Box 6

USING NATIONAL ACCOUNTS DATA TO GAUGE PRICE PRESSURES IN THE EURO AREA

The assessment of price pressures in the euro area economy is one of the key objectives of the conjunctural analysis conducted by the ECB, of which the analysis of price and cost variables represents an important part. Information from a variety of sources is usually used, such as consumer and producer price indices, labour cost data, commodity prices and surveys. National accounts data also provide valuable input into this assessment. This box gives an overview of national accounts price and cost data and assesses their signals with respect to current price pressures in the euro area.

The national accounts price and cost framework

For analytical purposes, national accounts data can be decomposed in several ways. Starting with the final demand deflator as the overall encompassing indicator, one can assess price pressures emanating externally by looking at developments in the import deflator, while price pressures stemming from domestic sources are summarised by the GDP deflator (see Chart A). The final demand deflator can also be further broken down into the components of expenditure, such as deflators for private consumption (which is similar to the HICP, but differs in some respects, for example, by including imputed expenditures for owner-occupied housing), investment and government consumption. GDP can be decomposed into the various components of income. From this, information can be obtained about developments in domestic price pressures disaggregated by compensation, gross operating surplus or profit, and taxes less subsidies on production and imports. As the GDP deflator measures the "price" of total value added per unit of output,[1] it can be decomposed into unit labour costs, gross operating surplus (or profit) per unit of output and net indirect taxes per unit of output. An alternative way of viewing profits is as a mark-up over labour costs. Finally, national accounts data also provide an insight into cost developments in the various sectors and activities of the economy.

National accounts data comprehensively cover many economic aspects in a consistent framework, and are thus used as the framework for the Eurosystem staff projections. However, the use of such data is not without drawbacks, particularly as the data are only available on a quarterly basis and with a significant delay (for example, euro area data on the income side of the national accounts for the third quarter of 2006 are not scheduled for release until mid-January 2007). Moreover, national accounts data can be subject to subsequent revisions, adding uncertainty to their real-time assessment. Furthermore, since national accounts rely, for deflation purposes, on primary statistical sources such as consumer and producer price statistics, possible shortcomings of existing price statistics are also reflected in national accounts deflators (for example, gaps in the price statistics for business services and external trade).

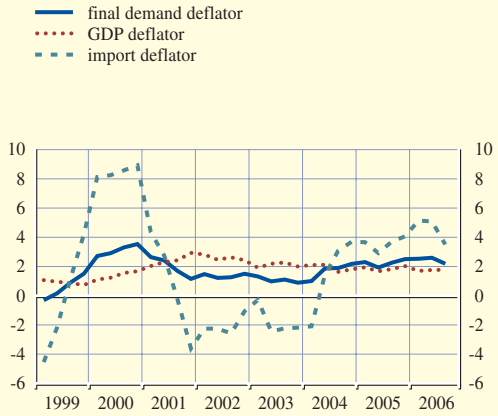
Recent developments in external and domestic price pressures

Looking at recent developments, Charts A and B give an idea of the size of the external price pressures faced by the euro area. The import deflator has increased noticeably in recent years,

1 Value added is calculated by subtracting intermediate consumption from gross output. To calculate the "price" per unit of value added, value added data are required in nominal and volume terms. As value added in volume terms is not actually observed in reality, it is in many cases calculated using the so-called double deflation method, whereby gross value added volumes are measured by subtracting intermediate consumption at constant prices from output at constant prices.

Chart A Final demand, GDP and import deflators

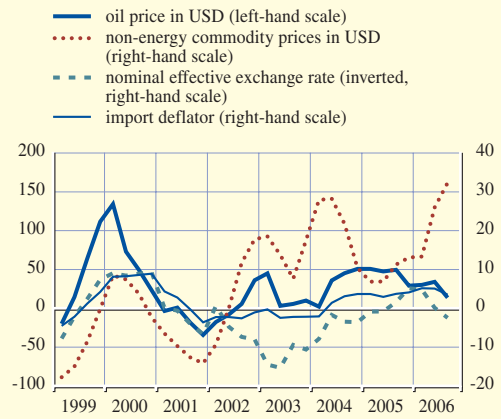
(annual percentage changes; quarterly data)



Sources: Eurostat and ECB calculations

Chart B Commodity prices, exchange rate and import deflator

(annual percentage changes; quarterly data)



Sources: ECB, Eurostat, HWWA, Thomson Financial Datastream and ECB calculations.

pointing to a significant build-up of external price pressures. While the import deflator covers both extra and intra-euro area trade, it is clear from Chart B that much of this increase has been driven by the rise in oil prices. The recent retreat in oil prices and the recent strengthening of the euro have helped to ease these pressures. Nevertheless, ongoing strong increases in the prices of other imported goods, such as non-oil commodities, in particular industrial raw materials, have continued to give rise to upward pressures from the external side in the second half of 2006.

In contrast to external price pressures, domestic price pressures, as reflected in the annual rate of change in the GDP (value added) deflator, have remained more contained in recent years, running at around 2% since 2004 after having been as high as 3% in late 2001. However, as depicted in Chart C, there have been rather divergent developments in the components of the GDP deflator. In particular, the contribution of growth in unit labour costs decreased significantly from 2002 onwards to reach about ½ percentage point in the second quarter of 2006. This decline reflects overall moderate wage developments in the context of high unemployment and increased global competition. More recently, a cyclical improvement in labour productivity has also helped to curtail unit labour cost growth. By contrast, the contribution of per unit indirect taxes has increased over time, while that of per unit profits has remained broadly constant at around 0.9 percentage point. Thus, on average, producers have been able to continue to expand profits despite strong non-labour input cost pressures and heightened international competition.

Sectoral developments

The resilience of profits is particularly evident considering developments in the industrial sector (excluding construction). Chart D illustrates developments in industrial producer prices and in the industrial sector value added deflator (and its breakdown into unit labour costs and

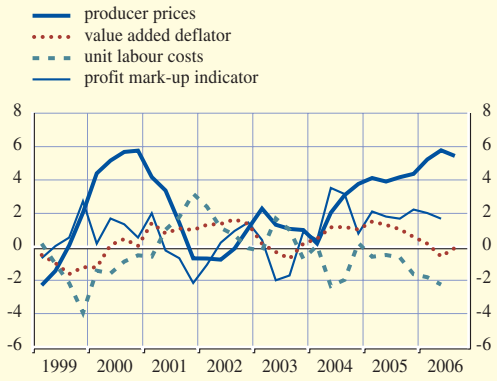
Chart C Decomposition of the GDP deflator

(annual percentage changes and percentage points; quarterly data)

Sources: Eurostat and ECB calculations.

Chart D Industrial producer prices and the breakdown of the industrial value added deflator

(annual percentages changes; quarterly data)



Sources: Eurostat and ECB calculations.
Note: Industry excludes construction.

the indicator of the profit mark-up on unit labour costs).[2] The significant difference between producer price developments and the value added deflator is due primarily to increases in intermediate input costs.[3] As these increases have not been fully passed through to producer prices, profit mark-ups have been affected, albeit to differing degrees along the production chain, and the rate of growth of the value added deflator in the overall industrial sector has declined. In addition, unit labour costs have been declining, thus helping to offset the upward pressures on prices from non-labour input costs. This development has enabled firms to maintain profit mark-ups on balance. However, were unit labour costs to increase, as was the case between 2000 and 2002, this would place additional pressure on firms' input costs.

2 Owing to the lack of information at the sectoral level on taxes (less subsidies) on production not linked to products, here an indicator of the profit mark-up is used, where the mark-up is proxied by the gap between the rates of change in the gross value added deflator (at basic prices) and unit labour costs.

3 Producer prices measure gross output prices, whereas the value added deflator measures only the price of value added (i.e. the difference between gross output and intermediate inputs). Thus an increase in intermediate costs which is fully passed through gives rise to an increase in gross output prices, although not in the value added deflator.

Decomposition of the value added deflator

(annual percentage changes and percentage points; annual data)

	Whole economy			Industry			Services		
	value added deflator	unit labour costs	profit mark-up indicator	value added deflator	unit labour costs	profit mark-up indicator	value added deflator	unit labour costs	profit mark-up indicator
1999	0.7	1.8	-1.1	-1.1	-1.8	0.7	1.5	3.4	-1.9
2000	1.4	1.1	0.4	-0.2	-1.1	0.9	1.8	1.7	0.1
2001	2.6	2.3	0.3	1.1	1.3	-0.3	2.9	2.6	0.3
2002	2.6	2.4	0.2	1.4	1.0	0.4	3.0	2.8	0.1
2003	2.1	1.8	0.3	-0.2	0.4	-0.6	2.6	2.0	0.6
2004	1.7	0.9	0.8	1.0	-1.0	2.0	2.0	1.7	0.2
2005	1.6	1.0	0.6	1.1	-0.8	2.0	1.7	1.2	0.5
2006H1 [1)]	1.4	0.9	0.5	-0.2	-2.0	1.9	1.5	1.6	-0.1

Sources: Eurostat and ECB calculations.
Note: Industry excludes construction. Owing to the lack of information at the sectoral level on taxes (less subsidies) on production not linked to products, here an indicator of the profit mark-up is used, where the mark-up is proxied by the gap between the rates of change in the gross value added deflator (at basic prices) and unit labour costs.
1) Complete (i.e. including income side) national accounts data are currently only available for the first half of 2006.

Unit labour cost growth has also declined in the services sector since 2002, as can be seen in the table, which shows developments in the value added deflators and their decomposition in the industrial and services sectors since 1999. However, unit labour cost growth in the services sector tends to be higher on average compared with the industrial sector, mainly reflecting lower labour productivity growth in the services sector. Whereas differences in the profit mark-up indicator are not as systematic between industry and services, they have tended to be more volatile and higher on average in the industrial sector. This greater volatility reflects, among other factors, the greater cyclicality in this sector and the greater exposure to external price developments, including commodity price fluctuations.

All in all, national accounts indicators provide useful information on euro area price and cost developments, both at the level of the whole economy and at more disaggregated levels. At the current juncture, analysis of domestic cost pressures illustrates that, although unit labour cost growth is low, domestic price pressures are held up by government measures and profit developments. The analysis also highlights the sustained pick-up in external cost pressures over recent years.