

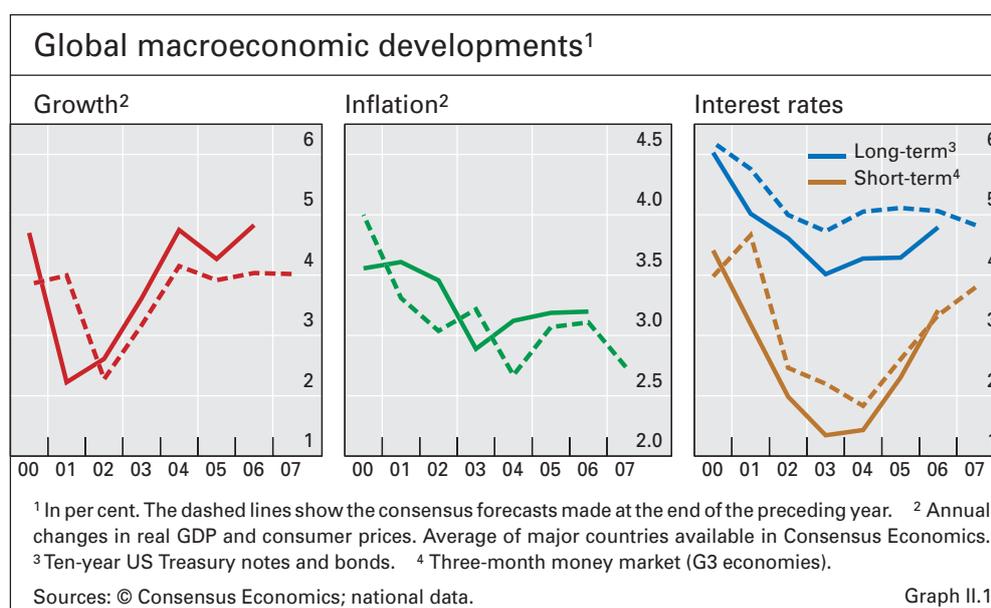
II. The global economy

Highlights

The strength of the global economy surprised again in 2006 (Graph II.1). This was due to resilient US consumption in spite of the weakening housing market, a broad-based upswing in other advanced industrial countries, and continued rapid growth in emerging market economies. Inflation remained subdued, with headline inflation receding in the second half of the year. However, underlying inflation pressures persisted against the backdrop of high, or rising, rates of resource utilisation in major economies.

The consensus view for 2007 is for a broad-based economic expansion, easing inflation pressures and gradually receding current account imbalances. This scenario is supported by growing evidence of a classical recovery in the euro area and Japan, with exports leading to rising investment, and in turn to rising employment and consumption. Healthy domestic demand in major emerging market economies is also encouraging.

Yet the baseline scenario remains subject to significant near-term risks. The impact of the downturn in the US housing market might not yet have been fully felt. Admittedly, Europe and Asia appear less dependent on US growth than a few years ago. Even so, there are questions regarding the strength of consumption in these regions and advanced industrial countries in general. At the same time, it is not clear whether inflationary pressures have been contained. Financing conditions, which have remained supportive to growth, might also eventually tighten, especially if inflationary risks were perceived to increase.



Graph II.1

Review of the global economy

Overview

In 2006, the global economy again enjoyed a combination of strong growth and moderate inflation. Total world output expanded at a rate of 5½%, marking the fourth consecutive year of growth above 4%. Economic strength was more broadly based than in the previous years. Virtually all advanced industrial countries grew at or above trend in 2006, and the major emerging market economies in Asia and Latin America expanded strongly. Commodity-exporting countries benefited from an improvement in their terms of trade compared to 2005. Oil prices declined in late 2006, but the prices of many other commodities rose further (Graph II.2). Despite the robust expansion, however, global consumer price inflation remained subdued.

Strong growth and subdued inflation continued

The balance of macroeconomic risks shifted in the course of the year. In the first half of 2006, buoyant growth led to concerns that the global economy might be approaching a “speed limit”. Oil prices increased by more than 35% in dollar terms between February and August on the back of persistently strong demand growth. Moreover, signs that slack was evaporating in major economies gave rise to concerns about overheating. Long-term inflation expectations in financial markets rose temporarily in the first half of 2006, especially in the United States (see Chapter IV), and financial market volatility increased sharply, if briefly, in May (see Chapter VI).

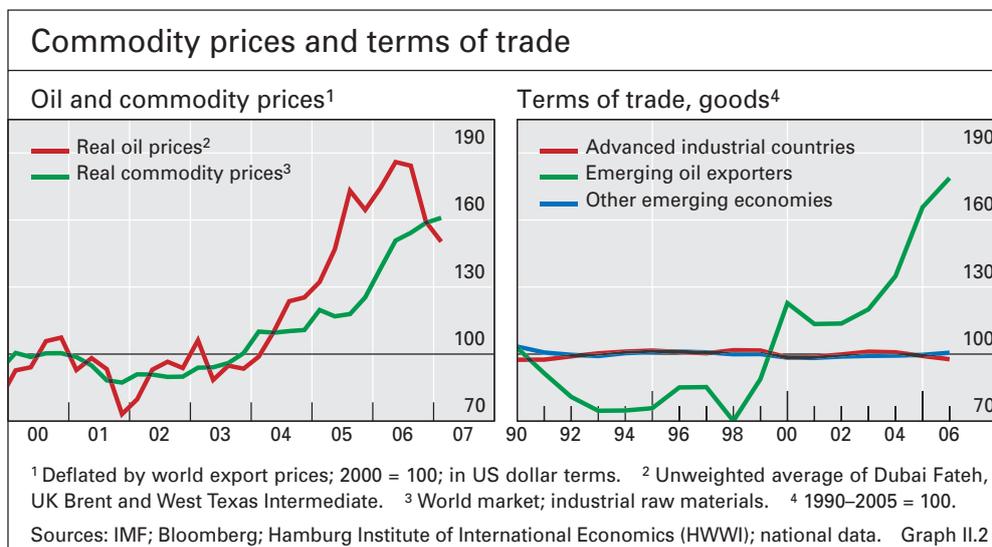
The balance of risks shifted from overheating ...

In the second half of the year, downside risks to economic growth became more apparent amidst mounting evidence of weakening US growth. At the same time, concerns about near-term inflation risks eased as oil prices began to decline. After peaking at more than \$75 per barrel in August, spot oil prices fell by about 25% by the end of 2006. This and the associated fall in petrol prices supported consumer spending towards the end of the year, especially in the United States.

... to weakness in growth

The upswing of the past four years has differed in several respects from that of 1994–97, when the global economy also recorded four consecutive

The current upswing differs from earlier ones



The current global upswing in perspective				
In per cent and percentage points				
	Current		Previous	
	2003–06 ¹	2006	1994–97 ¹	1997
World GDP growth	4.9	5.4	4.0	4.2
Contributions to world GDP growth ²				
Advanced industrial countries	1.3	1.5	1.7	1.8
United States	0.7	0.7	0.8	0.9
Emerging economies	3.6	3.9	2.3	2.4
China	1.4	1.5	0.9	0.9
Contributions to GDP growth of advanced industrial countries ³				
Household demand ⁴	67.4	52.2	60.2	51.0
Residential investment	7.4	0.2	4.1	0.4
Corporate demand ⁵	24.3	31.5	29.9	35.3
Change in real oil prices ^{6,7}	93.8	14.1	10.5	1.0
Change in real commodity prices ^{6,8}	66.6	25.4	15.4	5.3
Real interest rates ^{9,10}				
Short-term (policy rates)	0.6	1.3	0.0	2.2
Long-term (10-year government rates)	-0.7	1.9	1.1	3.6
Fiscal indicators ^{9,11}				
Structural financial balance ¹²	1.8	-1.9	2.4	-1.6
Gross public debt ¹³	6.9	85.8	7.1	77.2
Credit to the private sector ^{9,13}	12.0	134.5	2.0	105.7

¹ For GDP growth and contributions to GDP growth, annual average; for other indicators, cumulative change. ² In percentage points. ³ As a percentage of total GDP growth. ⁴ Private final consumption expenditure plus private residential gross fixed capital formation. ⁵ Private non-residential gross fixed capital formation. ⁶ Deflated by world export prices. ⁷ Unweighted average of Dubai Fateh, UK Brent and West Texas Intermediate. ⁸ World market; industrial raw materials, in US dollar terms. ⁹ Weighted average of the United States, the euro area and Japan, based on 2000 GDP and PPP exchange rates. ¹⁰ Deflated by the personal consumption deflator (United States) or consumer prices (euro area and Japan). ¹¹ General government. ¹² Cyclically adjusted financial balance, as a percentage of potential GDP. ¹³ As a percentage of GDP.

Sources: IMF; OECD; Bloomberg; HWWI; national data. Table II.1

years of growth at or above trend (Table II.1). First, emerging market economies, especially in Asia, have contributed 1¼ percentage points more to global growth than they did a decade ago. To an important extent, this reflects the buoyancy of the Chinese economy. More generally, however, major reforms seem to have strengthened growth in many emerging market economies (see Chapter III). Second, despite relatively moderate rises in real incomes in the advanced industrial countries, household demand has been a significantly larger (and corporate spending a smaller) factor behind growth in advanced economies than in the earlier upturn.

Third, financing conditions have remained much more supportive than a decade ago. Long-term real interest rates have not risen despite strong global growth and the progressive removal of monetary accommodation since 2004. Low interest rates have underpinned valuations of financial and real assets worldwide (see Chapter VI). In addition, they have been associated with rapid credit growth and substantial financial deepening (see Chapter VII). As a

In particular, financing conditions have remained easy

consequence, credit/GDP ratios have, on aggregate, reached new historical highs. Finally, structural fiscal deficits have declined during the current upswing, but to a lesser extent than in the mid-1990s.

A marked shift in global economic activity

The engines driving the global expansion changed in 2006. Output growth in the United States slowed from an annual rate of more than 4% in the first two quarters of the year to about 2% in the second half and 1¼% in the first quarter of 2007. At the same time, demand growth strengthened, or remained firm, in most other advanced economies, including the euro area, Japan, the United Kingdom and Canada. Domestic demand growth also continued to play an important role in major emerging market economies in Asia, central and eastern Europe and Latin America (see Chapter III).

A sharp downturn in housing market activity was the main factor behind slower US growth. Housing starts fell by 35% in 2006 and inventories of unsold houses soared (Graph II.3). Residential investment, which had contributed about ½ percentage point to GDP growth in 2005, on average subtracted more than 1 percentage point at an annual rate in the second half of 2006. Nonetheless, the US economy continued to grow at a moderate pace as consumption appeared to be largely unaffected by the housing slowdown.

The current downturn in the US housing market has been steep, but still appears shallower than the previous one in the early 1990s. Housing starts and new home sales have both declined by about 40% to date, compared to 60% and 55% respectively in the previous cycle. Indeed, housing starts and home sales continued to hover around their long-term average levels in the first quarter of 2007. Inventories of unsold new homes looked as if they had peaked, but remained high by historical standards.

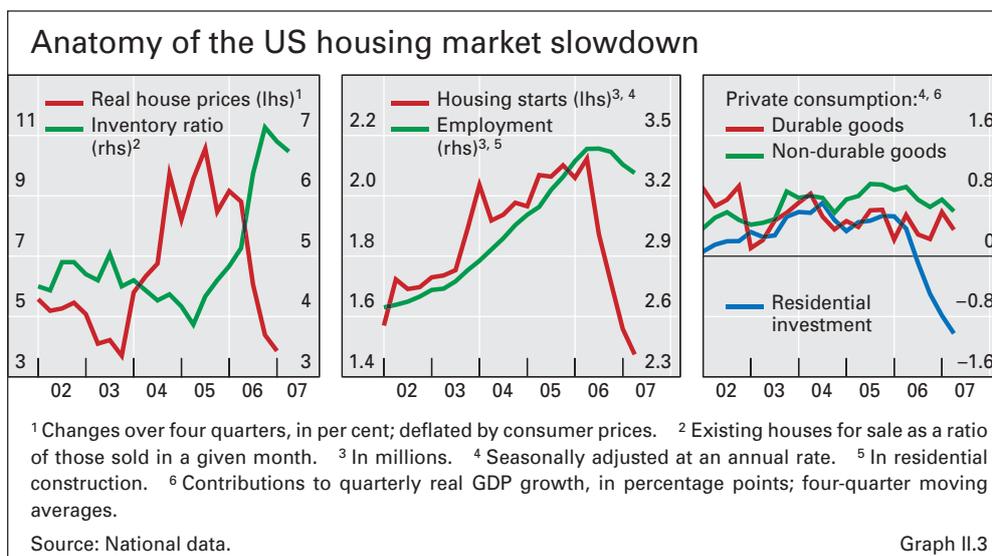
Continued increases in household wealth and income limited the impact of the US housing downturn on consumption. House prices in real terms dropped in some places that had earlier experienced particularly large rises, but they

The drivers of global growth changed in 2006

The US housing market downturn ...

... still appears shallower than the previous one ...

... and its impact has been cushioned by rising asset values



did no more than level off nationally. At the same time, the value of US households' financial assets continued to grow strongly (see discussion below). Perhaps even more importantly, unemployment remained low. Even employment in residential construction, which amounts to about 2½% of total US employment, remained stable. Indeed, it appears remarkably high relative to the current level of housing starts.

Signs of classical recovery in the euro area

Growth in the euro area exceeded that in the United States in the second half of last year, for the first time since 2002. The upswing seems to have followed the classical pattern of rising exports, then resurgent business investment and employment, and finally, albeit moderately, increased private consumption. The unemployment rate dropped below the levels seen at the peak of the previous cycle in 2001. Job creation was especially strong in Germany, where the unemployment rate fell by almost 1½ percentage points in 2006. The recovery of the German economy also supported growth in the country's major trading partners in Europe.

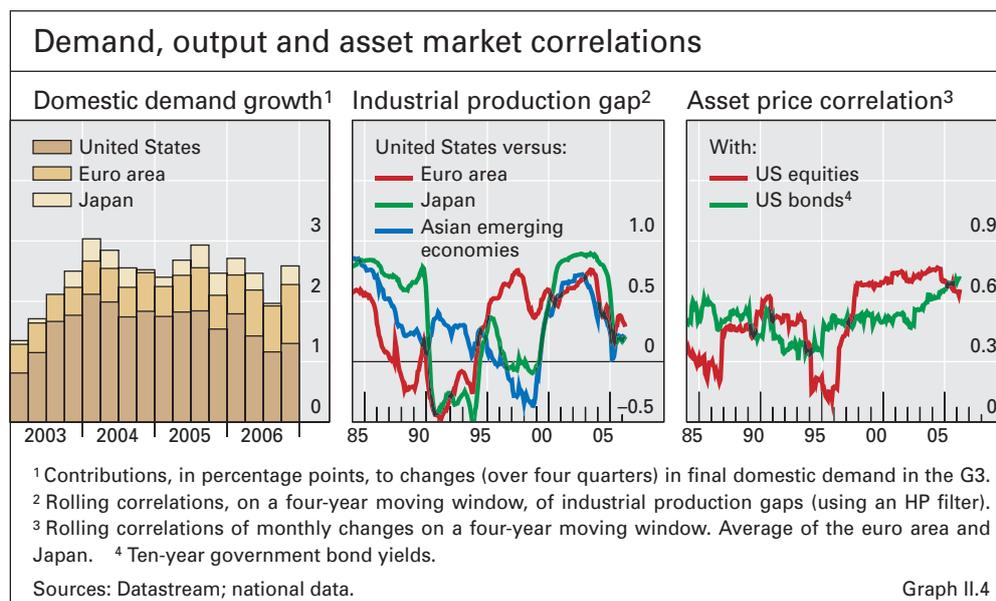
Moderate growth continued in Japan

The Japanese economy continued to expand at a moderate rate, although the pattern of demand growth remained somewhat uneven. Corporate investment continued at a brisk pace, especially in export-oriented sectors, which were supported by buoyant growth in China and a weak yen (see Chapter V). Consumption growth remained solid, although it lost momentum in the second half of 2006, despite cyclically low unemployment.

Has the rest of the world decoupled from US growth?

An apparent reduction in dependence on US growth ...

As a result of these trends, the United States contributed less to the global economic expansion as 2006 progressed. While aggregate domestic demand in the G3 economies continued to grow at a rate of about 2½%, the United States accounted for only about 50% of this in the second half of 2006, compared with an average of 70% over the previous three years (Graph II.4). The weakening of US domestic demand growth was, however, largely confined



Trade exposures to the United States								
	Direct exposure ¹		Indirect exposure ²		<i>Memo: Trade openness</i>			
					<i>Exports/GDP³</i>		<i>Imports/GDP³</i>	
	2006	2001	2006	2001	2006	2001	2006	2001
Canada and Mexico	81.2	87.9	4.0	2.5	31	32	29	29
Europe	7.6	9.1	7.7	9.5	31	28	31	27
Japan	22.7	30.4	10.6	11.0	14	9	12	8
China	21.0	20.4	10.1	14.5	37	23	30	21
Other Asia ⁴	13.5	19.2	12.4	14.0	44	41	42	39
Latin America ⁵	26.2	30.5	10.6	10.2	19	14	12	13

¹ Exports to the United States as a share of total exports. ² Exposure through exports to countries other than the United States, calculated as the sum of the export shares of these countries multiplied by their share of direct exports to the United States.
³ In per cent. ⁴ Excluding China. ⁵ Excluding Mexico.

Sources: IMF, *Direction of Trade Statistics*; national data; BIS calculations. Table II.2

to non-tradable goods: US real imports of goods and services continued to grow in the second half of the year. Allied with firmer demand elsewhere, especially from Europe, this helped to sustain strong export growth in the major emerging market economies. In early 2007, the value of China's exports to Europe exceeded that to North America for the first time.

Some developments suggest that the world economy might have become somewhat less dependent on the US business cycle than it turned out to be during the last US recession in 2001. In the past few years, industrial production in major regions has been much less synchronised with the United States than was the case during the early 2000s. In part, this reflects the fact that, unlike the current upswing, the earlier cycle was driven by a worldwide boom and subsequent collapse in IT-related capital goods. This involved a close co-movement in the production of these goods across regions.

... seems to reflect the different character of the current cycle ...

Moreover, the past few years have seen greater regional diversification of trade linkages. While the openness of economies has generally increased, the proportion of exports from the major economic regions going to the United States declined between 2001 and 2006 (with the major exception of China). Rising emerging economies and growing intraregional trade have reduced this direct, and possibly also the indirect, export exposure since 2001 (Table II.2). Much of the change in trade exposures – for instance those of Japan, emerging Asia and Latin America – has to do with the integration of China into the global marketplace (see Chapter III).

... changing trade patterns ...

Another, more recent, indication that dependence on the US business cycle may have declined is the continued optimism in the corporate sector of the euro area and other major economies in late 2006 and early 2007. This decoupling of sentiment bodes well for the near-term outlook, given that business sentiment tends to be correlated with capital spending.

... and possible decoupling of business confidence

Yet the likely impact of broader-based or more protracted weakness in the United States on business confidence among internationally active firms remains uncertain. For instance, German companies included in the DAX stock index generate about 70% of their revenues abroad, and the effects of weaker

Yet the linkages formed via corporate activity ...

US growth on their profit expectations and corporate spending might be considerable. Increasingly global trade linkages, not least through greater international integration of production processes, underline the potential importance of such effects.

... and financial markets remain close

A closely related reason for caution concerns financial linkages with the United States. Foreign exposures to a US downturn in the form of holdings of US assets have surged in the past few years. US external liabilities have risen, by over \$4 trillion between 2001 and 2005. Portfolio debt has increased especially rapidly, from 28% to about 34% of US external liabilities since 2001. Moreover, close co-movements of asset prices might spread the impact of a downturn in US financial markets beyond the holders of US assets. Equity market returns worldwide are generally highly correlated with those of the United States. Correlations of US long-term government bond yields with those in Europe are also high, and have risen during the period of increasing asset prices and output since mid-2003. International co-movements of asset prices tend to be even stronger during market downturns.

Improvement in structural fiscal balances

Structural deficits declined in 2006 ...

Fiscal balances in advanced industrial countries finally showed signs of improvement in 2006. Measures of structural budget deficits, which attempt to remove cyclical effects from headline deficit figures, decreased in the United States (by over 1 percentage point of GDP), Germany (by $\frac{3}{4}$ percentage point) and Japan (by $3\frac{3}{4}$ percentage points, largely due to one-off changes in capital transfers), and increased marginally only in Italy (Table II.3). Changes in US and German headline balances were even more pronounced, with their deficits each decreasing by $1\frac{1}{2}$ percentage points. While in most countries fiscal

Recent fiscal performance and medium-term fiscal projections ¹										
	Financial balance			Structural balance ²			Gross public debt		Change in fiscal position over medium term ³	
	2005	2006	2007	2005	2006	2007	2006	2007	Financial balance	Gross public debt
United States	-3.7	-2.3	-2.7	-3.6	-2.5	-2.8	62	62	1.0	1
Euro area	-2.4	-1.6	-1.0	-1.5	-1.0	-0.8	76	74	0.9	8
France	-3.0	-2.6	-2.3	-2.0	-1.7	-1.7	75	74	1.5	6
Germany	-3.2	-1.7	-0.7	-1.9	-1.1	-0.8	71	69	0.4	2
Italy	-4.3	-4.5	-2.5	-3.2	-3.4	-2.0	120	119	2.1	4
Spain	1.1	1.8	1.5	1.3	1.9	1.5	47	43	-0.6	5
Japan	-6.4	-2.4	-2.7	-5.9	-2.2	-2.7	179	179	1.6	7
United Kingdom	-3.3	-2.9	-2.7	-3.3	-2.8	-2.6	47	47	0.9	0
Canada	1.4	0.8	0.8	1.3	0.7	0.8	68	67	0.0	22
Australia	1.4	1.5	1.4	1.3	1.6	1.5	16	15	-0.5	5 ⁴

¹ General government; as a percentage of GDP. ² Cyclically adjusted financial balance, as a percentage of potential GDP.
³ Change, in percentage points, between the 2006 outcome and 2012 (for Australia, 2011; for Spain, 2008). Positive numbers indicate a reduced deficit/increased surplus and reduced gross debt, respectively. ⁴ Net debt.
Sources: European Commission; IMF; OECD. Table II.3

outcomes improved due to unusually buoyant tax revenues, in Germany and Japan expenditure restraint also played an important role.

Recent data suggest that fiscal performance continued to improve in early 2007. The US federal budget deficit is projected to decline to 1.6% of GDP in fiscal year 2007, about 1 percentage point less than the general government deficit and the lowest since 2002. In the euro area, most countries under the excessive deficit procedure are projected to keep or bring down their deficits below the ceiling of 3% of GDP in 2007, including Italy, where the fiscal deficit is expected to decline by 2 percentage points. Germany implemented a 3 percentage point increase in the VAT rate at the start of 2007 with a view to bringing the headline deficit below 1% of GDP this year. Japan's draft budget envisages a reduction in the primary deficit of about 1% of GDP in 2007/08, advancing the plan to achieve a primary surplus for the government's budget by 2011/12.

... and continued to improve moderately in early 2007 ...

Even so, durable fiscal consolidation remains a distant goal for most advanced industrial countries. Public debt levels are high in many large economies, and their reduction is projected to proceed at a snail's pace over the medium term. The stubbornly high debt levels in Italy and Japan, despite low interest rates and, in Japan, above trend growth, are particularly worrying. Even greater fiscal challenges lie ahead, as the ageing of populations will affect government budgets and, possibly even more strongly, household behaviour over the next several decades (discussed below).

... but durable fiscal consolidation remains a distant goal

Current account positions stabilised, but underlying imbalances persisted

Current account balances broadly stabilised as a percentage of GDP last year. In particular, the US current account deficit remained at about 6½% of GDP (Table II.4). Lower energy prices towards the end of 2006 were one major factor behind this: the US oil trade deficit fell by almost \$20 billion in the fourth quarter. For 2006 as a whole, the current account deficit of oil-importing countries remained unchanged at about 1% of GDP, compared to an increase of ½% of GDP in 2005. Correspondingly, the surpluses of oil exporters rose less than in the previous year; the combined current account surpluses of oil-exporting countries remained broadly unchanged at 9¼% of GDP, compared with a jump of almost 3 percentage points in 2005.

Current account balances stabilised owing to lower oil prices ...

Another factor that prevented current account imbalances from rising was the more balanced global economic expansion. Real exports of goods from the United States grew by more than 10%, the highest rate since 2000, supported by stronger growth of its major trading partners. The euro area recorded a small current account deficit, following an almost balanced current account in 2005 and a moderate surplus in 2004. Emerging Asia (excluding China) and Latin America recorded small increases in current account surpluses relative to GDP.

... and more balanced growth

Movements in real effective exchange rates in 2006 appear to have been still too small to lead to any substantial reduction of external imbalances. The dollar depreciated by 4% in real effective terms, but is still only 5% below its long-term average (see Chapter V). Correspondingly, the euro appreciated by about 5%. At the same time, however, the yen depreciated by 6½% and Japan's current account surplus increased to almost 4% of GDP. In addition, the exchange rates of many surplus countries in Asia appreciated only moderately

Changes in real effective exchange rates remained moderate

Global current account balances						
In billions of US dollars						
	Average 1991–2002	2003	2004	2005	2006	Memo: 2006 ¹
United States	-202	-528	-665	-792	-857	-6.5
Euro area ²	15	36	97	8	-29	-0.3
Japan	106	136	173	166	172	3.9
Other advanced industrial countries	1	54	56	64	63	1.1
China	16	46	69	161	239	9.1
Other emerging Asia	19	117	104	84	102	2.8
Latin America	-46	8	20	35	49	1.7
Central and eastern Europe	-14	-36	-58	-63	-89	-6.7
Oil-exporting economies	12	139	234	402	472	9.3
Norway	11	28	33	47	56	16.7
Russia	14	35	59	83	96	9.8
Saudi Arabia	-5	28	52	87	96	27.4
Oil-importing economies	-114	-212	-275	-451	-490	-1.1
Advanced	-86	-339	-394	-626	-728	-2.2
Emerging	-27	127	118	175	239	2.3

¹ As a percentage of GDP. ² Sum of the balance of individual euro area economies.
Sources: IMF; national data.

Table II.4

or even depreciated. In particular, China's currency depreciated by about 1% in real effective terms. Against this background, China's current account surplus rose by 50% (to over 9% of GDP).

Unusual patterns of saving ...

Moreover, the major factors behind the domestic saving/investment imbalances underlying international external payments imbalances seem to be persisting. Perhaps most importantly, the US household saving rate remained in negative territory in 2006. The moderate increase in the US national saving rate was primarily attributable to the lower fiscal deficit. At the same time, saving rates in emerging Asia stayed at high levels. The national saving rate in China even seems to have remained at a record level in 2006.

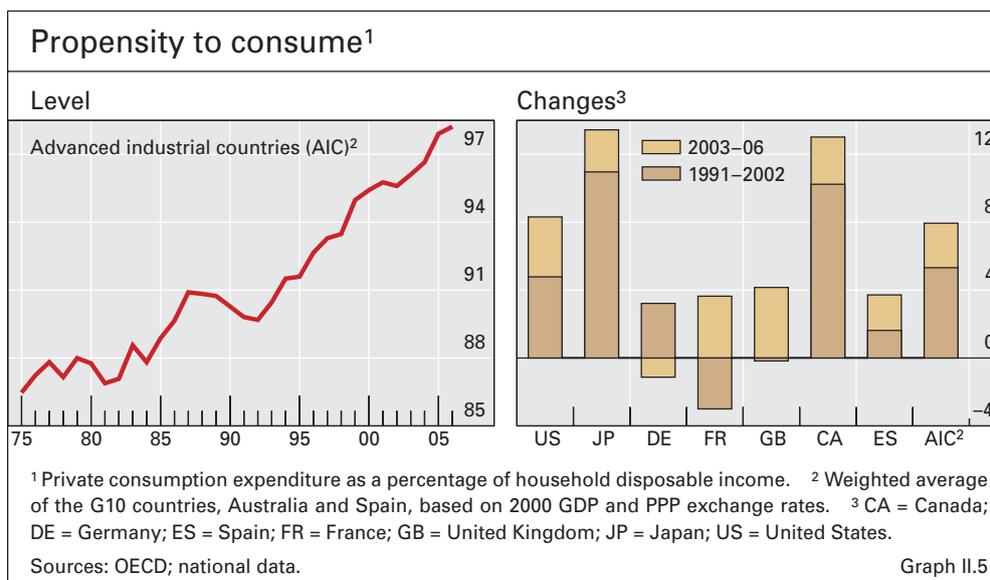
... and investment persisted

The pattern of global investment remained uneven. Lower residential investment contributed to a narrowing national savings gap in the United States, while changing little in other advanced economies. US corporate investment growth slowed markedly as the year progressed; non-residential fixed investment actually declined in the fourth quarter of 2006. Corporate investment picked up in emerging Asia but, as in previous years, this was driven entirely by China, where investment as a share of GDP reached a new record level. Machinery and equipment investment elsewhere in the region seemed to remain at a low ebb.

Household consumption in advanced industrial countries

The propensity to consume ...

Household consumption during the current upswing has made an unusually large contribution to GDP growth in advanced industrial countries, despite



subdued growth of household income. Average annual growth of household real disposable income was on aggregate somewhat less than 2% in 2003–06, compared to about 2½% during the second half of the 1990s and about 3% from 1975 to 1990. In contrast, consumption grew at an average annual rate of about 2½% from 2003 to 2006. As a consequence, consumption as a share of disposable income, which had been on an upward trend in many advanced economies since the early 1990s, reached new records in the period under review (Graph II.5).

The rise in the propensity to consume, and the corresponding decline in household saving rates, has been broad-based in the past four years. It has included in particular the United States, but has also been evident in other countries such as Japan, the United Kingdom, France and Spain. In some countries, most notably the United States, consumption has exceeded disposable income in the past few years, implying negative household saving rates. One major exception to this picture has been Germany, where the propensity to consume has actually declined since the early 2000s.

Several developments seem to have supported strong household spending in the face of recent subdued income growth. First, the value of household assets has risen rapidly. Second, in a related vein, rising collateral values and the financial innovations of the past decade have reduced the credit constraints on households. Moreover, low interest rates have helped contain debt service burdens. Growing household balance sheets seem to have supported consumption despite large hidden fiscal liabilities.

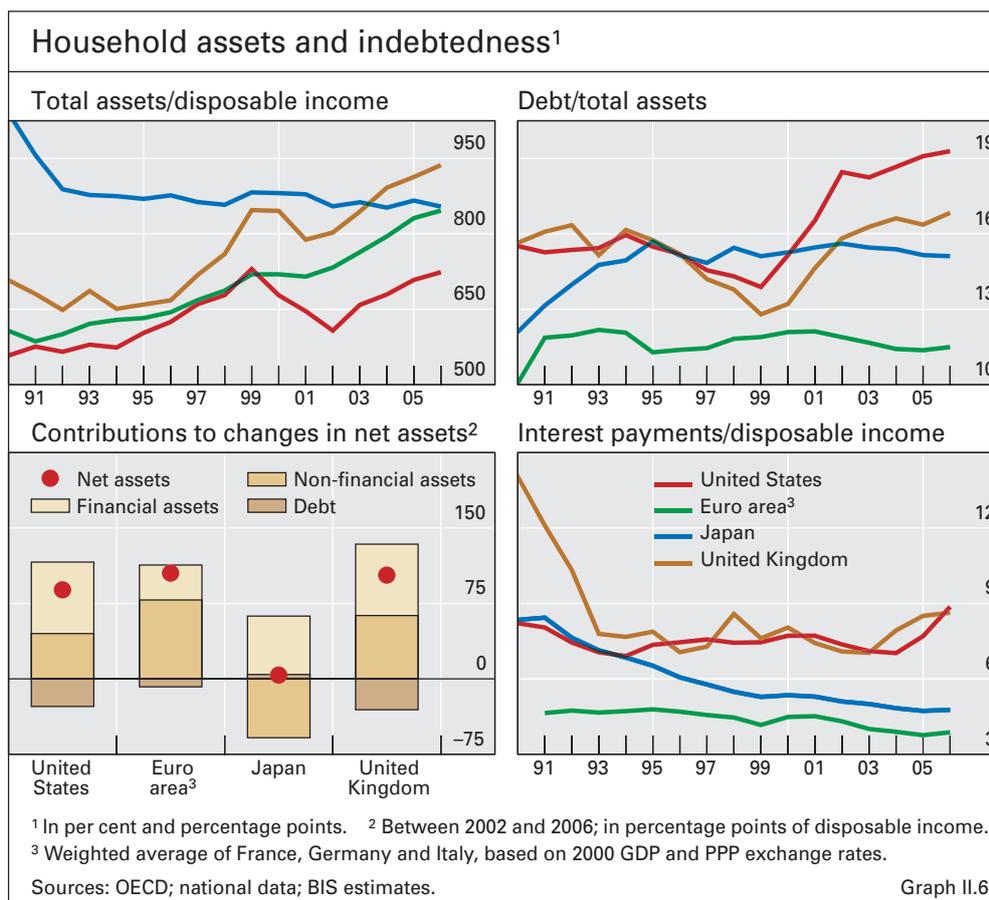
Changes in household wealth and borrowing

Household assets have experienced a rapid and broad-based increase in value during the current upswing in most advanced economies. Since end-2002, the ratio of total assets to disposable income has grown by about 15–20% in the United States, the euro area and the United Kingdom (Graph II.6). This increment is roughly equal in magnitude to annual disposable income, and brought the

... has risen in many advanced economies

Factors supporting strong household spending

Rapid increase in the value of household assets ...



asset/income ratios in these economies to record highs. One major exception to this picture is Japan, where the asset/income ratio has barely changed during the past 15 years or so.

... in the form of financial ...

Financial assets have accounted for most of the increase in the United States (60%) and the United Kingdom (55%). Within this, the bulk of the growth in financial assets – three quarters in the United States – has come from capital gains, mainly in equities and the pension and mutual funds that hold them. Net purchases of financial assets account for the small remainder. In Japan, rising values of financial assets and falling property values have largely offset each other.

... and non-financial assets

Increases in the value of non-financial assets have generally also been considerable. In the euro area, where the share of financial assets is relatively smaller, increases in the value of houses and durable goods even dominated. House prices have risen rapidly in most advanced economies in the past few years (Table II.5). This, rather than accumulation of additional housing or consumer durables, has accounted for the lion's share of the growth in non-financial assets. For instance, in the United States, net accumulation of physical assets (including housing) has made up only around 40% of the measured rise in household non-financial assets since end-2002.

Brisk expansion of household credit ...

Along with rising asset values, household credit has expanded briskly in many advanced industrial countries. This has been particularly marked in countries with booming housing markets, including the United States, the

Residential property prices and mortgage debt					
	Change in residential property prices ¹			Change in residential mortgage debt ²	
	1996–2002	2003–05	2006	2003–05 ³	2006
Norway	8.3	7.2	16.4	7.5	–0.8
Denmark	7.1	12.4	12.3	17.0	5.1
Sweden	8.0	8.9	10.5	6.7	2.5
New Zealand	4.0	17.2	9.6	18.6	7.3
Canada	3.7	9.7	9.4	5.0	2.3
Spain	7.7	16.1	9.1	16.0	6.1
United Kingdom	11.9	8.1	9.1	12.7	4.7
Australia	9.1	7.0	8.9	18.1	4.3
France	6.2	13.3	6.6	6.9	3.0
Italy	3.7	9.2	6.4	5.1	1.3
United States	5.7	10.9	5.9	14.3	1.7
Finland	8.2	7.3	5.7	9.1	2.1
Netherlands	11.2	3.9	5.3	13.2	–0.3
Japan	–4.7	–3.8	4.1	–0.1	–0.2
Switzerland	0.4	2.0	1.8	12.3	1.1
Germany	–0.7	–1.7	0.0	4.6	–0.6

¹ End of period; annual nominal changes, in per cent; for Japan, land prices in six large cities. ² In percentage points of GDP. ³ Cumulative change.

Sources: Various real estate associations; national data; BIS estimates. Table II.5

United Kingdom, France, Spain and several smaller advanced economies. Correspondingly, the stock of mortgage debt has risen considerably in these countries (Table II.5).

As both sides of the household sector's balance sheet have expanded, overall leverage – the ratio of debt to assets – has changed much less. In the euro area, debt has increased broadly in tandem with asset values (Graph II.6). In the United States and the United Kingdom, however, debt has risen even faster than asset values. By contrast, in Japan both debt and assets have trended down slightly relative to disposable income over the past decade as property prices have fallen until recently.

... but leverage has risen less

The expansion of household debt has generally been supported by low retail interest rates. From 2003 to 2006, typical mortgage rates in the countries shown in Graph II.6 were on average around 3 percentage points lower than in the 1990s. Retail interest rates seem to be reflecting the low level of interest rates worldwide and increased credit supply. Relaxation of lending standards due to greater competition and greater reliance on securitisation has contributed to a significant increase in lending, including to riskier households.

Retail interest rates have declined

Household financial deepening and consumption

These developments might have supported consumption growth through a variety of closely related mechanisms. First, households simply seem to have consumed more out of current income in the face of rising asset values. While it is difficult to isolate this channel from others, empirical studies generally find a significant impact of wealth on consumption. For instance, simple

Positive effect on consumption growth through rising asset values ...

consumption functions for the United States yield estimated contributions of higher asset values to consumption that even exceed those of growth of disposable income in the period 2003–06. Wealth effects in other economies seem to have been smaller, but still significant.

... increased borrowing ...

Second, rising asset values have increased households' scope for borrowing. In particular, housing equity withdrawal in the form of borrowing against rising collateral values has been an important source of cash flow, especially in English-speaking countries. For instance, in the United States flow of funds data suggest that housing equity withdrawal was, on average, equivalent to 4½% of household disposable income from 2003 to 2005, and 1½% in 2006. At the same time, its direct effect on consumption is likely to have been smaller than these figures suggest. Surveys conducted in Australia and the United States show that only about one fifth of the equity extracted from housing was spent on consumption.

... and subdued interest payment ratios owing to low interest rates ...

Third, low retail interest rates have allowed households to increase their average debt outstanding without a similar increase in repayment burdens. Total interest payments as a share of disposable income have drifted down in the euro area and, until recently, risen moderately in the United States and the United Kingdom. Debt service also seems to have remained fairly contained in the other advanced economies, although there have been exceptions, such as Australia.

... and debt substitution

The subdued profile of interest payment ratios also partly reflects the substitution of lower-cost housing-related debt for consumer debt. As well as helping to limit overall interest payments, this has lengthened the average duration of household debt. In addition, at least in the United States, some of the increase in mortgage debt service has replaced payment obligations such as rent, as more marginal borrowers have become homeowners. Broader measures of household financial obligations have therefore not risen as quickly as mortgage debt interest.

The capacity to smooth consumption seems to have grown

In addition to supporting faster consumption growth, these developments seem to have helped households smooth spending better than in the past. The past 10 years have seen the variation of aggregate household income growth remain at levels similar to the previous decade (Table II.6). At the

Measures of income and consumption variability ¹												
	Canada		France		Germany		Japan		United Kingdom		United States	
	Income	Cons	Income	Cons	Income	Cons	Income	Cons	Income	Cons	Income	Cons
1966–75	0.9	0.9	1.0	1.2	1.3	1.0	1.6	0.9	3.8	2.6	1.2	0.9
1976–85	2.4	1.4	2.6	1.4	2.3	2.5	2.4	0.8	3.0	2.6	1.0	1.0
1986–95	2.9	1.5	1.4	1.3	2.0	1.8	2.5	1.3	1.5	1.2	1.3	0.7
1996–2006	1.2	0.5	1.3	0.8	3.8	2.6	13.0	3.5	1.9	0.6	1.1	0.4
2003–06	1.0	0.4	1.6	0.5	7.0	6.3	3.1	2.1	1.2	0.7	1.1	0.4

¹ Coefficient of variation of quarterly growth in household disposable income deflated by the consumption deflator ("income") and final consumption expenditure at constant prices ("cons").

Source: National data. Table II.6

same time, however, consumption growth has generally fluctuated much less, with the notable exceptions of Germany and Japan, where household balance sheet expansion has been relatively limited. Empirical estimates also show a decline in the income elasticity of US consumption in the past couple of years. These observations are consistent with financial deepening reducing liquidity constraints of households.

How resilient are household balance sheets?

It is not clear how durable the increase in asset valuations underpinning the expansion of household balance sheets is. Over the past 10 years, there has not been a serious test of the resilience of balance sheets in the form of a sharp and simultaneous decline of asset values in the larger economies. The financial shocks that have occurred have generally only affected one asset class at a time. The drop in equity prices worldwide from 2000 to 2002 coincided with a fairly fast-paced rise in house prices in most advanced industrial countries (with the exception of Germany, Japan and Switzerland). In later years, housing prices declined temporarily in several smaller economies, but they are still rising fairly rapidly in nominal terms in many others.

The resilience of balance sheets has not been seriously tested

The experience of countries where house prices have fallen in recent years suggests that shocks specific to this asset class can be relatively easily absorbed as long as other factors affecting the balance sheet are supportive. Provided macroeconomic and labour market conditions continue to be strong, a moderate reversal in house prices is likely to result in some pullback in consumption, but probably not enough to generate a significant macroeconomic slowdown. However, a more generalised fall in asset prices that coincided with a macroeconomic downturn – as, for instance, happened in the Nordic countries in the early 1990s and the Netherlands more recently – might have more serious implications for consumption. Because sharp equity price falls often occur in the lead-up to recessions, they are also seen to precede larger consumption declines more often than falls in house prices alone (Graph II.7).

The impact of lower house prices has been limited ...

Another reason for expecting a more benign outcome from isolated declines in house prices can be found in distributional considerations. In most countries that have experienced rapid growth in housing-related debt, the increases have been concentrated amongst mid-career and higher-income households, especially existing homeowners. These groups generally already have substantial financial and other resources, and might be less likely than average workers to lose their jobs in a downturn. They are therefore the most able to bear the risks of additional debt.

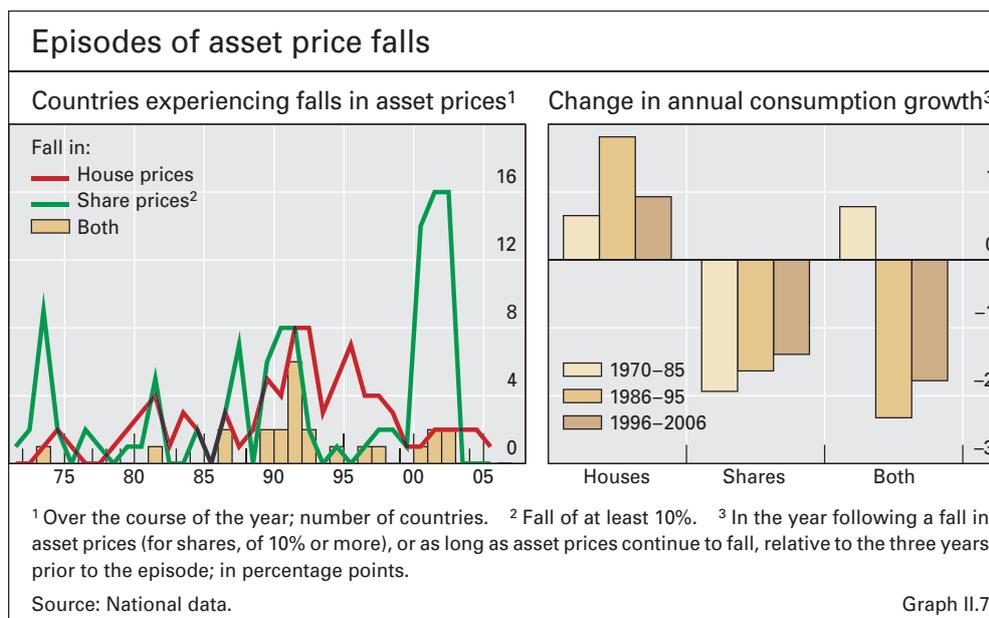
... in part because of the distribution of wealth

One exception to this pattern might be the United States. Although relaxations of lending standards to households have been a feature of the current cycle in many countries, the substantial expansion of the market to higher-risk borrowers seems to have been particular to the United States. Subprime mortgage lending accounts for a larger share of new mortgage lending in the United States than in other major economies, and has been increasing as a share of the total mortgage market there.

US subprime market risks ...

Many of the subprime and other non-traditional loan contracts incorporated large projected increases in required repayments several years

... have led to rising delinquency rates



into their terms, even if market rates did not rise. This has generated payment shocks for those borrowers who could not refinance or sell for a profit as planned when the interest payment was reset. The result has been a sharp pickup in mortgage delinquencies and defaults in the United States since late 2006. Although this has been most evident for subprime mortgages, delinquencies have also risen noticeably for prime and near prime loans with variable interest rates and resetting payments.

The role of hidden fiscal liabilities

Growing welfare payments ...

Despite a growing awareness of hidden fiscal liabilities, government welfare programmes and tax policies seem to have provided few incentives for households to increase saving. Since 1990, the share of government welfare payments in total household income has increased slightly in nearly all major industrial countries. This trend has been most apparent in those countries where population ageing is already boosting the size of the retired population, such as Italy and Japan. The share of social welfare payments in income is now slightly higher than at comparable points of earlier cycles in several countries, including the United States.

... and lower taxes

Household income has benefited not only from higher welfare payments but also from falling taxes. Relative to compensation of employees, personal income and wealth taxes paid declined in the late 1990s. Although this ratio has begun to pick up in some countries more recently, both as the expansion matures and as capital gains are realised and taxed, it generally remains lower than at the start of the decade.

Hidden fiscal liabilities ...

The fiscal liabilities associated with the ageing of the population raise serious doubts as to whether these two trends can continue. Within the next 10–15 years a dwindling share of workers will have to start supporting a ballooning share of dependants in all major industrial countries. In order to maintain current levels of pension, health care and other welfare benefits,

Projected impact of ageing populations on public expenditure										
	Total age-related spending		Pensions		Health care		Long-term care		Education	
	Level 2005 ¹	Change 2005–50 ²	Level 2005 ^{1,3}	Change 2005–50 ²	Level 2005 ¹	Change 2005–50 ²	Level 2005 ¹	Change 2005–50 ²	Level 2005 ¹	Change 2005–50 ²
European Union	22.4	3.8	10.6	2.2	6.4	1.5	0.9	0.6	4.5	–0.5
Japan	19.6	7.1	9.2	0.6 ⁴	6.0	4.3	0.9	2.2	3.5	...
United States	16.7	6.0	4.4	1.8 ⁴	6.3	3.4	0.9	1.8	5.1	–1.0 ^{4,5}

¹ As a percentage of GDP. ² In percentage points of GDP. ³ For Japan, fiscal year 2006; for the United States, 2000. ⁴ Change from 2000. ⁵ Including child and family benefits.

Sources: European Commission; OECD. Table II.7

total age-related spending would need to increase significantly over the next four decades (Table II.7). Clearly, taxes would have to be raised substantially to finance this spending increase. Alternatively, if the additional spending were to be debt-financed, then government debt ratios could spiral well above current ceilings, such as the euro area's 60% of GDP.

Empirical studies indicate that household consumption and saving might be quite sensitive to changes in the state of public finances, especially if the level of public debt is already high. One example might be the weak consumption observed in Germany since the start of this decade. This has been partly attributed to households' worries about their future pension and health care benefits. The timing of the "wake-up call" for households will depend on many factors, including their current level of saving. But probably the most important considerations will be the timing and nature of reforms to public pension and health care systems.

... might at some point affect household saving

Prospects for changes in household consumption and saving

The current configuration of record high propensities to consume and correspondingly low household saving rates in many advanced industrial countries appears unusual. Its sustainability ultimately depends on whether expectations of future permanent income underlying current spending decisions will be validated. A number of factors, including strong global growth, rising employment in many economies and still low interest rates, seem supportive to favourable income expectations and asset valuations in the near term. At the same time, the expansion of household balance sheets raises important longer-term issues, some of which could also be relevant over shorter horizons.

Unusual configuration of consumption and saving

A first issue is whether rises in asset prices genuinely imply increases in the household sector's wealth. Increases in the value of equity holdings represent greater aggregate wealth to the extent that they reflect correct expectations of future output growth. This could include participation in productivity gains in rapidly growing emerging economies by households in advanced economies, via international portfolio diversification.

Different character of equity ...

In the case of residential property, rising prices of a given stock of houses imply a redistribution of wealth, from current and future users of housing

... and housing wealth

services to existing house owners, rather than a net increase in wealth for the household sector as a whole. The current higher consumption levels resulting from this redistribution might in future be offset by higher saving on the part of future users of housing services. However, the consumption responses of this latter group could well be some way off.

Increased borrowing might continue for a while ...

A second issue concerns the impact of higher leverage on household spending. It is not clear whether the apparent boost to consumption from households' borrowing behaviour will persist. On the one hand, increased capacity of households to borrow against rising asset values, and enhanced credit supply to households more generally, might support consumption growth for a while, especially in an environment of ongoing financial innovation and heightened competition in the financial sector.

... but the sensitivity of household balance sheets might have increased

On the other hand, rising debt levels might have increased the sensitivity of household balance sheets to financial and macroeconomic shocks. At the aggregate level, debt/asset ratios still appear relatively low, notwithstanding the increase during the past couple of years in the English-speaking countries. One key question is what would happen if long-term interest rates were to rise from the current historically low levels (see Chapter VI). Much would arguably depend on the factors behind such a rise. If it reflected expectations of stronger growth, equity prices might also rise because of improved profit expectations. In contrast, higher interest rates due to increasing risk premia or higher inflation would probably bring down the net present value of asset classes across the board. This could also reduce the capacity of households to manage financial risks and smooth consumption over time.

Hidden fiscal liabilities as risk

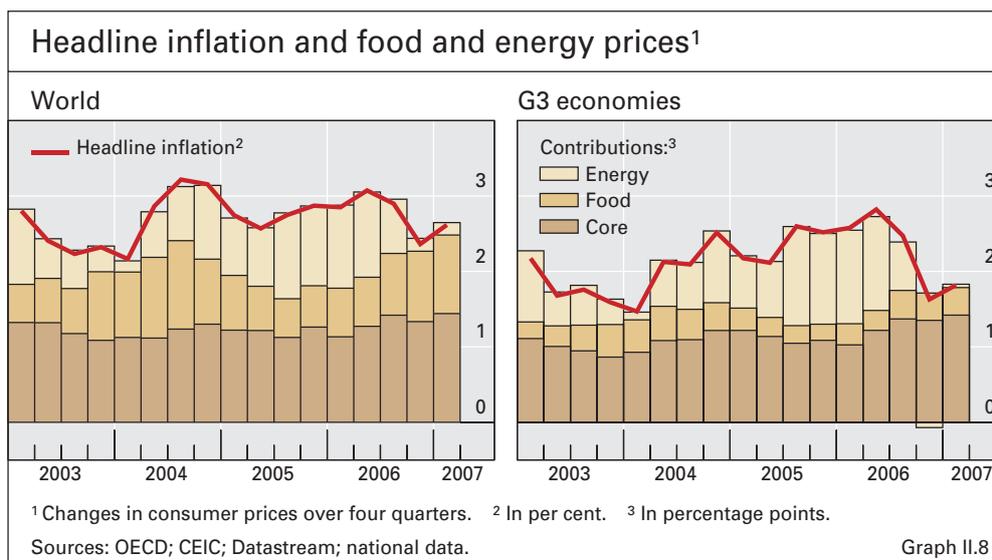
Finally, as mentioned above, hidden fiscal liabilities pose a hard to quantify risk for the sustainability of strong household spending. While the drawn-out nature of demographic trends and the political economy of major welfare reforms suggest that shifts in household saving and consumption behaviour are not likely to be abrupt, surprises along the path towards less generous but more sustainable welfare systems cannot be excluded. Financial problems surrounding unfunded pension schemes or public health care systems could affect households' expectations and increase their propensity to save in a relatively short period of time.

Inflation developments

Headline inflation fell as energy price pressures receded

Effects of oil prices lowered headline inflation ...

Global headline inflation closely tracked movements in energy prices in the period under review. On the back of rising oil prices, global headline consumer price inflation rose above 3% in the first half of 2006 before dropping sharply as energy prices declined towards the end of the year (Graph II.8). In the second quarter of 2006, headline CPI inflation in the United States exceeded 4%, the highest reading since the early 1990s, before falling back to 2% towards the end of the year. Energy prices also raised headline inflation in the euro area to 2½% before it receded to a level below 2% by end-2006. The decline in energy prices caused Japan's headline inflation to dip into negative



territory at the beginning of 2007. Emerging market economies experienced similar fluctuations in annual changes in headline CPI, although the impact of oil price movements was still dampened by administrative measures in some Asian economies (see Chapter III).

In the second half of 2006, the restraining effect of lower energy prices was partly offset by accelerating food price inflation. This was especially visible in emerging market economies, where food typically accounts for more than 30% of the consumption basket, compared to about 15% in advanced industrial countries. Food prices increased by about 7% in emerging market economies, primarily due to a drop in supply. For instance, despite easing in early 2007, wheat prices remained about 25% higher in dollar terms than one year previously because drought reduced the crop in major producer countries such as Australia.

... but were partly offset by rising food prices ...

To some extent, however, the increase in food prices might herald another more secular change in relative prices, similar to the observed rise in the prices of oil and base metal commodities vis-à-vis manufactured consumption goods. Prices of maize and soybeans have risen sharply because of strong demand growth. One important factor behind this development seems to be policies aiming at reducing oil dependence through the production of biofuel. Another factor which could gain importance over time is that rising income in emerging economies is lifting demand for high-quality food that is relatively scarce (such as fish) or whose production requires high feed input (such as meat).

... which might be maintained over time

Inflation excluding food and energy seems to have gradually trended higher over 2006. While this seems consistent with the notion that the pass-through of commodity price increases to the prices of other products remained fairly limited, it might indicate that underlying inflationary pressures have risen. In the United States and the euro area, core inflation accelerated in the course of 2006 and remained elevated into 2007. While some of this apparently reflected one-off factors – such as the VAT increase in Germany – there were no clear signs of a reversal in either economy. Core inflation in Japan remained negative, despite a modest upward trend since mid-2006.

Core inflation trended higher

Persistent uncertainty about underlying inflation pressures

Further increase
in resource
utilisation ...

The fourth year of strong economic growth went hand in hand with a further rise in resource utilisation worldwide. Traditional indicators such as output and unemployment gaps suggest that economic slack has more or less been used up in the major advanced economies (Graph II.9). Slack is also thought to be disappearing in emerging market economies, with unemployment rates reaching multi-year lows in many cases.

... and signs of
wage pressures

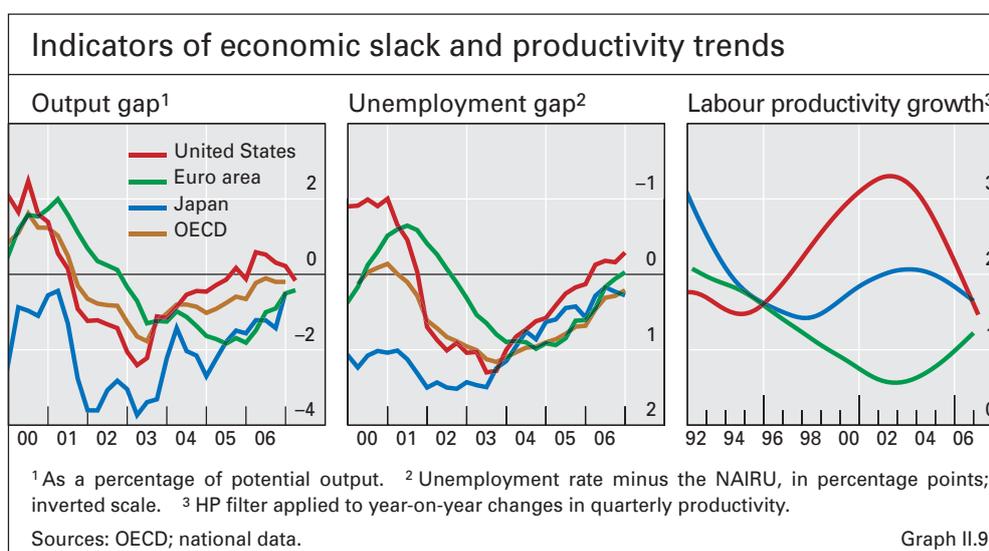
There are some indications that vanishing slack might have increased inflationary risks. In the United States, various measures of labour compensation displayed signs of acceleration against the backdrop of tight labour market conditions. In cyclically less advanced economies like Germany and Japan, labour unions appear to have become more aggressive in demanding pay rises. Actual wage increases in the euro area, however, remained subdued. Similarly, the growth rate of wages in Japan was still negative in spite of falling unemployment.

Rising wage shares
might also indicate
inflation risks ...

Diminishing slack in labour markets was also associated with an increase in the wage share of total income in some cyclically advanced economies such as the United States and the United Kingdom, against the long-term downward trend. Some researchers argue that compensation as a share of GDP can be seen as a proxy for the real marginal cost of production, which is held to be an important determinant of inflation. Indeed, together with the wedge between relatively low import and higher domestic prices, the falling wage share can explain a significant part of the disinflation experienced during recent decades (Table II.8).

... but the
uncertainties are
considerable

Yet it appears difficult to draw any firm conclusions about how these developments affect the inflation outlook. First, measuring levels of resource utilisation is fraught with difficulties, even in advanced economies with relatively well developed statistics. Assessing economic slack in emerging economies is even more challenging, and this makes it difficult to quantify reliably the amount of slack at the global level. There is also considerable uncertainty about the level of the unemployment rate below which inflation



Changes in inflation and contributing factors					
	Change in headline inflation ¹	Explained by changes in:		<i>Memo: Headline inflation</i>	
		Wage share ²	Import/domestic price difference ²	<i>Average³ 1975–89</i>	<i>Average³ 1990–2006</i>
United States	–3.1	–0.8	–0.8	5.4	2.3
Japan	–3.7	–0.6	–1.4	3.7	0.0
Germany	–1.3	–0.3	–0.6	3.1	1.8
France	–6.3	–1.9	–1.3	7.9	1.6
United Kingdom	–6.0	–0.4	–3.1	9.0	2.9
Eight OECD countries ⁴	–4.7	–1.2	–1.8	6.6	2.0

Contributions are calculated based on a regression of consumer price inflation on its own lags, levels and changes in wage share and import/domestic price difference (both lagged).

¹ Difference between average values for 1975–89 and 1990–2006. ² Contribution to difference. ³ Annualised quarterly changes, in per cent. ⁴ Simple average for Australia, Canada, France, Germany, Japan, Sweden, the United Kingdom and the United States.

Sources: OECD; BIS calculations. Table II.8

might be expected to accelerate. Empirical studies suggest that the non-accelerating inflation rate of unemployment (NAIRU) in the United States has declined by 1 percentage point or more since the mid-1980s, owing to various institutional changes in the US labour market. Estimates of the NAIRU for the euro area have also been lowered by a similar amount in the past couple of years.

Second, productivity growth is difficult to assess. It tends to vary over time and there is a particularly high degree of uncertainty about the interpretation of the most recent observations, which are often subject to substantial revisions. For instance, the final revision to estimates of labour productivity growth in the United States since 2000 has amounted to about 1 percentage point per year. This is almost half of the total average rate. Moreover, it is always hard to assess to what extent the most recent changes in productivity growth reflect structural as opposed to cyclical factors.

Identifying productivity trends is difficult

Third, and in a related vein, the future evolution of marginal costs of production appears uncertain. Wage shares in advanced economies have fallen by about 4 percentage points since the early 1980s. This downward trend observed across industrial countries cannot be explained by cyclical factors. Recent empirical studies support the view that technological progress and globalisation could have contributed to structurally lower wage shares in advanced industrial countries, possibly by curtailing the bargaining power of workers.

The trend in wage shares might reflect structural factors

Finally, there is considerable uncertainty about possible changes in the inflation process in general. For instance, the sensitivity of inflation to domestic slack – measured by either the output gap or the unemployment gap – is reported to have declined across a wide range of countries in the past two decades. Yet it is not clear how much guidance this observation provides under changing macroeconomic conditions. One interpretation is that Phillips curves have flattened and that unemployment might have to rise more than in the past

Changes in the inflation process are not well understood

to reduce inflation. Another possibility is that these estimates might unduly (and spuriously) reflect recent periods of high growth which failed to ignite higher inflation. If the reason were unaccounted-for positive supply shocks which were expected to continue, this would make inflation control easier, not harder.

Will firms pass on higher labour costs?

Against this general backdrop, it is difficult to assess to what extent firms might pass on higher labour costs to their output prices. High corporate profits suggest that firms have scope to absorb rising labour costs by margin compression. This seems to have happened during the cyclical run-ups in wage shares in the early 1990s and around 2000, as a result of which inflation remained low and stable. However, a steadily rising number of surveyed firms in the euro area and the United Kingdom expect to increase output prices. This might be an indication of an increasing capacity to pass on rising costs to consumers in an environment of strong demand growth.

Is Japanese deflation now less dangerous?

Stubbornly low inflation in Japan could be seen as an example of how the combination of structural and cyclical factors complicates the assessment of the inflation outlook and the associated risks. Service prices have barely changed since 1999 – compared to annual service price inflation of 1½–4½% in the United States and the euro area. This appears closely related to weak wage developments, which have supported high profits and corporate debt reduction at stable prices. In addition, deregulation has had non-negligible effects in markets for specific goods (eg mobile telephone charges) and in labour markets. Lower prices for both imports and import-competing goods have also been significant. More generally, notwithstanding inflation remaining close to zero, economic growth and restored financial stability imply that the potential for a downward deflationary spiral in Japan is much smaller than might have been the case five years ago.

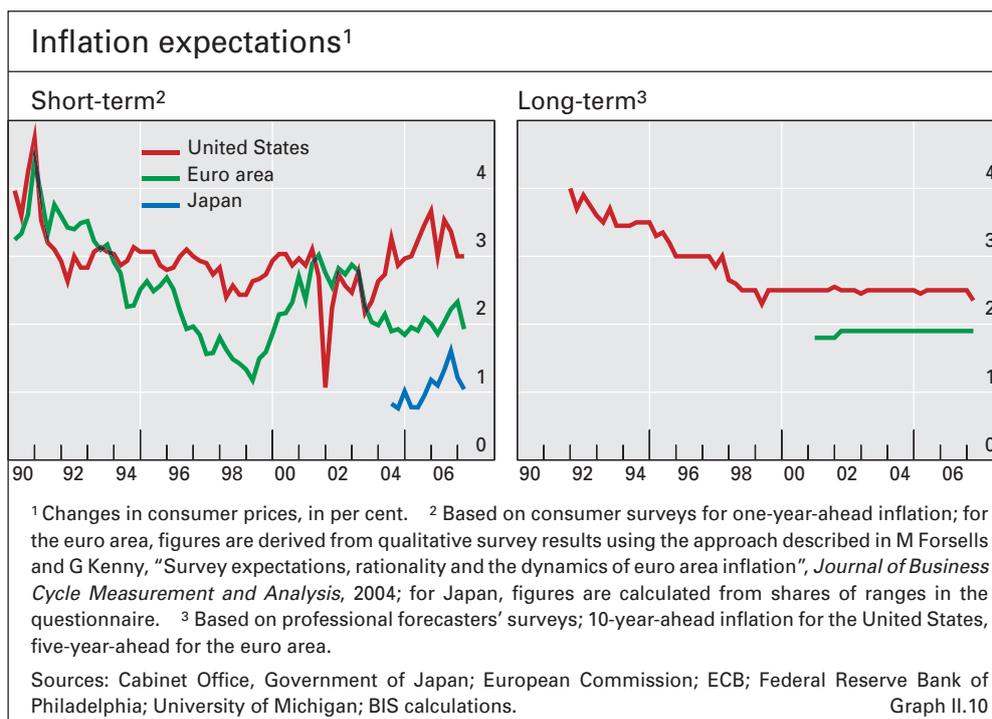
The role of inflation expectations

Stable long-term inflation expectations are encouraging ...

The relative stability of long-run inflation expectations might indicate that economic agents view current uncertainties as unlikely to jeopardise price stability. While survey measures of the short-term inflation expectations of the household sector have fluctuated with energy price developments, those of long-term inflation expectations have remained remarkably stable in recent years. In the United States, 10-year-ahead expectations for CPI inflation, taken from the Survey of Professional Forecasters, have remained virtually constant at 2½% since 1998. In the euro area, five-year-ahead inflation expectations based on a similar survey have also remained very stable at 1.9% during the last few years (Graph II.10). A high degree of stability is also found in market-based measures of inflation expectations, such as break-even inflation rates derived from long-term index-linked bonds.

... but might create a false sense of security

However, the reliability of inflation expectations indicators is sometimes challenged. One line of criticism is related to the quality of surveys, or the existence of time-varying risk premia and insufficient market liquidity that limit the information content of market-based indicators. Another, more fundamental, criticism concerns the limited understanding of the process of expectations formation. The fact that long-term inflation expectations have apparently remained well anchored over the past few years might not provide



an indication as to whether, and if so how strongly, these expectations might eventually be revised. For instance, if expectations are based on past experience, as argued by some observers, they might still rise quickly if trend inflation changed appreciably or inflation rates exceeded a certain threshold.

Outlook: a welcome moderation of growth and inflation?

The consensus view for the current year is for a moderation of global output growth to a sustainable level. The broad-based economic expansion is forecast to continue in 2007, and into 2008, at a slightly slower pace than in 2006 (Table II.9). Inflation is expected to ease as growth moderates and oil prices stabilise. A further narrowing of growth differentials is also expected to contribute to gradually receding current account imbalances.

The benign consensus forecast ...

In many respects, the macroeconomic environment appears favourable. Financing conditions remain generally supportive to growth. Unemployment has fallen in major advanced and emerging economies. Perhaps more fundamentally, the seemingly smooth shift in the balance of growth across regions during the past few quarters might support the view that the global economy has become more flexible and resilient.

... is supported by broad-based economic strength

Nonetheless, the baseline scenario is subject to significant near-term risks. The full impact of the US housing market downturn might not yet have been felt. The recent difficulties in the subprime mortgage market could well deepen the housing market downturn through forced sales of homes and adverse effects on credit supply. While Europe and Asia appear somewhat less dependent on US growth than a few years ago, questions persist about the robustness of consumption growth in some large economies. Moreover, the exposures to contagion associated with rapidly evolving global trade and

Yet near-term risks to growth ...

Growth and inflation						
Average annual changes, in per cent						
	Real GDP			Consumer prices ¹		
	2005	2006	2007 ²	2005	2006	2007 ²
Total ³	4.3	4.8	4.3	3.2	3.2	2.9
Advanced industrial economies ³	2.4	2.9	2.3	2.3	2.4	1.9
United States	3.2	3.3	2.1	3.4	3.2	2.4
Euro area	1.5	2.8	2.5	2.2	2.2	1.9
Japan	1.9	2.2	2.2	-0.3	0.2	0.1
United Kingdom	1.9	2.8	2.7	2.0	2.3	2.3
Other ⁴	2.8	2.9	2.8	2.0	2.3	1.8
Emerging market economies ³	7.0	7.6	7.1	4.5	4.4	4.3

¹ For the euro area and the United Kingdom, harmonised index. ² Consensus forecasts published in May. ³ Average of major countries available in Consensus Economics. ⁴ Australia, Canada, Denmark, New Zealand, Norway, Sweden and Switzerland.

Sources: Eurostat; © Consensus Economics; national data. Table II.9

financial linkages are not well understood. Finally, and in a related vein, an economic downturn might give rise to protectionism.

... and inflation
persist ...

The inflation outlook also remains uncertain. Energy and other commodity prices have rebounded since the beginning of 2007. Moreover, underlying inflationary pressures are still visible in major economies, and it is not clear whether the projected moderation of growth would be sufficient to significantly reduce resource pressures. At the same time, capacity utilisation rates also seem to be rising in major emerging economies. Assessing the impact of rising wages on inflation might be a particular challenge for central banks in advanced industrial economies, especially after such a long period of subdued wage growth.

... and might at
some point affect
financial markets

Macroeconomic outcomes might also depend on how financial markets adjust to news. A deeper than expected US slowdown, and concerns about the sustainability of strong growth elsewhere, could lead to rising risk premia. Equally, any perception that inflation risks are not under control could also lead to a repricing of risks. The two episodes of heightened financial market volatility in May–June 2006 and February 2007 are a reminder that negative surprises with respect to both inflation and growth can unsettle markets. While on those occasions there was no pass-through to the real economy, such an impact cannot be ruled out in the future.