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Impact of Gas Price Increase on the Economy of Ukraine in 2007

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Summary

The expected increase at the beginning of 2007 of the imported gas price to $130 per 1000 m3 will have a significant impact on the Ukrainian economy. Nevertheless, the economy should be able to perform reasonably well during the year. However, in order to sustain economic growth over the longer-run, the government should enhance structural economic reforms to encourage investments, including in energy-saving technologies.

- The negative impact of the gas price increases in real GDP growth in 2007 is estimated at 1.5-2 percentage points. Despite this, GDP growth is expected to grow by 5-6% yoy in 2007.
- Year-end inflation in 2007 will depend on the government policy response and budget performance; however, we believe inflation will be at about 10%, almost 3 percentage points higher than projected by the government for the 2007 fiscal budget.
- The foreign trade balance will continue to deteriorate, driving the current account deficit to about 2.5% of GDP in 2007. We expect the deficit to be covered by robust FDI inflow and extensive borrowing from abroad.
- Despite expected sufficient inflow of foreign currency to Ukraine, currency depreciation pressures may emerge. The exchange rate may be allowed to slightly depreciate to 5.1-5.2 UAH/$.
- Although the draft 2007 budget law envisaged the increase of natural gas prices, additional pressures to the successful execution of the fiscal budget may emerge. Nevertheless, we believe that the government has enough tools to keep the fiscal budget deficit at the projected 2.5% of GDP in 2007.
- In view of anticipated further increases in the cost of imported energy resources, in order to reach sustainable economic growth in the long-run, the economy has to boost investments, including into energy-saving technologies.

Agreed Terms for Gas Imports in 2006-2007

At the beginning of 2006, Ukraine and Russia agreed on a new 5-year agreement, according to which:

- Ukraine obtained 34 billion of natural gas of mixed origin (primarily Turkmenistan) at $95 per 1000 m3 at the Russia-Ukrainian border. Though the price was set for the first half of the year, it was later prolonged for the whole year, despite the increase in the price of Turkmen gas at the Russian border from $65 per 1000 m3 to $100 per 1000 m3 as of October 1st 2006.
- The transit fee for Russian natural gas through the territory of Ukraine was increased from $1.09 per 1000 m3 per 100 km in 2005 to $1.6 per 1000 m3 per 100 km and fixed until 2011.

- The company RosUkrEnergo (RUE) was defined as the unique importer of natural gas coming from the Russian Federation, though it did not mean that the imported gas was solely of Russian origin. Indeed, the majority of gas obtained by RUE was from Central Asia (mostly Turkmenistan).
- To sell imported natural gas to Ukrainian users, a joint venture UkrGazEnergo (with a parity ownership between RUE and Naftogaz Ukrainy) was established a few weeks after the agreement was signed.

Since Ukraine's total demand for natural gas was estimated at 76 billion m3 in 2006 and its own production amounted to about 20 billion m3, Ukraine needed to import 56 billion m3 in 2006. In addition to the 34 billion m3 from RUE, Ukraine planned to receive an additional 22 billion m3 of Turkmen gas in 2006 under a separate contract.[1] However, these plans were not realized as Turkmenistan stopped gas delivery to Ukraine, substantiating this decision by Ukraine's indebtedness for imported gas in previous periods. To compensate for the deficit, Ukraine negotiated larger amounts of gas imports from Russia. We assume that these amounts were delivered to Ukraine by RUE at $95 per 1000 m3.

Since Ukraine was paying only 38% of the international price for natural gas, in mid- 2006 it became clear that the price of $95 per 1000 m3 Ukraine would be raised in the future. On October 24th, Ukraine and Russia agreed that in 2007 RUE will deliver no less than 55 billion m3 of natural gas (of Central Asian origin) and up to 62 billion m3, at a price of $130 per 1000 m3. The price is set for the entire year. Although this price represented an increase of 37% over the 2006 price, it is still only about 47% of international prices. At the same time, the transit fee was left unchanged. Since the gas agreement contains a provision that Ukraine has no right to re-export gas received from RUE, it is very likely that only the minimum amount of gas will be delivered to Ukraine in 2007 (i.e., 55-57 billion m3). Considering that the Ukrainian economy is highly energy-intensive and thus vulnerable to gas price changes, and that the recent increase will be the second gas price shock in two years, the analysis below estimates the impact of these two arrangements on the Ukrainian economy.

Impact on GDP Growth

In order to estimate the impact of the increase in the price of imported gas on GDP, we used the model presented in the SigmaBleyzer/The Bleyzer Foundation paper issued in January 2006 entitled "Ukraine – Impact of Gas Price Increase." On this basis, we estimate that the direct impact of higher gas prices on GDP growth in 2007 will be a reduction of 1.5-2.0 percentage points relative to the baseline forecast of GDP growth.[2]

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[1] According to the agreement, the price of imported Turkmen gas at the Russian border would have been $50 per 1000 m3 in the first half of the year and $60 per 1000 m3 in the second. Even including transit fee payments, the price of Turkmen gas at the Ukrainian border would have been lower than under the contract with RUE.

[2] The main assumptions and calculations necessary to estimate the impact of a gas price increase on GDP were the following:

a) 56 billion m3 of natural gas will be delivered to Ukraine in 2007.
b) In 2006, Ukraine imported 56 billion m3 at a price of $95 per 1000 m3.
c) Natural gas transit through the territory of Ukraine will constitute about 122 billion m3 in both 2006 and 2007 (according to official statistics, natural gas transit to Europe through the territory of Ukraine has declined by about 7%. The decline is explained by lower gas consumption by European countries due to very warm weather and shortage of gas delivery at the beginning of the year due to unresolved gas supply issue between Ukraine and

In addition to 2007's gas price shock, the Ukrainian economy will continue to feel the effect of the gas price increase of 2006. Furthermore, there will be indirect impacts on GDP through other channels. In particular, the rise in imported gas prices in 2006 and 2007 would have depressive effects on private consumption, as they leave consumers with fewer resources to spend on other goods and services. In addition, some energy-intensive industries, like chemicals and metallurgy, may be severely hit with the new gas price shock. In 2006, many of these industries adjusted to the new gas prices through gas substitution with other types of fossil fuels and reductions in their profit margins. Furthermore, strong real sector performance during May-October 2006 was related to a favorable external environment for Ukraine's major export-oriented industries (like metallurgy[3], chemicals, machinery and equipment) and to record high consumption growth related to banking credit expansion.

Though the metallurgy industry may be capable of absorbing the 2007 price shock reasonably well, the effect of higher gas prices on the chemical industry may be more damaging. This is because in the chemical industries, energy represents a larger share of production costs. The average share of energy cost in non-fertilizer chemical production is up to 50% and approaches 70% in fertilizer production. In 2006, the chemical industry absorbed the gas price increase through a moderate reduction of profitability, which was possible due to strong domestic and external demand. For January-October 2006, the industry reported a 3.5% yoy increase in its output. However, the second significant increase in natural gas prices in two years may place many enterprises in the chemical industry below their profitability levels. On the other hand, the impact of the gas price increase for this industry may be lessened by the government as it has already announced plans to introduce price caps on natural gas supplied to chemical plants. This notwithstanding, the gas price increase may contribute to a further reduction of exports in Ukraine. The chemical industry accounts for about 10% of Ukraine's total merchandise exports in 2006.

Although private consumption in 2007 will remain high due to a series of recurrent income increases (minimum wages, pensions, etc.), its rate of growth will be more modest in 2007. Lower consumption growth and more moderate export growth in 2007 will have a "multiplicative" impact on national

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Russia. However, we believe gas consumption will increase in the coming months following the traditional seasonal pattern).

d) Though the 2006 increase in gas prices was passed on to industrial consumers at the beginning of the year, utility tariffs for households were raised mostly in the second half of the year. In addition, strongly revived investment activity (about 10% yoy in 1H 2006 in real terms) may suggest that the gas price increase stimulated investments in energy-saving technologies. In the residential sector, this process is much slower with a negligible impact on elasticity in the first year (2006). We assume that the 2007 gas price increase will be passed on to utility tariffs to a considerable degree in 2007. Hence, we believe that gas price elasticity of demand will increase in 2007, though not as strongly as we previously anticipated, with a more conspicuous effect in subsequent years.

e) According to the forecasted gas balance for Ukraine in 2006, Ukraine plans to export about 8 million m3 of natural gas (of its own production). The State Statistics Committee of Ukraine reported that Ukraine exported natural gas in an amount equivalent to $0.59 million over January-September. Extrapolating this figure for the whole year, we obtain the export price of about $100 per 1000 m3. We assume that in 2007, Ukraine will be able to export a similar amount of natural gas. It also looks reasonable to assume the price for it will exceed $130 per 1000 m3 but will be lower than the European average. We assume that the price will be in the range of $150-200 per 1000 m3.

f) GDP was estimated at $100 billion for 2006.

g) The ratio of gas imports to DP was estimated at 5.32% in 2006. But this ratio would be about 2.6% of GDP if corrected for gas transit and gas export revenues.

[3] Unlike expectations of a moderate decline in 2006, world steel prices resumed growth in April 2006 and on average were comparable to 2004 prices.

income (GDP), since the decline in aggregate demand represents exemptions into the circular flow of income, which affect further rounds of consumption spending. On a positive note, a compensating factor is that the gas price increases in 2006-2007 and the awareness that the cost of energy will continue to grow in the future will stimulate investments, including into energy conservation technologies. In addition, the Ukrainian economy may benefit from government policies and reforms that would improve Ukraine's business environment, thus enhancing investment activity and increasing total factor productivity. Furthermore, the likely accession to the WTO in the first half of 2007 may also have a positive effect on economic development in Ukraine.

Taking into account direct and indirect effects of a gas price increase on the economy, the negative impact on the growth rate of real GDP is estimated to be within 1.5-2 percentage points. The actual growth rate will crucially depend on the external environment (particularly, the development of steel prices on international markets) and the ability of Ukraine to implement economic reforms. Currently, we project GDP growth to reach 5-6% yoy in 2007.

Foreign Trade and the Current Account

As in 2006, the most significant effect of gas price increases will be felt by export-oriented industries such as chemicals and metallurgy, which together account for more than 50% of Ukraine’s total export. The crucial element for export performance in these industries is development of world metal and chemical prices. Despite growing world steel production, the global demand for steel has also been rising. At the same time, the supply of raw materials for metallurgical industries, particularly iron ore, has also been growing though at much slower pace. The shortage of raw materials may be the primary reason for upward pressures on world steel prices in 2006. Although likely increases in iron ore supply may reduce the price of raw materials, they may still remain at a relatively high level in 2007, thus not allowing for a sharp decline in steel prices. Most likely, Chinese and European steel prices, the main destinations of Ukraine’s steel exports, will show only a moderate decline in 2007. The extent of government support for the chemical industry will depend on the international price of Ukraine’s chemicals and commitments under the WTO. It is likely that some chemical and metal enterprises may turn unprofitable in 2007, thus reducing the volume of Ukraine’s goods export.

On the import side, the increase in the cost of imported energy resources will cause further deterioration of the merchandise trade deficit. Unlike in 2006, it will not be compensated for by a larger surplus in foreign trade of services as the transit fee will remain unchanged. Also considering the limited opportunities for Ukrainian natural gas exports, the direct negative impact on the current account balance is estimated at about 1.8% of GDP. Coupled with the impact on export-oriented industries, the full year current account deficit may reach 2.5% of GDP.

Consolidated Fiscal Budget

The 2007 budget, currently approved in the first reading by the Verkhovna Rada, forecasts a deficit of about 2.5% of GDP. In the preparation of the budget, the increase in gas prices for 2007 was already envisaged. However, the successful execution of the budget plan may be a challenging task for a number of reasons. First, budget revenues may turn out to be overestimated taking into account the rather optimistic forecast by the government of real GDP growth in 2007. Second, budget revenues may fall short of the targeted amount due to resumption of free economic zones and territories of priority development. Third, higher gas prices, though expected to be passed on to consumers, will increase expenditures on low-income assistance programs. Combined with the government plans to support the most effected industries, the budget deficit may reach 3% of GDP. At the same time, we believe the government has enough tools to control other expenditures and keep the budget deficit at a projected 2.5% if GDP.

Inflation

The imported gas price increase in 2006 became a catalyst for adjustment of all utility tariffs to cost-recovery levels (some of the utility tariffs had not been revised for more than 6 years). As a result, consumer price index growth will exceed the government projection of 10% yoy in 2006, and may reach 11%-12%. We expect that the gas price increase will be passed on to consumers in 2007, though some relief will be granted to low-income households.[4] Though natural gas per se holds a rather small share in the consumer basket[5], the increase in imported gas will pressure utility tariffs, transportation costs and producer prices. The latter, in turn, will spill over into consumer prices with some lag. In addition, due to the absence of a clear privatization plan for 2007 (the government plans to receive about $2 billion of privatization receipts, representing two thirds of deficit financing in 2007) on the back of considerable social expenditures in the budget[6], the likely fiscal budget deficits may cause inflation pressures. Taking this into account and assuming that the process of service tariffs adjustment to cost-covering levels will continue in 2007, we believe the government forecast of 7.5% yoy inflation in 2007 is very optimistic. We expect inflation to be around 10% yoy in 2007.

Exchange Rate

During 2006, the hryvnia exchange rate against the US dollar was maintained stable at 5.05 UAH/$, despite current account pressures at the beginning of the year. The deterioration of foreign trade performance was compensated for by surpluses in transfers and financial accounts (due to the robust inflow of FDI estimated at about $3.6 billion for the first nine months of 2006 and active private sector borrowing from abroad). This allowed the NBU to further replenish its reserves, which are expected to reach $20 billion at the end of the year. In 2007, exchange rate dynamics will be affected by a further worsening of the foreign trade balance, which will lead to a current account deficit of about 3% of GDP. However, we believe the inflow of foreign capital (either in the form of FDI or borrowings) will be enough to cover the current account deficit. At the same time, we anticipate that some depreciation pressures may occur throughout the year, during which the exchange rate may be allowed to depreciate slightly to 5.1-5.15 UAH/$.

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[4] The government may choose to keep energy prices unchanged on the domestic market. However, such a policy response will lead to distortions in market-correction mechanisms, thus sending wrong signals to business, accumulation of inflationary pressure and their transfer on future periods. Since such a policy may also cause the budget deficit to expand beyond the 3% of GDP level, we believe the government will allow for a price adjustment to a substantial extent.

[5] Housing services, gas, water supply and electricity together comprised less than 7% of the consumer basket as of mid-2006.

[6]Though the 2007 draft budget law envisages a rather moderate increase in minimum wages, pensions and other social expenditures, due to the recurrent increases in the previous two years, social spending will represent a significant share in the budgets in future years.