents and first earners in couples (Brewer *et al*., 2003). This is a consequence of linking credits to household income, and is less likely to occur in countries that base their credits on individual income (Bassanini *et al*., 1999). Linking credits to household income is, however, better from a distributional perspective.

The other main objective of employment-conditional tax credits is to redistribute income towards low-income individuals or households. However, often the very poorest are not reached. They do not usually have any earnings and so do not benefit from the policy until they find work. Those who tend to benefit most are lone parents. Moreover, employment-conditional tax credits also redistribute income to individuals who have high skills but choose to work less – in effect subsidising leisure of highly-skilled workers. Hence all considered, employment-conditional tax credits are probably helpful but not, on their own, the panacea. Reforming wage setting, stronger enforcement of job search requirements in unemployment insurance schemes, easing job protection legislation and better focused active labour market policies are indispensable complements.

Table 4.2. **In-work tax credits**
2001

	Target group	Non-wastable	Approximate maximum income increase (€/dollars)	Phase in	Phase out	Hours criterion
Belgium[1]	Individual	Yes	440	Yes	Yes	No
Canada (Quebec)[2]	Families	Yes	3 150	Yes	Yes	No
Finland	Individual	No	290	Yes	Yes	No
France[3]	Individual	Yes	230	Yes	Yes	No
Netherlands	Individual	No	920	Yes	No	No
Ireland[4]	Families	Yes	2 260 or more	No	Yes	Yes
New Zealand[5a]	Families	Yes	7 800	No	Yes	Yes
New Zealand[5b]	Families	Yes	780 per child	No	Yes	Yes
UK[6]	Families	Yes	6 150 or more	No	Yes	Yes
US[7]	Families	Yes	4 000	Yes	Yes	No

1. Reflects the situation in 2002, when the in-work credit was introduced.
2. Most Canadian provinces have a scheme similar to this. There are no Federal Make Work Pay programmes.
3. An individual tax credit which increases when gross income rises from 30% to 100% of the SMIC (minimum wage).
4. Equals 60% of the difference between net family income and an earnings limit. For a family with one child the weekly earnings limit is around €170. Figures given here reflect an assumption of hourly earnings of €5.33 and a 40 hour week; with lower earnings and hours, the maximum receipt could be higher.

5a. Family Tax Credit. The child carer must work at least 20 hours per week (lone parent) or 30 hours per week (combined hours for a couple with children). The maximum payment equates to the net income subsidy for a lone parent working 20 hours per week at the minimum wage, needed to reach the guaranteed minimum net income of NZD 15 080 p.a. in 2001.

5b. Child Tax Credit. The entitlement abates with family income after full abatement of the non work-tested Family Support, and is therefore available to many middle to higher income working families as well as to all low income working families.

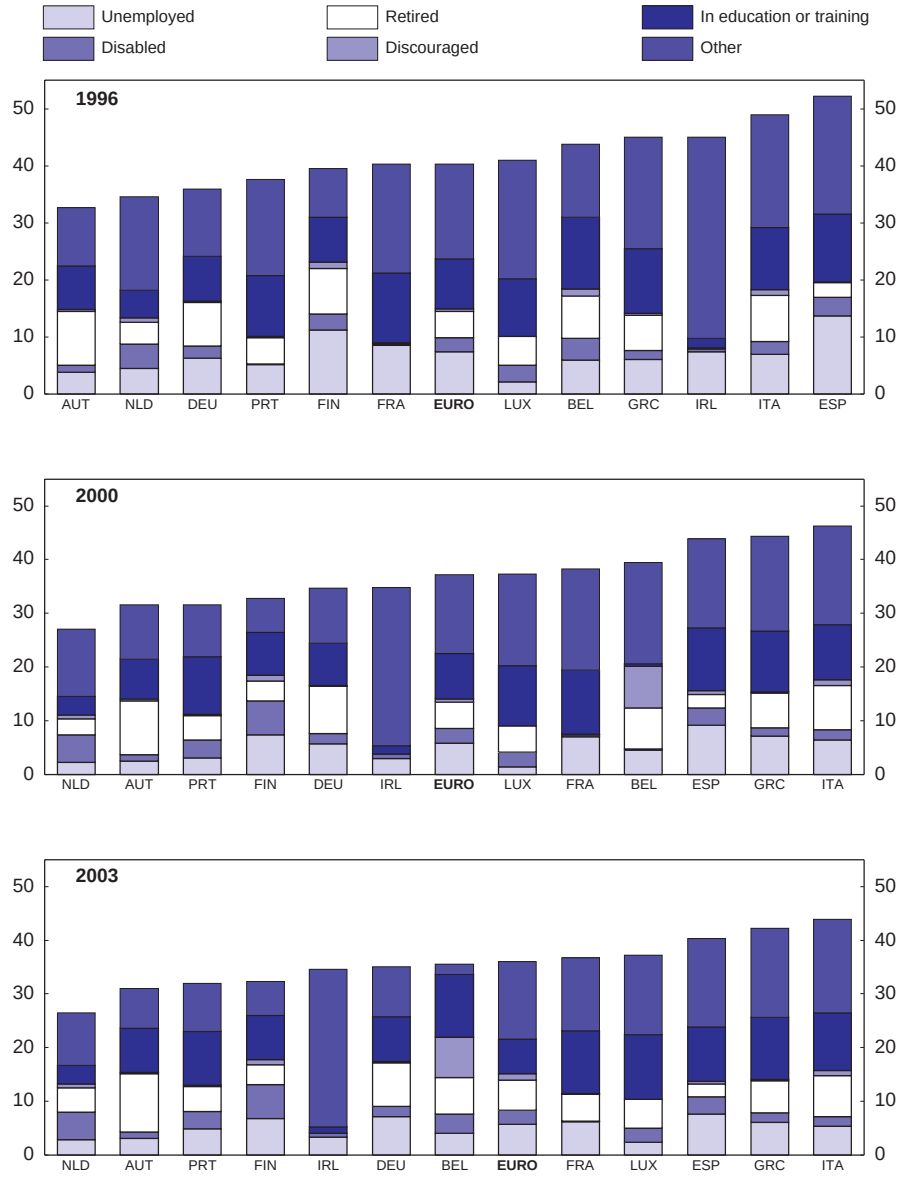
6. Working Family Tax Credit (replaced in 2003) was calculated by adding credits for adults and children and then deleting 55% of the difference between net income and £ 92.90 per week. The family is here assumed to have gross earnings of €5.33 per hour and a 40 hour week; with lower earnings and hours, the maximum receipt could be higher. Child-care supplements are ignored.
7. Earned Income Tax Credit (EITC). For taxpayers with two or more children, the credit is 40% of up to $10 020 of earned income in 2001. EITC reaches its maximum amount of $4 008. The credit starts to reduce in value when income exceeds $13 090 (at a rate of 21.06%) and phases out when it reaches $32 121.

Source: OECD Benefits and Wages database.

179. Early retirement is another area where the scope for making-work-pay initiatives in the euro area is large. According to Labour Market Survey data, of the 40% of the persons at working age who in 1996 were not working, more than a third reported to be unemployed, disabled or retired (**Figure 4.5**). According to the same source, in 2003 the total number of inactive had dropped to 37% of the working age population, but the share of unemployed, disabled or retired did not fall, remaining at 15% of the working age population. This suggests that the significant growth in labour supply registered over the past decade or so has stemmed largely from new labour market entrants, mostly female workers. Apparently, the observed increase in the employment rate of older workers in recent years has been offset by the growing weight of older cohorts in total labour supply.

Figure 4.5. Non-employment by category

Per cent of the working-age population



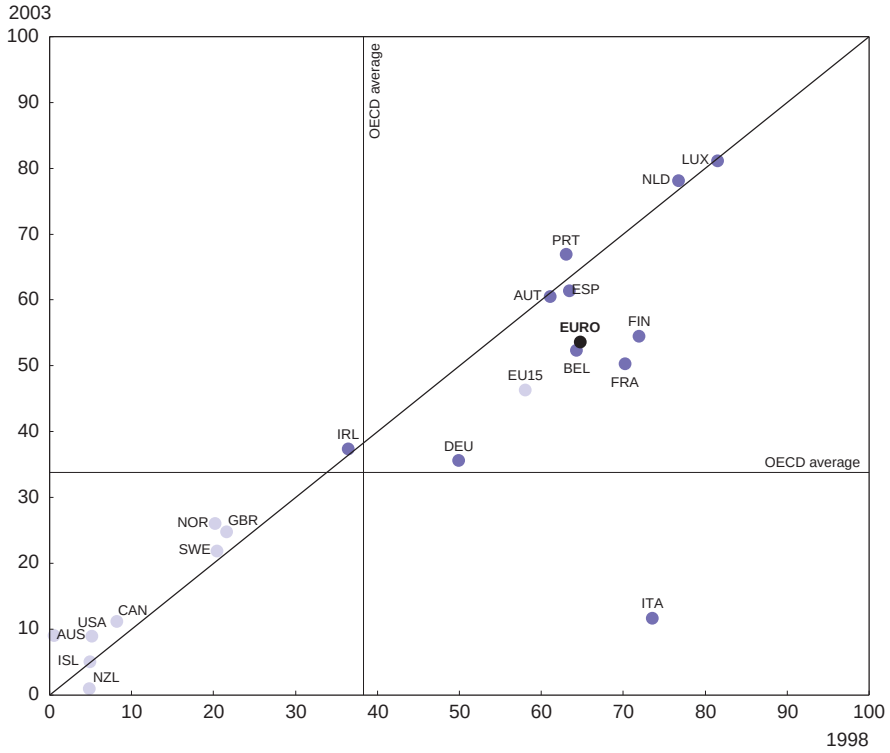
Source: Eurostat, *Labour Force Survey* and submission by the Belgian authorities for 2003 Belgian data.

180. This development corroborates findings that unemployment schemes, disability programmes and dedicated early retirement programmes often undermine work incentives, especially for older workers. This is again an almost exclusive feature of euro area countries. Recognising the adverse impact on labour supply and concerns prompted by population ageing, various countries reduced the financial disincentives to stay in the labour market, by tightening eligibility criteria to early retirement. Accordingly, the implicit tax embedded in early retirement schemes on continuing work of older workers has declined in the past ten years or so in many euro area countries, and most prominently so in the

countries where ageing is progressing fastest, *i.e.* Germany, Italy and Finland (**Figure 4.6**). However, concerning disability schemes there has been little action, and stronger efforts are required to reduce the incidence of subsidised inactivity significantly.

Figure 4.6. Implicit tax on continued work: early retirement[1]

Percentage of average worker earnings[2]



1. Average of implicit tax on continued work in early retirement route, for those aged 55 and 60.
2. Simple average of individual countries for the euro area (excluding Greece) and EU15 (excluding Denmark and Greece).

Source: OECD (2005), *Economic Policy Reforms: Going for Growth*.

Reforming wage setting

181. It is often hypothesised that the relationship between unemployment and real wage adjustment depends on the level of co-ordination of wage bargaining. Decentralised wage bargaining at the firm level is usually regarded as employment-friendly, preventing excessive wage claims since this would lead to a loss of market shares to competitors with detrimental effects on employment. At the other extreme, very centralised or coordinated bargaining systems induce bargaining parties to internalise the detrimental effects on employment that excessive wage pressure can have at the macroeconomic level.

182. Intermediate-level wage bargaining, on the other hand, would tend to yield the worst labour market outcomes, as it neither internalises the impact of wage demands on individual firms and local job prospects, nor of macroeconomic externalities associated with centralised wage bargaining. There is only weak empirical evidence that intermediate wage bargaining by itself would lead to worse labour market outcomes than other bargaining systems (OECD, 2005a). However, there is evidence that combined with

other labour and product market rigidities, intermediate bargaining contributes to high structural unemployment (Elmeskov *et al.*, 1998). These effects tend to be much stronger if the tax wedge is wide (Daveri and Tabellini, 2000).

183. Intermediate level wage bargaining is an exclusive feature of (most) euro area countries. Unlike in the United States or the United Kingdom, wage bargaining rarely takes place at the company or local level (**Table 4.3**). By contrast, the United States and the United Kingdom combine decentralised wage bargaining structures with low tax wedges, which is least detrimental to labour demand. Intermediate level bargaining is likely to have particularly detrimental effects in the presence of legal extensions of sectoral collective agreements, which are – again – an exclusive feature of most euro area countries.

Table 4.3. **Wage formation systems**

	Trade union density 2000	Collective bargaining coverage 2000	Predominant duration of agreements	Bargaining level[1]	Bargaining co-ordination[2]	Extension practice	Low pay regulation mechanism[3] 2000
AUT	37	95+	1 year	3	4	n.a.	Collective agreements
BEL	56	90+	2 years	3	4.5	High	National minimum wage ≈ 50% MW
DEU	27	84	2 years	3	4	Low	Collective agreements
FIN	76	90+	2 years	5	5	High	Collective agreements
GRC	27	. .	2 years	. .	. .	High	National minimum wage ≈ 50% MW
ESP	15	80+	3 years	3	3	High	National minimum wage ≈ 40% MW
FRA	10	90+	1 year	2	2	High	National minimum wage ≈ 60% MW
IRL	38	. .	2 years	4	4	Low	National minimum wage ≈ 60% MW
ITA	35	80+	Varying	2	4	High	Collective agreements
LUX	34	60+	Varying	. .	. .	None	National minimum wage ≈ 50% MW
NLD	23	80+	Varying	3	4	Moderate	National minimum wage ≈ 50% MW
PRT	24	80+	1 year	4	4	High	National minimum wage ≈ 35% MW

Table 4.3. **Wage formation systems** (*cont.*)

	Trade union density 2000	Collective bargaining coverage 2000	Predominant duration of agreements	Bargaining level[1]	Bargaining co-ordination[2]	Extension practice	Low pay regulation mechanism[3] 2000
DNK	74	80+	4 years	2	4	None	Collective agreements
SWE	81	90+	3 years	3	3	None	Collective agreements
GBR	31	30+	Varying	1	1	None	National minimum wage ≈ 40% MW
USA	13	14	n.a.	1	1	None	National minimum wage ≈ 35% MW

1. Centralisation:
   1 = Company and plant level predominant.
   2 = Combination of industry and company/plant level, with an important share of employees covered by bargains.
   3 = Industry-level predominant.
   4 = Predominantly industrial bargaining, but also recurrent central-level agreements.
   5 = Central-level agreements of overriding importance.
2. Co-ordination:
   1 = Fragmented company/plant bargaining, little or no co-ordination by upper-level associations.
   2 = Fragmented industry and company-level bargaining, with little or no pattern-setting.
   3 = Industry-level bargaining with irregular pattern-setting and moderate co-ordination among major bargaining actors.
   4 = a) Informal co-ordination of industry and firm-level bargaining by (multiple) peak associations.
   b) Co-ordinated bargaining by peak confederations, including government-sponsored negotiations (tripartitie agreements, social pacts), or government imposition of wage schedules.
   c) Regular pattern-setting coupled with high union concentration and/or bargaining co-ordination by large firms.
   d) Government wage arbitration.
   5 = a) Informal co-ordination of industry-level bargaining by an encompassing union confederation.
   b) Co-ordinated bargaining by peak confederation or government imposition of a wage schedule/freeze, with a peace obligation.
3. MW = median wage.

Source: OECD *Employment Outlook 2004*; CESIFO (2004), *Report on the European Economy*, Ifo Institute for Economic Research, Munich, Germany.

184. Reforms to bargaining structures have been very modest over the past ten years, with significant moves towards more decentralisation observed only in Belgium and Germany. There has been no movement in reducing relatively high statutory minimum wages which, as noted, are found to impinge on employment prospects for young and/or low-skilled workers. In Ireland, a relatively high minimum wage was introduced in 2000, but to alleviate possible adverse employment effects, sub-minimum rates were introduced for young workers. Progress towards more decentralisation and/or allowing greater regional dispersion of wage growth looks indispensable as a means to kick-start lagging regions where pockets of high unemployment persist. It would be especially beneficial in large countries where – unlike the smaller countries – regional diversity is high and each sector covers a comparatively large number of enterprises.

Easing labour market regulation

185. A certain degree of employment protection legislation (EPL) may smooth the reallocation of labour in response to changes in the industrial structure by buffering the impact on workers' income. It may also counteract the practice of seasonal industries to use unemployment insurance as part of the remuneration in what is effectively a continuing job. However, extensive EPL is susceptible to inefficiencies. It reduces both inflows and outflows from unemployment and as a result, the incidence of long-term unemployment is increased. This makes for a less dynamic labour market which compromises both the efficient allocation of labour and the capacity of economies to rebound from labour demand shocks. The efficiency costs of extensive EPL are particularly high in countries where wage bargaining is predominantly at the intermediate (sector) level (Elmeskov *et al*., 1998).

186. Over the past decade, euro area countries have generally maintained strict EPL for permanent contracts while easing EPL for temporary workers. Since temporary contracts involve few adjustment costs for firms, this liberalisation has helped to improve firms' hiring and restructuring, and may have improved the re-employment prospects of displaced and unemployed workers. However, it has also accentuated the duality of labour markets, and possibly raised real wage pressure insofar as unions pursue the interests of permanent workers. While keeping the stance of EPL broadly unchanged for permanent workers, the easing for temporary workers has been particularly marked in Belgium, Italy, Greece, Germany and the Netherlands. Spain moved the other way – tightening rules slightly for temporary workers after having liberalised them in the 1990s, while easing protection for permanent workers from a high level. Even so, Spanish EPL has remained comparatively high for permanent workers and low for temporary contracts.

187. The progress in reforming employment protection in the euro area over the past decade or so has thus been disappointing. Stringent EPL for insiders should be tackled, as the efficiency cost of stringent regulation is likely to have increased over time with the greater integration of the global economy (Bertola, 2004). Meanwhile, the liberalisation of EPL for temporary contracts without reducing protection for the permanently employed may help explain why real wage adjustment has remained sluggish in the euro area. National EPL being outside the remit of the European Union means that progress in easing EPL for permanent workers is predicated on the willingness to reform by the EU member states. The Community has issued various Directives concerning fixed-term contracts and temporary (agency) workers, including a Directive concerning the posting of workers from one EU country to another one (see below); but these mainly aim to prevent abuse of temporary workers, rather than tackling strict EPL for permanent workers. The resistance to reforming EPL for permanent workers in the euro area is deep, and the odds of significant change prompted by peer-review processes low.

188. By contrast, there have been some moves to increase working-time flexibility over the past decade. This involved more flexibility in the distribution of the maximum allowable working time over the year, which helps to diminish overall production cost, and the strengthening of the rights and possibilities for voluntary part-time work, which is attractive notably for female workers and young workers enrolled in higher education. Financial incentives to take up part-time work were substantially increased in Germany by strengthening part-time workers' entitlements to unemployment benefits and in France by adjusting the employment conditional tax credit (see above) so that it also benefits part-timers. The introduction of the 35-hour week in France made recourse to overtime more costly, but this constraint was eased subsequently. The EC Working Time Directive adopted in 1993 – which limits the working week to 48 hours per week including overtime averaged over a four month period, and contains provisions on night work and annual leave – is usually not binding in euro area countries where the statutory working time is low and the marginal cost of overtime high.

Strengthening active labour market policies

189. The effectiveness of active labour market policies (ALMPs) has been found to differ significantly between different types of programmes. Public job creation and wage subsidies often entail large dead-weight losses and substitution effects. Furthermore, any beneficial effects of ALMPs need to be weighed against the cost of the taxes required to finance them. Overall, public spending on active labour market policies in the euro area is comparatively high. Reforms over the past decade have concentrated on three broad areas: improving the performance of public employment services, testing of work availability and activation of the unemployed. However, few of the euro area countries went as far as Australia, Denmark, Sweden, Switzerland and the United Kingdom who have made benefit receipt dependent on participation in an activation programme.

Product market competition and labour market performance

190. Competition in product markets can have an impact on labour market performance via lower prices and rent sharing which stimulate employment and economic growth. Stronger competition may harden the bargaining position of employers and increase the employment costs of pushing wages higher, thereby leading to lower unemployment. It would also become less attractive to prolong and limit search for employment opportunities in "high wage" sectors. There may nevertheless be short-term adjustment problems, because increased competition may result in a labour shake-out.

191. Indicators of product market regulation indeed point to a reduction of regulatory impediments to product market competition since the late-1990s, with the most regulated countries moving towards the more liberal countries (OECD, 2005b). Much of the improvement in product market competition has been driven by the easing or elimination of command and control measures and price controls, a reduction of controls on public and private businesses, and the easing of barriers to trade and investment. However, progress in removing legal impediments to entry in sheltered sectors has been limited and privatisation modest. A hard core of regulations persists, in particular concerning barriers to entry in services. As long as these persist, there is unlikely to be any measurable effect of the stance of regulatory policies on better labour market performance and economic performance at large. The next section addresses this issue in more detail.

Integrating services markets

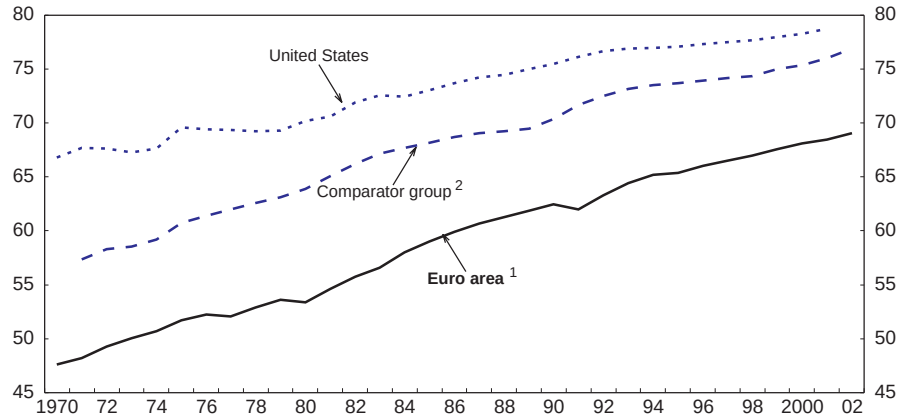
192. The primary aim of the Internal Market Programme is to open up national markets to competition within the European Union. In the early stage, the Programme focussed on eliminating non-tariff barriers to trade and investment by legislative means and mutual recognition of national regulation. Barriers to trade in goods have largely been removed – those that remain mainly concern complex products or where risks to health are a major concern. But barriers to the integration of services are still important. Removing these barriers would raise the euro-area's growth potential – indeed enhance the benefits from EMU – and heighten its resilience to shocks. And, of course, consumers would benefit from lower prices and improved quality of services, while new job opportunities would arise.

Why does it matter to integrate services markets?

193. Services, which have become increasingly important for growth and employment in all OECD economies (**Figure 4.7**), account for two thirds of total output and 68% of total employment, but exports represent only one-fifth of intra-euro area trade (but would be higher, if services provided by foreign affiliates are added). Greater integration of services markets in the internal market would provide opportunities for outsourcing and scale economies (Vogt, 2005). Services are even more important for job creation than their share of employment might suggest since the service sector has been steadily recruiting over the last three decades while the workforce has been shrinking in manufacturing and farming. Examples of the United States and the United Kingdom, where services account for an even higher share of employment, suggest that services still offer considerable job creation potential in the euro area.

Figure 4.7. Employment in services

As a share of total employment



1. Excluding Ireland.
2. Includes Australia, Canada, Denmark, New Zealand, Sweden and United Kingdom.

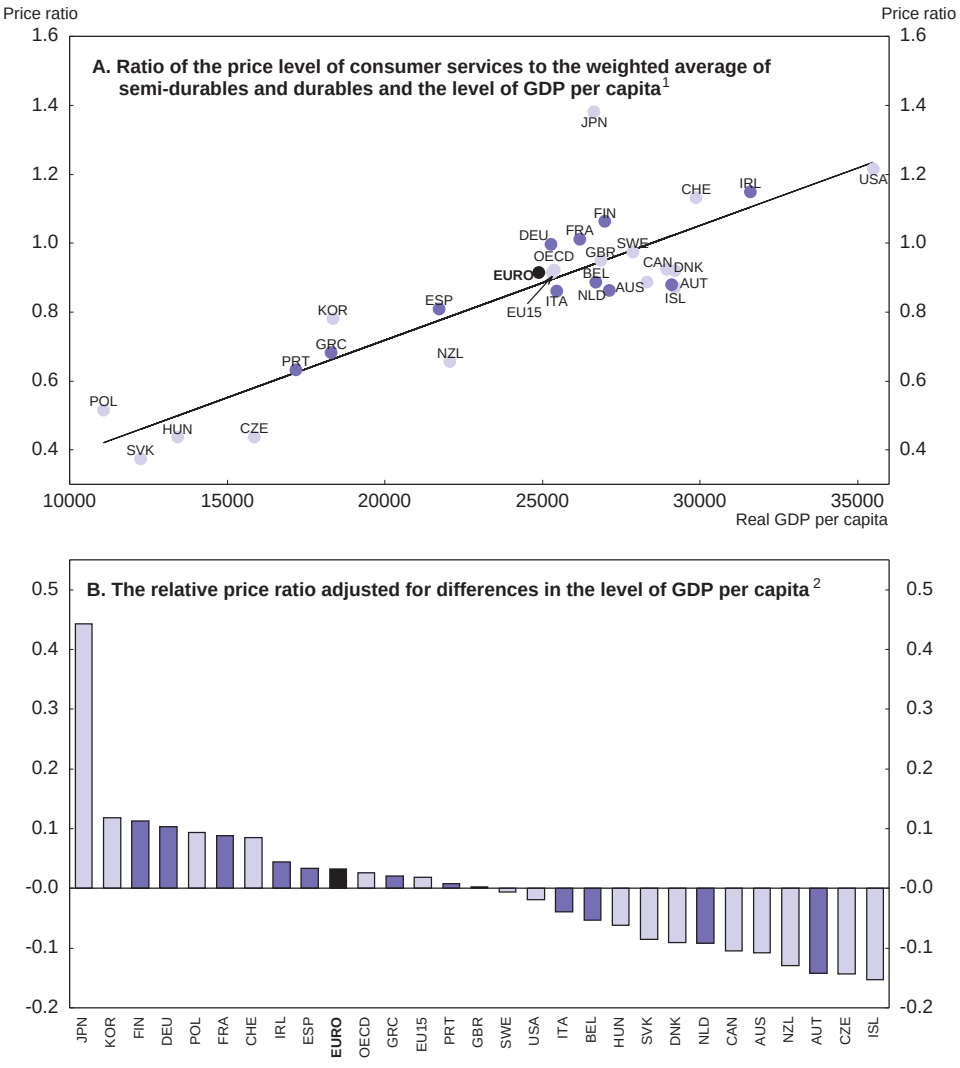
Source: OECD, STAN database.

194. The potential gains from the integration of services markets fall into two broad categories:

- *Welfare effects associated with the convergence of prices towards the best performers*. The wide dispersion of services prices in the euro area countries is an indication that a large scope for efficiency gains is being left unexploited (**Figure 4.8**). Comparatively high levels of services prices are found in Finland and France, Germany, Ireland and the lowest in Portugal. Adjusted for cross-country differences in per capita GDP, the country ranking changes somewhat, but the aforementioned four countries still show the highest service prices. The dispersion of services prices within the euro area looks somewhat less pronounced when a larger sample of OECD countries is considered (Dresdner Kleinwort Benson Research, 2000), but this is not surprising given that distance effects explain a significant amount of price variation even for durable consumer goods (Beck and Weber, 2001; Beck, 2003). The upshot is that prices for services can and should converge in the euro area.

- *Faster trend economic growth*. Growth of labour productivity in the service sector in the euro area has been poor in international comparison (**Table 4.4**). The productivity growth gap is particularly marked for business sector services where market conditions are most likely to weigh on measured efficiency. Labour productivity in business sector services grew at the sluggish rate of 0.3% per annum in the period 1995-2003 in the euro area against 2.8% in the United States and 2.1% in the United Kingdom – even though for statistical reasons the latter two countries portray a slight upward bias in comparison with the euro area.[2] The integration of services markets would spur trend growth by realising economies of scale, better exploiting comparative advantages and improving the allocation of resources at large.

Figure 4.8. Relative prices of services and GDP per capita
2003



1. Consumer services is a proxy for non-tradable goods and semi-durables and durables are a proxy for tradable goods. The price level of services is based on 2002 data and 2002 PPPs while the GDP per capita is for 2003 on the basis of 2000 PPPs.
2. Measured as the difference in the actual minus the fitted value of the price ratio appearing in panel A.

Source: Eurostat; OECD, *National Accounts* and *Purchasing Power Parities and Real Expenditures: 2002 Benchmark Year*, 2004 ed.

Table 4.4. **Labour productivity growth by activity**
Annual average percentage changes, 1995-2003[1]

Sectors	Euro area[2]	FRA	DEU	ITA	AUS	CAN	NZL	GBR	USA
Agriculture, hunting, forestry and fishing	2.0	3.3	4.8	2.7	5.9	3.4	9.1	5.2	2.3
Manufacturing	1.6	3.3	1.9	0.7	2.6	2.4	1.4	1.8	3.7
Business sector services	0.3	0.0	1.4	0.0	2.6	1.6	0.5	2.1	2.8
of which:									
Wholesale and retail trade	0.6	0.3	0.8	0.8	3.0	2.7	1.3	2.4	4.7
Restaurants and hotels	-1.9	-0.7	-6.3	-1.5	1.1	0.2	-2.2	-0.1	0.1
Transport and storage[3]	1.6	1.0	2.3	-0.2	3.3	2.0	4.2	2.0	0.6
Post and telecommunications	10.9	7.1	14.5	10.0	5.8	2.3	. .	7.9	3.9
Finance and insurance	1.3	-1.2	3.5	0.9	3.2	1.9	6.3	2.8	5.2
Real estate and business services	-2.4	-1.4	-1.8	-2.6	0.4	-0.8	-3.6	0.6	-0.3

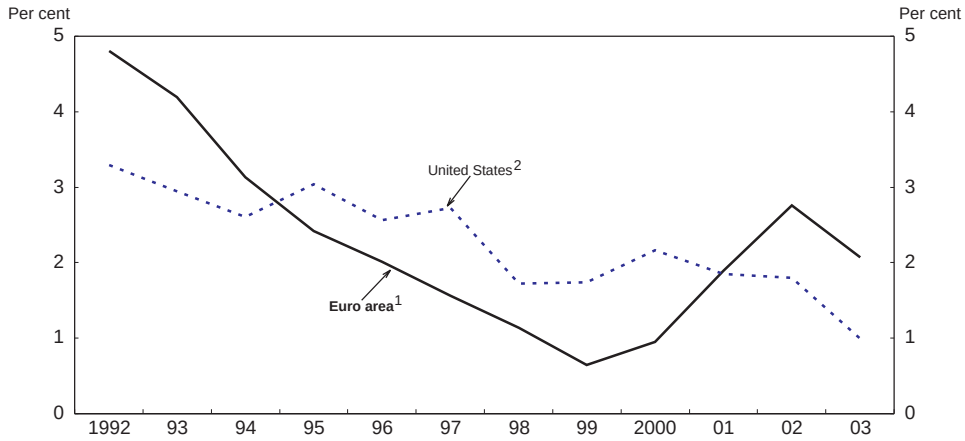
	AUT	NLD	BEL	FIN	GRC	LUX	PRT	ESP
Agriculture, hunting, forestry and fishing	6.9	1.9	2.8	5.0	1.2	1.4	1.3	2.7
Manufacturing	4.3	1.7	3.3	4.0	3.7	2.7	2.5	1.1
Business sector services	1.2	1.0	1.0	1.7	2.6	0.0	2.1	-0.1
of which:								
Wholesale and retail trade	1.8	1.7	1.2	2.3	3.3	2.7	0.9	0.1
Restaurants and hotels	0.7	-1.4	-0.5	0.6	2.6	-1.1	-1.8	-1.4
Transport and storage[3]	0.3	0.8	1.4	1.7	8.1	5.2	3.9	1.2
Post and telecommunications	6.8	8.9	. .	10.7	8.2	. .	. .	6.4
Finance and insurance	2.2	1.5	0.2	7.6	4.7	-0.5	13.0	1.9
Real estate and business services	-1.8	-0.8	-0.4	-1.9	-2.5	-5.1	-0.8	-2.7

1. Or nearest available year.
2. Excluding Ireland.
3. Including post and telecommunications for Belgium, Luxembourg, New Zealand and Portugal.
Source: OECD, STAN database.

195. Higher growth in labour productivity in services and the convergence of services prices would help lower inflation persistence in the euro area – arguably one of the main culprits of the area's weak resilience to shocks. As highlighted in Chapter 2, services constitute the most persistent component of overall inflation. While service sector inflation has been declining in the United States since 2000, it has been on an upward trend in the euro area (**Figure 4.9**). In comparison with the United States, euro area inflation was particularly strong in wholesale and retail trade, two sectors where most euro area countries impose stringent regulations (Conway *et al*., 2005). Some of the increase in service prices in the euro area may be related to the introduction of the cash euro in January 2002 which boosted restaurant prices in all countries and in the area as a whole in 2002 (Adriani *et al*., 2003). Hobijn, Ravenna and Tambalotti (2004) state that the increase in restaurant prices right after the introduction of euro coins and notes – which they estimate at 16% on average – should not be unexpected, since the existence of menu costs caused all firms to raise their prices at the time when the euro was introduced and at a higher rate than in the absence of the new currency. This shows that the adoption of a new currency is not necessarily neutral in a monetary sense. Eurostat, however, although acknowledging a significant increase in restaurant prices in 2002, concluded that the changeover effect cannot be seen as one of the main factors driving inflation in 2002 (Eurostat, 2003).

Figure 4.9. Price developments in market services

Annual percentage changes, GDP deflators



1. ISIC 50-74, average using real business sector services GDP 2000 weights, excluding Ireland.
2. Industry 34 to 67.

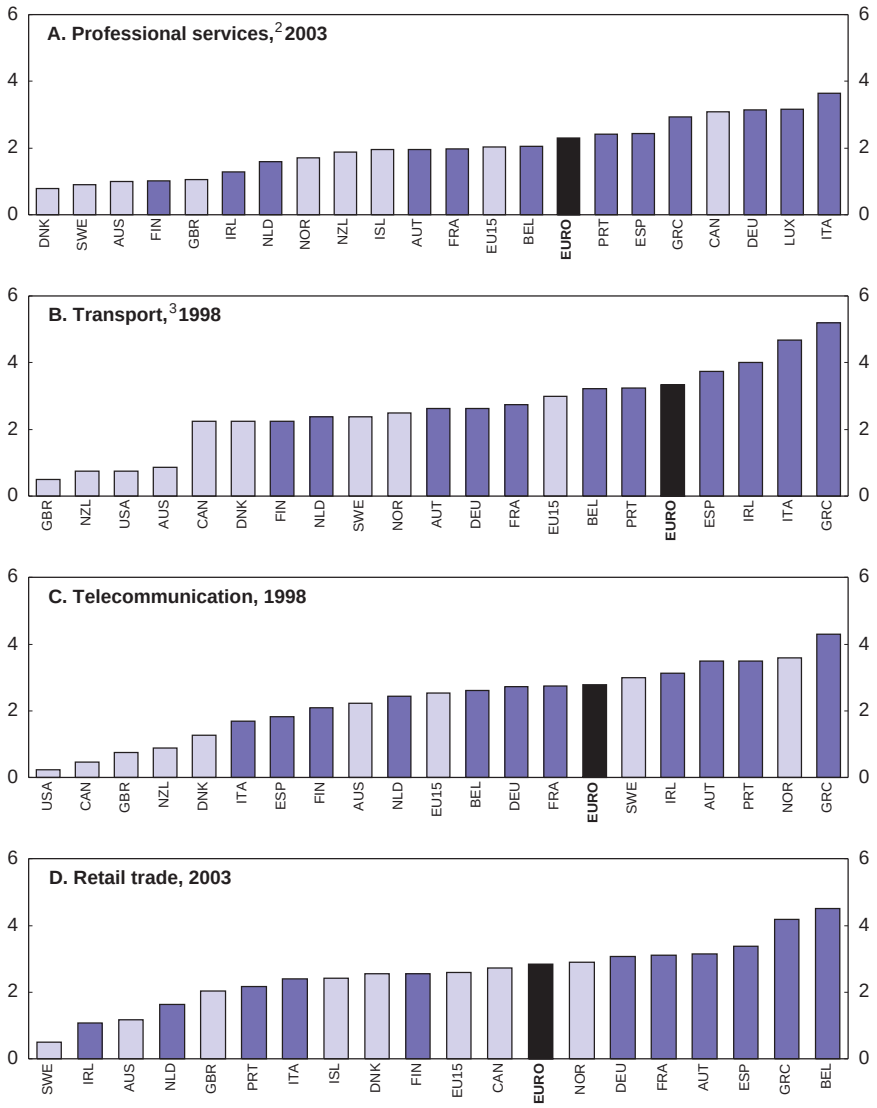
Source: US Bureau of Economic Analysis and Eurostat.

The impediments to integration

196. Regulatory obstacles to an integrated, competitive internal market for services can be classified in two broad categories: anticompetitive regulations within countries and rules that restrict the provision of services across national boundaries. Data from the OECD Product Market Regulation database show that euro area countries tend to impose more stringent restrictions on the provision of services than other OECD countries (**Figure 4.10**).

197. In addition to weakening domestic competition, national regulations are obstacles to intra-European trade in services. The breakdown of service trade by category corroborates the view that the regulatory environment is far from being conducive to services flowing freely within the European Union. The bulk of EU service exports consist of travel and tourism, which is mostly driven by natural endowments rather than by the regulatory environment. Cross-border trade in business and transport services are comparatively underdeveloped, while trade in personal services is almost non-existent. In business services, the Netherlands, the United Kingdom and to a smaller extent Spain have a strong openness to trade, whereas France, Germany and Italy appear to be rather inward-oriented – a pattern that is correlated with the regulatory environment (CPB, 2004a).

Figure 4.10. Domestic regulation in selected service sectors[1]



1. Index 0-6 scale from least to most restrictive.
2. Simple average of indicators for legal work, architectural work, accountancy and engineering.
3. Simple average of air, rail and road transport.

Source: OECD, Product Market Regulation database.

198. The European Commission has pulled together a comprehensive inventory of barriers that continue to inhibit trade in services in the internal market (European Commission, 2002). The major obstacles that were found are:

- Some services are *national monopolies,* for instance part of postal services.
- *Quantitative restrictions* governing the number of service providers give national operators an advantage over potential new entrants.

- *Residence requirements* can apply to shareholders, management and/or staff for some regulated professions.
- *Unbundling rules*, which prohibit the provision of certain different services by the same company, can in effect prevent sales by companies operating in countries where such restrictions are absent.
- *Favourable tax treatment* can be reserved to services purchased from local providers. Tax provisions of this nature abound in the area of financial services such as life insurance, pension savings accounts and mutual funds.
- Different *company tax regimes* and *accounting rules* can place high compliance costs on service providers operating across national borders, especially small- and medium-sized enterprises. The *European Tax Survey* published by the European Commission has provided evidence of high tax compliance costs, in particular for SMEs and companies with cross-border operations (EC, 2004b).
- Exceptions to the rule that *value-added tax* (VAT) is due in the country of establishment can considerably complicate the reimbursement of VAT on cross-border service providers and put them at a disadvantage to national firms.
- *Professional qualification* rules, requiring the holding of certain diplomas, can have the effect of denying the access of foreign-established operators when the equivalence of degrees cannot be established.
- Country-specific *technical standards* can also severely disadvantage potential new entrants established abroad. The telecommunications and rail transport sectors are particularly affected by such obstacles to intra-EU trade.
- *Economic needs tests*, imposed by the host country authorities to ensure that there is enough demand to make a new establishment economically viable, may act as a market entry barrier protecting incumbents.
- Application of the *host country rule* to service providers originating from another member state (for instance the need to establish a local infrastructure or to have a local guarantee).

The services directive

199. Unleashing market forces in services is key to the Lisbon agenda; hence it is not surprising that the European Commission has been focussing extensively on this issue. The main instrument to that end is the draft *Directive on services in the internal market* (henceforth referred to as the services directive) tabled by the Commission on 13 January 2004.[3] The services directive builds on EC Treaty Articles 43 and 48, which concern the "freedom of establishment ", and Article 49, which concerns the "freedom to provide services within the Community". But in practice these principles meet a large number of obstacles. Decisions by the Court of Justice only affect individual infringements of the EC Treaty and one country at a time. The services directive aims at making these work in practice throughout the Union, and not only accessible through case law. The services directive does not cover some sectors such as financial services, transport and telecommunications which are already covered by other Community-instruments and where further Community initiatives are underway (see below). Services performed by the State for no consideration as part of its social, cultural, educational and judicial functions where there is no element of remuneration are also excluded from the scope of the proposed directive

200. The services directive contains two main elements: *i)* freedom to establish a business in another member state; and *ii)* free trade between member states. In order to eliminate obstacles to the freedom of establishment, the proposal provides for administrative simplification, notably by establishing a single point of contact through certain principles and requirements. In order to reduce obstacles to the free movement of services, the proposed directive lays down a country of origin principle, so that a service provider is mainly subject to the legal regime of its country of establishment. The proposal also aims at removing barriers to the use of services from foreign providers by recipients, especially consumers. More specifically, the directive would require member states to repeal any provision favouring domestic providers.

201. The country of origin principle, however, does not overrule the Posting of Workers Directive, which states that temporary workers abroad are subject to host country provisions with regard to all employment conditions, including minimum wage, holidays, sickness insurance and collective agreements that have been extended to a whole sector (**Box 4.2**). Moreover, there is amongst others a general derogation for postal services and distribution of electricity, gas and water and derogations regarding specific requirements applicable in member states where the service is provided, linked to the particular characteristics of the place and which are necessary in order to maintain public safety and health provisions or the protection of the environment.

Box 4.2. The Posting of Workers Directive and its link with the services directive

The employment conditions of workers posted by their employer in another country on a temporary basis are regulated by the Posting of Workers Directive (PWD).[1] The PWD requires that posted workers should benefit from similar employment conditions to those applicable to local workers in the host country. More specifically, the working conditions covered by the directive include minimum wages, working time, minimum paid leave, the protection of temporary workers, health and safety standards and anti-discrimination measures. The PWD applies regardless of whether the corresponding rules stem from acts, regulations or administratively extended collective agreements. The administrative simplification provisions enshrined in the services directive have however prompted fears that workers' rights will be eroded and have played an important role in the trade union movement expressing strong reservations about the proposal (European Trade Union Confederation, 2004).

The PWD aims at protecting local workers against the competition of posted workers with lower compensation claims (Davies, 1997). To take one topical example, estimates reported by Meier (2004) show that the German construction sector counted between 100 000 and 200 000 foreign posted workers, whose wages averaged about 30% below their German counterparts, while 300 000 German construction workers were unemployed. As Meier (2004) observes with an analytical model, rising costs in the sectors that are covered by the directive pull down real wages in the rest of the economy, have an ambiguous effect on real wages in the construction sector and are most likely to reduce overall social welfare. The PWD limits the scope for enhancing competition and greater gains that are likely to ensue. Nonetheless, the services directive does not attempt to reform the PWD.

However, the services directive would have major implications for self-employed workers. Since they are not covered by the PWD, self-employed workers could supply services cheaply in the host country – indeed perhaps undercut rates in the black economy in that country. They would still have to comply with host country regulations on consumer protection and on safety and health risks, and any workers hired in the host country would be covered by local law. Several high-cost EU-countries view the freedom of self-employed workers to supply services on a temporary basis as a threat to social interests, and this partly explains the reticence in *e.g.* Germany and France.

1. The directive 96/71/EC concerning the posting of workers in the framework of the provision of services was adopted on 16 December 1996.

202. With its very wide scope, the services directive can be expected to bring about large employment and welfare gains. The fragmented and diffuse nature of the many obstacles to the free flow of services implies that the impact of the directive is very difficult to quantify. In its impact assessment, the European Commission (2004a) noted that the creation of a well-functioning internal market for services could result in gains equivalent to those generated by the Single Market Programme in the field of goods (1.8% increase in GDP and 2.5 million jobs). At the other extreme, a very conservative reckoning by Copenhagen Economics (2005) puts employment and welfare gains at 0.3 and 0.7% respectively. But the Copenhagen Economics figures include static effects only – even though most of the gains from stronger competition are of a dynamic nature – and are thus bound to underestimate the benefits by a wide margin. In particular, the Copenhagen Economics study focuses only on the effects of price convergence and does not account for the labour productivity gains that the directive would entail. The CPB Netherlands Bureau for Economic Policy Analysis (2004b) found firm indications that the proposed services directive will create a substantial increase – up to a third – in cross-border trade and investment, which are currently severely restricted by the heterogeneity of regulation across countries.

203. Despite its anticipated benefits, the services directive has met heavy opposition from different parties, in particular the labour unions. Its transversal approach implies eliminating rents in many sectors, including the regulated professions, thereby making it advantageous for a variety of powerful special interests to coalesce against the proposal. In addition, misunderstanding about the interaction of the proposed services directive with the existing Posting of Workers Directive and scepticism regarding the possibility of enforcing this directive has fuelled excessive fears of social dumping (**Box 4.2**), while others have argued that services, such as health care should be excluded. In public comments the country-of-origin principle has been misinterpreted and the directive has been linked with the issue of movement of persons from the new to the old EU member countries (**Box 4.3**). Skilful use of this misunderstanding has enabled interest groups to create considerable resentment in public opinion against the proposed directive. In order to address these fears and enhance the public acceptance of the directive the Commission signalled its willingness to review aspects of the directive.

204. The European Council in March 2005 underlined that the internal market for services has to be fully operational, but that the European social model should be preserved. It also stated that the ongoing debate shows that the directive as it is currently drafted does not fully meet these requirements. The directive is currently being discussed in the European Parliament by ten committees, with the Committee on the Internal Market and Consumer Protection as the lead committee. The committee has presented amendments (Part 1, more is expected), which propose a substantial narrowing of the scope of the directive and to replace the country of origin by a mutual recognition principle (**Box 4.4**). The Committee will vote on these amendments in July 2005, while a plenary vote of the Parliament is set for October. Based on the feedback from the Parliament and the Council, it seems likely that the services directive will be revised. It is, however, important that the European Commission resist a heavy watering down of the directive's main objectives in order not to lose the economic benefits.

Box 4.3. The services directive and the movement of posted workers and the self-employed

The freeing up of the provision of services across borders has raised anxieties in high-cost countries. For example, even though the free movement of workers is covered by other legislation and not by the services directive, fears have been expressed that the services directive would prompt movement of workers from the new to the old EU member countries, not least since the implementation of the directive would coincide with the ending of transitional arrangements restricting migration flows from the new EU member countries.[1] West German wages, for instance, are six times those in Poland, even though in purchasing power parities, differences in real wages are considerably smaller.

Since the services directive does not overrule the Posted Workers Directive (PWD, see **Box 4.2**), posted workers in the old EU member countries would be subject to host country labour market regulations. Hence for posted workers to be able to undercut labour conditions in the host country, one would need to assume that the PWD will prove difficult to enforce. However, even if the PWD is enforced, posted workers will exert downward pressure on host-country wages. While the services directive is likely to generate substantial economic gains for the Union as a whole, the question thus arises as to whether nationals of high-cost countries would be less well off if the services directive raised cross-border provision via migration.

In a broader context and apart from the specific scope of application of the services directive, theory suggests that the free movement of people will be advantageous for all countries in the Union. What immigrants earn exceeds the loss in output at home caused by emigration, while what they earn in the old EU countries is normally less than their output. Only the last immigrant receives a wage that equals the immigrant's contribution to national output. Migration will, of course, affect wages. Assuming an aggregate production function with constant returns to scale in the host country, immigration will raise labour supply and reduce the wage rate of occupations that offer similar services as the immigrants. But the national income accruing to nationals in the host country will rise – the so-called immigration surplus (Borjas, 1994) – as the owners of capital and real estate will gain as well as the occupations that are not subject to competition from immigrants.[2] This model implies that there will be losers in the west, but also that there will be a gain from immigration, with the winners winning more than the losers lose (Sinn, 2004). At the same time, wages will go up in the country of origin as labour gets scarcer. The shrinking in wage differentials over time will reduce incentives to migrate. They will cease to have an effect, when the wage differential equals the migration costs.

While immigration could hurt the wage income of some occupations, immigration also expands the size of the market and could thus lead to economies of scale, while the services directive is likely to generate large efficiency gains. In this case the marginal product of both labour and capital increases, which could increase the size of the immigration surplus substantially and even those occupations subject to pressure from immigration may not suffer.

Of course, gains from immigration will be smaller, if labour markets do not function well. If real wages fail to adjust in the host country, immigration will lead to higher unemployment. But this is not an argument against the services directive, but in favour of labour market reforms.

In addition, the services directive could trigger an outflow of capital towards the new EU member countries as companies may take advantage of the comparatively low labour cost. If so, the demand for labour in the new member countries would rise and eventually real wages would adjust up to a level where the real wage differential between the new and old member countries would be exactly offset by the migration cost of capital. Meanwhile the demand for labour in the old member states would fall, and unemployment would increase in the absence of labour market reforms.

1. All euro area countries have administrative restrictions on immigration for a seven year period. However, it does not apply to the posting of workers. The Ifo Institute projected that 4 to 5% of the population of the new member countries will emigrate to the old EU countries (Sinn, 2004).

2. Davis and Weinstein (2002) have challenged the notion of a positive immigration surplus. They argue that a large, technologically superior region is likely to experience a terms-of-trade deterioration from immigration, because at initial prices, the production of the immigrants leads to an excess supply in world markets and adjustment occurs through the deterioration in the terms of trade. The better integration of services in Europe is unlikely to lead to strong terms of trade effects, however, and while lower export prices could hurt the income of nationals, the net effect on welfare has also to take into account lower consumer prices for the nationals.

Box 4.4. The Gebhardt draft report

The draft services directive has been submitted to the European Parliament for a first reading. This has led to a proposal by MEP Evelyne Gebhardt for an amendment to the Parliamentary Committee on the Internal Market and Consumer Protection.[1] The amendment considerably narrows the scope of the directive. Specifically:

- It exempts "services, which are commercial, but pursue a general interest objective", which is much broader than "public services", from the Directive. It leaves it to the member countries to define "services of public interest", but this is understood to not only include health care (including private provision), but also regulated professions and crafts – thus removing most of the potential economic benefits from the Directive.
- It drops the "country of origin principle" in favour of a "mutual recognition" clause, but only explicitly applies this to business-to-business services and certain business-to-consumer services, with a very long list of derogations. The rewrite would force the Commission to launch a massive harmonisation operation, which is potentially costly. The Commission would prefer to harmonise regulations on consumer protection only and then apply the country of origin principle, as is the current practice for e-commerce and television broadcasting.
- While the rewrite maintains the freedom of cross-border business establishment for services, the reduced scope of the directive would also affect this principle. Moreover, the impediments to cross-border trade of services due to these amendments would deprive medium-sized business from the possibility to test markets abroad before they decide to establish a foreign subsidiary. This is less of a concern for big companies which can afford to cope with a different regulatory regime in the host country.

There is also a more fundamental problem associated with applying the mutual recognition principle, as opposed to the country of origin principle, in the case of services. The mutual recognition principle assumes that the specific service at hand is regulated. However, in practice the service provider rather than the service itself is usually regulated. For example, there often is regulation regarding the standards of certification of skills (diplomas), but not regarding the service itself because service products are often relatively heterogeneous or tailor-made and not well defined. As a result, it will prove very difficult to enforce the mutual recognition principle in practice, whereas the country of origin principle is relatively easy to enforce.

1. European Parliament, *Draft Report Part I on the Proposal for a Directive of the European Parliament and of the Council on Services in the Internal Market*, Committee of the Internal Market and Consumer Protection, provisional, 2004/0001(COD).

Other Community policies

Financial services

205. The financial services action plan (FSAP) is the Community's central tool for fostering financial market integration. It is due to be fully implemented by end-2005. In the 2002 *OECD Economic Surveys on the euro area*, the implementation of the FSAP was assessed and the OECD recommended further efforts in implementing the FSAP by 2005 in a satisfactory manner (OECD, 2002). Although major progress has been made since then, there are still lacunae and political agreement at the EU level has yet to be reached on three proposed directives (out of a total of 26) relating to cross-border mergers, aspects of company law (including the transfer of headquarters to another EU member state) and capital adequacy requirements for banks and investment firms. Against this background, barriers to achieving the objectives of the FSAP remain and highlight the very real difficulties in harmonising national legislation and legal concepts. Two examples are important.

- The directive on takeover bids was intended to harmonise rules governing the bid procedure and the use of takeover defences, and to protect minority shareholders. While some minimum standards have been set, the directive agreed by the EU Council in November 2003 and passed by the European Parliament the following month went some distance in the opposite direction by allowing member states to opt out of the articles with regard to takeover defences. The general rules require mandatory authorisation of takeover defences by shareholders and the suspension of special defensive rights such as multiple voting shares. However, governments

reserve the right not to require companies to apply the new provisions. In that case, a company may opt for an investor friendly regime but can also opt out. It can be argued that the directive focuses too much on multiple voting rights as a barrier to takeovers but is rather silent on other barriers which are practiced widely in Europe, such as voting caps, golden shares or double voting. Such provisions preserve national champions.

- One and a half years after the EU Commission put out its proposal for a directive on cross-border mergers, the EU Council reached a political agreement in November 2004, which was accepted by the Commission. One of the main issues at stake in the Council discussions was the provision on employee participation. It was finally agreed that employee participation in the newly created company will be subject to negotiations based on the model of the European Company Statute. When companies with different degrees of worker representation merge, trade unions can force the merged firm to comply with the higher standards if at least one third of the total number of employees before the merger were covered by a workers' participation scheme.[4]

206. Since the transposition of legislation agreed under the FSAP into national legislation is still incomplete, its impact on integration is only beginning to be felt. Based on quantitative measures, the ECB (2004) finds that, five years after the introduction of the euro, the level of integration achieved in the different segments of the European wholesale capital market has remained heterogeneous. They conclude that integration has progressed faster and more deeply in market segments where product specification has been defined on a market-wide basis, where the rules applying to transactions and the practices followed by market participants have been harmonised across the area, and where a common infrastructure exists. At this juncture, the key issue is to achieve fast and consistent implementation of the directives at the national level consistent with earlier commitments of full implementation by 2005 so as to reap the benefits from integration. The Lamfalussy arrangements, which have established committees of supervisors in charge of monitoring the consistent transposition of EU financial regulation, will play a key role in this respect. Meanwhile, retail markets have remained segmented, with retail banking merger activity mainly taking place within countries rather than cross-border. Recent initiatives at EU Council and Commission level, however will hopefully take away barriers to cross-border consolidation. Initiatives to integrate mortgage markets have so far been piecemeal. In its financial services policy for 2005-2010, the European Commission will propose carefully-targeted, evidence-based measures to improve the functioning of markets for retail financial services, including mortgage markets.

Transport

207. Good policy intentions have focused on part of the transport sectors, but preciously little decisive action has taken place. EU efforts to create an integrated market for transport services give a central role to the *railways* sector. As a first step towards instilling competition, the first railways package, passed in March 2001, established the principle of vertical unbundling between transport providers, infrastructure operators and regulators.[5] It is still not fully implemented as it has not been transposed by Germany and Greece. A second railways package passed in April 2004 provides that freight services – including cabotage – will be fully competitive as from 1 January 2007.[6] The Commission took a further step in March 2004 with the third railways package which proposes the opening up of international passenger services as from 2010.[7] The proposal is still under discussion in the EU Council.

208. The *air transport* sector remains fragmented despite the adoption of the "single European sky" in 2004. Contrary to what its name may suggest, the regulation of 10 March 2004 laying down the framework for the creation of the single European sky does not create a single European airspace but authorises the cross-border provision of traffic control services, for which the primary responsibility remains with member countries, and reinforces co-operation among national regulators (Van Houtte, 2004). In practical terms, this means that, under the single European sky, a flight from Rome to Brussels still has to deal with nine different control centres. Furthermore, a string of bilateral "open skies" agreements between member states and third countries contain provisions that advantage the airlines of the signatory countries relative to operators from other EU countries. The EU Commission entered into negotiations with the United States on an accord that would supersede existing bilateral treaties but, after six negotiating sessions between October 2003 and June 2004, no agreement was reached.

209. In *road transport*, the goal of promoting congestion charging, which was laid down by the EU Commission in its 2001 white paper, is still remote. The current situation in which tolls are often absent or loosely related to external costs is associated with large welfare costs because of the economic losses from congestion and of the environmental damage from emissions (European Commission, 2001). Congestion charging could thus bring considerable benefits. Nevertheless, the directive proposed by the Commission in July 2003 as a first step in this direction, which aimed at introducing toll fees based on economic and environmental costs for lorries, is still in limbo.

210. Progress towards a competitive market for transport services has proved even more difficult in the area of *ports*. The EU Commission presented a directive on market access to port services in February 2001.[8] An important provision was to end the monopoly of port authority workers on the loading and unloading of ships. Despite a 25 year delay before exposing incumbents to competition, the proposal has met with strong opposition from trade unions and was ultimately rejected by the European Parliament in November 2003. Meanwhile, the Commission has tabled another liberalisation package in late 2004.

Telecommunications

211. Effective implementation of agreed objectives is also an issue in telecommunications. Three years after its adoption, the implementation of the new regulatory framework for electronic communications is still incomplete. The directive on a common regulatory framework for electronic communications networks and services entered into force in July 2003.[9] The main contribution of the directive to the internal market is its Article 7 which aims at consolidating previous liberalisation directives. The thrust of Article 7 is that national regulatory authorities must consult other EU regulators before enacting any new regulatory measure in order to ensure that the new provision does not restrict internal market competition. The implementation gap is wide in the euro area as Belgium, Germany, Greece, France, Luxembourg and the Netherlands are not complying with the directive.

Fostering innovation

212. As part of its Lisbon Strategy, the European Union has singled out R&D as an important lever for innovation policy. In this context, the Barcelona European Council (2002) set the goal of raising R&D expenditure to 3% of GDP, with two-thirds financed by the private sector. It is currently close to 2% of which 1¼ per cent is privately financed. This compares rather unfavourably with the United States, where R&D spending amounts to 2¾ per cent of GDP, of which 2% is private, and Japan, where it amounts to 3% of which 2% private. For the OECD as a whole, public sector R&D almost uniformly varies between ½ per cent and 1% of GDP. Hence most cross-country variation in R&D outlays reflects business sector R&D, which varies from about ½ per cent among the poorest performers to 2 to 2½ per cent of GDP among the strongest performers.

Innovation performance and framework conditions

213. A broad range of indicators measuring innovation and the diffusion of new technology also reveals a considerable gap between numerous euro area countries and the best performing OECD countries, and an even more striking dispersion within the euro area itself (**Table 4.5**). For example, Finland has the second highest score on total and business R&D intensity, the highest score on the number of R&D employees per capita and is among the top five OECD countries with regard to the per capita number of scientists and triadic patents.[10] By contrast, Italy, Portugal and Spain are the weakest performers in the OECD on all these scores (**Figure 4.11)**. This is indicative of a persistent "north-south divide" for innovation activity within the euro area.

Table 4.5. **Innovation activity indicators**[1]

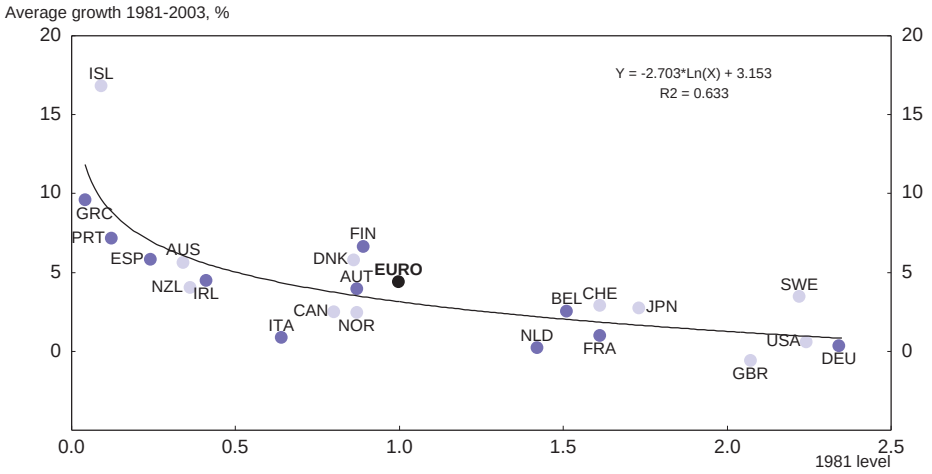
2003[2]

	Total R&D intensity	Business R&D intensity	Non-business R&D intensity	Scientists share[3]	R&D employees share[3]	Triadic patents[4] (2001)	Average indicator[5]
Sweden	1	1	2	4	2	3	2.7
Finland	2	2	3	1	1	2	1.7
Japan	3	3	9	3	5	4	3.3
Iceland	4	9	1	5	8	14	7.7
United States	5	5	8	2		7	4.7
Switzerland	6	4	14	10	4	1	5.7
Germany	7	6	12	12	7	5	8.0
Denmark	8	7	11	6	3	10	8.0
Belgium	9	8	18	9	6	9	9.0
Austria	10	10	10	11	12	12	11.0
France	11	11	6	13	10	8	10.7
Canada	12	13	4	8	9	15	11.7
United Kingdom	13	12	15	14	13	11	12.7
Netherlands	14	15	7	16	15	6	12.0
Norway	15	14	13	7	11	13	11.7
Australia	16	17	5	17	16	16	16.3
Italy	17	19	17	19	18	18	18.0
Ireland	18	16	20	15	14	17	16.7
Spain	19	18	19	18	17	19	18.7
Portugal	20	20	16	20	19	20	20.0
Correlation with total R&D intensity	1	0.97	0.61	0.87	0.92	0.82	0.97

1. Countries in the table are ordered by decreasing level of total R&D intensity. The comparison is based on rank orders according to the various criteria. Rankings are a rough measure of cross-country differences. A more refined measure would use deviations from the country mean expressed in multiple of the standard deviation of countries' observations around the mean.
2. Or latest available year.
3. The employment of scientists and R&D personnel is expressed as a share of employed persons aged 25-64. There are no data on the R&D employee share for the United States and the ranking according to this criterion is not perfectly comparable because only 19 countries are included instead of 20.
4. Number of triadic patents per million persons aged 15-64.
5. The average is the simple arithmetic average of the rankings for total R&D intensity, scientist share and triadic patents.

Source : OECD, *Main Science and Technology Indicators*, 2005 ed.; Labour Force Statistics database.

Figure 4.11. Convergence in business sector R&D intensity[1]



1. Business enterprise expenditure on R&D as a percentage of value added in industry.
Source: OECD (2005), *Main Science and Technology Indicators*.

214. However, these indicators need to be qualified to some extent. The *European Community Innovation Survey* suggests a weak cross-country correlation between intramural R&D and patents and measures of innovative success (**Table 4.6**). The ranking of countries even shifts radically with regard to the share of new products in turnover. For example Spain reports one of the highest shares of new products in turnover even though it scores poorly on other innovation indicators. This suggests that the factors that affect the probability of making a successful innovation are not the same as those that affect the commercial value of that innovation. Many other types of actions lead to successful commercial development of innovations, including business organisation, marketing and training.

215. A stability-oriented macroeconomic framework provides a business environment that is conducive to innovation. The advent of the euro and the co-ordination of macroeconomic policies at large undoubtedly helped to establish such a more favourable business environment, especially in member countries in the area's periphery that have histories of macroeconomic instability. In addition, three other strands of framework conditions stand out as important drivers of R&D investment:

- As R&D projects are inherently more risky than others, the likelihood of financial constraints biting is high, especially for (potential) new entrants into the process of "creative destruction". This is particularly relevant in the euro area, where start-up firms have limited access to high-risk venture capital. The equity-based financial systems that predominate in the English-speaking countries in the OECD provide more favourable conditions for firms seeking to raise external finance for innovation. Many euro area countries have sought to ease financing constraints by providing fiscal relief for R&D spending (see below). In this context, the legal environment also matters and appears to be restrictive in many euro area countries.
- The diffusion of knowledge across national borders through imported goods and services, inward direct investment and international labour mobility is essential for successful R&D. Equally, national companies can access information abroad through exporting or by establishing affiliates in other countries. *A priori*, more open economies will have a greater exposure to foreign knowledge, and hence the achievement of the internal market may pay

large dividends also for innovation. The flip side is that R&D activities will tend to concentrate in countries with a comparative advantage in such activities.

- A low level of product market regulation also tends to raise R&D intensity, and contributes to the higher R&D intensity found in the United States. When competition forces are strong, incumbent firms have incentives to innovate to escape from competition while potential competitors have incentives to catch-up or surpass the technologies of incumbent firms.

Table 4.6. **Innovation implementation indicators**[1]

Country	Macroeconomic indicators		CIS measures of implementation of innovation	
	Business R&D intensity (2003)	Triadic patents (2001)	Proportion of successful innovators	Share of new products in turnover
Sweden	1	2	9	
Finland	2	1	8	2
Germany	3	3	1	1
Denmark	4	7	7	7
Belgium	5	6	3	6
Iceland	6	11	2	12
Austria	7	9	5	8
France	8	5	10	10
United Kingdom	9	8	14	
Norway	10	10	12	11
Netherlands	11	4	6	9
Spain	12	13	13	3
Italy	13	12	11	4
Portugal	14	14	4	5
Correlation with Business R&D intensity	1.00	0.78	0.34	0.14
Correlation with triadic patents	0.78	1.00	0.17	0.18
Correlation with % successful innovators	0.34	0.17	1.00	0.03
Correlation with share new products in turnover	0.14	0.18	0.03	1.00
Number of countries	14	14	14	12

1. Care has to be taken when interpreting cross-country comparisons made with the aggregated data in CIS, as there are differences in the sample size used in the respective national components of the survey. The share of new products in turnover is available only for a subset of countries so that the ranks of countries can not be directly compared across all indicators, though their rank-ordering can be compared. Countries in the table are ordered by decreasing level of business R&D intensity.

Source: Community Innovation Survey (CIS).

The role of innovation policies

216. The rationale for innovation policy stems from evidence that the creation and transfer of new technologies, which is one of the major sources of growth in modern economies, requires adequate framework conditions. Public funding and support of R&D investment remains an important lever of innovation policy. This is based on evidence that the social rate of return on R&D investment generally exceeds the private rate of return. Otherwise the positive externalities could result in insufficient supply if provision is entirely left to the market (OECD, 2003). The externalities result from the spin-off on technological applications outside the R&D performing firm together with spill-over benefits conferred upon engineers and scientists conducting the R&D. R&D policies may thus lead to reduced unit production costs and the development of new products and processes that contribute to economic growth.

217. There are several groups of instruments available to governments to stimulate innovation, with varying degrees of effectiveness:

- *Financial incentives for R&D.* This can take the form of grants or tax incentives (OECD, 2003). The availability of funding via grants can help to boost R&D expenditure if businesses face severe financing constraints, whereas tax incentive schemes are generally more powerful instruments for profitable firms. However, tax incentives also have limitations (**Box 4.5**). For example, firms may over-report R&D activity to qualify for support and tax burdens must rise elsewhere to compensate for the budgetary cost of support. Although the latter could be justified because other sectors may benefit from the externalities, this is less obvious if the spill-overs cross borders.

- *Expanding non-business sector R&D*. Research performed in universities and other public research institutions has long been an important source of scientific and technological advances. Fundamental research is often undertaken with little or no idea of the potential commercial applications or the length of time required for such applications, making it necessary for it to be supported by public funding. There is empirical evidence that non-business sector R&D is an important component of innovation, either directly, as reflected in patenting, or indirectly by raising the productivity of business sector researchers.

- *Intensified collaboration* between non-business and business sector researchers is found to heighten these favourable effects, provided that the performance of universities is high – which is not uniformly the case in the euro area.

- *Strengthening intellectual property rights*. Many countries tend to provide strong protection of intellectual property rights, especially for patents. Legislative changes have made patent rights easier to enforce, broadened the range of innovations that can be patented and lengthened the period of validity of a granted patent. This policy is intended to provide incentives to undertake research and subsequently disclose information about the inventions to enhance the diffusion of knowledge, stimulate follow-on innovation and avoid unnecessary duplication of efforts. In return for disclosure, it allows inventors to have exclusive use of their innovations for a fixed period (OECD, 2004b). However, there are social costs linked to the protection of intellectual property rights: it creates (temporary) monopolies and it directs innovation to patentable activities without necessarily raising R&D outlays. The case for a further strengthening of intellectual property rights appears to be weak (OECD, 2005b).

- *Focusing education and labour market policies on innovation.* Targets for R&D expenditure are unlikely to be met without substantial increases in the numbers of researchers employed. In addition, if higher public R&D outlays result in higher demand for researchers, the availability of researchers for the private sector will fall and their wages rise. This suggests that tackling low R&D requires a simultaneous increase in the number of skilled researchers; education and labour market policies are key factors in this regard.

- *Technology diffusion* plays an important role in spreading innovation, especially in the services sector, which tends to be less R&D intensive.

Box 4.5. Tax incentives for R&D: A tax policy point of view

Many EU countries, like several other OECD countries, have introduced special tax relief targeted at R&D, typically in the forms of special R&D tax credits or tax allowances. Roughly half of the OECD countries provide such relief. Tax relief for R&D has been increasing in OECD countries since the mid-1990s. Interestingly, countries which provide comparatively large tax relief for R&D are generally those where R&D intensity is low. Australia, Canada, Portugal and Spain are prominent examples (**Figure 4.12**). Conversely, tax relief tends to be low or absent in countries with high R&D intensity, such as Sweden, Iceland, Finland, Switzerland and Belgium. However, it is misleading to look at the partial correlation between R&D and tax relief. After controlling for the many other possible factors that affect R&D, the impact of tax relief on R&D turns out to be positive.

One advantage of tax credits is that these do not interfere with the choice over R&D projects; once the government has increased the private return on R&D projects, markets decide how much and which type of R&D should be engaged. There are, however, also problems associated with relying on the tax system to support R&D:

- *First*, due to their non-discretionary nature, tax breaks are less transparent and more prone to abuse (for example by over-reporting) compared to direct grants. They are also more difficult to remove or refocus.

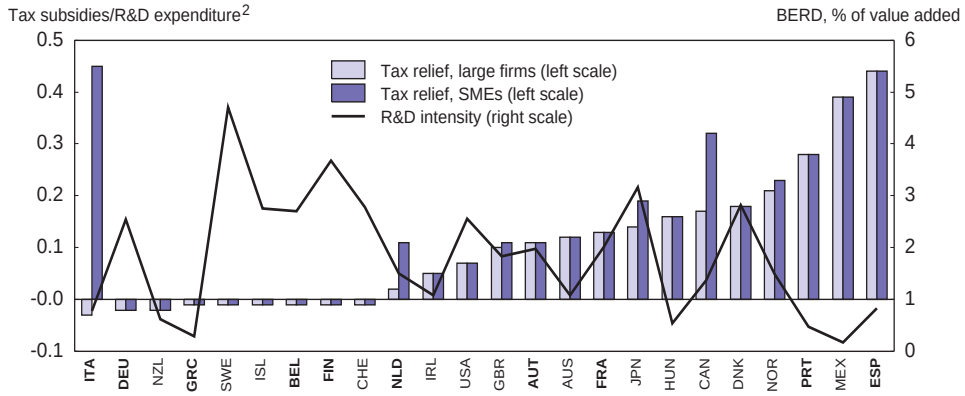
- *Second*, tax credits are granted normally only when a firm is profitable, which tends to penalise R&D undertaken by start-up firms where the payoff from R&D activity may be several years down the road. One way countries address this problem is by making tax credits non-wastable.

- *Third*, tax relief may be undone or partly offset through the operation of international features of tax systems. Tax relief for R&D granted to a subsidiary of a multinational firm may be offset by a reduction in the tax credit to alleviate double taxation in the home country.

- *Fourth*, tax credits for R&D carry a deadweight loss, since it may benefit projects that would have been carried out anyway. This problem can be addressed by the use of incremental credits – with credits provided only beyond a certain threshold of R&D investment. But this may prompt strategic behaviour, with companies lumping projects together in a single fiscal year in order to exceed the threshold.

Figure 4.12. Tax relief for R&D and R&D intensity[1]

2001



1. Business enterprise expenditure on R&D as a percentage of value added in industry.
2. Rate of tax subsidies for 1 USD of R&D expenditure. For more details, see pp.42-43 of OECD (2003), Science, Technology and Industry Scoreboard.

Source: OECD (2005), *Science, Technology and Industry Scoreboard*; OECD (2005), *Main Science and Technology Indicators*.

218. A specific dimension of the innovation process in the euro area is that geographic barriers to diffusion are substantial. As noted, innovation is still hampered by a legacy of "national champion" policies in high-technology industries, which contrasts sharply with the policy environment in for instance the United States or Japan. An important key to better innovation performance in the euro area is to remove the sources of market segmentation that currently hamper the diffusion of new technologies. Specifically, a Community Patent is still not in place due to disagreements over translation issues, national research grant competitions escape the Community provisions for cross-border public procurement, and segmentation in services markets implies that national markets for small innovative firms remain small.

219. Moreover, as noted by a recent study by the European Commission services (Denis *et al.*, 2005), politically sensitive areas will need to be tackled, including the introduction of merit-based pay and research funding, greater university autonomy, a change of culture towards the commercialisation of research (underpinned by the establishment of an internal research market), and the creation of pan-European (as opposed to national) centres of excellence (see also Sheehan and Wyckoff, 2003). These centres of excellence should – and will – be based on existing strengths in research, both within corporations and other research organisations. Thus market conditions for technological development at the firm level also need to be strengthened. It is well-known that although entry and exit rates of new firms are similar in the euro area and the United States, successful entrants in the United States expand much more rapidly (Bartelsman *et al.*, 2004). The contribution of firms' churning to productivity in high-tech industries is much larger in the United States, where new technologies are better harnessed by new firms.

220. The Commission's Action Plan in the pursuit of the Barcelona objective builds upon the subsidiarity principle, leaving the primary competence for innovation policy in the remit of the EU-member countries. The European Union's Scientific and Technical Research Committee (CREST) is responsible for the surveillance of progress in innovation policies in the framework of the Lisbon

process. Its latest report (CREST, 2004) confirms the growing use of fiscal measures to stimulate innovation in the Union, in line with developments elsewhere. While generally welcoming this trend, the Committee regrets the "severe lack of thorough evaluations" of the effectiveness of innovation policies. It puts forward a long list of 30 recommendations which, in a nutshell, can be grouped under five main headings:

- *The instrument mix*. Governments are asked to disclose better information on the chosen policy mix and funding requirements.
- *Public research and its links to industry*. Countries are encouraged to reform public research so as to facilitate the transfer of knowledge to society and involve the private sector in shaping public research programmes.
- *Fiscal measures and research*. Countries are required to focus support on research-intensive start-ups, improve evaluation, better track the budgetary costs and look at cross-border spill-over effects.
- *Intellectual property and research*. Countries should better evaluate performance, improve the coherence of intellectual property rights regimes, and promote technology transfer on a European-wide basis.
- *Small and medium-sized enterprises (SMEs) and research*. Countries are encouraged to give heightened attention to the needs of start-up firms and SMEs with a high growth potential, prioritise R&D support to SMEs in the context of structural funds and improve the SMEs' access to venture capital.

221. While these recommendations are generally in line with the empirical findings on the requirements for an effective innovation policy, the jury is out as to the reliance on steering national policies through the "open method of co-ordination" at the EU-level. Any efforts to achieve the target of 3% of GDP R&D expenditure need to be accompanied by policies in the pursuit of stronger innovation performance per unit of R&D input. A key to better innovation performance at the EU-level is to remove cross-border barriers to diffusion and to tackle a number of politically sensitive issues. As noted, weak innovation activity – including but not solely with respect to ICT – is among the factors that have shaped the apparent productivity slowdown in the euro area. The potential gains of a successful innovation policy could be substantial.

The potential gains from structural reform

222. Previous economic surveys for the euro area have reported model simulations to gauge the longer-term impact of structural reform on economic growth and performance at large in the longer term. These simulation results can be used to estimate the potential benefits from structural reforms in each of the three broad policy areas covered in this chapter: labour markets, service market integration and technology diffusion. Two sets of policy "shocks" are simulated (**Table 4.7**):

- It may be assumed that, as a result of the full implementation of the initial Commission proposal for the Services Directive, product market regulation in the euro area becomes as competition-friendly as in the United States. According to econometric estimates carried out in the framework of the OECD Growth Study this would imply an improvement in multifactor productivity of roughly 2 percentage points over eight years. This is probably a conservative estimate given that the implied cross-country convergence of regulatory environments in the euro area would raise economic efficiency by itself, regardless of the size of the net

improvement. In addition, preliminary evidence based on ongoing OECD work on the determinants of R&D (OECD, 2005b) suggests that, if framework conditions become as friendly for business R&D as in the United States, this would raise the intensity of business R&D by 0.8% of GDP. According to the Growth Study this would imply an improvement in multifactor productivity of as much as 8 percentage points in the long run. However, gains to productivity because of greater research intensity are probably already included to some extent in the above liberalisation scenario. In the simulation exercise, therefore, a more modest impact on productivity is assumed, of 1% over an eight-year period, bringing the total productivity increase to 3 percentage points. As the services directive is likely to be weakened, this estimate is probably an upper limit to the realised gains.

- Reforms in product and labour markets can also have strong effects on employment. According to Nicoletti *et al.* (2001), if both the labour and product markets were as flexible as in the United States or the three best performers in the euro area, then the employment rate would rise by 10 percentage points. However, in the simulation it is assumed that reforms are more modest and result in a 1 percentage point rise in the employment rate over the next ten years due to a lower structural rate of unemployment and increased participation, thus providing a ready-reckoner for the potential gains.

223. The results presented in Table 4.7 cover the transition period towards a new steady state in which real output and employment are both higher and the price level lower than baseline. During this transition period there may be scope for lower real interest rates in view of lower inflation outcomes, but real interest rates would eventually return to their baseline level once the dynamic effects of the shocks have petered out.[11]

Table 4.7. **The macroeconomic impact of structural reform**

Deviations from baseline, percentage points, average 2006-12

	Unit	3 percentage points rise in productivity level		1 percentage point rise in employment rate	
		Unchanged monetary policy	150 basis point reduction in real interest rates	1 percentage point decline in the NAIRU	1 percentage point rise in the participation rate
Gross domestic product	% growth	0.3	0.3	0.2	0.2
Private consumption deflator	% growth	-1.4	-0.6	-1.0	-0.7
Unemployment rate	%	0.0	-0.2	-0.5	0.3
Employment rate	%	0.0	0.2	0.4	0.3
Government net lending	% of GDP	0.9	1.9	0.8	0.3
Current account balance	% of GDP	-0.2	-0.3	0.0	0.0

224. The productivity shock in the first exercise would improve the sacrifice ratio, as stronger growth would go hand in hand with lower inflation. At the same time the budget deficit would shrink, mostly on a structural basis. Lower inflation may also allow monetary policy to be more supportive of real activity during a transition period. In this scenario, there is barely any effect on employment, as growth gains come entirely from improved productivity.

225. The employment shock in the second scenario also has strong effects. In fact two simulations were run: one where the increase in employment is entirely due to a decline in the structural

unemployment rate, and a second one where the rise in employment is triggered by increased labour force participation so that unemployment declines by less. In both cases, the effect on the euro area's performance after eight years is significant. The level of real activity is boosted by about 1½ per cent, whilst inflation decreases by around 1 percentage point. A reduction in euro area wide public deficits occurs in both cases, although it is larger in the case where participation does not rise (as the decline in the unemployment rate is more important in this scenario).

226. The simulations thus suggest a strong impact of changes in structural policy settings affecting labour markets, product markets and innovation on overall economic performance. Better performance would also improve fiscal performance to such an extent that the tax burden could decline. The simulations assume only partial progress in implementing the structural reform agenda pursued by the Lisbon strategy and therefore provide relatively conservative estimates. A recent survey by the European Commission (2005) suggests that, if fully implemented, the type of measures envisaged in the Lisbon strategy would raise the European Union's potential growth rate by 0.5-0.75 percentage points. Over a 10-year period, this would imply an increase in the GDP level of up to 7-8%. Summing up, pushing ahead with reforms would launch a virtuous circle where growth and employment are rising, inflation declines, and even tax reductions might be possible, whilst at the same time the Stability and Growth Pact is respected.

NOTES

1. In France reductions in social security contributions have been extended since 2003 (the cumulative reductions have risen from 18 percentage points before July 2003 to 26 points after July 2005 for earners of the minimum wage in firms which kept working time unchanged).
2. The greater use of hedonic methods in inflation measurement and the higher share of ICT products in consumption inflate productivity estimates to some extent. Timmer *et al.* (2004) show that, if measurement in the retail and wholesale sectors where the same in the United States as in Europe, productivity growth would be 0.8 and 1.5 percentage points lower in the retail and wholesale sector, respectively. But this would still imply a considerable productivity growth differential.
3. Commission proposal COM (2004)2.
4. This provision applies when the higher standards covered more than a third of the workforce prior to the merger.
5. Directives 2001/12/EC, 2001/13/EC and 2001/14/EC, all of 26 February 2001. In those countries, that have unbundled, the separation of infrastructure and operation of passenger services has led to still unresolved conflicting incentives that threaten to undermine investment and service quality.
6. Directives 2004/49/EC, 2004/50/EC, and 2004/51/EC, all of 30 April 2004.
7. Commission proposals COM(2004)139, COM(2004)140, COM(2004)142, COM(2004)143 and COM(2004)144, all of 3 March 2004.
8. Commission proposal COM(2001)35 of 13 February 2001.
9. Directive 2002/21/EC of 7 March 2002.
10. Triadic patents cover only patents that have been applied for at the European Patent Office and Japanese Patent Office and applied for and granted by the United States Patent and Trademark Office.
11. If economic growth increases on a permanent basis, real interest rates would increase against baseline in the steady state. However, the model used does not generate such permanent growth effects.

BIBLIOGRAPHY

Adriani, F., G. Marini, and P. Scaramozzino (2003), "The Inflationary Consequences of a Currency Changeover: Evidence from the Michelin Red Guide", *CEIS Tor Vergata - Research Paper Series*, No. 9, Rome.

Allsop, C. and M. J. Artis (2003), "The Assessment: EMU, Four Years On", *Oxford Review of Economic Policy*, Vol. 19.

Bartelsman, E., J. Haltiwanger and S. Scarpetta (2004), "Microeconomic Evidence of Creative Destruction in Industrial and Developing Countries", *IZA Discussion Papers*, No. 1374, Institute for the Study of Labor.

Bassanini, A., J.H. Rasmussen and S. Scarpetta (1999), "The Economic Effects of Employment Conditional Income Support Schemes for the Low-paid from a CGE Model Applied to Four OECD Countries", *OECD Economic Department Working Papers*, No. 224, OECD, Paris.

Beck, G.W. and A.A. Weber (2001), "How Wide Are European Borders? On the Integration Effects of Monetary Unions", *CFS Working Paper*, No. 2001/07 – revised, Frankfurt am Main.

Beck, G. W. (2003), "Nominal Exchange Rate Regimes and Relative Price Dispersion: On the Importance of Nominal Exchange Rate Volatility for the Width of the Border", *CFS Working Paper*, No. 2003/45, Frankfurt am Main.

Bertola, G. (2004), "Labor Market Institutions in a Changing World", *Moneda y Crédito*, Nr. 218, Fundacion Santander Central Hispano, Madrid.

Blanchard, O. and J. Wolfers (2000), "The Role of Shocks and Institutions in the Rise of European Unemployment: the Aggregate Evidence," *NBER Working Paper*, No. 7282.

Borjas, G. (1994), "The Economic Benefits from Immigration", *NBER Working Paper*, No. 4955.

Brewer, M., A. Duncan, A. Shephard and M. J. Suarez (2003), "Did Working Families' Tax Credit Work? Analysing the Impact of In-work Support on Labour Supply and Programme Participation", *HM Revenues and Customs Working Paper*, No. 2, December, London.

Conway, P., V. Janod and G. Nicoletti (2005), "Product Market Regulations in OECD Countries: 1998 to 2003", *OECD Economics Department Working Paper*, No. 419, OECD, Paris.

Copenhagen Economics (2005), *Economic Assessment of the Barriers to the Internal Market for Services*, Copenhagen.

CPB Netherlands Bureau for Economic Policy Analysis, (2004a), "Intra-EU Trade and Investment in Service Sectors and Regulatory Patterns", *Memorandum 102*, The Hague.

CPB Netherlands Bureau for Economic Policy Analysis, (2004b), "A Quantitative Assessment for the EU Proposals for an Internal Market for Services", Communication 23 September 2004, The Hague.

CREST (Scientific and Technical Research Committee of the European Union)(2004), *Report on the Application of the Open Method of Coordination in Favour of the Barcelona Research Investment Objective*, European Communities, Brussels.

Daveri, F. and G. Tabellini (2000), "Unemployment and Taxes: Do Taxes Affect the Rate of Unemployment?", *Economic Policy*, Vol. 15.

Davies, P. (1997), "Posted Workers: Single Market or Protection of National Labour Law Systems?", *Common Market Law Review*.

Davis, D.R. and D.E. Weinstein (2002), "Technological Superiority and the Losses from Migration", *NBER Working Paper*, No. 8971.

Denis, C., K. McMorrow, W. Röger and R. Veugelers (2005), "The Lisbon Strategy and the EU's Structural Productivity Slowdown", *European Economy – Economic Papers*, No. 221, European Commission, Brussels.

Dresdner Kleinwort Benson Research (1999), Pricing Survey 2000, London.

Elmeskov, J., J. Martin and S. Scarpetta (1998), "Key Lessons for Labour Market Reforms: Evidence from OECD Countries' Experience", *Swedish Economic Policy Review*, No. 5.

European Central Bank (2004), Monthly Bulletin, October 2004, Frankfurt am Main.

EC (European Commission) (2001), *Getting the Prices Right*, Brussels.

EC (2002), "Report from the Commission to the Council and the European Parliament on the State of Internal Market for Services", Brussels 2002.

EC (2004a), "Extended Impact Assessment of a Proposal for a Directive on Services in the Internal Market", *European Commission Staff Working Paper*, Brussels.

EC (2004b), "European Tax Survey", Taxation Papers, Working paper n° 3/2004 http://europa.eu.int/comm/taxation_customs/resources/documents/tax_survey.pdf

EC (2005), "The Economic Costs of Non-Lisbon; A Survey of the Literature on the Economic Impact of Lisbon-type Reforms", *European Economy – Occasional Papers*, No. 16, Brussels.

European Trade Union Confederation (2004), "ETUC Demands Major Changes to the Draft Directive on Services in the Internal Market", http://www.cgil.it/segretariatoeuropa/depliant%20market_310105_EN.pdf.

Eurostat press release 69/2003, 18 June 2003, "May 2003, Euro-zone Annual Inflation Down to 1.9%", Luxembourg,

Greenspan, A. (2004), *Speech for the 14th Frankfurt European Banking Congress*, November 19, http://www.malekigroup.com/ebc/download/speeches_2004.pdf.

Hobijn, B., F. Ravenna and A. Tambalotti, "Menu Costs at Work: Restaurant Prices and the Introduction of the Euro" Federal Reserve Bank of New York, *Staff Report* No. 195, October 2004

Hoeller, P., C. Giorno and C. de la Maissonneuve (2004), "One Money, one Cycle? Making Monetary Union a Smoother Ride", *OECD Economics Department Working Papers*, No.401, OECD, Paris.

van Houtte, B. (2004), "The Single European Sky", *Skyway*, Spring.

Meier, V. (2004), "Economic Consequences of the Posting of Workers Directive", *Metroeconomica*.

Mourre, G. (2004), "Did the Pattern of Aggregate Employment Growth Change in the Euro Area in the Late 1990s? ", *ECB Working Paper Series*, No. 358, May.

Nicoletti, G., A. Bassanini, E. Ernst, S. Jean, P. Santiago and P. Swaim (2001), "Product and Labour Market Integration in OECD Countries", *OECD Economics Department Working Papers*, No. 312, OECD, Paris.

OECD (1995), "Taxation, Employment and Unemployment", in: *The OECD Job Study*, OECD, Paris.

OECD (1999), "Implementing the OECD Jobs Strategy: Assessing Performance and Policy", OECD, Paris.

OECD (2002), "*OECD Economic Surveys: Euro area*, Vol. 2002/16, OECD, Paris.

OECD (2003), *The Sources of Economic Growth in OECD Countries*, OECD, Paris.

OECD (2004a), *OECD Jobs Strategy*, OECD, Paris.

OECD (2004b), *Patents, Innovation and Economic Performance*, OECD, Paris.

OECD (2005a), "Wage Setting Institutions and Outcomes", *OECD Employment Outlook 2005*, Paris.

OECD (2005b), "Innovation in the Business Sector", *OECD Economics Department Working Papers*, OECD, Paris, forthcoming.

Pelkmans, J. and J. Casey (2004), "Can Europe Deliver Growth? The Sapir Report and Beyond", *CEPS Policy Brief*, No. 45, Brussels.

Sapir, J. *et al.* (2003), *An Agenda for a Growing Europe – Making the EU Economic System Deliver*, Report of an Independent High-Level Study Group Established on the Initiative of the President of the European Commission, Brussels.

Sheehan and A. Wyckoff (2003), "Targeting R&D: Economic and Policy Implications of Increasing R&D Expenditures", *OECD STI Working Paper*, Bo. 2003/8, Paris.

Sinn, H.-W. (2004), "EU Enlargement, Migration and the New Constitution", *CESifo Economic Studies*, Vol. 50, 4/2004.

Timmer, M.P., R. Inklaar and B. Van Ark (2004), "Productivity Differences in the U.S. and EU Distributive Trade Sector: Statistical Myth or Reality?", Groningen Growth and Development Center, Groningen.

Vogt, L. (2005), "The EU's Single Market: at Your Service?", *OECD Economics Department Working Papers*, OECD, Paris, forthcoming.

ACRONYMS AND ABBREVIATIONS

ALMP	Active labour market policy
BIS	Bank for International Settlements
CPI	Consumer price index
ECB	European Central Bank
EDP	Excessive deficit procedure
EMU	Economic and Monetary Union
EPL	Employment protection legislation
FSAP	Financial services action plan
GDP	Gross domestic product
HICP	Harmonised index of consumer prices
ICT	Information and communication technology
NKPC	New Keynesian Phillips Curve
PPP	Purchasing power parities
PWD	Posting of Workers Directive
R&D	Research and development
SGP	Stability and Growth Pact
SME	Small and medium-sized enterprises
SMIC	French statutory minimum wage
UMTS	Universal Mobile Telephone Systems (third generation mobile telephone systems)
VAT	Value-added tax