

# Macroeconomic Forecast Ukraine

- The real GDP growth is estimated to stay at 7.2% in 2007, but a deceleration of growth to 6.1% is forecast for 2008.
- The deceleration of real GDP growth is attributed primarily to slower development of households' consumption.
- Investment activity is expected to remain high both in 2007 and 2008, despite political turmoil and increased cost of borrowing.
- The trade deficit is expected to preserve in 2008 due to higher import prices, despite the slowdown of growth rates of real imports.
- Manufacturing growth is forecast to slowdown in 2008 due to higher input prices and lower domestic demand.
- Consumer inflation will accelerate in 2008 and reach 14.6% as annual average compared to 12.8% in 2007.

**No.2 (12)  
December  
2007**

**Forecast Period:**  
Q3-2007 to Q4-2008

**Forecast Variables:**  
GDP and components, inflation

## GDP: The growth in real GDP is forecast to slow in 2008

Real GDP is estimated to increase by 7.2% in 2007, thus maintaining the growth rate of the previous year. The key driving force for growth continued to be the private domestic demand, though this year it was coupled with the recovery of real exports. At the same time, high domestic demand stimulated the growth of real imports that significantly exceeded the growth of real exports.

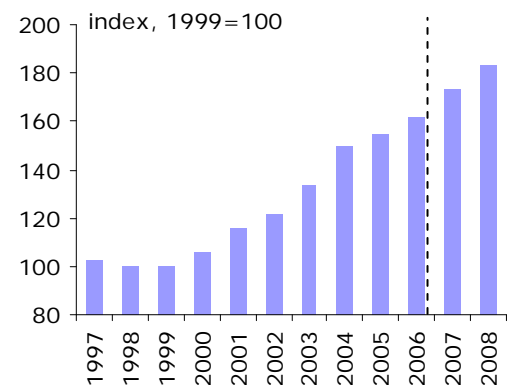
There were several important shocks for the economy in 2007. First, it was an increase in the price for imported gas by more than one third to USD 130 per thousand cubic meters. Despite some concerns, the economy was able to sustain the shock thanks both to high export prices for metals and chemicals – key manufacturing consumers of gas – and somewhat improved energy efficiency.

Second, the level of political uncertainty was especially high in 2007. The activity of the Verkhovna Rada was de-facto frozen since April 2007. This situation has not significantly affected the economy in the short-run, but if sustained it could negatively impact the medium-term economic perspectives of the country.

Third, an international financial crisis started in August 2007, which has posed a threat to future foreign capital inflows to the country. In the first half of 2007, the levels of foreign borrowings as well as the FDI inflows were historically high. But lower international liquidity and higher interest rates could negatively affect these inflows, slowing both investments and consumption. Although this slowdown is not likely to affect the economic development in 2007, it creates an additional risk for the next year growth.

In 2008 the real GDP growth is forecast at 6.1%, thus decelerating compared to 2006-2007. It is mainly attributed to much slower growth of household consumption, although the domestic demand is expected to stay a main contributor to growth. The growth of real imports is forecast to remain higher than of real exports, although also decelerating alongside with domestic demand.

**Gross Domestic Product**



Source: Derzhkomstat, own calculations

## Assumptions:

- In 2008 the imported gas price will be USD 179.5 per thousand cubic meters at the border with Russia.
- The world prices for metal and chemicals remain high.
- Ukraine will join WTO in mid-2008.
- No changes in major tax rates in 2008.
- Growth in social payments, pensions and minimum wage will accelerate in 2008.
- The average nominal exchange rate will be 5.05 UAH/USD in 2007 and 2008, though it will be more volatile in 2008.

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## Private Consumption: Significant deceleration of real households' consumption is expected in 2008

For several years the private consumption was the key driving force for the GDP rise in the country, demonstrating record growth rates. It is expected that in 2007 the real growth of households' consumption will be only somewhat lower than in the previous period at 12.8%. The expansion of households demand is backed by the continued growth in incomes, including both wages and social transfers, and by the credit boom. According to the National Bank of Ukraine, in the first nine months of the year outstanding credits to physical persons increased by 64.9% yoy, and totalled to UAH 129.5 bn. Also, the ratio of outstanding credits to official households' incomes (excluding credits) reached 0.3, indicating an increased debt pressure on households. The boom of retail credits has been financed by banks' foreign borrowings. The prolonged international financial crisis accompanied by increased interest rates and reduced liquidity is likely to diminish the inflow of foreign funds, thus curtailing a further credit expansion next year. Yet other important factor slowing the growth of real households' consumption already in the fourth quarter of 2007 and expected to stay in 2008 has been the acceleration of consumer inflation. Therefore, our forecast for 2008 is much more reserved. It is expected that the growth of real private consumption will be much slower at 6.2%.

## Government Consumption: Moderate growth of government final consumption is expected

Although the share of state consumption in the GDP is estimated to remain rather stable at around 18% in 2007-2008, its contribution to the GDP growth is expected to be very moderate, as it has been since 2004. In particular, the real state consumption is expected to increase by 3.8% in 2007 and by somewhat lower 2.8% in 2008. The estimate is based on the assumption that there would be no noticeable expansion of the real expenditures on healthcare and education, the largest part of its consumption bundle. Though, rapid expansion of services in social sphere – apart of social transfers to households – may result in higher growth.

## Investment: Fixed capital growth remain high in 2008

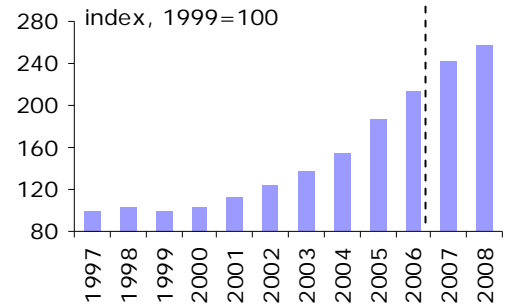
The investment expansion in Ukraine is expected to be maintained in 2007 and 2008. According to the Derzhkomstat, in the first half of 2007 the real gross fixed capital accumulation increased by 23.9% yoy. The likely incentives for high investment activity are intensification of competition among producers, energy prices increase and thus the need to implement energy saving technologies. Although the financing of the investments was predominantly from own enterprise funds, a higher share of enterprises started to use borrowed funds. The international financial crisis and thus higher interest rates negatively affect the availability of the funds, somewhat hampering the growth. Prolonged high political uncertainty, including the early parliamentary elections in September, seems to have a mild impact on investments. Thus, it is estimated that the real gross fixed capital accumulation grew by 19.7% in 2007.

In 2008 investment growth is expected to slow slightly to 15.3% yoy, mostly due to truncated access to borrowed funds. Competition and energy price factors will remain the driving force for investment activity. Also, the preparation for the European Football Championship 2012 will stimulate investments in infrastructure, since its current level falls clearly behind the required level by UEFA.

## External Sector: The trade deficit will be preserved despite expected deceleration of imports in 2008

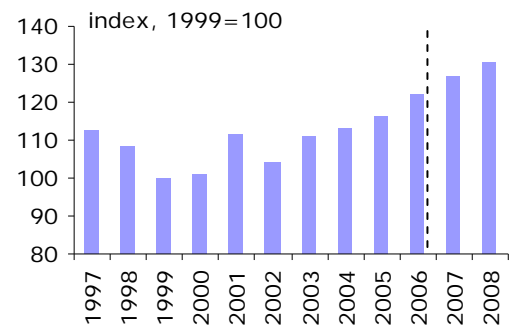
According to the Derzhkomstat, in the first half of 2007 the growth of real exports of goods and services significantly lagged behind the growth rate of imports, 5.0% yoy and 16.4% yoy respectively. Although the growth of export prices was higher, the trade deficit

### Households' Consumption



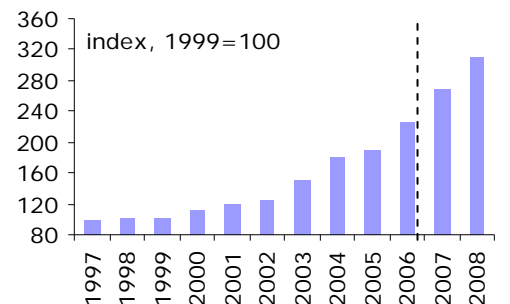
Source: Derzhkomstat, own calculations

### Government Consumption



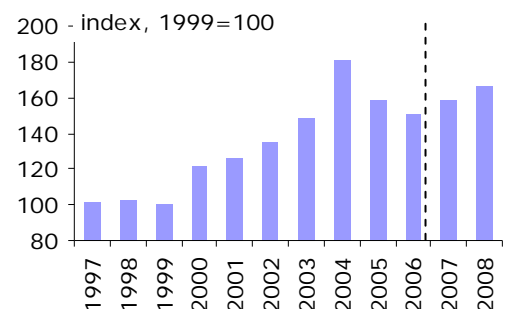
Source: Derzhkomstat, own calculations

### Gross Fixed Capital Accumulation



Source: Derzhkomstat, own calculations

### Exports of Goods and Services



Source: Derzhkomstat, own calculations

widened. The growth of imports has been stimulated by the high domestic demand, both for consumption and investment goods. It is expected that the trend will be preserved till the end of the year, and the growth rates of real exports and imports in 2007 will be at 5.4% and 16.7% respectively.

In 2008 the situation will slightly change. The slowdown of domestic demand, first of all its private consumption component, is expected to decelerate the growth of real imports, even despite the access to the WTO assumed at mid-2008. At the same time, the growth of real exports is expected to be preserved, partially thanks to better access to the WTO member countries' markets in the second half of the year. Thus, real exports and imports are forecast to increased by 4.9% and 8.7% respectively, though higher imports prices are expected to lead to even wider trade deficit in 2008.

### Production: The value added decline in agriculture is compensated by growth of other sectors in 2007

The decline of value added in *agriculture* is expected to constitute 4,8% in real terms by the end of 2007. The poor weather conditions became the major cause for the relatively low grain harvest, and thus for decline in agricultural output. It is expected that next year the agriculture will grow at 5.1%, mainly due to statistical base effect (assuming normal weather conditions).

The high real growth rates of value added in *manufacturing* (at 12.9% in 2007) are explained by strong domestic and the CIS countries' demand for the Ukrainian machine building products. Other high growth sector is metallurgy. Strong external demand helped the industry to overcome the consequences of the gas price shock. The manufacturing real growth is expected to return to the moderate growth pace at 6.9% in 2008, mostly due to higher input prices (primarily, gas) and lower domestic demand.

In 2007 the value added in *construction* is expected to grow by 11.5% in real terms due to the accelerating investment activity and still high demand for residential construction. In 2008 the construction is forecasted to increase by 11.8% in real terms. The fact that Ukraine will host European Football Championship in 2012 is expected to stimulate the development of this sector.

Services will continue to maintain high growth rates in 2007 backed by the strong domestic demand. *Trade* shows the highest rates of growth: it is estimated to reach 17.5% in real terms in 2007. Though, the sector real growth is expected to somewhat decelerate to 11.2% in 2008 due to slowdown in domestic demand.

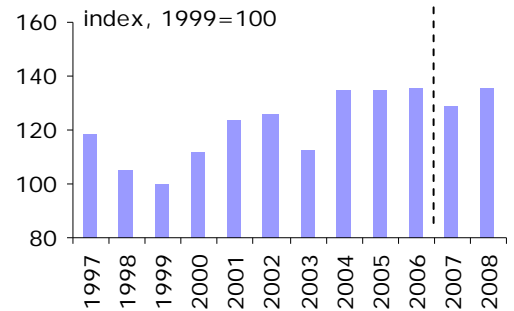
The reduction of pipeline transportation services observed in 2007 is expected to be maintained in 2008. Thus, it has been compensated by the fast development of other types of transportation. The real growth in *transportation* is expected to reach 7.2% in 2007 and somewhat lower 6.3% in 2008.

### Inflation: Consumer price inflation will accelerate

Consumer price inflation in 2007 is expected to reach an annual average of 12.8%. It has been driven by the increases in utility tariffs due to growing price of imported gas, high external demand for food products coupled with limited domestic supply and strong growth of monetary aggregates and consumer demand.

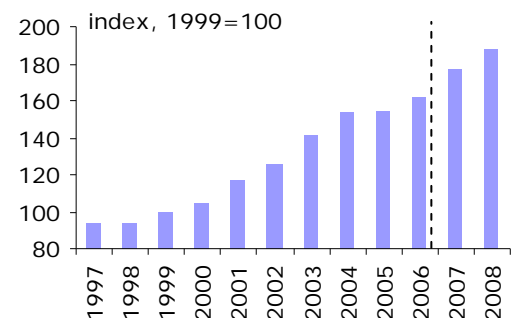
In 2008 we expect slower growth of monetary aggregates, and further government regulation to limit inflationary pressure. However, aggressive income policy, including further increases in minimum wages and pensions, and still tight conditions on food market will continue to influence inflation in 2008 both directly and through higher inflation expectations. Significant imported gas price increase will also contribute to inflation. Thus we expect consumer inflation to accelerate to 14.6% as annual average.

#### Agriculture



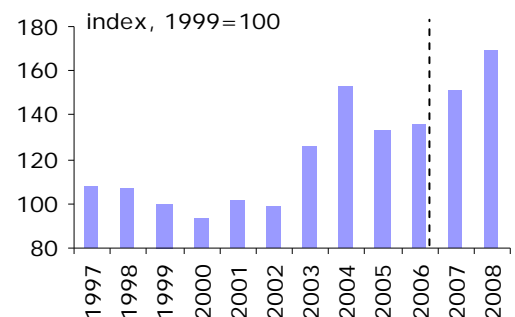
Source: Derzhkomstat, own calculations

#### Industry



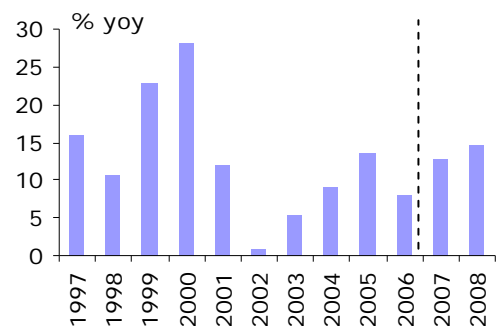
Source: Derzhkomstat, own calculations

#### Construction



Source: Derzhkomstat, own calculations

#### Consumer Price Index



Source: Derzhkomstat, own calculations

**Table 1. Forecast growth of the real GDP by expenditures (% yoy)**

|  | 2004         | 2005         | 2006         | 2007E        | 2008F        |
|--|--------------|--------------|--------------|--------------|--------------|
| Household consumption                  | 13.1         | 20.6         | 14.4         | 12.8         | 6.2          |
| State consumption                      | 1.8          | 2.9          | 4.8          | 3.8          | 2.8          |
| Gross fixed capital formation          | 20.5         | 3.9          | 18.7         | 19.7         | 15.3         |
| Exports of goods and services          | 21.3         | -12.2        | -4.9         | 5.4          | 4.9          |
| Imports of goods and services          | 15.5         | 6.4          | 6.5          | 16.7         | 8.7          |
| <b>Gross Domestic Product</b>          | <b>12.1</b>  | <b>2.7</b>   | <b>7.1</b>   | <b>7.2</b>   | <b>6.1</b>   |
| <b>Gross Domestic Product (UAH bn)</b> | <b>345.1</b> | <b>441.5</b> | <b>537.7</b> | <b>698.9</b> | <b>883.6</b> |

Note: E – estimate; F – forecast

**Table 2. Forecast growth of the real GDP by sector (% yoy)**

|  | 2004        | 2005       | 2006       | 2007E      | 2008F      |
|--|-------------|------------|------------|------------|------------|
| Agriculture, hunting and forestry                  | 19.8        | 0.4        | 0.3        | -4.8       | 5.1        |
| Extractive industry                                | 3.5         | 2.5        | 5.4        | 3.1        | 2.5        |
| Manufacturing industry                             | 12.4        | 0.4        | 5.0        | 12.9       | 6.9        |
| Production/distribution of electricity, gas, water | -3.6        | 1.7        | 3.0        | 1.8        | 1.4        |
| Construction                                       | 21.3        | -13.3      | 1.9        | 11.5       | 11.8       |
| Wholesale and retail trade, repair services        | 13.4        | -14.7      | 17.0       | 17.5       | 11.2       |
| Transport  | 11.4        | 8.2        | 6.8        | 7.2        | 6.3        |
| Education  | 0.0         | 0.0        | 3.1        | 0.0        | 1.0        |
| Health care  | 1.6         | 0.2        | 4.8        | 2.5        | 1.5        |
| <b>Gross Domestic Product</b>                      | <b>12.1</b> | <b>2.7</b> | <b>7.1</b> | <b>7.2</b> | <b>6.1</b> |

Note: E – estimate; F – forecast

#### Technical note

This forecast is based on iterative-analytical techniques, grounded in the system of national accounts, using different methods of GDP determination.

There are three basic methods for calculating GDP: GDP by production, GDP by income and GDP by expenditures (final uses of income). Two methods are used in this forecast – production and expenditures.

The calculations are conducted on a quarterly basis. Annual data are derived by aggregating the quarterly dynamics.

The forecasting procedure involves the following steps:

- For each method, the level of disaggregation of the GDP components is selected. The final result of the GDP forecast is based on forecasts for each component.
- The evolution of each component is forecast on the basis of historical data as well as the set of assumptions supplied with the forecast. Whenever possible, a forecast is based on a suitable leading indicator. Major work is focused on the dynamics of each component in real terms.
- The real GDP growth (for each method separately) is determined by summation of the contributions of each component. Here, contribution means the real growth of each component weighted by its share in the GDP structure in the corresponding period of the previous year (see Box 1 for details).
- The real values of GDP - determined by the two methods - are compared, and if a discrepancy is noted, another component forecasting iteration is initiated.

The forecast is built on a system of build-in indicators (proportions), which are expected to stay fairly constant. These indicators partially connect components of the GDPs by production and by expenditures. As additional instruments in component forecasting, econometric equations and input-output tables are used. The iterations continue until the two methods of GDP determination produce identical results.

#### Box 1. Calculations

To identify the contribution of each GDP component to total real growth, the following formula for growth of GDP  $\hat{Y}$  can be used (1):

$$\hat{Y} = \left( \frac{Y_t^* - Y_{t-1}}{Y_{t-1}} \right) = \left( \sum_{i=1}^I \frac{X_{it}^* - X_{it-1}}{X_{it-1}} \cdot \frac{X_{it-1}}{Y_{t-1}} \right)$$

for each period  $t$ ,

where  $Y$  is the GDP, and  $X$  is a component of the GDP,  $I$  is the number of components, and the sign \* indicates inflation adjustments to the respective data.

Consequently, a contribution  $\Theta_t^{X_i}$  of component  $X_i$  to real growth can be calculated as (2):

$$\Theta_t^{X_i} = \frac{\left( \frac{X_{it}^* - X_{it-1}}{X_{it-1}} \right)}{\hat{Y}} \cdot \frac{X_{it-1}}{Y_{t-1}} \cdot 100$$

for each period  $t$ .

In formula (2), the ratio of real growth rates of component  $X_i$  to GDP is weighted on the basis of the previous-period's share of this component in the nominal GDP.

Note: yoy year-on-year