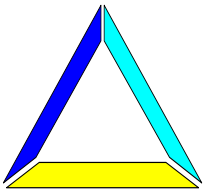
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W 10

High Inflation in Ukraine: Analysis and Policy Recommendations

Executive Summary

In November 2007 the consumer price index (CPI) in Ukraine rose by 15.2% yoy, the highest inflation rate since 1999. But also other price indicators such as the producer price index (PPI), the GDP deflator as well as asset price indices for real estate and for shares (PFTS) rose sharply in recent times. Without doubt, Ukraine is facing a serious inflation problem, which jeopardizes macroeconomic stability and hurts the mass population. In view of the role inflation expectations play in creating future inflation, it is crucial for policy makers to act quickly and in a coordinated manner. A "wage-price nexus" has to be decisively combated before it is too late, i.e. before the cost of fighting inflation becomes extremely high in terms of output losses.

On the side of aggregate demand, monetary and exchange rate policy has a great role to play. Under the long-term real appreciation pressure on the hryvnia, the peg to a currently weak currency such as the US dollar implies a high rate of inflation. In order to combat inflation, this link has to be softened and the hryvnia should be allowed to become more flexible. But also fiscal and incomes policy should contribute to lower inflation. In particular, increases of minimum wages and pensions should go in line with the general economic development, and not contribute to an overheating of the economy.

Measures on the aggregate supply side of the economy take more time to work, but are of crucial importance for combating inflation in the long-term. This concerns especially the need for structural reforms on agriculture. Instead of short-term and anti-market measures to control price increases, policy makers should focus on long-term measures to increase investment and to make this sector more competitive. But also measures to increase efficiency in the energy sector are of paramount importance.

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1 Introduction

Starting in the middle of last year, Ukraine has faced a surge in inflation. The latest figures from November 2007 show that inflation as measured by the increase in the consumer price index (CPI) is running at 15.2% yoy, bringing consumer inflation to 14.2% year-to-date. These developments are similar for other inflation indicators like the producer price index (PPI), which grew 20.0% yoy. While this exceeds all forecasts made previously (the official government forecast for CPI inflation in 2007 amounted to 7.5%)[1], this recent surge increased inflation above its previous peak seen in August 2005 (14.9% yoy).

It is obvious that this development is a major concern for both the population and policymakers, due to the well-known negative effects of high and volatile inflation. Therefore, fighting inflation must be considered a key priority, ensuring that all relevant institutions of the state join forces to lower price level growth. This paper tries to contribute to these efforts by analysing the recent development of inflation and recommends policy measures effective both in the short- and in the long-term.

The paper is structured as follows: after a statistical analysis of different indicators of inflation and its sub-components (part 2), we will identify the main drivers and factors causing the price level to rise (part 3). The following part 4 is devoted to a discussion of policy responses by different government institutions, including the NBU and MinFin, as such a phenomenon can be only effectively combated by joint and coordinated efforts. In part 5 we conclude.

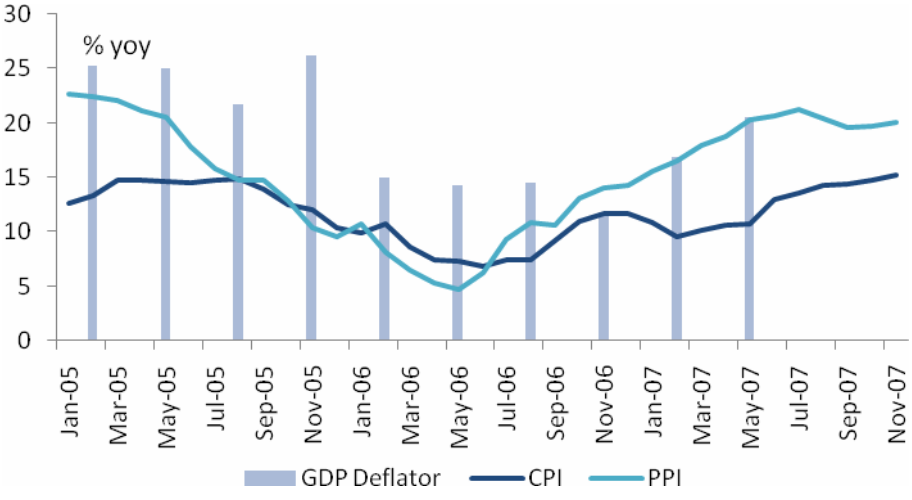
2 Inflation in Ukraine: A statistical overview

In the following subsections we will examine dynamics of different measures of inflation and review the main sub-components of the consumer price index. To put these observations in a broader context, developments of asset prices will be also discussed.

(i) Headline inflation

Inflation is usually measured by one of the three main indicators: growth in consumer price index (CPI), producer price index (PPI) and GDP deflator. The CPI reflects end-user prices for a basket of both domestically produced and imported consumer goods and services. The PPI includes prices for goods manufactured in Ukraine both for domestic consumption and export at the producer level. GDP deflator includes prices for all domestic output and doesn't have a fixed basket.

Figure 1
Inflation dynamics in 2005-2007



Source: Derzhcomstat

As we can see in Figure 1, which shows the recent development since January 2005, inflation in Ukraine as measured at the consumer, producer and GDP level started to decelerate in

[1] This forecast was made by MinEcon in August 2006, and relates to inflation at year-end 2007. Recently, the official forecast was revised substantially to 14.5%.

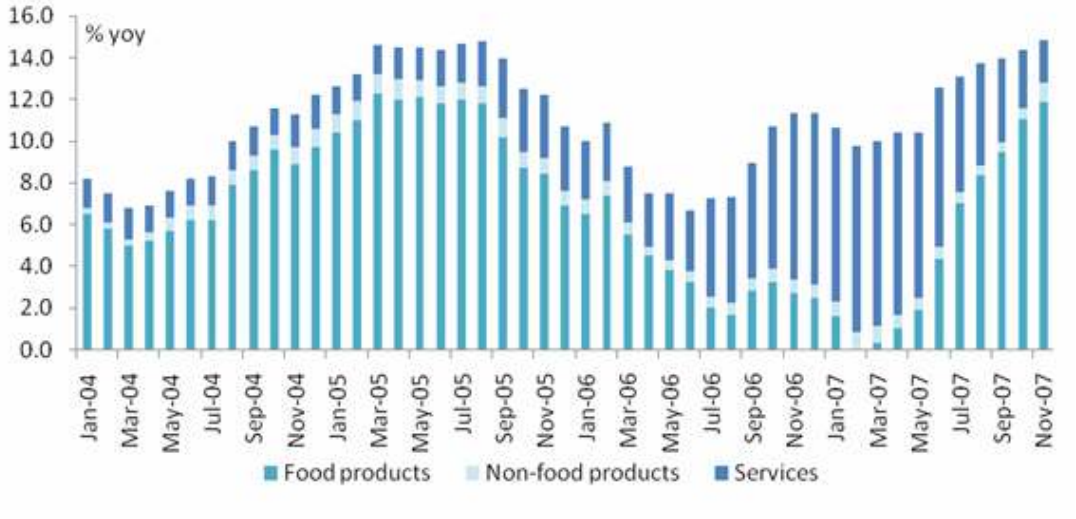
2005, a slump that continued in the first half of 2006. However, starting in the second half of 2006, and all over 2007 the CPI, PPI and GDP deflator grew increasingly fast. PPI growth in November 2007 and the GDP deflator for the Q2 2007 were around 20% yoy (PPI: 20.0%; GDP deflator: 20.5%) and November consumer price inflation amounted to 15.2% yoy, above the previous high measured in August 2005 (14.9% yoy). Due to their different underlying concepts, consumer and producer price indices have large sectoral differences in their composition: while food products are dominant in the former, mining and metals are prominent in the latter. Therefore, joint movement of different price indices point to common factors causing these movements. Also, high volatility exhibited in all inflation indicators is destabilising as it hinders planning by economic agents and dampens investment activity.

(ii) Analysis of sub-components of the CPI

Since the CPI is generally considered as the main indicator of inflation in the economy, we will focus in this section on this particular index. The Ukrainian statistical agency historically divided the CPI into three main components: food products (including alcohol and tobacco), non-food products and services (including electricity, heating, water and gas).[2] Food products dominate the basket, though their share slowly declined from 64% in 2006 to slightly above 60% in 2007. The rest of the consumer basket is roughly evenly divided between services and non-food goods.[3]

Figure 2

Contributions of CPI sub-components to headline inflation



Sources: Derzhcomstat, own calculations

Due to their high weight in the basket, food prices usually define overall CPI dynamics. This can be clearly seen in Figure 2, where such a first phase is visible from the beginning of 2004 until mid-2006. However, we can also see in this figure that from mid-2006 until the beginning of 2007, sharp utility price increases and mild food price growth (mainly due to external conditions, i.e. a Russian export ban on Ukrainian food products and expanding official and unofficial imports) reversed this trend, and a second phase of CPI dynamics can be identified. Starting later in 2007, especially in the summer, a third phase of CPI development can be distinguished, where food prices regained their previous role in the inflationary process as the impact of the global food price shock was felt in Ukraine, while the increases in administratively-set tariffs on services were stopped by the authorities.

(iii) Asset price developments in Ukraine

Asset price growth for a number of asset classes was highly volatile and uneven over the last years (see Figure 3). However, asset prices consistently grew much faster than other

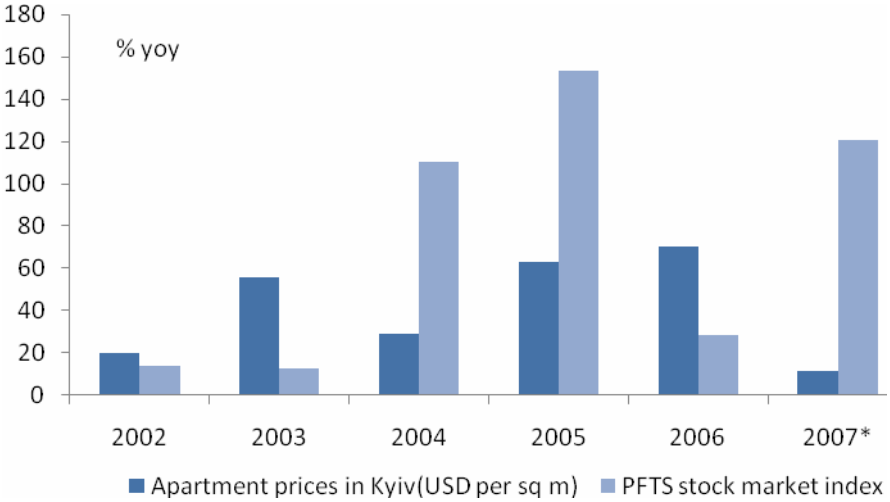
[2] In 2007, the Ukrainian statistical agency (Derzhcomstat) started to use international "Classification of Individual Consumption According to Purpose"(COICOP) for CPI calculation. Three aforementioned CPI components are continued to be reported. However, utilities were reclassified as non-food goods. 2007 price statistics is adjusted to reflect the previous classification.

[3] In 2007, the composition of the basket was revised to include more non-food goods. The share of non-food goods grew accordingly.

measures of the price level for goods and services with a compound average growth rate (CAGR) of 39.8% for apartment prices and 76.3% for the PFTS stock index over 2003-2007. Such situation reflects at least in part a very low starting level and a very limited range of opportunities for investors on the local markets. However, such rapid appreciation of assets is also a part of the general inflationary process that we have observed and as such supports the analysis presented above.

Figure 3

Asset price growth



Sources: Renaissance Capital Estimates (for apartment prices), PFTS
**PFTS -year to 26.11.2007;*

(iv) Conclusions from the statistical analysis

Overall, since 2004 we have observed fast price growth at all levels of the production chain as well as on financial and real estate markets. While the contribution of food prices to CPI inflation is currently again a dominant factor, expected utility price increases in 2008 (due to higher import costs of energy carriers) on top of that can change the general picture in the future and worsen the outlook further. Now, CPI inflation is at risk from two of its main drivers in the past – food prices and services. Also, the risk of higher producer and asset prices trickling down to the consumer price level remains a future risk for the inflation outlook.

3 Main determinants of inflation

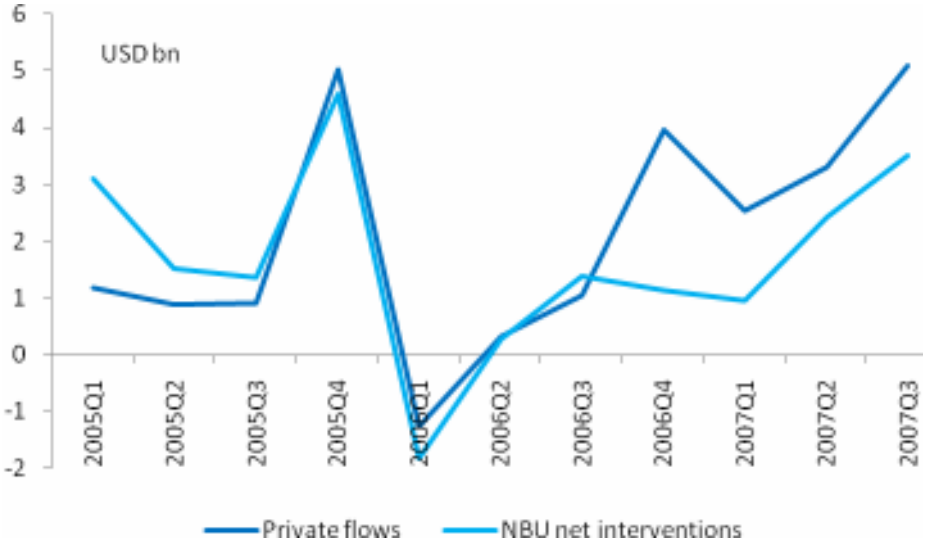
While ultimately, i.e. in the long-run, inflation is mainly determined by monetary factors, in the short term, inflation is influenced by the complex interplay of aggregate demand and aggregate supply side factors. Therefore, we will analyse in the following section these factors separately.

3.1 Aggregate demand side

(i) Monetary policy

Ukraine is currently faced with very high capital inflows under the de-facto fixed peg to the US dollar, which lead to high interventions in the foreign exchange market by the NBU, as Figure 4 shows:

Figure 4
Private net capital inflows and NBU net interventions

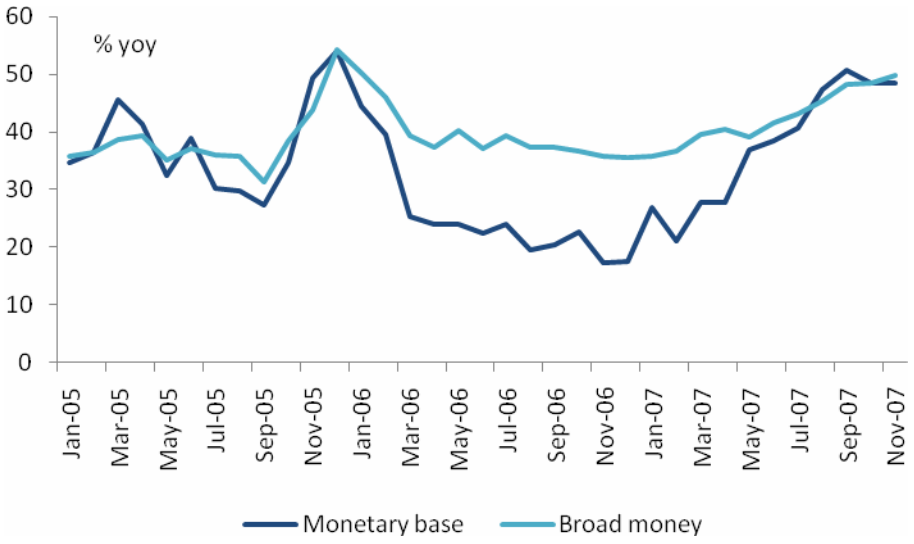


Source: NBU
Remark: Net interventions show the net foreign currency purchases over the corresponding period

The heavy volumes of intervention on the foreign exchange market lead in turn to a corresponding growth in the monetary base and in money supply (see Figure 5), since only a partly sterilization of the liquidity created in this process took place:

Figure 5

Money growth



Source: NBU

It is safe to assume that these interventions are the main factor behind the recent surge in money supply growth of 49.9% yoy in November, well above the central bank's declared target range of 28-33% yoy. While money demand is also growing, due to high income growth and increased confidence in the banking system by the population, this seems insufficient to absorb the high growth in money supply completely, with the result of inflationary pressure. Similarly, Ukraine experiences currently negative real interest rates, which are creating further aggregate demand pressure.

This difficult situation is further aggravated by the current depreciation of Ukraine's anchor currency, the US dollar, against all major currencies. At the same time and causally connected to this is the fact that in the US, a loosening cycle of monetary policy has started. Therefore,

the environment of ample liquidity creation will likely subsist in the future, if policy makers do not take measures to counter them.

Assessment: The current monetary and exchange rate system has contributed and continues to contribute to ample liquidity creation, setting the stage for a rapid development of inflation.

(ii) Fiscal/Incomes policy

With low budget deficits in the range of 0% - 3% of GDP annually over the last couple of years, fiscal policy seems prudent. However, in an environment of rapidly growing nominal GDP, nominal expenditures were also surging, as Table 1 demonstrates. At the same time, spending was and is oriented mainly on consumption and transfers, and less so on public investments. This means that no significant expansion of new supply due to government spending can be expected, which might contribute to lowering inflation.

Table 1
Central budget 2001 – 2007*

	2001	2002	2003	2004	2005	2006	2007*
Central budget expenditures, UAH bn	39.9	44.0	55.0	78.6	112.2	137.1	180.0
Growth in budget expenditures, yoy %	12.4	10.3	24.9	43.1	42.8	22.1	31.3
Budget deficit, UAH bn**	2.7	-1.0	0.7	9.1	7.6	3.8	19.2
Budget deficit, % of GDP**	1.3	-0.4	0.3	2.6	1.7	0.7	2.8

Source:IFS, Derzhcomstat, own calculations
** 2007 budget figures are planned, 2007 GDP - IER estimate*
*** A negative number denotes a budget surplus*

This surge in nominal spending, especially since 2004, led to high growth in nominal (and real) wages as well as pensions, as election promises often foresaw a politically motivated increase in such payments towards subsistence levels. The minimum wage increased since 2002 annually with double-digit figures, raising at the same time public sector wages, which are indexed to minimum wages (this is partly also true for the private sector). Another key objective of social policy was the increase of pension payments, since a large share of the elder population lived below the poverty line. Therefore, in most of the past years, double-digit growth was also observed in minimum pensions. In the draft 2008 budget, minimum pensions were planned to top even the minimum wage, after a projected 32% rise in comparison to the previous year.

Table 2

Monthly minimum and average wages and pensions, 2001 – 2008*

	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008***
Minimum wage aop, UAH	118	153	187	216	300	365	430	533
Minimum wage aop, yoy, %	0	29	22	16	39	21	18	24
Average wage, UAH	311	376	462	590	806	1041	1307**	1780
Average wage, yoy, %	35	21	23	28	37	29	25**	36
Minimum pension aop, UAH	36	46	49	166	322	359	404	483
Minimum pension aop, yoy %	41	29	5	241	94	11	13	20
Average pension, (January 1)	84	126	139	190	317	409	508	683
Average pension, yoy, %, (January 1)	22	50	11	36	67	29	24	34

Sources: Derzhcomstat, State budget laws, Pension fund, own calculations
** updated Draft State Budget Law for 2008*
*** 10M 2007*
aop = average over period

It is obvious from an economic point of view that such steep increases in minimum wages and pensions, mainly targeted at low-income groups which consume a high share of their

disposable income, create a "demand-pull" and, ultimately, inflation[4]. Food products, which form a main part of such consumers' budgets, have seen their prices rising also due to such demand pressures.

Assessment: The ongoing (and expected) rapid nominal expenditure growth contributes to inflation development as well, since it leads to demand pressure, especially from low-income groups, which spend a large share of their income on food.

(iii) External demand factors

Since Ukraine is a very open country, world market prices for its exports also influence domestic price trends. Rising prices for export goods (e.g. metals, food), which are currently at very high levels at world markets, can therefore also contribute to domestic inflation as measured by the various indices (CPI; PPI; GDP deflator).

3.2 Aggregate supply side

Inflationary pressures can also originate from domestic supply shocks, shifting the supply curve upwards. Over the last couple of months, the agriculture sector, not just in Ukraine, but on a world wide scale, has experienced such (global) supply shocks[5], lifting food prices in this process higher. This explains also the fact that food prices are currently the dominating driver behind the development of CPI inflation. However, it would be too easy to blame high price increases only on supply shocks, which are outside policy makers' range of influence. In the case of Ukraine, these shocks have hit a highly uncompetitive and structurally unreformed agriculture sector, and this particular mix has created the problems we are currently observing. Frequent and sometimes intransparent government inference in the markets tried to suppress price pressures, but undermined in effect the trust of market participants in the proper functioning of markets. Generally, direct price controls and export restrictions for certain goods, as well as subsidies do not contribute to the creation of a competitive market which can withstand sudden shocks.

In such supply-side considerations, also imported inflation from abroad plays an important role. For an energy-importing country like Ukraine, a key factor is the price for energy fuels it imports. A key future inflation risks in this regard is the new gas price agreement with Russia's Gazprom. Recently, it was reported that a price of USD 179.5/tcm was agreed for 2008, rising from USD 130/tcm in 2007. The effect on domestic inflation from this almost 40% increase will crucially depend on future tariff increases for households/retail consumers. In the past, the pass-through of previous hikes to enterprises and households was very different. While households consumed (domestically produced) gas at relatively low, regulated prices, industrial producers bought gas at the wholesale market for prices which reflected the full increase in import prices. This also contributed to inflation, as this put cost pressure on enterprises. However, it is hard to image that this scenario of flat household gas prices repeats itself in 2008, and we therefore think that tariffs for households will be adjusted upwards[6] and CPI inflation will rise accordingly.

Assessment: Supply shocks have played a certain role in causing inflation, especially when they hit largely unreformed sectors like agriculture. Furthermore, agreed upon hikes in energy import prices, which will converge to market prices over time, will increase inflation risk in the future.

4 Policy responses to fight inflation

Inflation has turned into a major concern for policy makers, since macroeconomic stability and social development are clearly endangered. Therefore, the main question for all state

[4] Of course, since wages are also an important cost factor in production, their rise plays a dual role in influencing inflation from both the demand and the supply side, especially when not covered by corresponding increases in productivity. Pension payments influence only the demand side.

[5] Besides short-term factors like adverse weather conditions and resulting poor harvests, there seem also more long-term factors at play, which make it likely that food prices will stay at high levels in the future. Therefore, an adjustment to permanently higher prices seems inevitable. For a more detailed analysis, see IER/German-Ukrainian Policy Dialogue in Agriculture Policy Paper No.14: Weather and Policy Risks - Are the Grain Export Restrictions Unavoidable to Achieve Food Security in Ukraine?, June 2007.

[6] This upward adjustment in tariffs is also necessary from an economic point of view, since prices that are artificially kept below costs make any investment unattractive. Only prices that reflect freely the underlying demand and supply constellation can attract such badly needed investments in supply infrastructure. See Policy Paper No. V15 by Pavel/Chukhai: Household gas prices in Ukraine. How to combine economic and social requirements, 2006.

institutions concerned is how to react to this situation appropriately, including the question which policy tools should be applied.

Following the distinction established in the last chapter regarding the main factors behind the recent increase in inflation, also the policy responses can be distinguished according to their impact on either aggregate demand or supply. The main strategy to decrease inflationary pressure in the short term must be to bring domestic demand more in line with a given domestic aggregate supply. Accordingly, this must be the joint focus of both monetary and fiscal policy. In the long term, measures to increase the flexibility of domestic aggregate supply through structural reforms need to move into the centre of policy maker's attention. This implies also that policy makers allow for changes in relative prices, when permanent changes in supply conditions require it (food prices, energy), i.e. when a non-interventionist policy stance is called for.

4.1 Aggregate demand side

Due to their potentially good and stable control over aggregate demand, policy makers can influence macroeconomic variables like the price level and inflation even in the short-term.

(i) Monetary policy

The high liquidity creation resulting from the peg to the US dollar, coupled with high capital inflows has forced the NBU to take restrictive short-term measures to constrain money growth. A first step has been the increase in auctioning of certificates of deposit (CDs), in order to sterilize excess liquidity in the banking sector. While interest rates on sterilisation debt were very low until recently (hovering around 1% p.a. for two-week CDs), the NBU started to sell CDs more aggressively in November 2007, offering higher interest rates and raising the amount of sterilized liquidity. A second step consisted in the extension of mandatory reserve requirements on foreign currency borrowing by local banks from foreign financial institutions (regulation 403 from 8 November 2007), which should also dampen credit and money growth going forward[7]. The third step consisted in increasing the reference refinancing interest rate. On 9 November, it was raised from 9 to 12% (for secured loans), while another increase from 12% to 14.5% took place on 11 December.

While we welcome these steps as a short-term measure bringing liquidity creation under control, we doubt their usefulness in the long term. In the context of Ukraine, which is a fast growing transition country and for several reasons under real appreciation pressure policy makers can to some extent choose only the form in which this real appreciation materializes: through price increases or the exchange rate; or a combination of them. At the moment, the NBU has chosen an adjustment through price increases, which hurt the population as this implies a constant loss in purchasing power. To gain better control on liquidity creation and, ultimately, inflation, the NBU should allow gradually more exchange rate flexibility[8], which we consider the most important instrument in this context. This allows the NBU to use its instruments more effectively to influence domestic inflation, while export competitiveness concerns regarding more flexibility can still be taken into account. In this context, an (expected) nominal appreciation can also contribute to lower inflation directly through the prices of imported goods – a relatively high pass-through effect is a stylized fact in transition countries like Ukraine – and indirectly through a dampening of aggregate demand. However, our call for more flexibility should not be confused with the demand for a nominal revaluation. Such a revaluation could easily attract further capital inflows, especially when market participants expect further such steps in the future. Then, the same problem as before continues to exist. On the contrary, flexibility of the exchange rate implies a two-way risk, limiting one-way bets and speculation by market participants.

(ii) Fiscal/Incomes policy

Similarly to the case of monetary policy, also fiscal and incomes policy can contribute to a tightening of aggregate demand, thereby reducing inflationary pressures. Public spending and incomes policies, which - as we saw in the last chapter - are growing rapidly and often target

[7] This measure has also implications for foreign borrowings by banks. See Policy Paper W9 (2007) by Giucci/Kirchner/Poltaeva: Private foreign borrowing and credit growth in Ukraine: Trends and policy recommendations, for more information.

[8] For a more detailed analysis, see Policy Paper V10 (2006) by Kirchner/Giucci/Kravchuk: Exchange Rate Policy in Ukraine: Why and how to float the hryvnia.

consumption and transfers rather than public investments, need to be tightened. This leads as a result also to lower domestic interest rates and less capital inflows, limiting at the same time liquidity creation (see the discussion in the last section). At the same time, a positive side-effect of such restrict in government spending would be a shift towards a more sustainable fiscal policy in the long term.

In the delicate issue of striking the balance between (still immense) social and infrastructure needs on the one hand, and a prudent expenditure policy on the other hand, the budget for 2008 will play a decisive role. We recommend a tight budgetary stance which helps to restrict demand, and thereby indirectly contributes to social policy goals. This would imply in turn more moderate increases in minimum wages and pensions. It has to be kept in mind that the poorest are the ones that suffer most from high inflation and therefore any market-friendly measure that limits price growth is highly appreciated.

(iii) Policy coordination

The success of such a proposed anti-inflationary strategy by the several institutions depends crucially on the degree of policy coordination. Only when the relevant institutions under (i) and (ii) work together in a well-coordinated manner, they can achieve lower inflation as a result. Otherwise, a sub-optimal policy mix might lead to a recession with high economic costs. Concretely, this means that e.g. a contractive monetary policy, which might be necessary to dampen liquidity creation, must not be countered by an expansionary fiscal impulse at the same time.

A key to the success of bringing down jointly inflation is the necessity to tame inflation expectations. Otherwise, when economic agents start to react to high observed inflation, increase their inflation expectations and include them subsequently into their wage demands, a potentially huge problem with its own dynamics can start: a so-called wage-price nexus. This process could develop its own adverse dynamics of further increasing inflation. At the same time, the price the authorities have to pay to slow inflation down – namely, output costs of reducing inflation – will likely increase.

4.2 Aggregate supply side

While aggregate demand can be tightened by policy makers through various instruments in the short term, influencing domestic aggregate supply is in comparison a more long-term issue. Currently, we observe that domestic supply can't match the rapid increase in domestic demand, and the most visible results besides a growing current account deficit are price pressures, i.e. growing inflation. This observation is not only restricted to goods markets, also the labour market has tightened.

To mitigate this problem, aggregate supply should be made more flexible through government-inspired structural reforms (leading to a higher degree of wage and price flexibility). In this respect, a direct link to the current privatization debate and attraction of further FDI is given, as especially the latter can contribute in several ways to a more efficient functioning of enterprises. The resulting increase in competition would foster enterprise restructuring, thereby decreasing monopoly rents in prices of certain products, and limit future price setting powers.

The focus of such long-term structural reforms should be the agriculture sector, since a more transparent, competitive and efficient sector can better cushion supply shocks like the ones we observed recently. Also, stronger trade integration with world markets would help to limit price fluctuations. For the government, this implies that it must refrain from using non-market instruments like price controls (e.g. for bread) or export quotas (e.g. grain) to control inflation, as the negative economic effects of such instruments are severe. A significant part of the observed price increases are of a permanent nature and such instruments can only delay the necessary market adjustment. At the same time, economic costs (e.g. income losses in the sector) likely outweigh possible gains due to artificially lower prices. If legitimate social targets like affordable food for the poor should be achieved, other instruments should be used instead.

5 Conclusions

Inflation in Ukraine as measured by all main indicators is very high and poses huge economic and social risks. Since 2004, food prices and services have contributed to inflation in an

alternating manner. In the near future, both factors could act simultaneously and drive inflation up to new records.

Since inflation is the result of aggregate demand surpassing aggregate supply on the market for goods and services, it is useful to treat both market sides separately for analysing inflation and for deriving appropriate policy recommendations.

On the demand side, the country faces a strong real appreciation pressure, which can be absorbed by inflation or exchange rate appreciation. So far, the NBU has chosen to fully absorb this pressure through inflation, which partly explains the current high inflation rate. In our view, this approach is too single-minded. Also a more flexible exchange rate policy should make some contribution in absorbing this pressure. Furthermore, the government should avoid increasing aggregate demand by further sharp rises in minimum wages and pensions. Also, the government and the NBU should coordinate their attempts to fight inflation in order to prevent an increase in inflation expectations, which might lead to a dangerous wage-price nexus.

Reforming the supply side of the economy is of paramount importance for fighting inflation in the long-term. The aggregate supply of goods has to increase and become more flexible. In particular, this applies to the vastly unreformed agricultural sector, which has a huge influence on inflationary dynamics. But also reforms in the energy sector are needed.

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Lector: Ferdinand Pavel

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