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Contents

Armenia and Azerbaijan: recent economic developments and policy challenges*

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Background

The two countries of the Southern Caucasus – Armenia and Azerbaijan – are relatively small in terms of both their population (3.2 and 8.5 million, respectively) and the size of their GDP (Table 1). Besides, they have a similarly low level of development, with GDP per capita at purchasing power parity (PPP) of some USD 5000, corresponding to around one-fifth of the EU average and about half of Russia's level. However, contrary to what their per capita GDP levels might suggest, they do not fall into the category of 'classical' developing countries. The share of agriculture in GDP – the usual sign of underdevelopment – is not strikingly high even in Armenia (18%) and is even lower in the case of Azerbaijan.

The economic problems these countries are facing largely date back to the disintegration of the Soviet Union in 1991 and the subsequent economic near-collapse. Although economic decline in the wake of transition to a market economy was observed almost invariably in Eastern Europe and the former USSR, in countries of the Caucasus its magnitude proved to be particularly high. Over the first half of the 1990s, real GDP had plunged to 44% of its 1989 level in Armenia and even to 37% in Azerbaijan before it started to recover. The decline in industrial production was even more pronounced, leading to a rapid de-industrialization of the countries' economies. The reasons for this initially disastrous performance were manifold. On the one hand, these small countries were obviously hit harder by the disruption of economic links which existed in the Soviet Union than their bigger counterparts (such as Russia or Ukraine). On the

* The text is based on the author's presentation at the workshop 'Der Bergkarabach-Konflikt – Ursachen, Auswirkungen und Perspektiven', at Schloss Rothschild, Reichenau, 11 October 2007.

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Table 1

Selected economic indicators, 2006

	Armenia	Azerbaijan
Population, in million, end of year	3.223	8.533
GDP in USD billion	6.4	20.2
GDP per capita at ER, in USD	1,980	2,380
GDP per capita at PPP [1)], in USD	4,660	5,600
Agricultural production, % in GDP	18.1	6.5
Fixed investments, % of GDP	24.2	34.4
Government expenditures, % of GDP	18.6 [1)]	21.0
Foreign trade turnover, % of GDP	58.5	109.4
Average exchange rate to US dollar	416	0.89 [2)]
Population below the poverty line, % [1)]	30	24

1) As of 2005. - 2) As of 1 January 2006, the Azerbaijani manat was denominated 5000 times.

Source: CIS Statistical Committee, EBRD, wiiw calculations.

other hand, unlike the former CMEA countries in Central Europe and the Baltic ex-Soviet republics (or neighbouring Georgia, for that matter), they have never had any EU accession aspirations, in many ways feeling 'closer' to the alternative regional super-powers: Russia (in the case of Armenia) and Turkey (in the case of Azerbaijan). Also, in both countries, the usual economic difficulties of transition countries were badly aggravated by the conflict around Nagorny Karabakh and the related political tensions in at least two ways. First, their military expenditures absorbed a lion's share of economic resources that could have been alternatively used for financing the badly needed economic restructuring. Second, those conflicts brought about an extremely unstable environment, not only inhibiting large-scale investment but also creating an obstacle to cross-border trade flows.[1] Finally, compared to the countries of Central Europe, the transition to a market economy by Armenia and Azerbaijan was marked by a more extreme dismantling of the role of the state, especially concerning the social safety network and the resulting surge in poverty levels.

Recent growth patterns

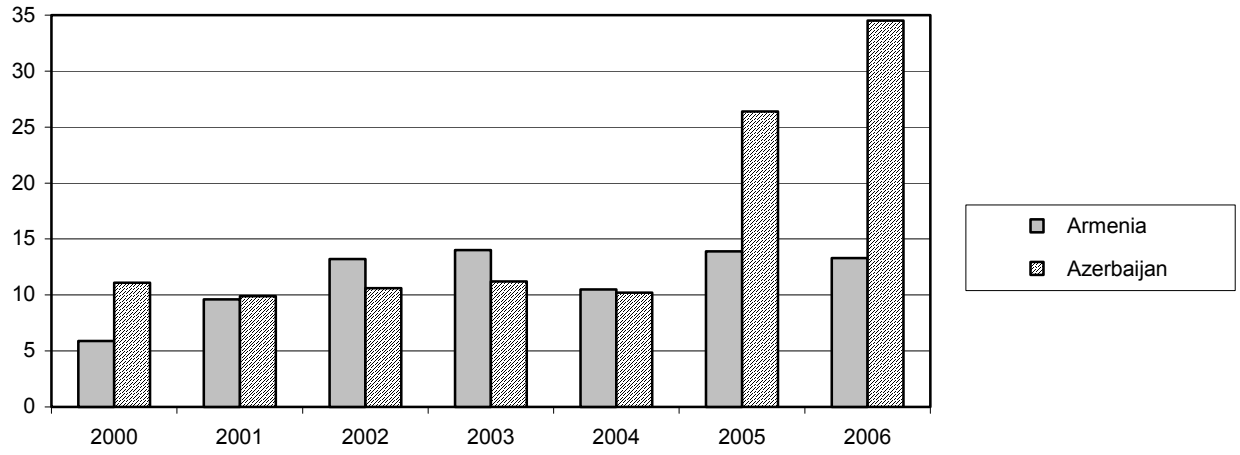
However, after the Nagorny Karabakh conflict had been effectively 'frozen', a certain degree of stability returned to the region. Economic growth resumed in 1994 in Armenia and in 1996 in Azerbaijan, and has been maintained ever since – often at two-digit rates and uninterrupted by the Russian crisis (Figure 1). By now, both countries (Azerbaijan in particular) have surpassed their pre-transition GDP by a wide margin and succeeded in substantially reducing their poverty levels. In Armenia, the share of population below the poverty line declined from 56% in 1999 to 30% in 2005, and in Azerbaijan from 40% in 2003 to 24% in 2005. However, much still has to be done, with the so-called 'internally displaced persons' (mainly war refugees) being the most vulnerable group, often living in temporary housing for years.

Despite the superficial similarity, the sources of growth in the two countries have been vastly different. In Armenia, economic growth has been attributed first of all to rising domestic demand, largely financed by loans and transfers from abroad. These transfers either come from the wealthy Armenian foreign diaspora (particularly in the United States and France) or represent remittances from Armenians who left the country over the past two decades in search of better job opportunities (mostly in Russia, where an estimated 1 million Armenians are reportedly working). Although industrial production has been

[1] From the latter, Armenia seems to suffer the most.

Figure 1

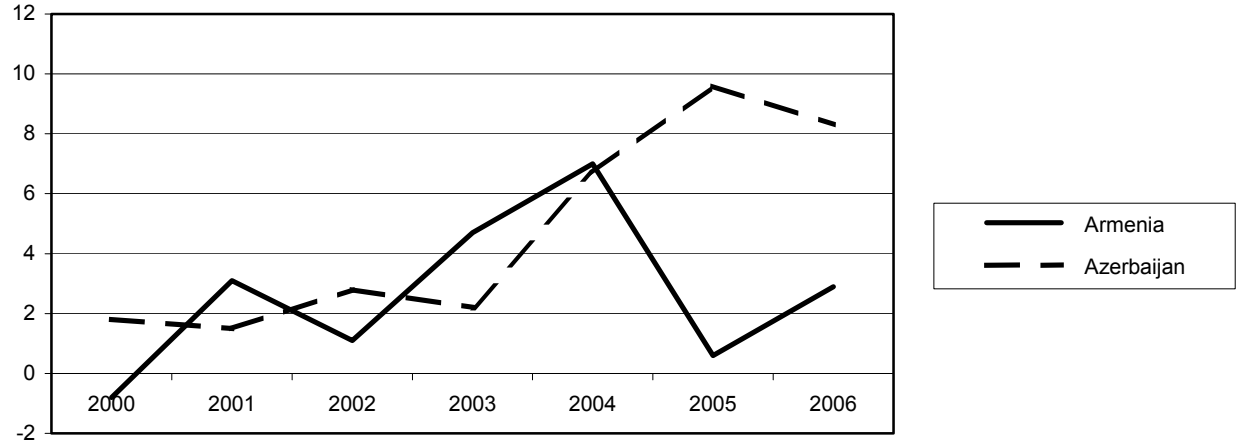
Real GDP growth, in %



Source: CIS Statistical Committee.

Figure 2

Consumer price inflation, annual average in %



Source: CIS Statistical Committee.

expanding as well, the key engine of growth has been the services sector, and here particularly construction which posted growth rates of some 30% over the past few years (not least due to generous tax exemptions granted to the construction sector). Remarkably, the economy has been growing in absence of strong inflationary pressures (Figure 2). The inflation target of 4 ±1.5% set by the National Bank has been largely met, helped by the continuous appreciation of the Armenian dram in the wake of massive inflows of remittances and foreign direct investment. The currency appreciation has contributed decisively to rising confidence in the dram and hence to a de-dollarization process which, in turn, is fuelling further appreciation.

However, the reverse side of this macroeconomic stability has been a widening of external imbalances, as high economic growth has led to strong demand for imports (such as the imported inputs for the booming construction sector). As a

result, the country's trade deficit has been on the rise and reached some 16% of GDP by 2006. More generally, the country's persistently high trade deficit is a reflection of the structural weakness of its industrial sector and its dependence on energy imports. The price of imported energy has risen markedly over the past few years (particularly due to the doubling of the price of natural gas charged to Armenia by Russia's Gazprom as of April 2006),[2] and the country's terms-of-trade have worsened accordingly.

Contrary to Armenia (where economic growth has been driven primarily by domestic sources and has been essentially import-fed), growth in Azerbaijan has been clearly export-led. Following the signing of major production-sharing agreements (PSAs) with foreign multinationals,[3] the start of operation of the vast Azeri-Chirag-Guneshli offshore oil deposit and the launch of a major Baku-Tbilisi-Ceyhan oil pipeline in 2006, oil exports from Azerbaijan have surged, leading to a near-doubling of exports and an impressive GDP growth of 34% in 2006 – the world's highest. As a result of the 120% growth in oil revenues, in 2006 the country's current account switched to a huge surplus (16% of GDP) – in contrast to previous years that had been characterized by high current account deficits, resulting largely from FDI-financed imports of equipment for the oil industry. The massive influx of oil-related export revenues facilitated a rapid accumulation of foreign exchange reserves and boosted the country's fiscal revenues. As a result, wages in the public sector and pensions were raised by about 50%, and capital expenditures by a stellar 300%.[4] However, the unpleasant side-effect of the increased spending has been a surge in inflation (see Figure 2) – and this even despite the on-going appreciation of the Azerbaijani manat.[5] Currently, oil and natural gas account for about 30% of Azerbaijan's exports to the CIS and for some 90% to the non-CIS.

Problem areas and policy challenges

Although Armenia and Azerbaijan share some common problems, the structural differences of their economies and the divergence in their current growth paths imply also important differences in the nature of the economic problems these countries are facing.

As can be seen from Table 1, poverty is still a big issue in both countries – notwithstanding the recent marked improvements. The reasons for this are multiple, but an important explaining factor has been the virtual dismantling of the social safety network in the wake of economic transition. The latter is manifested *inter alia* in the extremely small size of their governments: in both countries, government expenditures hover around 20% of GDP – not only much below the figures observed in the EU countries (generally above 40%), but even e.g. in Russia and Ukraine (30-35%). The limited government ability to spend is partly due to poor tax collection resulting from low tax morale and the wide incidence of the shadow economy. In Armenia, where some of the most dynamic economic sectors (such as construction) used to be exempted from taxation, this is particularly the case.

One problem specific to *Armenia* is the relative closedness of its economy: its foreign trade turnover (exports plus imports) stands below 60% of GDP – much lower than what the country's small size could suggest. The major reason is that its trade with neighbouring Turkey and Azerbaijan falls

[2] Still, even the new price of USD 110 per thousand cubic metres is less than half the West European level and is in fact the second lowest price charged by Gazprom to the CIS countries (behind Belarus). The reasons for this relatively generous treatment by Russia's Gazprom are widely considered to be political.

[3] Although Azerbaijan has a state-owned oil corporation of its own (SOCAR), 70% of the country's oil exports is accounted for by the Azerbaijan International Operating Company (AIOC) including – beside SOCAR – the leading foreign multinationals such as BP, Chevron, Statoil, ExxonMobil, etc.

[4] This surge in expenditures is also to be viewed against the background of approaching (in 2008) presidential elections.

[5] Similar to the case of Armenia, since 2006 – when the earlier fixed exchange rate regime was abandoned and replaced by a 'crawling peg', i.e. a targeted rate of appreciation – the Azerbaijani manat has been appreciating.

far short of its potential.[6] The costs of this are manifold: while the missing export opportunities imply losses for the economic agents involved, the re-direction of cargo shipments via sub-optimal transport routes means eroding profit margins of exporters and higher domestic prices of imported goods.

Another issue is the narrow range of Armenia's specialization pattern: about 60% of the country's exports is accounted for by diamonds and non-ferrous metals (such as copper and molibdenium). Although narrow specialization is to some extent natural for a country of Armenia's size and goes in line with the 'comparative advantage' principle of international trade, the problem is that world prices for Armenia's major export items (notably metals) are subject to sharp and unpredictable fluctuations, which partly translates into the volatility of the country's growth path. As exemplified by the recent successful experience of numerous East European countries, attracting FDI into the industrial branches producing (and exporting) more sophisticated products (as well as potentially into tourism) helps improve the economic structure and thus represents a solution to that problem. However, a prerequisite for that would be an improvement in the investment climate, which would require *inter alia* the settlement of existing 'frozen' conflicts and greater stability in the Southern Caucasus in general.

Also in the case of *Azerbaijan*, the country's narrow specialization on energy resources is potentially dangerous – even though in the short and the medium run, oil prices are expected to stay stubbornly high, so that the risk of a major crisis currently appears to be low. However, the necessity of diversifying the economy away from energy is generally understood by the country's authorities.[7] Therefore, the biggest policy challenge is how to take advantage of the current oil 'bonanza' in the most efficient way in order to pursue the goal of diversification. Following the experience of many other energy-exporting countries, Azerbaijan set up an Oil Fund already in 1999, although it was not until 2006 – when the country's oil production and exports increased markedly – that the Fund accumulated sizeable assets, which reached some USD 2 billion by the end of the year.

The country's current policy dilemma is as follows. Channelling energy revenues exclusively into the Oil Fund for the benefit of future generations (as typically advocated by the IMF, and largely in line with the policy pursued e.g. by Norway) – rather than spending them on a current basis – runs the risk of depriving the economy of the badly needed investments, including those in the social sphere (in the so-called human capital). Indeed, it is fairly obvious that the development needs in Azerbaijan are quite different from e.g. those in Norway, one of the world's richest nations. On the other hand, boosting government expenditures on a current basis (the strategy which is currently broadly followed), if driven to the extreme, may jeopardize the country's macroeconomic stability. In particular, a surge in inflation can be hardly avoided (signs of this are already visible – see Figure 2), leading to higher production costs and thus undermining the international competitiveness of the *non-energy* tradable sector (the so-called 'Dutch disease')[8] – thus making the goal of economic diversification more difficult. Therefore, the policy challenge for the authorities under the current circumstances is to find a reasonable compromise by tempering the pace of the fiscal expansion in order to avoid excessive 'overheating'.

[6] The reasons for this are largely political: the controversy (with Turkey) over the alleged genocide of Armenians at the beginning of the 20th century and the conflict (with Azerbaijan) over Nagorny Karabakh.

[7] Also, according to available estimates, unless new oil deposits are discovered, the country's oil production is likely to peak out already in 2009-2010.

[8] In 2006, while the economy as a whole registered an impressive 34% growth, the 'non-oil GDP' (i.e. the economic sectors not directly connected with energy extraction and transportation) grew by 8%, and the non-oil *tradable* sector by just 4% (compared to 10.4% in 2005). Although non-oil exports rose by as much as 30% in US dollar terms, that surge was explained by the booming prices of agricultural commodities and metals.

Agricultural support: consequences of an eventual EU accession of the Balkan countries*

BY SÁNDOR RICHTER

Being relatively underdeveloped economies, each of the Balkan-7 countries[1] will, after accession, be a net recipient of EU funds. But estimating the future agricultural transfers from the EU budget to those countries is a complex task.

– The agricultural support scheme of the Common Agricultural Policy (CAP), together with the UK rebate, has been one of the most controversial issues of the EU budget. Its future after 2013 is uncertain. The direction of possible reforms is hard to predict.
– The possible accession date of all but two countries in the Balkan-7 group (Croatia and perhaps Macedonia) is beyond the time frame of the current financial perspective 2007-2013. Currently, at least three different waves of accession seems to be likely, with Croatia at the earliest, Turkey the latest and the other five countries somewhere in between. Even the group of those other five countries may be split up into smaller sub-groups. This means different 'phasing-in' periods across different financial perspectives and agricultural support schemes.
– It is difficult to foresee the future structure of agricultural output in the economies of the Balkan-7 which may change compared to the current composition with regard to the (possibly also changing) EU support scheme.

Methodology

Taking account of these difficulties, the solution proposed here is focused on a top-down assessment of the overall impact of the Balkan-7 accession on the EU budget in general and the agricultural section of the EU budget in particular. Consequently, the estimation was made without going into the details of the agricultural output in the individual countries.

Due to the practice of the ten-year phasing-in period for direct payments, the proper impact on CAP expenditure can be felt only in the tenth year of membership of any new member state. For the countries which joined in 2004 this will be the year 2013, for Bulgaria and Romania 2016, for the Balkan-7 well beyond 2016.

The relevant question is about the transfers in the post-phasing-in period. Here we make two assumptions: First, that all new members will be treated equally, and in the same way as the former (2004 and 2007) new members. Second, that agricultural support from the EU budget will have the same relative size in the Balkan-7 new member states as in the former new member states.

In order to facilitate a comparison across all current member states and the future Balkan-7 members, a *hypothetical* EU-34 is considered, comprising Romania and Bulgaria as well as the Balkan-7 countries. The working assumption is that the 2004 enlargement included Bulgaria, Romania and the Balkan-7. In this hypothetical EU-34, EU-34(hyp) for short, the first year of full (post phasing-in) impact on CAP expenditures is *uniformly* 2013. The estimated impact in the EU-34(hyp) in 2013 should, under the condition that the current CAP scheme prevails, give a *rough approximation* of the real impact that could be exerted in that unknown year in the remote future when the phasing-in of the last acceding Balkan-7 member state will have been concluded. Compared to estimates for an EU in 2015 (with the beginning of the phasing-in period) or 2025 (full costs with completed phasing-in), the creation of the hypothetical EU-34 and the calculation of the relevant full costs for 2013 has

* This text is part of a wiiw research project on the prospects of EU accession of the Balkan countries, and its impacts on Austrian farming. The project, led by Z. Lukas and J. Pöschl, was financed by the Austrian Federal Ministry of Agriculture, Environment, Water Economy and Forestry (Project No. 1402).

1 The Balkan-7 group includes Albania, Croatia, Bosnia and Herzegovina, Macedonia, Montenegro, Serbia and Turkey. Serbian data *do not include* Kosovo. Due to the missing GDP and other important data for Kosovo, no estimation for the impact on the EU budget was made in the case of a future EU accession of this entity.

the advantage that the necessary GDP estimations for the EU total and the individual member states, candidates and potential candidates cover a relatively short period (2007-2013) while GDP data for the first third of the period investigated (2004-2006) are already available as facts. This way uncertainties through estimations for years in the remote future can be avoided.

The assessment of the impact is based on GDP data and GDP estimations of the economies concerned, and further on the available components of the CAP scheme for the current EU members for the years 2007-2013: the national ceilings for SPS and SAPS[2] payments in 2007-2013[3], and the EU support for rural development 2007-2013[4]. It is important to point out that CAP has a third, relatively small component (market and price support) which will not be part of the present estimation due to the unpredictability of the item concerned. For this reason, instead of 'CAP expenditures', the expression 'Direct Payments and Rural Development expenditures' (D+R expenditures) will be used in the following. Direct Payments data used in the estimation constitute national *upper limits*; in real life they may be smaller, but in this case they reappear in the transfers for Rural Development and thus the D+R expenditures used in the estimation do not change.

Further on, the estimation is based on the assumption that the Balkan-7 joined the hypothetical EU in 2004 under the same conditions as the current 12 new members. Due to the similarities in the level of per capita GDP and the role of agriculture in the economy, the ratio of D+R expenditures to GDP in the NMS-12 will be similar to the ratio of hypothetical D+R expenditures to GDP in the case of the Balkan-7.

In a first step we estimate the Balkan-7 GDP in 2013. Subsequently we calculate the Balkan-7 D+R expenditures in that year, relying on the estimated 2013 D+R expenditure/GDP ratios for the NMS-12. These hypothetical Balkan-7 D+R expenditures can then be compared to the total hypothetical EU-34 D+R expenditures and the total hypothetical EU-34 budget expenditures.

Table 1

GDP by member state
in a hypothetical EU-34 in 2013

EUR million, in 2004 prices

Member State		in %
OMS-15	**12,121,110**	**89.83**
NMS (04)-10	**736,002**	**5.45**
Bulgaria	31,595	0.23
Romania	99,163	0.73
NMS (07)-2	**130,758**	**0.97**
NMS-12	**866,760**	**6.42**
EU-27	**12,987,870**	**96.26**
Croatia	*41,438*	*0.31*
Albania	*9,309*	*0.07*
Bosnia and Herzegovina	*11,979*	*0.09*
Macedonia	*6,476*	*0.05*
Montenegro	*2,423*	*0.02*
Serbia	*31,484*	*0.23*
Turkey	*401,928*	*2.98*
Balkan-7	**505,036**	**3.74**
EU-34	**13,492,906**	**100.00**

Source: For the calculation of the 2013 GDP level for individual member states and the EU-34(hyp), factual annual growth rates were used for the period 2004-2005, wiiw estimates for 2006-2007 and wiiw forecasts for 2008. For the years 2009-2013 an annual GDP growth rate of 2.2% was assumed for the old member states, 4.2% for the NMS-10 and Croatia and 5.2% for Romania, Bulgaria and each member of the Balkan-7 group (except Croatia).

It is clear from Table 1 that the Balkan-7 GDP will be somewhat more than half the NMS-12 GDP in

[2] SPS: Single Payment Scheme or Single Farm Payment; SAPS: Single Area Payment Scheme.

[3] Official journal of the European Union L384/529.12.2006. These are upper limits of possible transfers under this heading and will not necessarily be equal to actual payments. Payments in respect of calendar year (n) are in fact paid under the budget for year (n+1).

[4] Pre-allocated rural development funding under Heading 2, 'Natural Resources' of the Financial Framework. For Bulgaria and Romania: European Commission, http://europa.eu, for all other member states Official journal of the European Union L261/34 22.09.2006. The data include the money transferred from direct aid for farmers to Rural Development under the so-called 'Modulation'.

2013. Within the Balkan-7 group, the five former Yugoslav Republics plus Albania will have a smaller combined GDP in 2013 than Hungary, while Turkey will have a somewhat higher GDP than Poland. Within the Balkan-7 group, 80% of the combined GDP will fall on Turkey.

Table 2

Direct payments and rural development expenditures in % of GDP in EU-27* in 2013

OMS-15	**0.3**
NMS (04)-10	**1.2**
Bulgaria	3.2
Romania	2.5
NMS (07)-2	**2.7**
NMS-12	**1.4**
EU-27	**0.4**

*) Under the condition that Bulgaria and Romania complete phasing-in of direct payments by 2013 and not in 2016 as in real life.

Source: Own calculations based on data listed in footnote 3 and 4.

Direct payments and rural development expenditures constitute a significant part of the total transfers to the member states from the EU budget, amounting to about 42% in the period 2007-2013 (including market and price support).[5] Their significance for the recipient member states, measured by the ratio of these transfers to the GDP, differs quite considerably (see Table 2). In the group of the old member states that ratio is at 0.3% on average; only the ratio of Greece reaches as much as 1%. In the group of the ten new (as of 2004) member states the average ratio is 1.2%, for the 12 new member states together 1.4%. The new members' significantly higher ratio (compared to the EU-15) reflects the relatively bigger importance of agriculture in the economies concerned and the lower level of economic development. Note especially that Bulgaria and Romania will have substantially higher ratios (3.2% and 2.5%, respectively) than any of the 2004 new members after phasing-in has been completed. (In that group Lithuania will have the highest ratio, 1.8% of its GDP.)

The results

The D+R expenditures for the Balkan-7 are estimated in two scenarios. In the first scenario we assume that the D+R expenditures to GDP ratio for the Balkan-7 is identical to the average support ratio (1.4%) in the 12 new member states. In the second scenario the assumption is that this ratio is identical with the average support to GDP ratio in Bulgaria and Romania (2.7%). The results of the first scenario show that in 2013 the D+R expenditures would be close to 15% higher in a hypothetical EU-34 than in an EU-27, namely in an EU without the Balkan-7. Estimated with the higher (Bulgarian–Romanian) average ratio of 2.7% the respective agricultural expenditures would be close to 29% higher with the Balkan-7 than without them.

Additional estimates were made for a case where the D+R support for Croatia was calculated with the NMS-12 support to GDP ratio, as Croatia with its substantially higher level of development fits better into that group than in the Romania–Bulgaria group. The other six countries in the Balkan-7 group were calculated with the higher, 2.7% support to GDP ratio. In this case the agricultural support for the EU-34 should be 26.5% higher than for the EU without the Balkan-7.

Turkey has certainly the dominant weight in the Balkan-7 group. Thus, omitting Turkey from the calculation yields a very different result: the D+R support for an EU-33 without Turkey would only be somewhat more than 4% higher than that for the EU-27.

The enlargement of the EU by seven new members would also change the allocation across countries. In the EU-27 of 2013 three quarters of the D+R transfers would be allocated to old members, about 18% to the ten 2004 new members and 7.4% to the 2007 new members Romania and Bulgaria (see Table 4). In a

[5] Overview of the Financial Perspective 2007-2013, http://europa.eu, and *Rural Europe*, No. 34, January 2006, p. 2.

Table 3

Estimated direct payments and rural development expenditures for the Balkan-7 in a hypothetical EU-34 in 2013

EUR million

Country	GDP	D+R expenditure, if the ratio to GDP is equal to:	
		1.4% (NMS 12)	2.7% (Bulgaria and Romania)
Croatia	41,438	580	1,119
Albania	9,309	130	251
Bosnia and Herzegovina	11,979	168	323
Macedonia	6,476	91	175
Montenegro	2,423	34	65
Serbia	31,484	441	850
Turkey	401,928	5,627	10,852
Balkan-7	**505,036**	**7,071**	**13,636**

Source: Own calculations.

Table 4

Direct payments and rural development expenditures in a hypothetical EU-34 in 2013

in 2004 prices

Member State	EU-27		EU-34 (1.4%)		EU-34 (2.7%)	
	EUR mn	in %	EUR mn	in %	EUR mn	in %
OMS-15	**35604**	**74.6**	**35604**	**65.0**	**35604**	**58.0**
NMS (04)-10	**8591**	**18.0**	**8591**	**15.7**	**8591**	**14.0**
NMS (07)-2	**3526**	**7.4**	**3526**	**6.4**	**3526**	**5.7**
NMS-12	**12117**	**25.4**	**12117**	**22.1**	**12117**	**19.7**
EU-27	**47721**	**100.0**	**47721**	**87.1**	**47721**	**77.8**
Croatia			580	1.1	1119	1.8
Albania			130	0.2	251	0.4
Bosnia and Herzegovina			168	0.3	323	0.5
Macedonia			91	0.2	175	0.3
Montenegro			34	0.1	65	0.1
Serbia			441	0.8	850	1.4
Turkey			5627	10.3	10852	17.7
Balkan-7			**7071**	**12.9**	**13636**	**22.2**
EU-34 (EU-27+Balkan-7)			**54792**	**100.0**	**61356**	**100.0**

Source: Own calculations.

hypothetical EU-34 in 2013, in which the Balkan-7 support to GDP ratio would correspond to the NMS-12 average (1.4%), the 27 current member states would receive 87.1% of the D+R support and the Balkan-7 12.9%. In the scenario with the higher (2.7%) support to GDP ratio, the share of support allocated to the Balkan-7 would surpass 22% of the total. This share would be higher than that of the NMS-12. The share of the old members would be less than 60%. In the Balkan-7 group Turkey's share alone would amount to 17.7%. Beyond Turkey, only Croatia and Serbia would have a higher than 1% share in the total D+R support for the EU members.

In all above calculations the assumption prevailed that the D+R expenditures for the member states will increase when the Balkan-7 join the EU. This, however, will not be necessarily so and we therefore calculate a 'meagre' version of enlargement in which the D+R expenditures earmarked for the EU-27 do not increase after the EU accession of the Balkan-7. In that case, the resources allocated originally to the EU-27 were to be reallocated among 34 members. Provided that each member state is treated equally and thus the reduction of R+D expenditures takes place at a uniform rate, the members states would lose 13% of their transfers if the 1.4% support/GDP ratio were applied and 22% if the higher 2.7% ratio were applied to the Balkan-7. In a version omitting Turkey the loss for the individual member states would amount to 2.6% and 4.4%, respectively.

So far we have investigated the impact on *agricultural transfers* that an EU accession of the Balkan-7 would have. Next we attempt to asses the *overall* budgetary impact of the Balkan-7 accession in the field of agriculture (see Table 5). The estimated 2013 GDP data for the EU-27 and the hypothetical EU-34, respectively, allow a calculation of the rate of expansion of the EU aggregate GDP due to the increase in the number of member states from 27 to 34.

Since the Balkan-7 are relatively poor, the 2013 GDP of the EU-34(hyp) would only be 3.9% higher than that of the EU-27. If agricultural expenditures were to increase at the same rate, by 3.9%, the enlargement from 27 to 34 members would have practically no impact.

These 3.9% higher agricultural expenditures may be regarded as the enlarged EU's 'supply' of agricultural support at a scale which would not generate an additional burden for the EU-27 as a group. Nevertheless, the strongly agricultural economies of the Balkan-7 necessitate a more than 3.9% increase in D+R expenditures. Further above an estimation was made for two scenarios applying two different R+D expenditure to GDP ratios. This may be interpreted as the Balkan-7 'demand' for EU agricultural support if they were to be treated roughly equally to the NMS-12 or Romania and Bulgaria, respectively. The difference between the impact-neutral EU-34 'supply' and the EU-34 'demand' amounts to EUR 5.2 billion or EUR 11.8 billion, respectively, depending on the ratio selected. Turkey's net impact amounts to 80% of the above figures, EUR 4.2 billion and EUR 9.4 billion, respectively.

In another approach, the EU accession of the Balkan-7, if they were treated equally to the NMS-12 or Romania and Bulgaria, would raise the D+R expenditures out of the EU budget by 10.5% or 23.8%, respectively. This can be interpreted as the *net impact* of the Balkan-7 accession on the *D+R expenditures*.

Finally, if we assume that in 2013 the budget of the hypothetical EU-34's own resources (the revenue side of the EU budget) will amount to 1% of the EU-34 GDP[6], we can estimate the emerging additional need for the overall financing of the EU budget due to the additional costs from R+D expenditures for the Balkan-7. Assuming that total EU budget revenues are equal to total EU budget expenditures,[7] the figures presented in Table 5 indicate that total budgetary expenditures of the EU-34(hyp) will be about 4% or close to 9% higher than the total budgetary expenditures of the EU-27 if, in the field of agriculture, the Balkan-7 is treated in the same way as the NMS-12 or Bulgaria and Romania, respectively. Again, the lion's share of these additional costs derives from Turkey's accession. In a hypothetical EU-33 (EU 27+Balkan without Turkey) the total budgetary expenditures would only be about 0.8% (1.4% R+D expenditures to GDP ratio) or 1.7% (2.7% R+D expenditures to GDP ratio) higher than in the EU-27.

[6] In the real life EU-27 own resources in 2013 will amount to 1% of the EU-27 GNI, in terms of payment appropriations.

[7] In real life own resources are about 6% higher than expenditures due to expenditures spent in other than EU member states (pre-accession aid, international aid programmes, etc.).

Table 5

Impact (only agriculture) of Balkan-7 EU membership on total EU budgetary expenditures in a hypothetical EU-34

A.	GDP (2013) EU-27 (EUR million)	12,987,870
B.	GDP (2013) EU-34 (EUR million)	13,492,906
C.	GDP Expansion EU-34/27 **(A/B*100)** (in %)	103.9
D.	EU-27 D+R expenditures (EUR million)	47,721
E.	EU-34 D+R expenditures (impact neutral 'supply') **(D*1.039)** (EUR million)	49,582
F.	Balkan-7 'demand' for D+R (1.4% of GDP) (EUR million)	7,071
G.	Balkan-7 'demand' for D+R (2.7% of GDP) (EUR million)	13,636
H.	EU-34 demand for D+R (1.4%of GDP) **(D+F)** (EUR million)	54,791
I.	EU-34 demand for D+R (2.7 %of GDP) **(D+G)** (EUR million)	61,357
J.	Difference EU-34 impact neutral supply and EU-34 demand (1.4%) **(E-H)** (EUR million)	-5,209
K.	Difference EU-34 impact neutral supply and EU-34 demand (2.6%) **(E-I)** (EUR million)	-11,775
L.	Proportion EU-34 demand/expenditure (1.4%) **(H/E*100)** (in %)	110.51
M.	Proportion EU-34 demand/expenditure (2.7%) **(I/E*100)** (in %)	123.75
N.	Share of preservation & management of Natural Resources in total expenditures in 2013 (in %)	40.4
O.	Total EU-34 expenditure (1.00% of the EU GDP) (EUR million)	134,929
P.	Increase of total expenditures due to excessive demand for agricultural support (1.4%) **(-1*J+O/O)** (in %)	103.9
	- without Turkey (in %)	100.8
R.	Increase in total expenditures due to excessive demand for agricultural support (2.7%) **(-1*K+O/O)** (in %)	108.7
	- without Turkey (in %)	101.7

Source: Own calculations.

If we project these costs on the aggregate GDP of the hypothetical EU-34, the result indicates that instead of 1% of GDP transferred to the EU budget, the member states should transfer 1.039% or 1.087%, respectively, of their GDP to finance the increased EU budgetary outlays as a (partial, agricultural) consequence of the Balkan-7 membership in the EU.

Conclusions

Any predictions concerning the agricultural transfers to the future EU members in the period after 2013 are made quite unreliable by a number of uncertainties; we therefore chose to estimate those transfers in the context of a hypothetical EU-34 in the year 2013.

The top-down estimation was based on the assumption that the agricultural support to GDP ratios are similar across member states being at similar levels of development and sharing a similar weight of agriculture in the economy. The results show that the annual additional burden, in terms of direct payments and rural development expenditures, for the 27 current EU incumbents due to the EU membership of the seven Balkan countries would range between EUR 5 and 12 billion (in 2004 prices). The former figure reflects an agricultural support to GDP ratio corresponding to the average of the 12 new member states; the latter reflects the respective (average) ratio of Bulgaria and Romania. As the members of the Balkan-7 group[8] are in many respects more similar to Bulgaria and Romania than to the more developed new members as of 2004, the additional burden will probably be closer to the higher than to the lower figure.

[8] Except for Croatia.

In relative terms the hypothetical accession of the Balkan-7 in 2004 would necessitate a net increase of the pool of transfers for direct payments and rural development expenditures in the range of 10.5% to 23.8%. Alternatively, if that pool were not to be expanded, incumbent members would lose about 13% or 22%, respectively, of the transfers compared to those eligible for them in an EU without the Balkan-7.

Finally, it must be emphasized that the Balkan-7 group is far from being homogeneous in terms of additional expenditures generated by the individual members of the group. About 80% of the additional expenditures fall on Turkey alone. While integration of the former Yugoslav Republics and Albania in the CAP seems to cause only a moderate increase of expenditures, the accession of Turkey may necessitate a new design of agricultural policies in the EU.

Globalization and inflation: impacts unlikely to be large and permanent*

BY LEON PODKAMINER

Some common-sense views on (dis)inflationary impacts of globalization

Globalization has become a very important (or perhaps *the* most important) theme in the public debate on the course of the evolution of real economies – at both global and national levels. But for quite a long time globalization has been referred to in discussions on topics other than inflation in the advanced economies. Primarily, globalization has been invoked while focusing on, e.g., the consequences of the liberalization of capital flows, the build-up of major global financial imbalances, the rise of strongly competitive 'emerging markets' and its impacts on labour market developments in the advanced countries, etc. Only recently, one observes a more intense interest in exploring, somewhat more systematically, the possible links between 'globalization' and inflation.[1]

The common-sense motivations for linking globalization to inflation (primarily in advanced industrial countries) seem quite straightforward. They all start from the notion of progressing opening and liberalization of national markets for goods, capital (and – albeit to a lesser degree – labour), declining costs (e.g. of transportation) and, eventually, tightening international integration. As domestic prices (and also wages) are increasingly left free to interact with those abroad, one should expect – so the story runs – the domestic inflation to be also somehow linked to what is going on globally.

One often distinguishes several (though fairly related) likely mechanisms ('channels') through which 'globalization might affect domestic inflation':

(1) The expansion of *freer trade* may impact domestic inflation through prices of imported final – and also intermediate – goods. Cheaper imports of consumer goods lower the overall price index directly (if included in the underlying basket of goods). Apart from this, one speaks of possible indirect effects when imported intermediate goods get cheaper. Such imports could lower costs (and hence possibly also prices) of domestically produced goods and services (whose production requires the application of imported intermediate imports).

(2) In addition, downward pressures on prices of domestic substitutes to low-price imports may erode the market position of their (domestic) producers (forcing lower mark-ups on costs) – and thus possibly imply attenuation of inflation. Or, alternatively, the downward pressure on prices of domestic substitutes is transmitted into lower wages of domestic employees[2], without necessarily lowering the mark-ups.

(3) Ample and growing supplies of low-price imports of some unsophisticated consumer goods (i.e. *'wage goods'*, so to say) may help preserve the purchasing power of nominally stable domestic wages. The domestic labour force can be kept reasonably happy without pronounced hikes in their nominal wages. This should be conducive to lower domestic inflation as well.

* This is part of a text written following a request from the European Parliament's Committee on Economic and Monetary Affairs (November 2007).

1 Arguably, that interest may have been aroused by the decisive change in trends in the world market prices of energy carriers and other basic raw materials and commodities which started in 2003-2004. Sustained massive rises in these prices may have brought back the memories of the oil price shocks of the 1970s and what had followed – the extended periods of very high inflation (combined with stagnant growth and high unemployment). But, let us observe that that gloomy 'stagflation' was unrelated to any globalization, as now understood. Protectionism was then openly preached and practised, and there were no competitive 'emerging markets'.

2 For instance by eroding the market position of employees/Trade Unions in sectors most exposed to competitive imports from low-cost 'emerging markets'.

(4) Competitive imports may also stimulate productivity growth, resulting in slower growth in production costs – *ergo* in weakening inflation pressures.

An aside: can globalization induce *higher* inflation?

It may be observed that the above-described channels should work best (or at all) only when the domestic (advanced) economy is increasingly exposed to competitive (i.e. lower-cost) imports of substitutes to domestic products. Thus all these channels must be assumed to act as *brakes* on the domestic inflation. They are only active when foreign goods are competitively cheap vs. the domestic ones.[3] Thus, globalization would imply a *deflationary bias* – at least as far as the advanced industrial countries are concerned.

However, sometimes it is suggested that globalization can also be a serious *indirect* source of an inflationary tendency. One refers here to the fast growth of large emerging markets such as China or India which is combined with strong expansion of their demand for oil and other raw materials (or, more recently, for some farm and food products). This is believed to have driven up the world market prices of the commodities in question. In so far as these commodities cannot be substituted by own (competitively priced) supplies, these higher world market prices exert a direct upward pressure on domestic prices of the commodities in question in the advanced countries – and indirectly on costs of production of domestic goods and services.

Clearly, this situation should support higher inflation (just as falling prices of imports are believed to be conducive to declining domestic inflation). However, I have doubts whether China's, India's etc. growing demand for oil – even if actually responsible for the observed rise in oil prices – should be linked to the globalization process. In my opinion, globalization (equated with liberalization, removal of barriers to trade, freer capital movements, declining trade costs, etc.) is *not* necessary for the emergence of fast-growing economies than bid up world market prices of oil and other commodities.[4] Concluding, I do not think we should make globalization as such responsible for acceleration of inflation in the advanced countries – now, or in the future.[5]

Some reservations about the views on the role of import prices

Falling (or rising, as the case might be) prices charged by foreign suppliers for some goods imported by an economy are anyway a poor predictor of the change in the *overall* price level – hence of *inflation.* In general it is inappropriate to expect, e.g., falling import prices (whether linked to globalization or any other development) of some goods to be necessarily followed – other things being equal – by lower inflation. A fall in some prices may cause a change in the consumption pattern, and also provoke a *rise* in prices of some other goods. The end effect of all these changes

[3] Foreign goods offered at prices that are higher than those of the domestic substitutes would be uncompetitive. There would be no good reason for their being imported. Here the country's imports should turn negative – the domestic economy would be expected to become an *exporter* of competitively priced goods – thereby possibly contributing to slower inflation in its trading partners.

[4] In the past, other countries (such as Japan, South Korea) successfully caught up with the most advanced ones under highly illiberal international (and internal) conditions. They too had to compete for oil and other raw materials, possibly driving upwards the world market prices of these commodities. A possibly inflationary impact of the emergence of new strong 'players' does NOT need globalization to materialize. Had the global institutional arrangements been more or less the same as in the 1960s, China could now be growing very fast all the same (surely relying on expansion of domestic investment and consumption rather than on gigantic trade surpluses). But its demand for oil etc. could have been equally strong.

[5] One may wonder whether the more affluent middle classes arising in the 'emerging economies' cannot induce higher inflation in the advanced countries (via increased demand for more sophisticated consumer goods produced and exported by the latter). I do not believe this is a likely development. Inflation has been particularly *low* in the leading exporters of such goods: Japan and Germany (among others). The huge export surpluses that these countries record coexist with very low inflation (or even deflation) at home.

may imply a *rise* in the price level – a positive inflation. (For instance, lower spending on cheaper imported shoes may induce a stronger rise in prices of some domestic services.) The *'other things being equal'* clause cannot be legitimately invoked here: a change in some prices/quantities requires definite adjustments in all other prices/quantities. This, by the way, is the most rudimentary lesson from the general equilibrium analysis.[6]

There are also some practical (and less 'pedantic') reasons for doubting the arguments advanced to justify the significance of the impacts of changes in import prices on the measured domestic inflation in the advanced countries:

(1) Non-tradables (primarily services such as housing, health care, education, etc., plus some goods that for various reasons are not traded internationally) increasingly dominate the consumption (and overall GDP) structures in the advanced countries. Services alone account for more than 50% of the GDP in these countries. Moreover, the share of non-tradables in consumption and GDP keeps rising (in line with overall affluence). This is combined with (i) rising *relative* prices of non-tradables; (ii) rising *absolute* volumes of non-tradables; (iii) stagnant *absolute* volumes of tradables. In effect the impacts which the changes in prices of *all* tradables (domestically produced *plus* imported) have on the overall inflation index keep diminishing. For practical purposes the *direct* accounting impacts (even disregarding possible 'perverse' effects referred to above) of changes in prices of imported tradables are losing significance.

(2) There is some evidence (also generated by research conducted at the ECB) that the pass-through from shocks in import prices (and also in exchange rates) to the domestic price indices is rather weak. Moreover, the pass-through coefficients seem to be actually *declining* over time, meaning that eventual inflationary / deflationary impacts of changing import prices may have been weakening. This is not inconsistent with the belief that globalization has been deepening. On the contrary, this might suggest that globalization may have already reduced the *incentives* for a further narrowing of gaps between prices charged domestically and internationally.

(3) Globalization notwithstanding, the gaps between producer costs/prices of tradables and prices eventually charged on the final foreign buyer are truly gigantic. These gaps tend to dwarf the producer prices themselves.[7] Of course, to some extent these gaps may reflect unavoidable costs (transportation, insurance, normal trade margins, taxes, etc.) of getting the goods from the producer to the final buyer. But my guess is that the combined profit mark-ups in all activities involved dominate the price gaps in question. The presence of such mark-ups would indicate that there are some invisible (and invincible?) limits to actual globalization. The visible trade liberalization (dismantling of *official* barriers to international trade) is not followed by a dismantling of the imperfectly competitive structures of the private trade industry. With such structures, possibly firmly entrenched, one may expect a rather weak, and at best delayed, pass-through from foreign to domestic prices. Variations in foreign prices may effectively be smoothed out by the intermediating firms, which can also 'protect' the domestic markets from excessively low prices.

To conclude, there are some good reasons to doubt the significance of low and falling import prices for *overall* inflation in the advanced countries.

[6] In the present author's experience, some fairly standard (and reasonably realistic) computable general exchange equilibrium models of international trade suggest that free trade ('globalization') is capable of inducing *higher* price levels in some (mostly more affluent) countries.

[7] This is documented and thoroughly analysed by J. Anderson and E. van Wincoop; see e.g. 'Trade Costs', *NBER Working Paper* No. 10480, 2004.

Empirical identification of globalization impacts on inflation is rather problematic

It is rather difficult to arrive at quantitative estimates of the disinflationary impacts of globalization. Generally, it is certainly true that the gradual disinflation over the recent two decades or so has coincided with – broadly understood – progressing liberalization, economic integration, rise of 'emerging economies', etc. In short – with globalization. Has there been a causal link running from deepening globalization to gradual deceleration of inflation during the past about 20 years? There is no convincing proof of that. First, running regressions 'explaining' gains in inflation by changes in globalization is hardly possible. Globalization itself has proceeded along many dimensions. We do not have any single well-defined index (or even a set of such indices) to measure the progress of globalization. Second, even if one agreed to some definition of a 'composite' index of globalization, there would be a problem with allowing for other processes that may have been by far more influential in the disinflation in the advanced countries. These processes include:

(1) the tremendous transformation in the doctrines and practices of central banking (monetarism being put to rest, the rise of inflation targeting, tendency for central bank independence);

(2) the proliferation of floating exchange rate regimes, the emergence of large global financial imbalances;

(3) profound changes in the fiscal (rediscovery of the virtues of 'sound' public finances) and social (contraction of the welfare state) policies;

(4) acceleration of technological change (computerization, information technologies, etc.), possibly enhancing productivity gains;

(5) the accelerated pace at which new products (and new varieties of old products) have been entering the market[8];

(6) last, but not least, the great disinflation has involved a decisive change in the distribution of national income, with a consistent decline in the share of income going to the labour force. It is this latter development – labour's great moderation – which may have made disinflation possible.[9]

Estimates available: fragmentary and fairly low

Given the simultaneity of globalization, the five processes enumerated above, and disinflation in the advanced economies, the possibility of arriving at a reliable empirical identification and quantification of the role played by globalization alone is rather problematic. Estimates of the impacts of specific aspects of globalization on specific aspects of inflation need to be treated with due care. Literature on the subject is – anyway – rather limited. Moreover, the conclusions derived in that literature are generally quite modest. This is well exemplified by the study 'How has globalization affected inflation' included in the IMF World Economic Outlook 2006 (April). The main specific finding of that study is that a 1% decrease in real import prices decreases inflation in the advanced economies by about 0.08 percentage points (p.p.) in the first year, to be followed by even smaller gains in inflation in the second and third years.[10] Thus, the overall role of import prices has been quite negligible in reducing inflation,

[8] New products/varieties, even if appearing at a slow pace, pose well-known problems for the calculation of inflation indices which – out of necessity – *directly* allow only for changes in prices of 'old' products/varieties. Let us note that problems become more complicated when new products / varieties keep entering the market on a massive scale. The prices of the old varieties tend to be depressed under such conditions (e.g. when a new version of Windows is released, the older one is offered at a discount) even before the basket of goods used for the calculation of inflation is properly modified. Thus the recorded inflation is downward biased: it allows for lower prices of the old varieties, but not necessarily for the prices (possibly quite high) of the new ones. Observe that when product innovation is fast and sustained over time, the downward bias in the recorded inflation will be permanent.

[9] That moderation may have been forced upon the labour force by the policies consistent with the doctrine that stipulates the social desirability of having a sufficiently large ('natural') rate of unemployment.

[10] Impacts for Germany, France and Italy are even lower, impacts for the UK and the USA higher (0.19 p.p. and 0.15 p.p. respectively).

according to that study. More concretely, the average contribution of non-oil import prices to inflation in the advanced countries was found to be about one fourth of one per cent (over the years 1997-2004). For the euro area countries that contribution was then not significantly different from zero. Another interesting finding of the IMF study is that price and wage growth in the sectors that have been more exposed to international competition (including e.g. textiles and electronics) has been restrained. In such sectors producer prices and unit labour costs have declined relative to the overall price and unit labour cost levels – i.e. their relative prices and costs have fallen. This is also reflected in falling relative prices of goods and imports (vs. the CPI). Of course, these findings seem unsurprising – the more so as the estimates of the impacts of greater trade openness on relative producer prices in manufacturing are quite minute.[11]

Concluding remarks: *real* (indirect) impacts, after all?

As I have argued, there are serious problems, both conceptual and practical, with the identification of the impacts of globalization on inflation. The evidence that is nonetheless referred to suggests that these impacts must be insignificant quantitatively. The impacts of freer trade are perhaps more pronounced when one considers developments in prices, wages and unit labour costs in specific branches of manufacturing, especially in low value added branches of manufacturing that are most exposed to competition from low-wage countries. But even that evidence must be interpreted with care. The fact that research does not support strong hypotheses on the role of globalization in reducing inflation over the past 15-20 years suggests that other developments (changes in monetary, exchange rate, fiscal and social policies, etc.) may have been decisive. Besides, one may need to allow for the fact that the progressing disinflation seems to be coupled with a falling share of national income accruing to labour (and thus with generally falling real unit labour costs). In so far as globalization (and in particular the growing liberalization of trade and investment vs. the low-wage countries) has helped to moderate the wage (and living standards) aspirations of employees in the advanced countries, it could have played a prominent role in achieving low inflation. The impact in question need not have been *direct.* All that is needed for that impact to have *real* consequences is that labour in the advanced countries is convinced – which largely seems to be the case – that its services could be easily substituted by the services performed by workers in low-wage countries.

[11] For the sake of completeness I need to mention a study that suggests that 'global economic conditions' might have an impact on inflation in advanced countries (C. Borio and A. Filardo, 'Globalization and Inflation', *BIS Working Paper*, May 2007). Specifically, this study suggests that the concept of the national output gap (believed to be useful for explaining the cyclical behaviour of inflation) should perhaps be supplanted by the concept of a GLOBAL output gap. This story seems dubious to me on both theoretical and purely empirical grounds. I do not believe it if only because it works with econometric models whose Adjusted R-squared indicators are miserably low. A more complete appraisal (negative) of the concept of the global output gap can be found in L. Ball, 'Has globalization changed inflation?', *NBER Working Paper* 12687, November 2006.

Conventional signs and abbreviations

used in the following section on monthly statistical data

.	data not available
%	per cent
CMPY	change in % against corresponding month of previous year
CCPY	change in % against cumulated corresponding period of previous year (e.g., under the heading 'March': January-March of the current year against January-March of the preceding year)
3MMA	3-month moving average, change in % against previous year.
CPI	consumer price index
PM	change in % against previous month
PPI	producer price index
p.a.	per annum
mn	million
bn	billion

BGN	Bulgarian lev
CZK	Czech koruna
EUR	euro, from 1 January 1999
EUR-SIT	Slovenia has introduced the euro from 1 January 2007
HRK	Croatian kuna
HUF	Hungarian forint
PLN	Polish zloty
RON	Romanian leu
RUB	Russian rouble
SKK	Slovak koruna
UAH	Ukrainian hryvnia
USD	US dollar

M0	currency outside banks / currency in circulation (ECB definition)
M1	M0 + demand deposits / narrow money (ECB definition)
M2	M1 + quasi-money / intermediate money (ECB defintion)
M3	broad money

Sources of statistical data:
National statistical offices and central banks; wiiw estimates.

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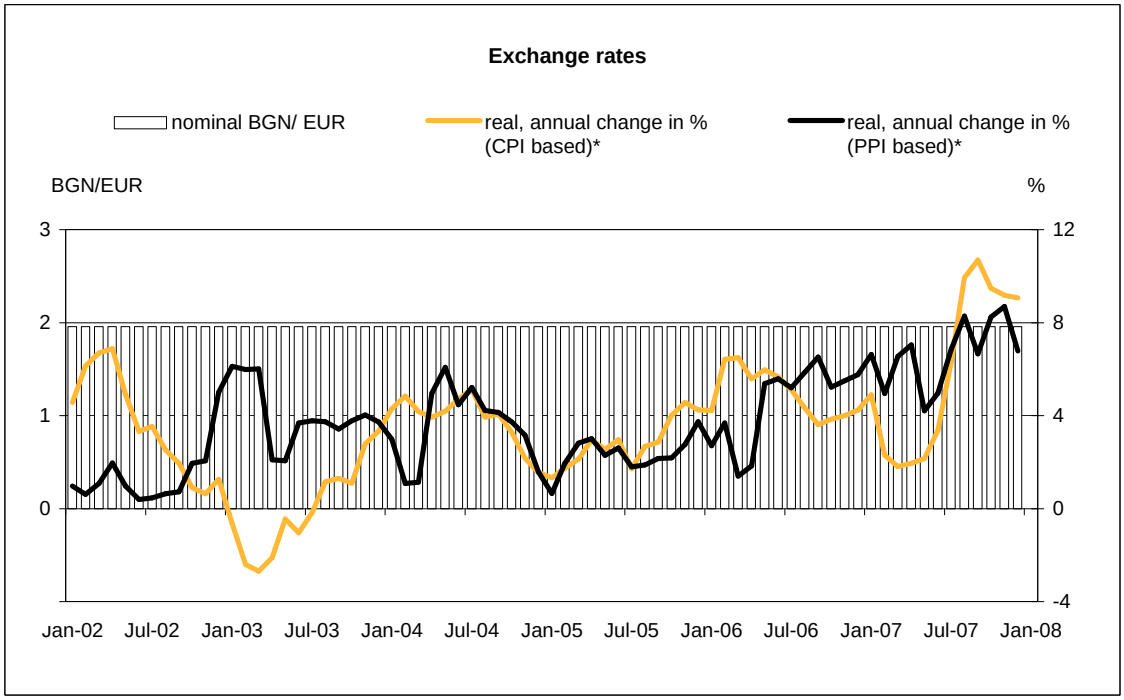
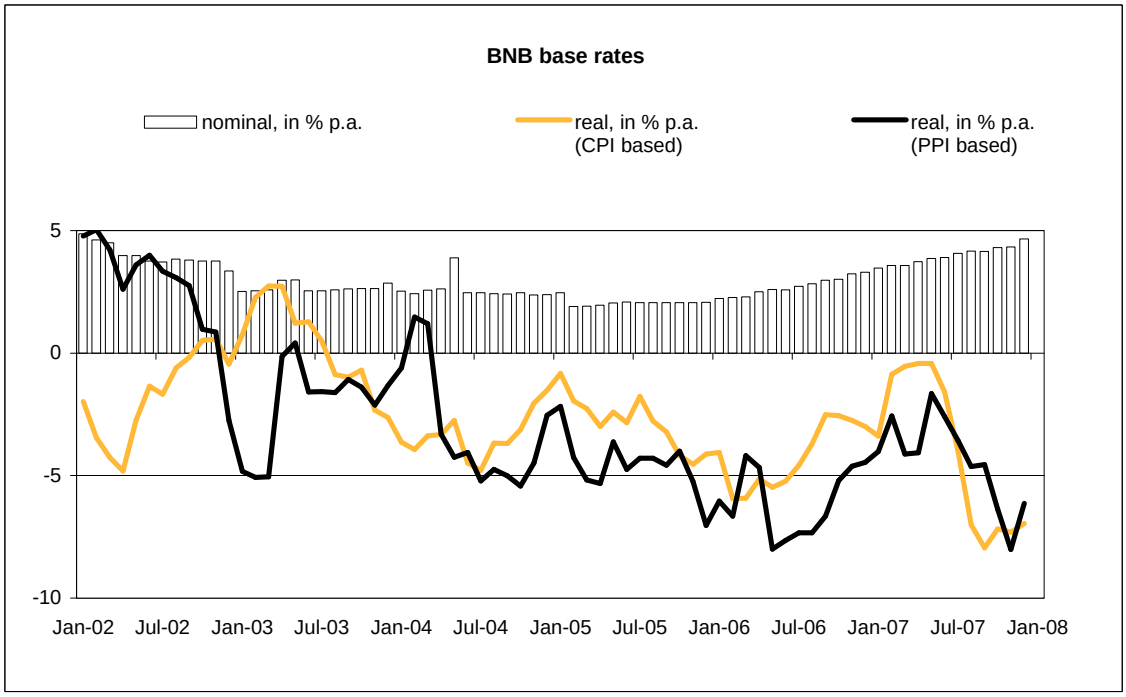
Bulgaria: Selected monthly data on the economic situation 2002 to 2008



Remark: *Positive values indicate real appreciation.



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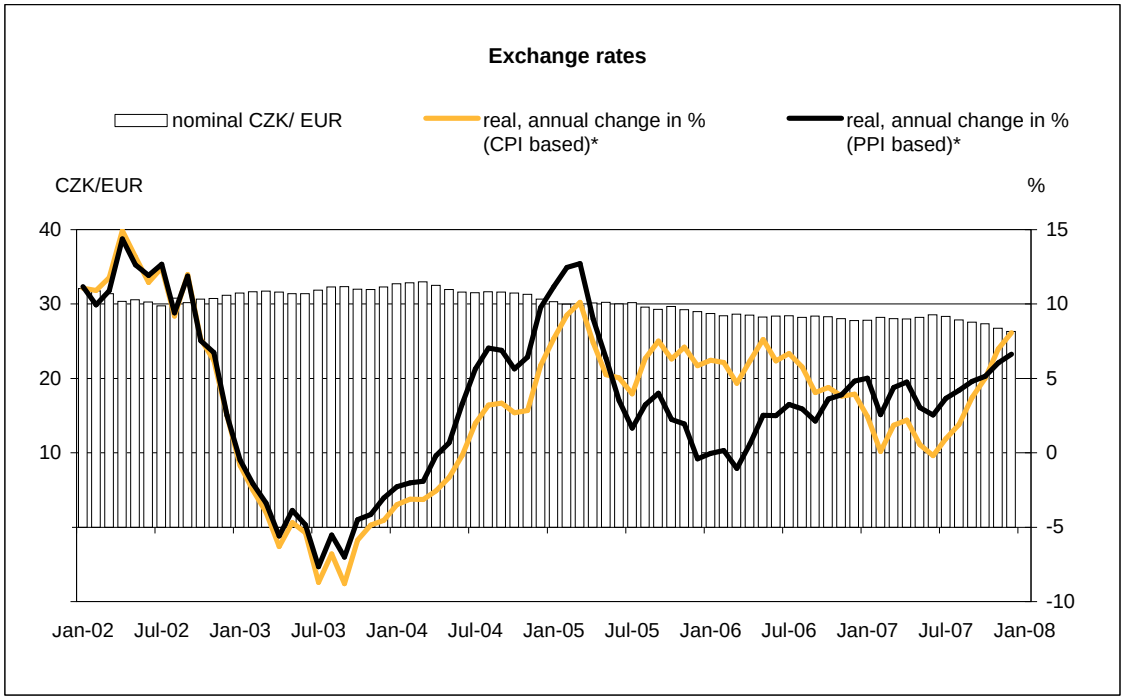
Czech Republic: Selected monthly data on the economic situation 2002 to 2008



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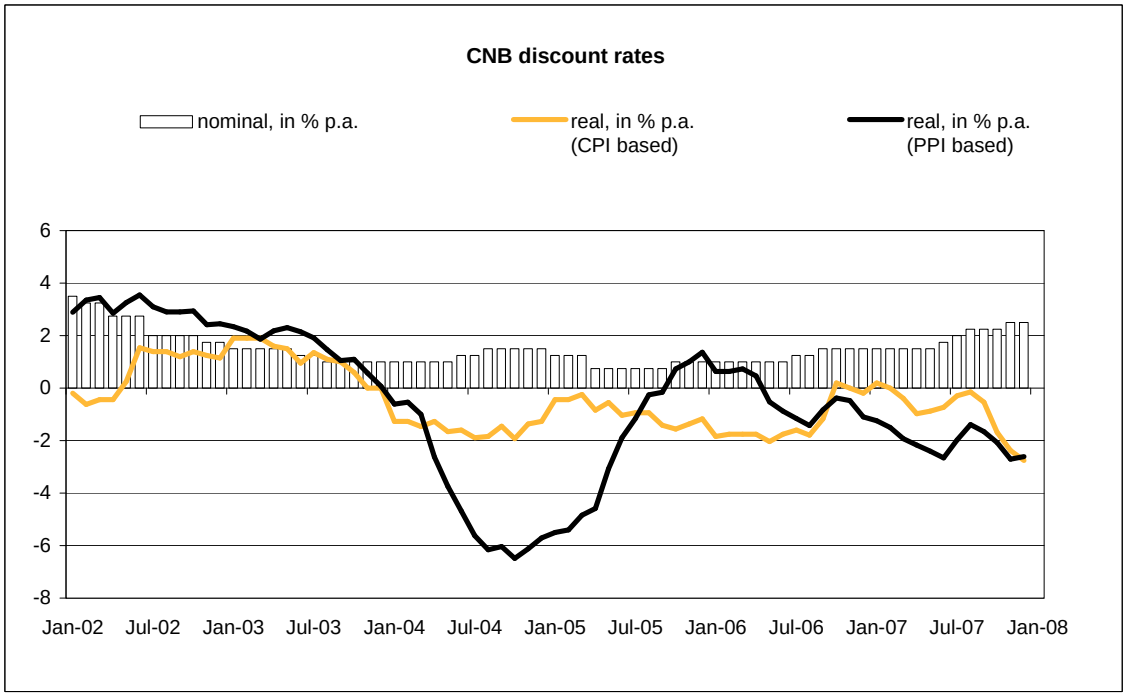

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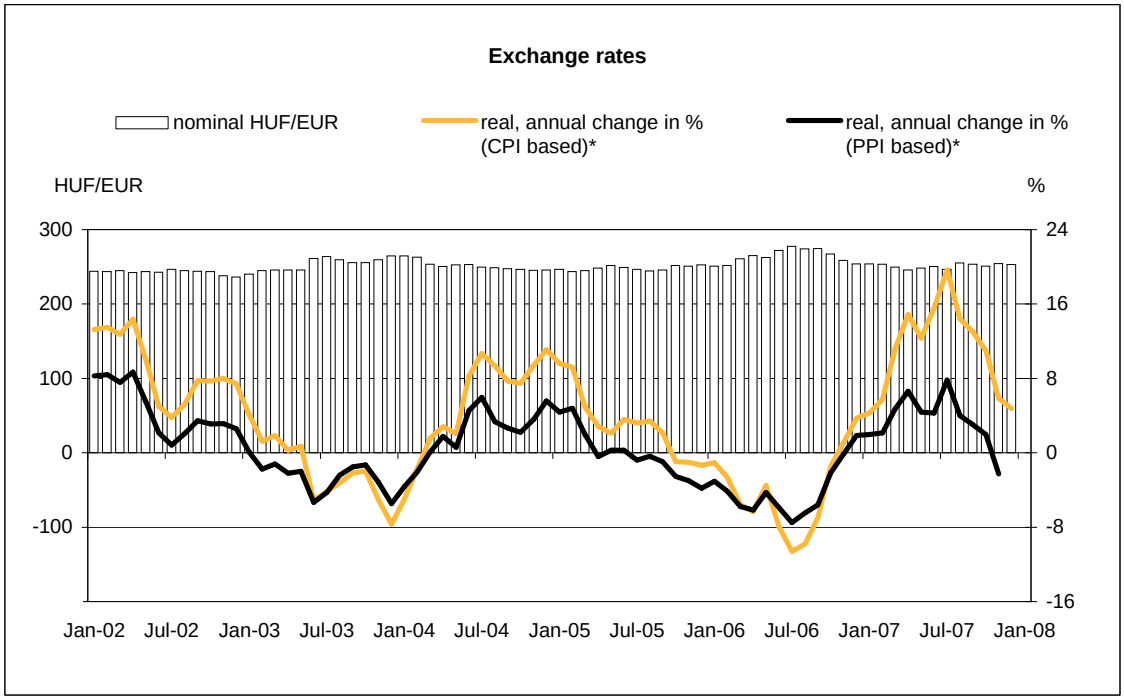

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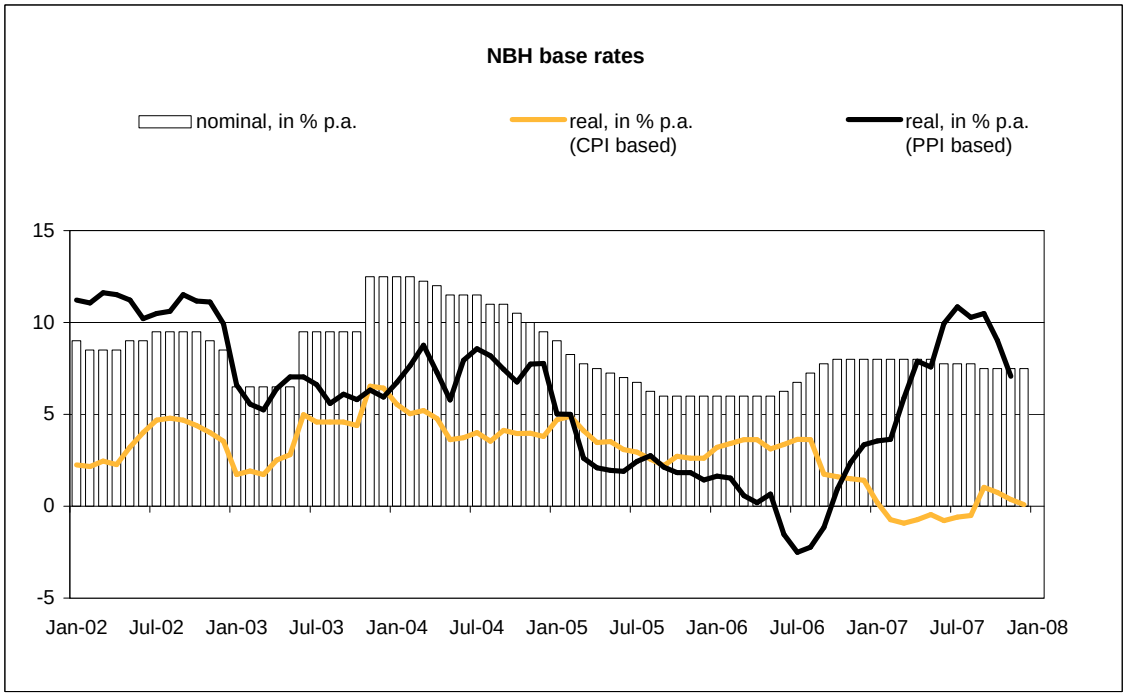

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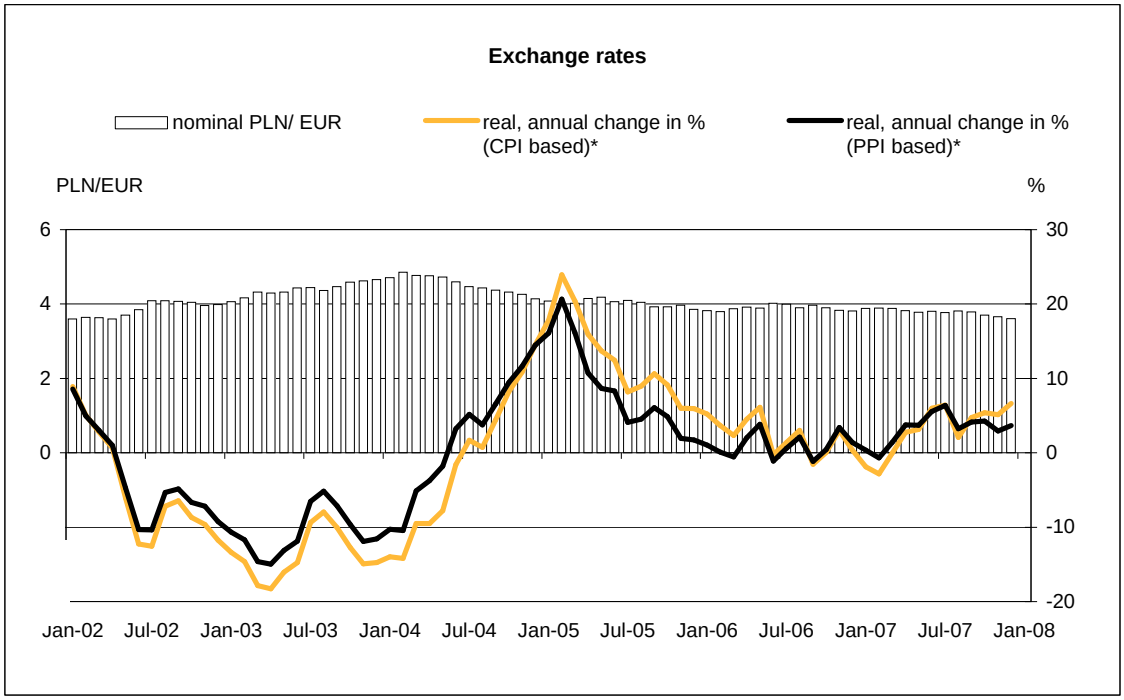

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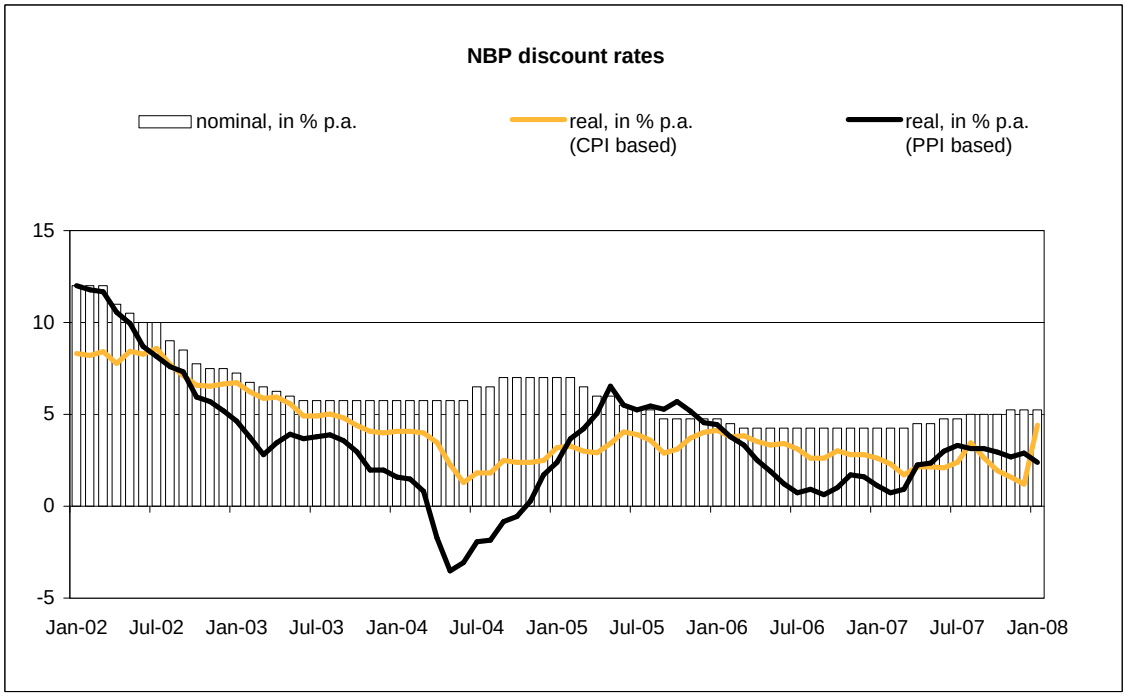

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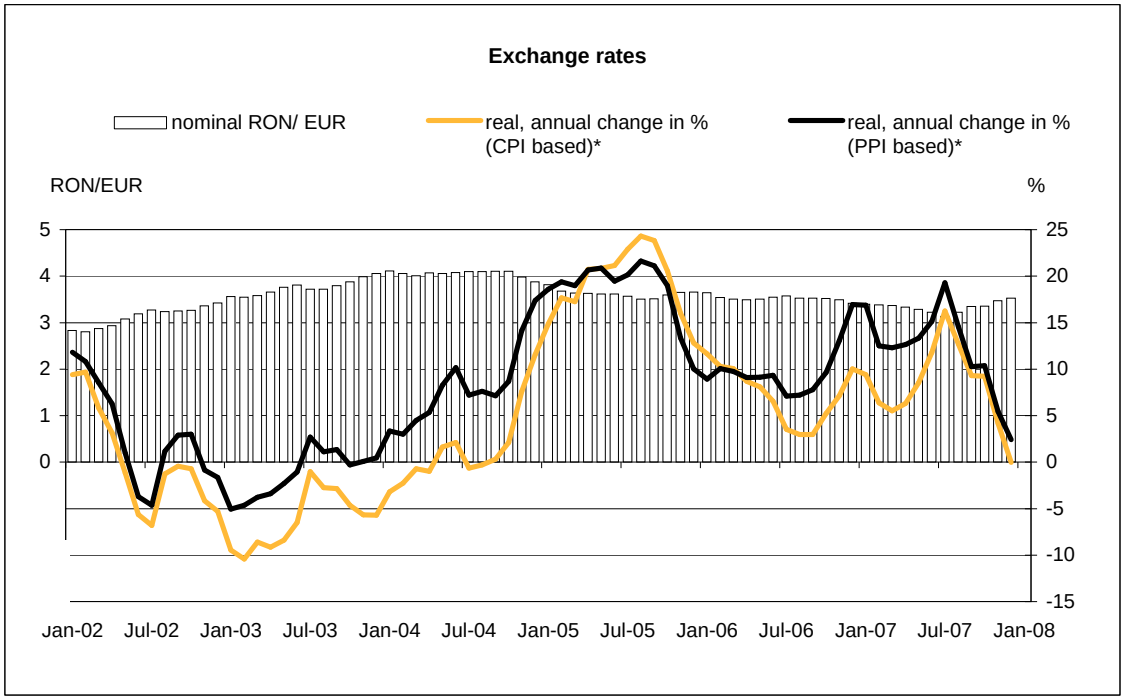

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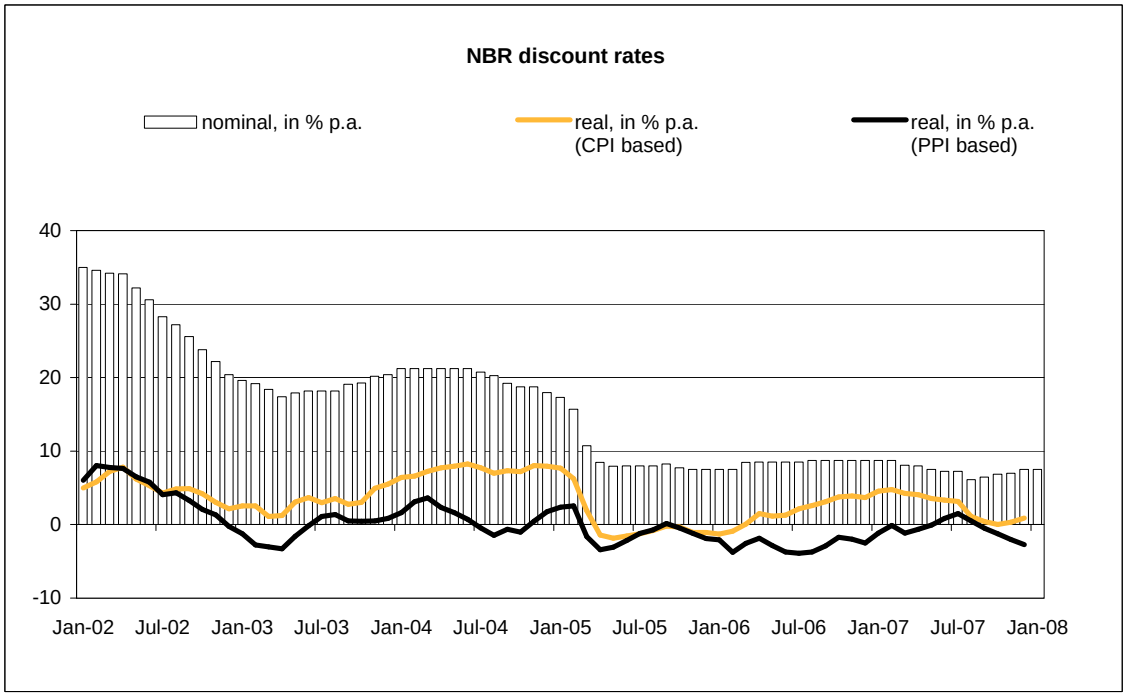

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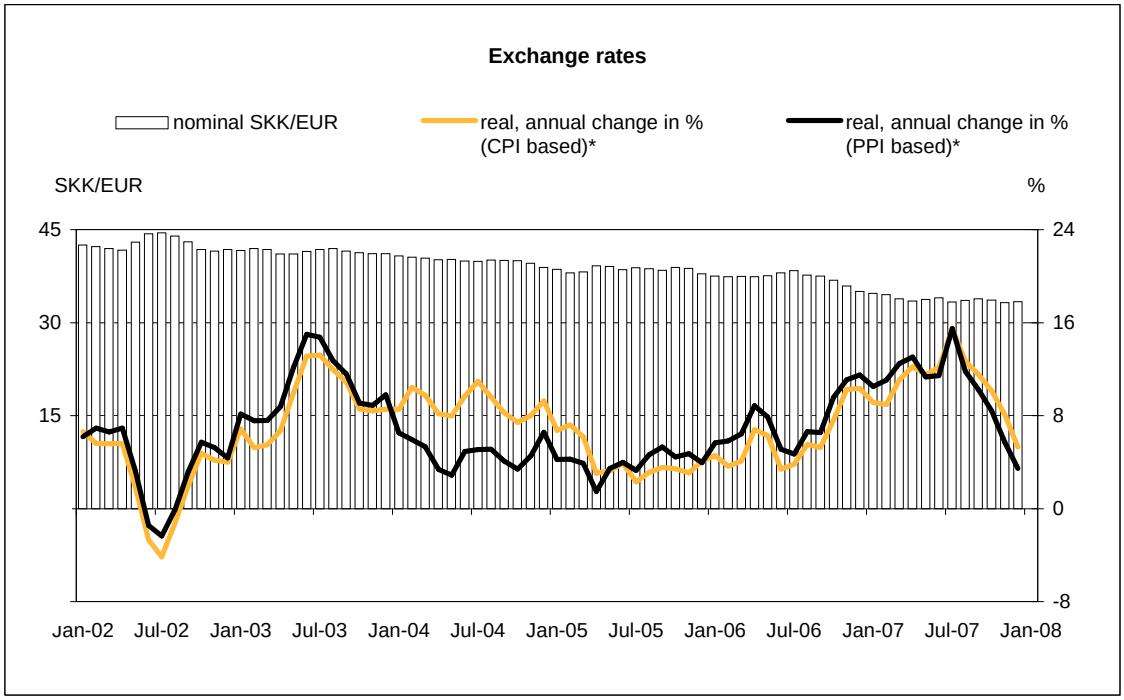
Slovak Republic: Selected monthly data on the economic situation 2002 to 2008



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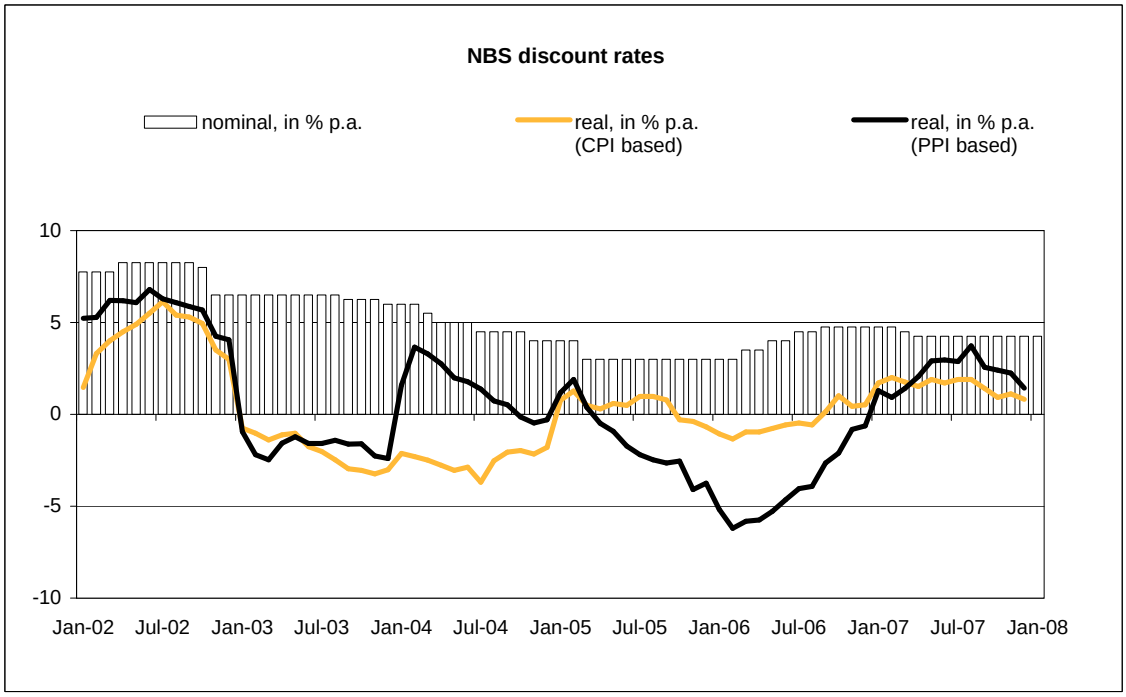
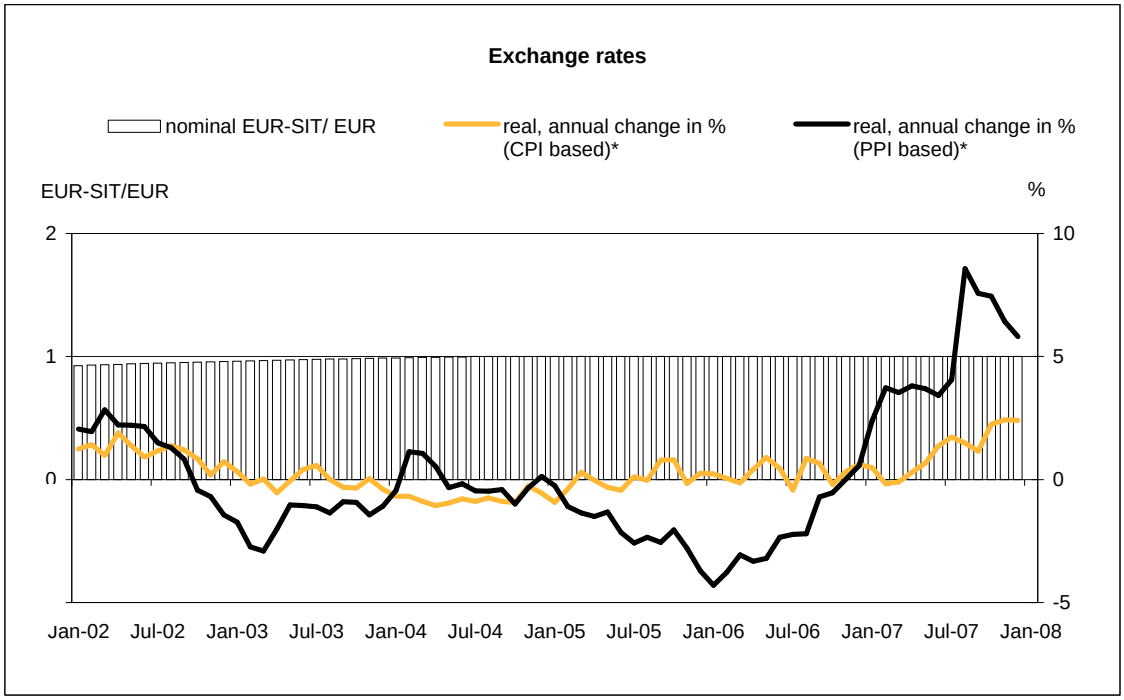
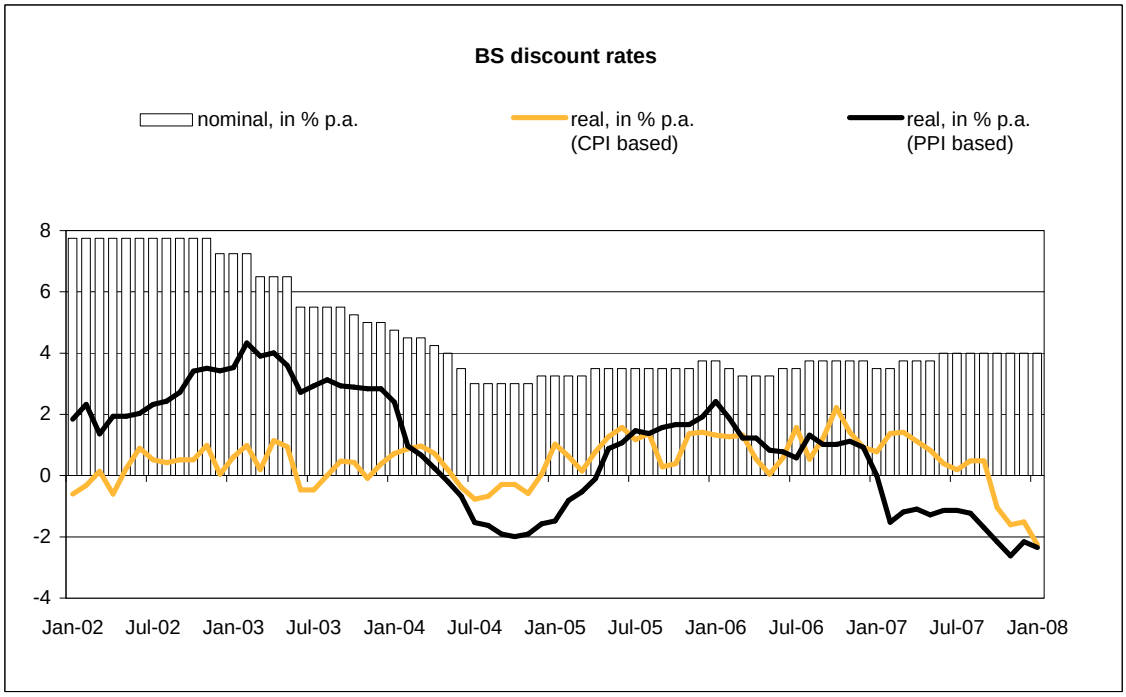


Source: wiiw Monthly database incorporating national statistics.

Slovenia: Selected monthly data on the economic situation 2002 to 2008

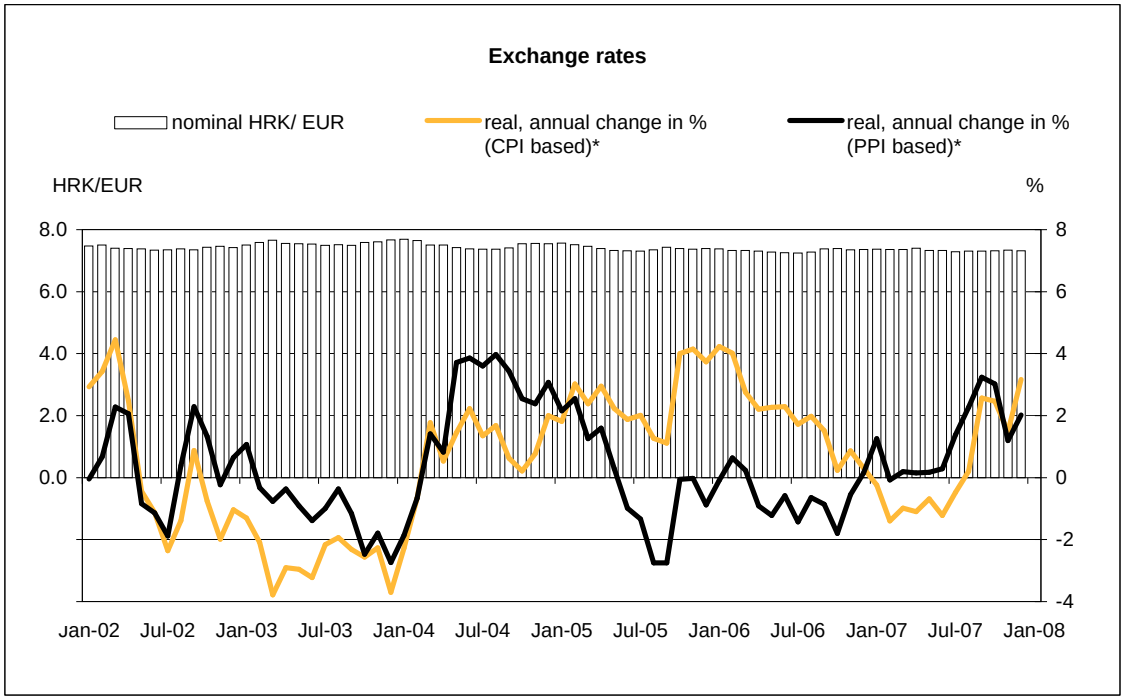


Remark: *Positive values indicate real appreciation.

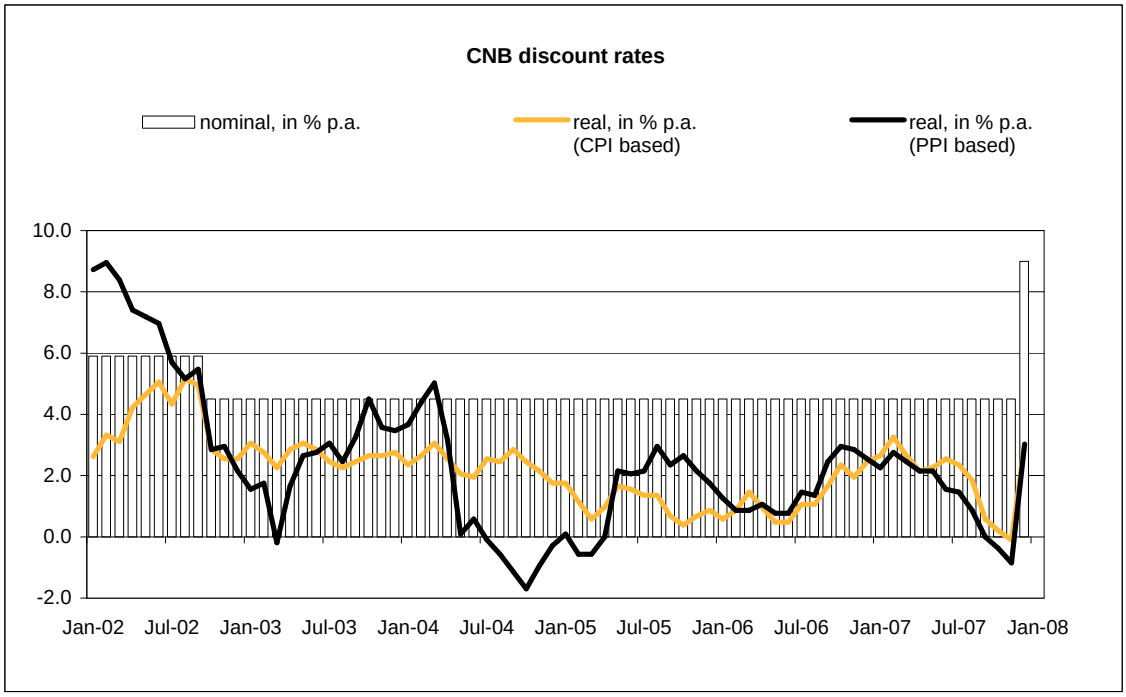


Source: wiiw Monthly database incorporating national statistics.

Croatia: Selected monthly data on the economic situation 2002 to 2008

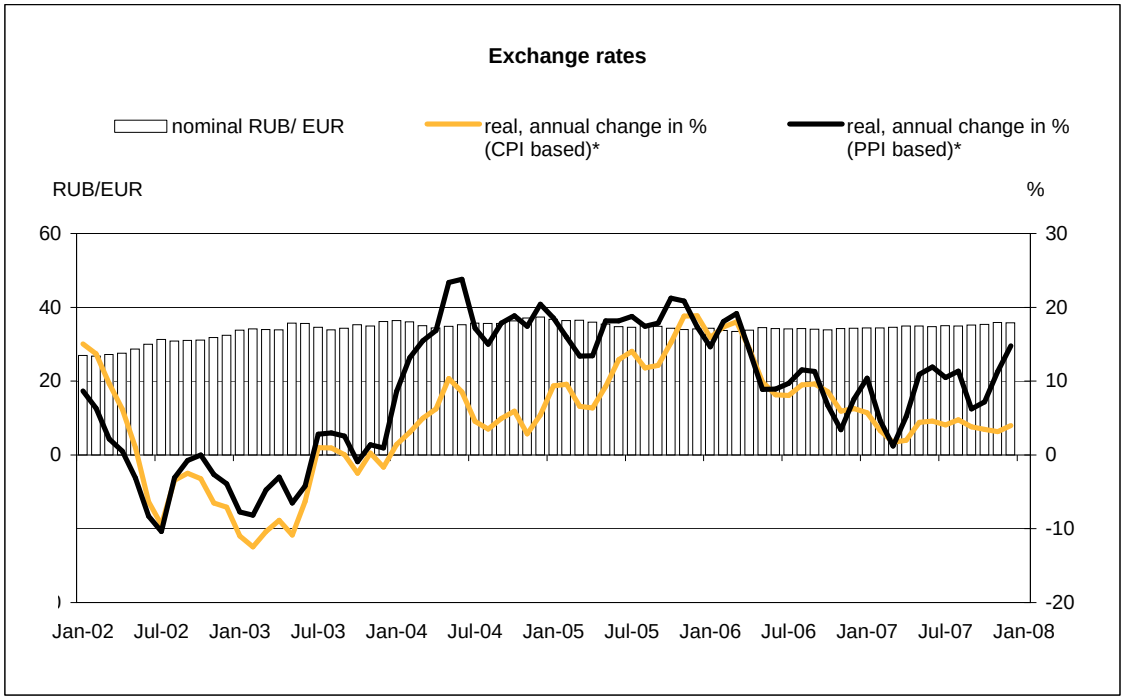


Remark: *Positive values indicate real appreciation.

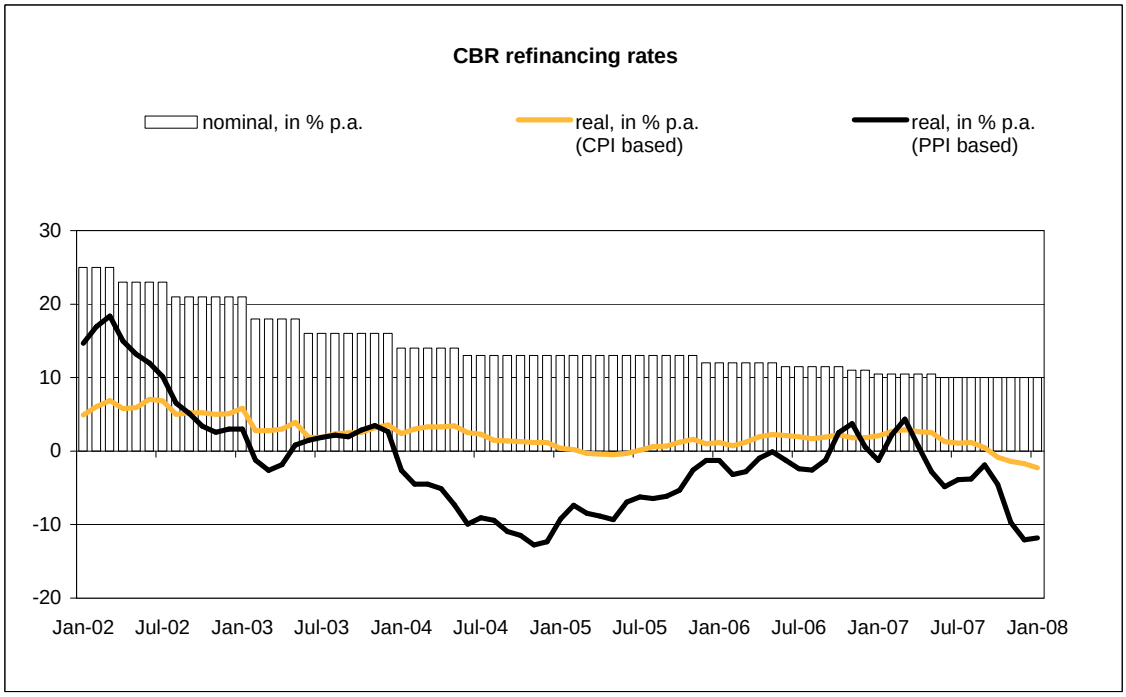


Source: wiiw Monthly database incorporating national statistics.

Russia: Selected monthly data on the economic situation 2002 to 2008

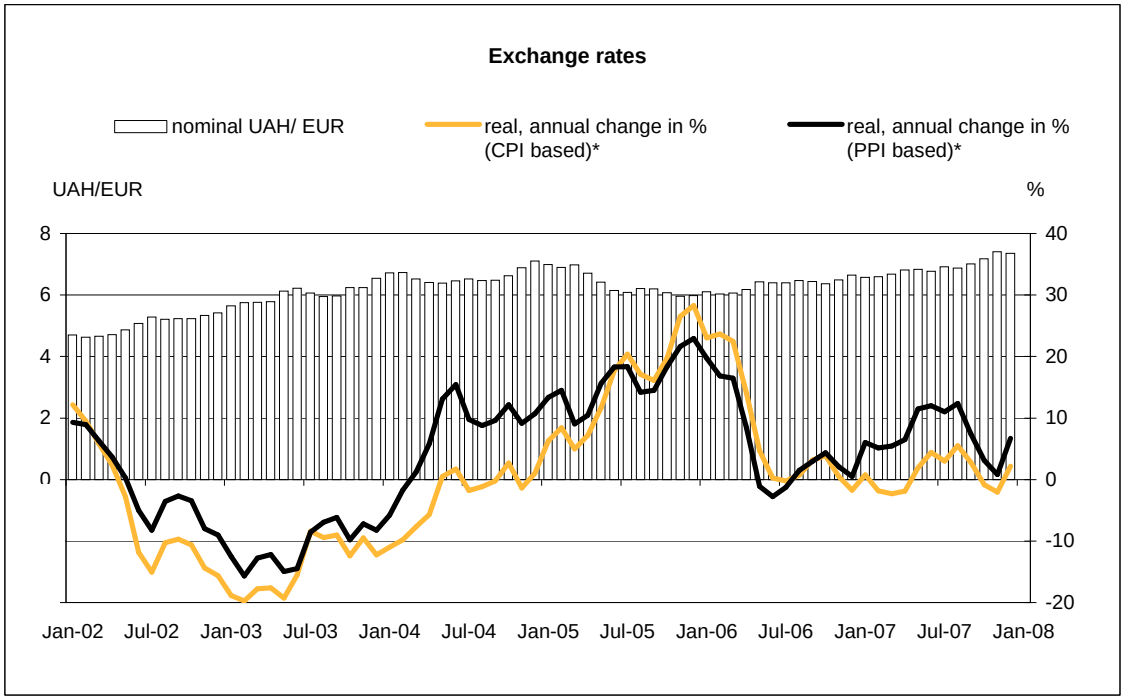


Remark: *Positive values indicate real appreciation.

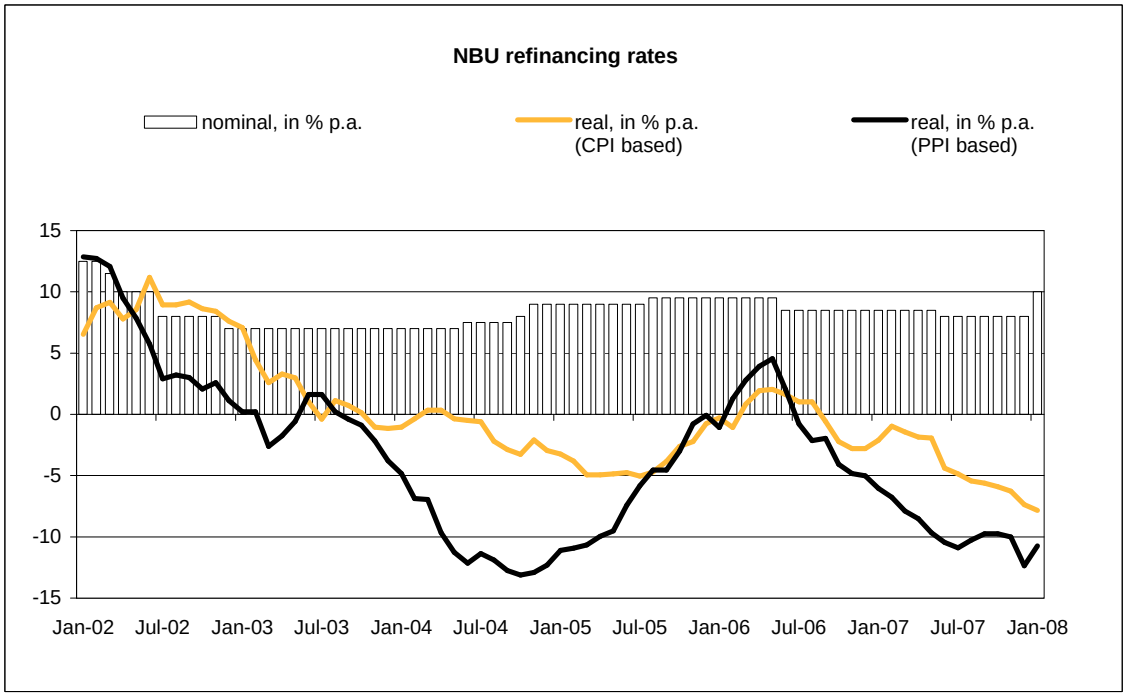


Source: wiiw Monthly database incorporating national statistics.

Ukraine: Selected monthly data on the economic situation 2002 to 2008



Remark: *Positive values indicate real appreciation.



Source: wiiw Monthly database incorporating national statistics.

Guide to wiiw statistical services on Central, East and Southeast Europe, Russia and Ukraine

	Source	Type of availability	How to obtain	Time of publication	Price
Annual data	*Handbook of Statistics*	printed	order from wiiw	November 2007	€ 92.00; for Members free of charge
		on CD-ROM (PDF files)	order from wiiw	October 2007	€ 92.00; for Members € 64.40
		on CD-ROM (MS Excel tables + PDF files), plus book	order from wiiw	October 2007	€ 230.00; for Members € 161.00
	individual chapters	via e-mail (MS Excel tables)	order from wiiw	October 2007	€ 37.00 per chapter;
	computerized wiiw Database	online access	via WSR http://www.wsr.ac.at	continuously	€ 2.70 per data series; for Members € 1.90
Quarterly data (with selected annual data)	*Current Analyses and Forecasts*	printed	order from wiiw	February and July	€ 70.00; for Members free of charge
		PDF (online or via e-mail)	order from wiiw	February and July	€ 65.00; for Members free of charge
	Monthly Report (2nd quarter)	printed, PDF (online or via e-mail)	for wiiw Members only	*Monthly Report* nos. 10, 11, 12	only available under the wiiw Service Package for € 2000.00
Monthly data	*Monthly Report*	printed, PDF (online or via e-mail)	for wiiw Members only	*Monthly Report* nos. 2-4, 6-7, 10-12	
	computerized wiiw Database	online access	see http://mdb.wiiw.ac.at	continuously	for Members free of charge
Industrial Database	*wiiw Industrial Database Eastern Europe*	on CD-ROM (MS Excel files)	order from wiiw	June	€ 295.00; for Members € 206.50
	Brief excerpt	printed, PDF (online or via e-mail)	for wiiw Members only	*Monthly Report* no. 1	for Members free of charge
Database on FDI	*wiiw Database on FDI in Central, East and Southeast Europe*	printed	order from wiiw	May	€ 70.00; for Members € 49.00
		PDF (online or via e-mail)	order from wiiw	May	€ 65.00; for Members € 45.50
		on CD-ROM (tables in HTML, CSV and MS Excel + PDF files), plus hardcopy	order from wiiw	May	€ 145.00 for Members € 101.50
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Index of subjects – March 2007 to March 2008

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