wiiw

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Monthly Report | 2/10

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wiiw Spring Seminar 2010
'A New Growth Model After the Crisis?'

Friday, 19 March 2010, 9:00 a.m.

hosted by Raiffeisen Zentralbank
Am Stadtpark 9, 1030 Vienna
'Raiffeisensaal'

Preliminary Programme

8:30	Registration and Coffee	
9:00	**Opening Remarks**	*Ferdinand Lacina, President wiiw*
9:15	**Revisiting the Growth Model in Central and East Europe**	*Michael Landesmann, wiiw* *Vladimir Gligorov, wiiw*
10:00	**How Much Has the World Changed? What Did We Learn for Policy?**	*Susan Schadler,* *St. Antony's College Oxford*
11:00	Coffee break	
11:30	**Economic Prospects for CEE and SEE**	*Peter Havlik, wiiw*
12:15	Buffet luncheon	
13:30	**Ukraine After the Elections**	*Vasily Astrov, wiiw*
14:15	**Effects of the Crisis on Labour Markets**	*Robert Stehrer, wiiw*
15:00	Coffee break	
15:20	**European Regions: Growth Dynamics and Growth Factors**	*Roman Römisch, wiiw*
16:00	End of Seminar	

For Registration Form see end of Report.

China's oil policy: facing the challenge of rising oil demand∗

BY WALTRAUT URBAN

According to the most recent IEA World Energy Outlook (IEA, 2009), China's primary oil demand is estimated to increase from 7.7 million barrels per day (mb/d) in 2008 to 16.3 mb/d in 2030. As domestic oil production will eventually decline during this period (from 3.8 mb/d to 3.2 mb/d), China's net imports are expected to multiply from 3.9 mb/d to 13.1 mb/d in 2030 and China's oil dependence ratio will rise from 51% to around 80%. China's own energy projections have stepwise adjusted to this scenario. Given that oil is of crucial importance for further economic development, securing oil supply from abroad is taking a prominent role in China's energy policy.

From a global perspective, China's expected rise in net imports between 2008 and 2030 (8.2 mb/d) accounts for 67% of the total increase in world oil trade (13.7mb/d) in that period. By the year 2030, China will be the largest importer of oil, ahead of the USA (12.7 mb/d) and the EU (10.3 mb/d), whose net imports will stay more or less constant or may even decline. Thus China's oil demand will have a significant impact on the global oil market. According to a recent simulation exercise, China's growth alone explains almost 90% of the projected rise in the oil price between 2008 and 2020.[1] Most obviously, China's external oil policy is not only its own affair but of global significance – not to mention its impact on the world climate situation.

China's increasing thirst for oil

Overall energy supply and demand

Since the beginning of the economic reforms in 1978, China's economy has expanded at a stunning average annual rate of nearly 10%. Naturally, energy consumption has expanded fast as well, but the growth rate of energy consumption (in real terms) remained well below the growth rate of GDP until 2002 thanks to a massive shift of Chinese industry from heavy to light industries and to substantial gains in energy efficiency. Accordingly, the energy elasticity of GDP[2] remained below one until that year, and the amount of energy used to generate one unit of GDP fell significantly, from 2.4 tons of oil equivalent (toe) per 10,000 yuan GDP in 1980 to 0.77 tce in 2002.[3] This level is still 2.5 times the world average and 7.2 times the value in Japan (measured at current exchange rates) – see Figures 1 and 2.

After 2002, China's demand for energy began to rise faster than GDP, due to a reversal of the production structure towards more energy-intensive industries such as cement, metals and chemicals and driven by accelerated urbanization and the export boom following China's membership with the World Trade Organization (WTO) (DRC, 2004, Overview p. 4).

Rising dependence on oil imports

China's major source of energy is coal, covering around 70% of total energy consumption. Crude oil accounts for a relatively small share (20%) in China's energy mix. But while the relative importance of crude oil in energy consumption has remained fairly stable, domestic oil production did not keep pace and the share of crude oil in China's energy production fell from 24% in 1980 to 11% in 2007. In 1993, oil demand exceeded oil supply for the first time and the balance had to be imported. Since then, Chinese oil imports have accelerated, particularly after 2002 (see Figure 3). In 2007, net oil imports (the crude oil balance) amounted to 179 Mtoe (million tons of oil equivalent) and their share in domestic oil consumption reached nearly 50% (Table 1).

∗ This article is based on the findings of a broader study in the framework of FIW (Research Centre International Economics) by E. Christie (ed.), J. Francois, W. Urban and F. Wirl (2009).

[1] Christie (ed.) et al. (2009), Table 2.5, p. 45.

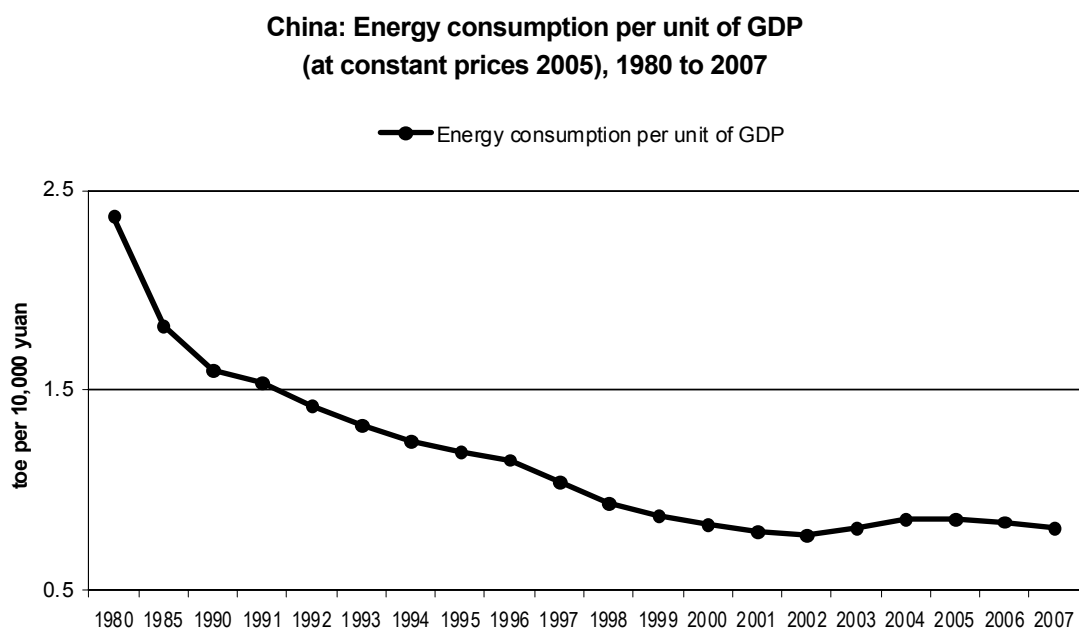[2] Growth rate of total energy consumption / growth rate of GDP.

[3] The strong decline in 1997 and 1998 is related to the Asian financial and economic crisis.

Figure 1

China: Energy elasticity of GDP, 1980 to 2007
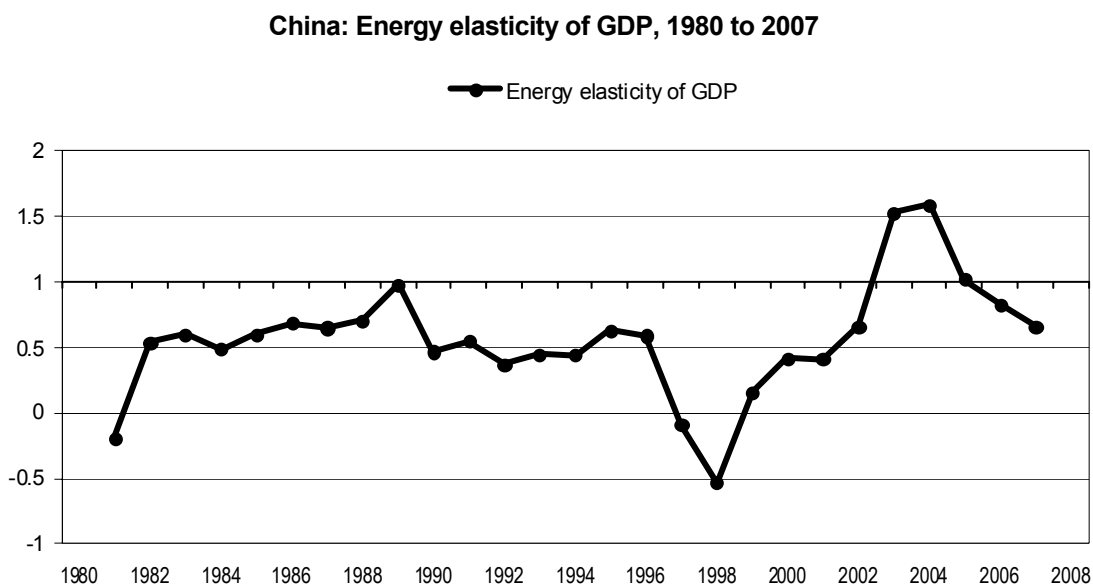
Source: China Statistical Yearbook 2008, Tables 6-8; Sinton et al. (2005), Figure 1.

Figure 2

**China: Energy consumption per unit of GDP
(at constant prices 2005), 1980 to 2007**

Source: China Statistical Yearbook, 2008; converted from tsce (= tce) to toe. 1 tce = 0.697 toe (tons of oil equivalent).

Although industry is the biggest consumer of energy, the increase in oil demand is mainly driven by the rising consumption of petrol on the part of transport, construction and households. While the share of industry in petrol consumption declined from 64% to 41% between 1990 and 2007, the respective shares of transport rose from 14% to 34%. In absolute terms, petrol consumption for transport increased more than threefold in 1990-2000 and more than twofold in 2000-2007.

The major reasons behind this development are accelerating urbanization, higher per capita incomes and the use of private cars. Between 1990 and 2007, the number of people living in urban areas doubled from 300 million to 600 million; per capita income (at constant prices 1995) more than quadrupled; and the number of passenger cars skyrocket from 1.6 million to 32 million. By 2003, China had surpassed Japan as the world's second largest petroleum consumer after the USA.

Figure 3

China: Crude oil production and consumption, 1980 to 2007
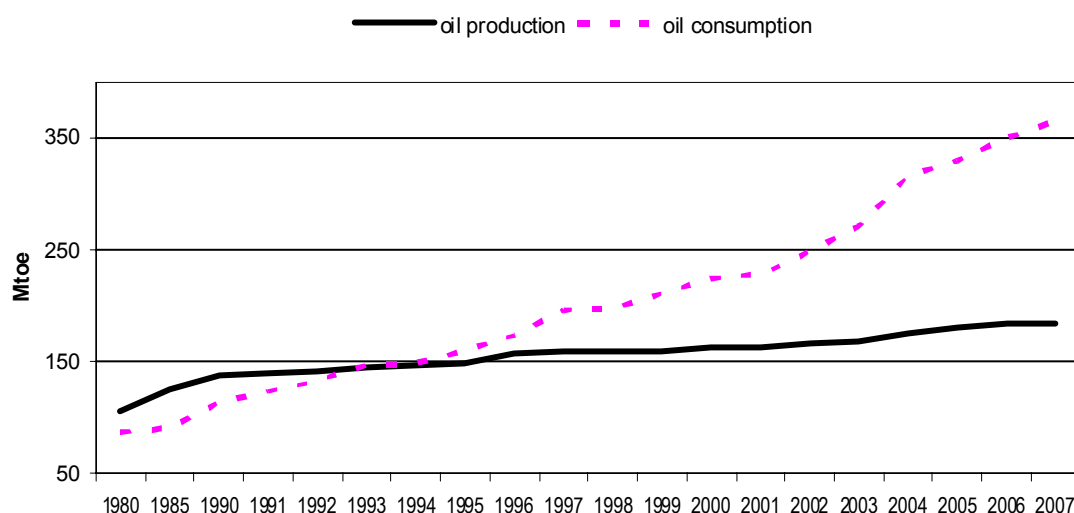

──── oil production ▪ ▪ ▪ oil consumption

Source: China Statistical Yearbook, 2008; converted from tsce (= tce) to toe. 1 tce = 0,697 toe (tons of oil equivalent).

Table 1

China: Basic data on energy production and consumption, 1990 to 2007

	1990	2000	2005	2007
Total energy consumption, Mtoe	688	966	1566	1851
Total energy production, Mtoe	724	899	1435	1641
Crude oil consumption, Mtoe	114	224	329	365
Crude oil production, Mtoe	138	162	181	185
Crude oil balance (prod. - cons.), Mtoe	23	-62	-148	-179
Share of crude oil balance in crude oil consumption, in %	20.5	-27.6	-44.9	-49.1
GDP (at constant prices 2005), in yuan bn	4298	11595	18322	22880
Total energy elasticity of GDP[1)]	0.47	0.42	1.02	0.66
Total energy consumption, toe per 10 000 yuan of GDP	1.60	0.83	0.85	0.81
Total energy consumption per capita, toe	0.60	0.76	1.20	1.40
Oil consumption per capita, toe	0.10	0.18	0.25	0.28

Note: Total energy (oil) consumption refers to primary energy (oil) demand. Values converted from tsce (= tce) to toe. 1 tce = 0.697 toe (tons of oil equivalent).

Source: China Statistical Yearbook, 2008; Sinton et al. (2005); own calculations.

Future scenarios of China's oil demand and supply

In 2004, the governmental Development Research Center (DRC) came out with the 'National Energy Strategy and Policy 2020' (see DRC, 2004). One major finding of that report is that China should be able to keep the growth of primary energy demand at a relatively low rate for the next 20 years if the right energy strategies and related policy measures are taken. The relevant policy target is that energy demand should not more than double between 2000 and 2020 while GDP would grow fourfold as stipulated at the 16th National Congress of the CPC in November 2002. This target was taken up in the central scenario (Scenario B) presented in Table 2, projecting a total demand for primary energy of 1441 Mtoe in 2010 and 2021 Mtoe in 2020.

However, actual energy consumption rose much faster than expected: It hit the benchmark for 2010 already in the year 2005, and in 2007 90% of the energy target for 2020 was reached (see Table 1).

Actual consumption in 2005 also exceeded the less ambitious 2010 benchmark from the 'Business-as-Usual' scenario (A) amounting to 1489 Mtoe, let alone the more ambitious target of Scenario C. The DRC projections for primary oil demand presented in Table 2 are somewhat more realistic, whereas the 'Business-as-Usual' scenario (Scenario A) is the one supported most by actual developments so far. According to that scenario, China's primary oil demand would amount to 375 Mtoe in 2010 and to 611 Mtoe in 2020. Actual oil consumption in 2007 was 365 Mtoe, slightly below the 2010 target (Table 1). On the supply side, domestic oil production is projected to stay at more or less the same level in 2010 and 2020. The resulting import need under Scenario A is in the range of 195 Mtoe in 2010 and 431 Mtoe in 2020. The corresponding import dependence ratio would reach 52% in 2010 and jump to 70% in 2020 (Table 2).

In August 2009, the Chinese Academy of Sciences released the 'Chinese Energy Development Plan' (CAS, 2009). In the light of the higher than expected growth of energy demand, a reassessment of the major drivers of growth was attempted, leading to a New Scenario extending to the year 2050. Total energy demand would reach 2161 Mtoe in 2010, 3137 Mtoe in 2020, 4252 Mtoe in 2035 and 4600 Mtoe in 2050. This projection assumes that the Chinese economy's energy efficiency would reach (i.e., decline to) the current world average by 2020 and converge with that of Japan by 2050, which is an ambitious target. However, the CAS projection for 2020 is very close to the IEA (2009) reference scenario for that year (Table 2).

The primary demand for oil is projected by CAS for the year 2050 only. Under the (optimistic) assumption, that domestic oil production will remain at about 180 Mtoe, the oil import need would come up to more than 800 Mtoe and the import dependence ratio would reach 83% in that year. However, the global oil supply constraints (which would affect prices, and thus demand) and probably fundamental technological changes ahead may lead to completely different outcomes. In this light, the long-term scenario should be seen as a useful

thought experiment and perhaps also as a means to awaken elite opinion in China to the future challenges.

Figure 4

Major regions of China's oil imports, 2008
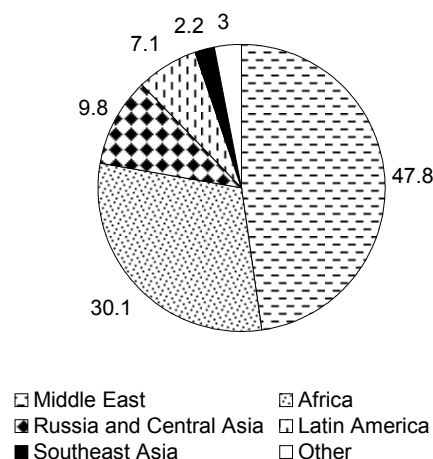
Source: UN Comtrade.

The two scenarios presented in IEA (2009) are also shown in Table 2. The IEA's Reference Scenario is a kind of 'business-as-usual' scenario that takes into account policies enacted until mid-2009. Notably, IEA (2009) foresees a slow decline in China's oil production over 2015-2030, raising the import dependence ratio to nearly 80% in 2030 already. The IEA's 450 Scenario assumes that bold action is taken globally in order to stabilize the atmospheric concentration of CO_2 at 450 parts per million and is thus more optimistic regarding China's oil consumption and import demand.

Main sources of China's oil imports

If the forecasts hold true, China's oil import dependence ratio will soon equal that of the USA today (63%) and, in a longer-term approach, current EU levels (81%). Thus China is becoming increasingly vulnerable to supply disruptions and to fluctuations of the global oil price. Further on, most of China's imports come from the politically unstable Middle East and/or are transported over the sea, passing the Straits of Malacca which could be easily blocked in case of a natural disaster, by embargo or by a terrorist attack (see Figure 4).

China's oil policy

After analysing the current situation and prospects for energy supply and demand in China, the 'National Energy and Policy' ('NESP'; DRC, 2004) recommended the following strategies:

- Make the best use of domestic resources, while looking actively for foreign resources.

- Keep a better balance between supply- and demand-oriented energy policies, with the latter given priority (by energy saving and increasing efficiency).

- Make environmental protection an integral part of the energy development strategy.

To provide oil security in particular, the following measures and strategies were proposed:

- China should diversify the sources of its oil imports, with a focus on Russia and the Middle East. The Middle East will remain the most important oil import source until 2030. In the Middle East, particularly Saudi Arabia, Iran and Iraq offer great potential for China's oil business, including exploration, development, refineries and pipelines, taking advantage of China's advanced technology in these fields. The areas around the Caspian Sea and Central Asia (Kazakhstan!) are considered very interesting in this respect as well.

- Chinese oil companies should invest more upstream. In the last century, they did not invest enough upstream, especially in oil exploration. Also, research and development in this area should be enforced.

- The reform of the national oil companies must be deepened, and strong and powerful international oil companies should be formed, including both upstream and downstream activities. They should engage in joint ventures and seek to obtain shares in petroleum exploration blocks, natural gas fields, oil and gas pipelines and other energy assets.

- A proper mix of competition and alliances should be aimed at, with regard to countries as well as companies.

- To better handle fluctuations in oil prices and quantities supplied, China should establish a strategic reserve and precautionary system for petroleum[4].

In 2007, when world oil prices started to rise very fast, reaching 80 USD/bl in December, increasing quantities and prices together made China's oil bill climb by more than 70% and energy security was in the focus of policy makers again. In December 2007, the State Council Information Office published a White Paper entitled 'China's Energy Conditions and Policies'[5], building largely on the NESP, but with a stronger focus on environmental issues and the promotion of new and renewable energies. Regarding energy security, in addition to the recommendations in the NESP, the White Paper criticizes the current heavy reliance of the Chinese National Oil companies on spot trading of crude oil and encourages the signing of long-term supply contracts instead.

With regard to safeguarding world energy security, the White Paper suggests that dialogue and cooperation between energy-exporting and energy-consuming countries should be strengthened. Probably with a view to China's perception as a threat to the world's energy security by other countries, the paper states that 'Energy issues should not be politicized and triggering antagonism as well as the use of force should be avoided'.

China's 'Go abroad' policy

Investments of Chinese oil companies abroad are not only supported by China's energy policy, but also by the so-called 'go abroad' policy. This policy, proclaimed by the government in 2002, is politically and financially supporting foreign direct investment of Chinese enterprises abroad. It is aimed at various targets: to make efficient use of China's huge foreign exchange reserves, to secure resources, to acquire technology, to gain access to established distribution networks, and to reduce the

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[4] Strategic reserves should be equivalent to 40 days' demand by 2010 and 55 days' demand before 2020.

[5] China State Council Information Office (12 December 2007).

Table 2

Future scenarios for China's energy demand

	DRC (2004)						CAS New Scenario				IEA (2009)			
	Scenario A		Scenario B		Scenario C						Ref. Scenario		450 Scenario	
	2010	2020	2010	2020	2010	2020	2010	2020	2035	2050	2020	2030	2020	2030
Total primary energy demand, Mtoe	1489	2286	1441	2021	1296	1719	2161	3137	4252	4600	3116	3827	2876	2934
Primary oil demand, Mtoe	375	611	365	554	321	445	..	..	..	1058	557	758	522	664
Oil production, Mtoe [1]	180	180	180	180	180	180	..	..	..	180	183	162	183	162
Net import needs, Mtoe	195	431	185	374	141	265	..	..	..	878	374	596	339	502
Oil import dependence ratio, %	52	71	51	68	44	60	..	..	..	83	67	79	65	76

Note: 1) For IEA scenarios, IEA (2009) data in mb/d were taken and converted into Mtoe.

Source: DRC – Development Research Center (2004); CAS – Chinese Academy of Sciences (2009); IEA – International Energy Agency (2009); author's calculations.

risk of Chinese enterprises getting caught by non-tariff barriers to trade. In a longer-term perspective, the goal is to generate a group of 30 to 50 big multinational companies, and the state-owned oil companies are prominent candidates.

Recent policy initiatives

In 2009, China's National Energy Administration (NEA) put up a three-year plan for the oil and gas industry. The plan was submitted at the National Work Conference on Energy held in Beijing in February 2009. As part of this plan, the government considers to set up a special fund to support Chinese oil and gas companies in their pursuit of foreign mergers and acquisitions.[6] Further on, in January 2009, the long-debated draft for a new 'Energy Law' was submitted to the State Council Legislative Affairs Office for consideration from which it will go to the full State Council and the National People's Congress (NPC), the legislative body of China. That will push the ultimate passage of the legislation into spring 2010.

Finally, on 27 January 2010, China's State Council, or Cabinet, decided to set up a National Energy Commission (NEC) with Premier Wen Jiabao as head to step up strategic policy making and coordination. The NEC will consist of 21 members from various government agencies. It will be responsible for drafting national energy plans, reviewing energy security and coordinating domestic energy development and international cooperation. It will be supported by the National Energy Administration (NEA) of the National Development and Reform Commission (NDRC).

References

CAS (2009), *Chinese development plan for energy*, Chinese Academy of Sciences (in Chinese language only; translation and summary available from the author).

Christie, E. (ed.), J. Francois, W. Urban and F. Wirl (2009), 'China's foreign oil policy: genesis, deployment and selected effects', free download from the FIW homepage: http://www.fiw.ac.at/fileadmin/Documents/Publikationen/ Studien_II/SI03.Studie.China__s_oil.pdf.

DRC (2004), *China's National Energy Strategy and Policy 2020*, Development Research Center of the State Council (in Chinese language; a condensed and translated version of this report is available at: http://www.efchina.org/csepupfiles/report/200610269521 8188.8060385177036.pdf/0_Main_Report.pdf, retrieved on 24 November 2009).

IEA (2009), *World Energy Outlook 2009*, International Energy Agency, Paris.

Sinton, E. J. et al. (2005), *Evaluation of China's Energy Strategy Options*, prepared for and with the support of the China Sustainable Energy Program, May.

White Paper (2007), 'China's Energy Conditions and Policies', State Council Information Office, 26 December, http://www.china.org.cn/english/whitepaper/energy/23711 6.htm (retrieved on 26 June 2009).

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[6] *China Daily*, 12-22 February 2009.

Efficiency improvements in Russian gas-fired heat and power generation

BY EDWARD CHRISTIE

Introduction

Close to 60% of Russia's electricity and heat is generated using natural gas, a much higher proportion than in the European Union (see Figure 1). Coal is a distant second (18.5%), while other energy products account for much smaller shares. Russia's situation is therefore in stark contrast to the EU's relatively balanced mix of coal, natural gas and nuclear power.

Conversely, electricity and heat generation accounted for 58.5% of Russia's total natural gas consumption in 2007, i.e. 265 billion cubic metres (bcm). From the point of view of Russia's natural gas balance the generation sector therefore plays a crucial role: Russia's net exports were 195 bcm in 2008 (see IEA, 2009a).

Russia's overall average thermal efficiency in gas-fired generation is comparatively high (roughly the same as the EU average). However, this is a composition effect rather than an efficiency effect. Russia makes more intensive use of district and distance heating, while heat plants are inherently more thermally efficient than electricity plants. Combined heat and power (CHP) plants also have higher average thermal efficiency than electricity plants. Most of Russia's generation facilities are nevertheless much less efficient than what can be found in many OECD countries if one compares facilities by type. Figure 2 shows a comparison of thermal efficiencies by type of facility between Russia, the European Union average and a selected benchmark OECD country. The types of installation which are presented correspond to those that are in use in Russia, namely: autoproducer electricity plants (1% of natural gas used in generation), main activity producer CHP plants (63%), autoproducer CHP plants (8%) and

autoproducer heat plants (28%). The benchmark efficiency levels for each type refer to Canada, Germany, the Netherlands, and again the Netherlands, respectively. These findings suggest that large efficiency improvements are possible in gas-fired generation of electricity and heat, should relevant investments for the commissioning of new capacities occur.

Figure 1

Electricity and heat production in the EU and Russia by primary energy product, 2007 (shares of total)
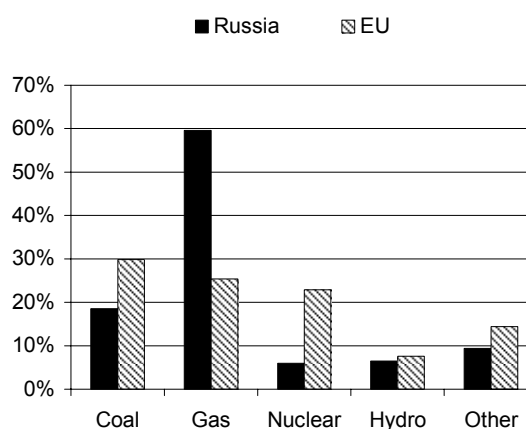
Note: Based on total output from main activity and autoproducer electricity, heat and CHP plants.
Source: IEA Energy Balances, author calculations.

The easiest benchmarking exercise would be to assume that Russia is able to replace existing facilities until it reaches the same average thermal efficiency as the EU for those three categories, i.e. autoproducer electricity plants, main activity CHP plants and autoproducer CHP plants. Autoproducer heat plants may be assumed to reach the higher benchmark shown in Figure 2, i.e. the level found in the Netherlands which is 95%. Moreover, it is assumed that final demand for gas-fired generated electricity and heat will grow in line with total final demand for electricity and heat as in the Reference Scenario in IEA (2009b). Demand for gas-fired electricity would therefore grow from 41.8 Mtoe to 53.0 Mtoe, while demand for gas-fired heat would drop slightly from 97.4 Mtoe to 96.6 Mtoe, over the period 2007-2020. The new amount of gas that is consistent with these assumptions can be

determined using a standard linear optimization approach. The initial situation is taken from the IEA Energy Balances database for the year 2007. For the optimization it is assumed that gas can be redistributed freely between the four available types of facility, under the constraint that the relative shares of electricity and heat in the output mix remain constant for each type. The target value, which is minimized, is the total amount of gas used in order to generate the projected output levels of electricity and heat.

Figure 2

Thermal efficiency of gas-fired plants by type, 2007
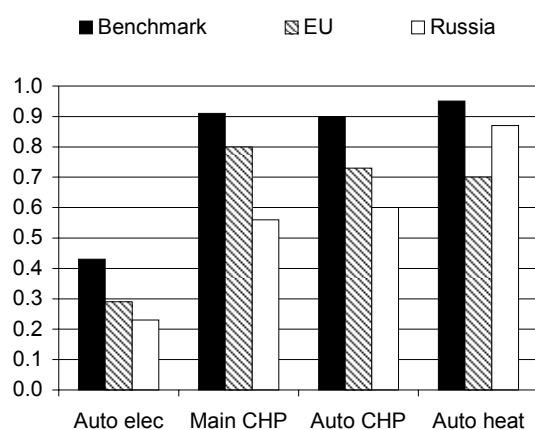
*Note: t*otal energy output of both electricity and heat divided by energy content of gas input

Source: IEA Energy Balances and own calculations

Applying linear optimization only with these assumptions leads to the complete shut-down of both autoproducer electricity plants and autoproducer CHP plants owing to their lower efficiency levels. This prospect is not entirely realistic, as there are cases where local circumstances justify autoproduction, e.g. surplus energy is available anyway due to the company's main industrial processes and it is more cost-effective to use that energy than to purchase the corresponding amounts from the market. A detailed assessment of this question would require an analysis of individual facilities and would be beyond the scope of this article. However for simplicity it is assumed that half of the energy output currently produced by those facilities would still be produced in the same way in 2020, while the rest of the demand from autoproducers would be purchased from the market. The result of the linear optimization as described is shown in Table 1. Potential gas savings amount to 42.9 bcm as compared to the 2007 level. As compared to a baseline without any efficiency improvements the savings are higher. With current efficiency levels, producing the projected output levels of electricity and heat for 2020 would naturally require a higher input of natural gas than was necessary in 2007, namely an extra 29.3 bcm. Total annual savings as compared to the baseline are therefore 72.2 bcm.

This simple simulation exercise assumes that Russia's gas-fired generation capacity could be substantially replaced by 2020. Without discussing the time-frame of such large-scale changes, one interesting question would be whether the change would, notionally at least, be economically feasible. One way of looking at that question is to take into account Russia's ongoing reform of domestic energy prices. Gas prices in particular have risen above the rate of inflation for both residential and non-residential customers in the last few years.

Gas price increases

In 2007 the average administered price across all pricing zones, excluding VAT, was 1075 roubles per thousand cubic metres (RUB/mcm) for residential customers and 1376 RUB/mcm for non-residential customers. This was equivalent to 42 USD/mcm and 54 USD/mcm respectively using the 2007 RUB/USD exchange rate. Prices rose for both types of customers by 25% (in nominal terms) in 2008; and by 16.3% in 2009 for residential customers and by 16.1% for non-residential customers. For 2010 it has been officially announced by the Federal Tariff Service that the increase is 15% for both types of customers. Prices for non-residential customers have therefore increased by around two thirds since 2007 in nominal RUB terms. The question is whether this policy will continue until, as was initially announced, prices reach what is often referred to as the

Table 1

Potential savings in gas-fired generation, thousands of tonnes of oil equivalent (ktoe)

Variable / category	Auto electricity	Main act. CHP	Auto CHP	Auto heat	Total
Gas input	877	125,037	6,906	46,539	179,358
Electricity output	250	51,619	1,131	0	53,000
Heat output	0	48,517	3,901	44,212	96,630
Total output	250	100,136	5,031	44,212	149,630
New thermal efficiency	28.6%	80.1%	72.9%	95.0%	83.4%
Old thermal efficiency	22.9%	56.4%	59.9%	87.2%	65.1%
Input reduction	1,306	9,347	9,880	14,111	34,644
Input reduction (bcm)	**1.6**	**11.6**	**12.2**	**17.5**	**42.9**

netback price[1]. As argued in Fjaertoft (2009), the target that was set by the Russian authorities is not strictly speaking the netback price, but rather the export price minus all export-related costs *including export duties*. That price is such that it ensures equal profitability between the domestic and export markets from the point of view of Gazprom (see Fjaertoft, 2009, p. 15) for the exact formula.

Table 2

Gas price and CPI assumptions 2008-2020

Year	Low-price path	High-price path	CPI
2008	25.0%	25.0%	14.1%
2009	16.1%	16.1%	12.3%
2010	15.0%	15.0%	9.9%
2011	10.0%	15.0%	8.5%
2012	10.0%	15.0%	7.7%
2013	10.0%	15.0%	7.2%
2014	10.0%	15.0%	7.5%
2015	7.0%	7.0%	7.0%
2016	6.0%	6.0%	6.0%
2017	5.0%	5.0%	5.0%
2018	5.0%	5.0%	5.0%
2019	5.0%	5.0%	5.0%
2020	5.0%	5.0%	5.0%

Since the equal-profitability price fluctuates along with the price of petroleum products with a six-month time lag, it is rather difficult to use it for scenario-building unless one constructs a scenario

for the price of oil as well. While this does not pose exceptional difficulties, the practical reality is that the price increases so far have all been defined as fixed nominal price increases rather than, e.g., as a gradually increasing proportion of the equal-profitability price. A discussion on the advantages and disadvantages of the two different types of reform will be briefly discussed in the final section. For the time being it is convenient to assume that fixed nominal price increases will continue for a few years before converging with consumer price inflation. Price scenarios are then easily built and can be used to assess input costs and corresponding potential input cost savings.

Price scenarios and assumptions

It is assumed that the Federal Tariff Service imposes further increases on the price of natural gas for the non-residential sector (charged to the generation sector among others). In particular, it is assumed in a low-price scenario that nominal increases of 10% per year occur every year from 2011 to 2014 included. Thereafter the price grows in line with consumer price inflation. In a high-price scenario it is assumed that nominal increases of 15% per year occur in the same years, and that nominal prices then likewise follow consumer price inflation from 2015. The full set of price assumptions to 2020 is shown in Table 2.

A time horizon of 30 years is chosen for illustration. The other assumptions are as follows. Inflation drops to 2.5% per year starting from 2021, implicitly

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[1] The netback price may be defined as: 'the effective wellhead price to the producer of natural gas which is based upon the selling price of the gas minus delivery charge', see Rowe (2004, p. 66).

marking the end of Russia's growth catching-up process. The starting year for a possible campaign of mass investment is set as 2012. The RUB/USD exchange rate in that year is assumed to be 34.85 based on IMF World Economy Outlook projections. For simplicity it is assumed that all investments occur in 2012 and start to operate from 2013. Corrections to that assumption can easily be made by shifting the financial evaluation period forward by a few years. It is also assumed for simplicity that the level of gas savings is 72.2 bcm for every year of the 2013-2042 period.

Russia's total gas-fired generation capacity was 97 GW in 2007 (see IEA, 2009b). It is assumed for simplicity that 100 GW of new capacity is commissioned. The bulk of the existing capacity would therefore be decommissioned, although the most efficient existing facilities would be kept and total capacity would be somewhat above 100 GW in order to cope with higher demand for electricity. Assuming USD 1100 per kW (at 2012 prices and exchange rates) for new build across all types of facility, capital costs would amount to USD 110 billion (RUB 3834 billion). Capital cost assumptions may naturally be more detailed. In this particular case the estimate is taken from ETSAP (2009) and applies to new build for combined-cycle gas turbine (CCGT) facilities and is measured in kWe (kilowatt of electricity), so not including heat output. However the general order of magnitude should be appropriate for this short illustration.

Assuming the high-price path, the internal rate of return is 4.8%. There is some sensitivity in the results. A slightly different exchange rate, for instance 32 RUB/USD, leads to an internal rate of return of 5.5%. Assuming the low-price path yields a rate of return of 3.5% with an exchange rate of 34.85 RUB/USD, and a rate of return of 4.1% with the lower exchange rate. Such rates of return are not particularly high for the private sector and suggest that state intervention and support would be indispensable. In that case one would consider the social time preference rate, which in Western European countries is below the estimates presented, e.g. 3.5% in the UK as used by the

government for typical appraisal purposes, falling to 3% for time horizons of 30-50 years. In the case of Russia estimates of the social time preference rate are however much higher, around 10%-11.5% (see e.g. Sheluntsova, 2009; Valentim and Prado, 2008). On the other hand the long life-time of power generation facilities should lead both to more favourable rates of return (recalculating the results above with, say, a 40 year horizon) and to a lower hurdle in terms of Russia's social time preference (STP) rate. The latter is considered to decrease with the length of the time horizon considered, see e.g. Lowe (2008). In addition, rising living standards should gradually push down Russia's STP rate ceteris paribus. Another finding quite naturally is that the assumed price path makes a difference. This suggests that the Russian Federation would have to stick to relatively ambitious price increases if it wishes to incentivize substantial changes in efficiency. More generally, it is shown using simple assumptions that there is scope for substantial efficiency change in a manner that may be economically feasible. Conversely, if one assumes that Russia's STP rate was indeed in the order of 10% in recent years this could explain why a number of forward-looking investments that would seem natural to Western European governments have not been undertaken.

Price paths revisited

The price paths that were assumed were constructed on the basis of fixed nominal increases which would not correspond to particularly drastic real price increases given Russia's (assumed) high inflation to 2014. In the high-price scenario the real increase would amount to 54% by 2014 as compared to the 2007 price level, while in the low-price scenario the increase would be only 29%. Naturally more ambitious assumptions could be made which would have a favourable effect on the rate of return calculations presented earlier. As implied from the latter, returns may be too low to elicit sufficient private sector incentive and government intervention and investment would be necessary. But if government intervention is assumed, then the valuation of the gas savings would also be different. It was assumed earlier that

the savings should be valued at the domestic price. Implicitly that would be the point of view of an electricity producer in Russia. If the problem is seen from the viewpoint of social returns, then gas that is not consumed in the country can be exported, and hence its valuation may be made, in part if not in full, using export prices. The latter valuation would include export duties since those are revenues that accrue to the national budget.

Deeper consideration could be given to the goals of the price reform. For instance the argument has been made that it would be preferable to make the gas export duty depend on the export price in such a way as to yield an equal-profitability price for the domestic market which is stable (see Fjaertoft, 2009, p. 16). The supporters of that option also seem to support relatively low domestic prices. The latter is not a good idea if deep efficiency improvements are to be attained. However both equal profitability and stable domestic prices are attractive goals. Export price formulae are based on the concept of replacement value, i.e. they entail a pre-emptive measure against substitution by end-users, traditionally with reference to fuel oil (see ECT, 2007, p. 147). The latter was originally supported by the Dutch government to maximize market penetration for Dutch natural gas in Western European export markets in the 1960s. The Soviets, and then the Russians, drew inspiration from the arrangement. While using the replacement value pricing principle is certainly favourable for gas companies (including gas importers, as their downstream market remains stable as well), it is questionable whether tracking it at home is favourable for the Russian economy, particularly if energy savings become an important policy goal. Stable domestic prices, as opposed to what the current equal-profitability formula would entail, would certainly be more conducive to energy-saving investments in general (not only in power generation) as this would reduce price uncertainty and therefore investment risk.

As a result of these considerations, equal profitability could be pursued by replacing the current export duty, which is an ad valorem tax

(30% of the custom value in 2008), with a variable tax which would strip out the export price volatility and lead to a stable domestic price. By implication that tax would be progressive in the export price, with a tax-free threshold to ensure equal profitability in case of particularly low export prices which would occur if crude oil prices fell to low levels. The export duty would also take on the role of stripping out exchange rate volatility, since the goal should be to have a stable though reasonably high domestic price in (constant) roubles. Ideally, nominal domestic prices would increase in line with inflation thus forestalling a real own-price effect on consumption levels. The details of such a new export duty system would have to be evaluated in detail, particularly as regards the marginal value of leaving an extra unit of Gazprom profits untaxed. In that context the goal should not be to extract too much of Gazprom's monopoly rent as that could damage the company's upstream investment programme. However, given earlier considerations, proceeds from the gas export duty could finance efficiency savings which themselves generate gas savings. This could be an interesting form of revenue recycling which would merit further study.

References

ECT (2007), *Putting a Price on Energy. International Pricing Mechanisms for Oil and Gas*, Energy Charter Secretariat, Brussels.

Fjærtoft, Daniel B. (2009), 'Russian Gas – Has the 2009 economic crisis changed Russian gas fundamentals?', *BOFIT Online* 10/2009, Bank of Finland.

IEA (2009a), *Natural Gas Information 2009*, OECD/IEA, Paris.

IEA (2009b), *World Energy Outlook 2009*, OECD/IEA, Paris.

Lowe, Joseph (2008), 'Intergenerational wealth transfers and social discounting: Supplementary Green Book guidance', HM Treasury, London.

Rowe, Dan (2004), 'LNG Market Overview', presentation, The Oxford Princeton Programme, 14 March, available from: http://www.oxfordprinceton.com/pdf/ieca_presentation.pdf, accessed on 3 February 2010.

Seebregts, Ad (2009), 'Gas-Fired Power', *ETSAP Technology Brief* E02, IEA OECD Energy Technology System Analysis Program.

Sheluntsova, Mariya (2009), 'Evaluation of a social discount rate for the Russian Federation', conference paper, ICEA – FAA Bucharest, 14-15 November.

Valentim, Joice and Jose M. Prado (2008), 'Social discount rates', working paper, Institute for Advanced Studies Lucca.

The Russian labour market: whence stability?

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The Russian labour market has an intriguing feature that has hardly ever received a satisfactory explanation: employment has always been relatively stable despite a sequence of severe economic shocks. We attempt to unravel this riddle.

The special case of the Russian labour market

Figure 1 below presents the pattern of the functioning of the Russian labour market in a schematic form; it shows the trajectories of GDP and employment in the country in 1992-2007. Unlike in the majority of CEE countries, in Russia employment was fluctuating within quite narrow margins and demonstrated robust resistance to economic shocks. Thus, between 1991 and 1998, the most dramatic period of post-communist transition, employment in Russia shrank by 13.5% against the background of an almost 40% decrease of GDP. In other words, each percentage point of output contraction was accompanied by only approximately 0.35% of employment reduction. Only six years after the inception of the 'shock therapy', general unemployment calculated according to the ILO methodology surpassed the 10% barrier, reaching its maximum of 13.3% in 1998; the minimum, 5.8%, was achieved in 2008 just before the current crisis.

The causes

What are the reasons for this apparent employment stability? One often cited assumption was the supposed inherent paternalism of Russian employers, another the alleged low labour mobility inherited by modern Russia from the central

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planning days. Both have been disproved by facts (Kapelyushnikov, 2002). For example, the labour force turnover rate has been oscillating between 43% and 62% for the economy overall and between 45% and 65% for industry (Figure 2). Paradoxically, in the majority of cases employment was terminated at the initiative of the employees: 65-74% of all employees who left their jobs did so of their own accord. Even if we assume that some of the quits were in fact latent dismissals, the proportion is still high.

The stability of the Russian labour market must be the manifestation of some fundamental qualities. In our opinion they are the prevalence of flexible working time and flexible pay. The flexibility of working hours and pay makes it possible to offset pressures on the labour market without recourse to a drastic readjustment of employment: in lean times, instead of making some workers redundant, the employer may reduce the cost of operation (the usual reason for laying off labour force) by shortening the working hours or diminishing the rate of compensation. Similarly, in a period of economic growth, the ability to increase working hours and pay may boost output and productivity to the extent required by the market demand, thus reducing the need of hiring more workers.

Flexible working hours and pay are not the prerogatives of the Russian model of the labour market. What distinguishes Russia is the persistence, depth and scale of these phenomena and their institutional embeddedness. The situation with wages provides a good example.

Flexible pay

The volatility of wages in Russia has been remarkable. According to official statistics, between 1991 and 1998 wages had plummeted by almost 70% in real terms. They started to grow again in 2000 at the spectacular rate of 10-20% per year. As a result, in the period preceding the current economic crisis, they rose by more than 300%. In Russia the flexibility of wages is the consequence of a number of factors. First, it is the

Figure 1

**GDP growth and employment in Russia,
1991-2007, %**
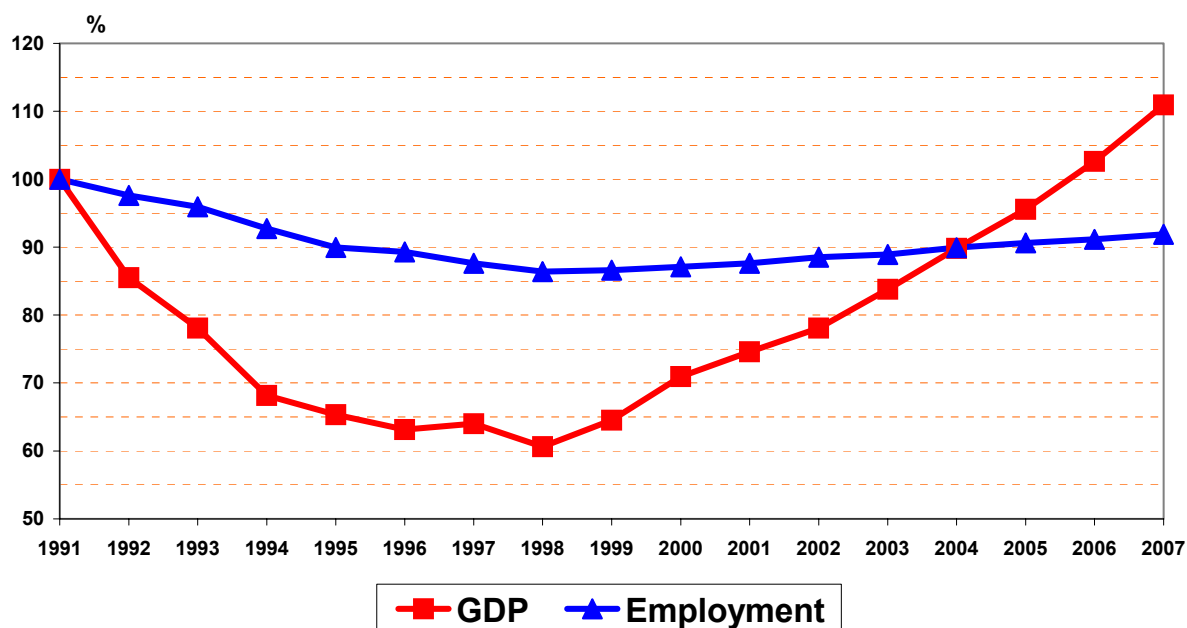
Source: Rosstat.

Figure 2

Employment dynamics in Russia, 1991-2008, %
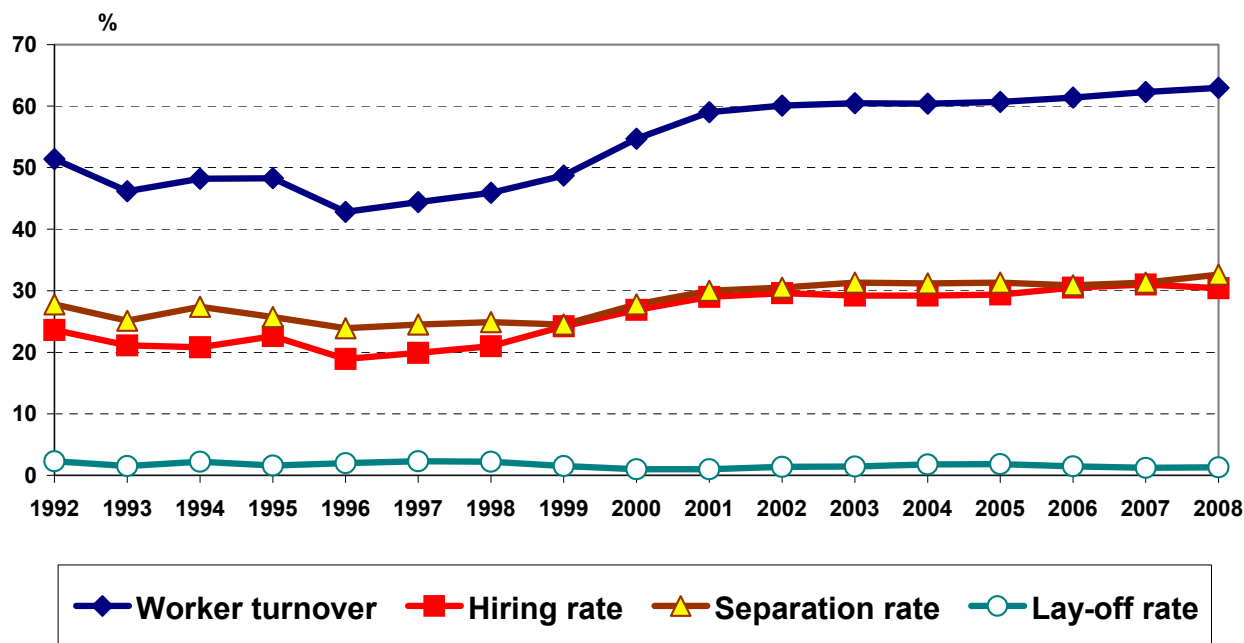
Source: Rosstat.

absence of compulsory indexation. Second, a substantial share of the wage (25-40%) is traditionally made up of bonuses and other incentive payments over which the management

has considerable discretion. Third, Russian managers were able to make use of such an extreme form of wage manipulation as delaying the payment of wages beyond statutory pay days. This

is probably the most unusual feature of the Russian system of wage payments. In essence this is a peculiar form of an involuntary interest-free loan provided by the employees to the firm for which they work on conditions decided by the management of the firm. Finally, a distinctive resource of wage flexibility in Russia has been the practice of underhand or 'shadow' salaries. Employers either disguise wages under other forms of remuneration (interest on bank deposits, insurance payments etc.) or pay them in cash on the basis of informal agreements with employees. According to Rosstat, the national statistical agency, even in the current period undeclared payments are common and add nearly 50% to the official average wage (Figure 3).

In periods when the economic situation deteriorates all these mechanisms provide for a speedy decline of the cost of labour which allows firms to retain the workers who they would have been forced to release if the wage regulations had been more stringent. As a result the Russian labour market was able to respond to changes in demand by adjusting workers' remuneration rather than employment.

Flexible work arrangements

An important feature of the Russian labour market is the ubiquity of what literature categorizes as 'non-standard work arrangements'. Under standard work arrangements it is generally expected that work is done full-time on the basis of a formal contract, would continue indefinitely, and is performed at the employer's place of business under the employer's direction. Non-standard work arrangements lack all or some of these provisions. Such arrangements are neither new nor can they be found in Russia alone, but in Russia they have particularities that make them distinctive. These are the pervasiveness of non-standard arrangements, the tendency for these arrangements to exist on the borderline between the legal and the 'shadow' economy, and the prevalence of 'low status' arrangements.

For Russia it is important to put things into perspective: before marketization, for generations of employees only standard work arrangements were a norm. These days, however, the share of 'standard' workers has fallen to just 60-65% (Gimpelson and Kapelyushnikov, 2005). Literature makes a distinction between 'good' and 'bad' forms of non-standard arrangements (Tilly, 1996). 'Good' forms are part of an integration strategy used to retain valued workers or to allow them to use their potential with maximum efficiency. 'Bad' forms represent a marginalization strategy that provides employers with a source of cheap labour; they are associated with low-paid low-status jobs. Non-standard arrangements in Russia gravitate to the latter category. The most popular arrangements are shortened working hours and administrative unpaid leaves, wage arrears and 'grey' salaries, non-monetary payments (payments in kind). Employers also often expect their work force to obtain secondary employment or to hold multiple jobs, or to produce goods and services in their households to support their income. There were periods when as much as a quarter of Russian industrial workers were made to work part-time or were given non-voluntary holidays; from 10% to 15% of all employed have to have more than one job; in 1996-2000 the stock of wage arrears on average was approximately equivalent to two monthly wage bills (Lehmann and Wadsworth, 2002). A striking feature is that about 40% of the population is involved in subsistence agriculture on private allotments.

Employee relations and the institutional environment

The characteristics of the modern labour market in Russia can be explained by two groups of factors. The first group includes historical circumstances. Under the Soviet production system genuine worker involvement in firm management and wage determination was very limited. This contributed to the attitude of inertia and resignation towards changes in the conditions of employment introduced by the management. It also created the readiness and the moral acceptance of taking

Figure 3

Russia: income statistics, 1991-2008

Source: Rosstat.

advantage of loopholes in official rules. Historical influence is also evident in the role played by trade unions (TUs). The traditional TUs, representing about 80% of all employees, have chosen the route of 'social partnership' with the state: in essence the TUs take upon themselves to uphold social stability in exchange for a part in the running of social policy. As a result, the position of Russian TUs is basically similar to the position of the former Soviet TUs: on paper they have many rights, but in reality they have subordinated themselves to the state; their influence and prestige are low (Chetvernina, 2009). Managers for their part often ignore or dilute 'general pacts' negotiated between TUs and employer associations (Zaslavsky, 2001).

The situation with TUs is symptomatic of the state of affairs with the labour legislation in general. There is a big gap between the letter of the law and its implementation. While employee relations were going through a period of extreme transformation, employment legislation was remaining almost unchanged. With some amendments the Soviet Labour Code of 1971 was operational until 2002. On paper the legal norms remained very stringent

but their real strength was nominal. The flexibility of the provision of labour as required by the market mechanism was achieved by ignoring the norms and replacing them with informal institutions.

The new Code, adopted in 2002, is the product of a political compromise; the norms reflecting the realities of the market economy coexist in it with the relics of the Soviet era. Most importantly, all the administrative and financial barriers that make it almost impossible for the employer to lay off an employee have been preserved: in Russia the 'employment protection regulations index', calculated by OECD, is 2.79, which puts Russia in one group with Germany and Sweden. Also the employment legislation remains extremely cumbersome (on top of the Labour Code of Russia there are more than 100 other laws and regulations) and restrictive. According to the World Bank's 'rigidity of employment index', the Russian labour market is one of the most regulated and controlled.

This implies that the Russian labour market maintains its high level of adaptability not because of the regulatory system but in spite of it. This is

only possible if the regulatory superstructure lacks the powers of control and enforcement.

Indeed, law implementation has been extremely flawed in Russia (Vishnevskaya and Kapelyushnikov, 2007). This created a vacuum of formal regulations which was soon filled with a plethora of informal and surrogate 'rules of the game' as described earlier. This has changed the whole hierarchy of stimuli motivating the participants of the labour market. The non-standard forms of employee relations have one thing in common: when enacted, in most cases this involved either using the loopholes in the existing legislation or contradicting the law. As a result both workers and their employers have been willing to accept that their relations have become mostly informalized as implicit rules and unwritten agreement prevail over contract provisions and other formal obligations.

The Russian model and the current economic crisis

The 2008-2009 economic crisis has been a major test for the existing model of the labour market. In the first half of 2009 GDP fell by 10.4% in comparison to the same period in 2008; industrial output contracted by 14.8%. In these circumstances, has the Russian labour market preserved its main functional feature – the low elasticity of employment?

The initial reaction of Russian firms was not radically different from the pattern observed in the 1990s. Although there was shedding of labour on a scale that had not been seen since 1994, the increase in unemployment was nowhere as intensive as suggested by the severity of the economic crisis. According to official estimates, in the first half of 2009 general employment fell only by 2.5-2.7%. As before Russian firms chose the 'soft landing' strategy. This time, however, the adjustment was mostly centred on a wide-scale reintroduction of non-standard work arrangements leading to reduced working hours: in the fourth quarter of 2008 the number of employees who were forced into part-time work increased ten times

compared to the same period of 2007 (Kapelyushnikov, 2009). We estimate that as a result of these measures the employers achieved savings that otherwise would have required an increase in unemployment of 5-6%.

By contrast, manipulations with wages have not been as common as before: the fall in real wages has been rather shallow at less than 10%. This is almost negligible compared to the disastrous drops in real wages that were a feature of the economic shocks in the previous decade. Wage regulations have been made more effective as this time the state has taken a very firm position towards those enterprises that were delaying the pay.

Overall it can be argued that the adjustment to the crisis in the sphere of employment has been unproblematic: the decline in real wages and in the rate of employment has been limited, although the share of involuntary part-time employment has increased to the level of the late 1990s.

Therefore, despite similarities, the current situation is somewhat different compared to the 1990s. Then the main factor of the relative stability of the rate of employment was the inflationary decrease in the real cost of labour. This time the state has been implementing a steady anti-inflationary policy, making this option unavailable to the employers. The state has made its presence more noticeable in the realm of employment regulations as well. In many cases penalties for infringing the law have been made more severe and effective. An example is the legislator specifically targeted at wage arrears: now it is a criminal offence to deliberately delay the payment of wages. The freedom of the employer to send workers on administrative unpaid leave has been curtailed as well.

Conclusions

The institutional core of the current model of labour relations in Russia is a combination of very stringent formal rules and a great variety of informal arrangements that make it feasible to 'soften' these rules or circumvent them altogether. This helps to absorb external shocks by means of shortening

working hours and other measures that minimize the cost of labour. This is a flexible system, but this flexibility is not the product of a deliberate effort of the legislator as in a liberal market economy. The flexibility comes from the willingness and ability of both employers and employees to curtail their exposure to formal rules and rely on informal arrangements instead. Russian firms seek to compensate their inability to lay off workers with a variety of redeployment tactics. The Russian system is characterized by the absence of strong corporatist institutions or arrangements allowing organized interests to participate directly in the formulation of government policy. Instead it is typified by a combination of poor enforcement of formal rules and the ubiquity of informal arrangements, making the line between formal and informal sectors in the economy so blurred that the behaviour of large corporations and state-owned enterprises is often indistinguishable from that of the operators of the 'grey' economy.

The model that emerged in the 1990s has helped to ease the impact on employment of the hardships and shocks that accompanied transition to the market. At the same time its contribution was not entirely positive. To begin with, it has undermined the status of one of the central institutions in any market economy – the contract. Without properly enforced contracts, both employers and employees were forced to shorten the time horizon when making their decisions about jobs. This had negative consequences for the specific human capital in the country and the information transparency of the labour market. Overall, the existing mechanism puts the burden of supporting stable employment on the employees themselves, who pay for this stability by giving up a share of their real wages.

References

Chetvernina, T. (2009), 'Trade Unions in Transitional Russia – Peculiarities, Current Status and New Challenges', Russian Research Center Working Paper No. 16, Institute of Economic Research, Hitotsubashi University, Tokyo.

Gimpelson, V. and R. Kapelyushnikov (eds) (2005), *Nestandartnye formy zaniatosti v Rossii*, State University – Higher School of Economics Publishing House, Moscow.

Kapelyushnikov, R. (2002), 'Obshaia i regestriruemaia bezrabotitsa: v chem prichiny razryva?', Working Paper 3/2002/3, State University – Higher School of Economics, Moscow.

Kapelyushnikov, R. (2009), *Konets rossiiskoi modeli rynka truda*, Liberal Mission Fund, Moscow.

Lehmann, H. and J. Wadsworth (2002), *Wage Arrears and the Distribution of Earnings in Russia*, Centre for Economic Reform and Transformation, Discussion Paper 2002/02, School of Management, Heriot-Watt University.

Tilly, C. (1996), *Half a Job: Bad and Good Part-time Jobs in a Changing Labor Market*, Temple University Press, Philadelphia, PA.

Vishnevskaya, N., and R. Kapelyushnikov (2007), 'Infrorsment trudovogo zakonodastel'stva v Rossii'. Working Paper series 'Problems of Labour Market', Working Paper No. 3, State University – Higher School of Economics, Moscow.

Zaslavsky, V. (2001), 'The Russian Working Class in Times of Transition', in V. Bonneil and G. Breslauer (eds), *Russia in the New Century*, Westview Press, Boulder, pp. 201-230.

STATISTICAL ANNEX

Selected monthly data on the economic situation in Central and Eastern Europe

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 definition)
M3	broad money

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

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B U L G A R I A: Selected monthly data on the economic situation 2008 to 2009

(updated end of Jan 2010)

		2008 Oct	Nov	Dec	2009 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PRODUCTION																
Industry, total[1)2)]	real, CMPY	-5.1	-11.7	-11.2	-18.4	-17.7	-16.9	-20.2	-22.0	-18.2	-18.9	-15.8	-21.1	-16.5	-10.8	.
Industry, total[1)2)]	real, CCPY	3.7	2.2	1.0	-18.4	-18.1	-17.6	-18.3	-19.1	-18.9	-18.9	-18.6	-18.8	-18.6	-17.9	.
Industry, total[1)2)]	real, 3MMA	-4.6	-9.3	-13.8	-15.8	-17.7	-18.3	-19.7	-20.1	-19.7	-17.7	-18.6	-17.8	-16.1	.	.
LABOUR																
Employees total	th. persons	2481	2466	2436	2438	2428	2413	2405	2403	2402	2398	2375	2338	.	.	.
Employees in industry[2)]	th. persons	699	692	681	653	645	634	625	618	613	610	606	602	.	.	.
Unemployment, end of period	th. persons	216.6	216.8	232.3	240.8	247.8	254.9	260.7	262.1	270.1	282.2	291.9	297.5	304.9	320.8	338.1
Unemployment rate[3)]	%	5.8	5.8	6.3	6.5	6.7	6.9	7.0	7.1	7.3	7.6	7.9	8.0	8.2	8.7	9.1
Labour productivity, industry[1)2)]	CCPY	2.7	1.4	0.4	-14.3	-13.5	-12.5	-12.4	-12.7	-12.1	-11.7	-11.0	-10.9	.	.	.
Unit labour costs, exch.r. adj.(EUR)[1)2)]	CCPY	20.0	21.2	21.8	33.2	30.9	28.8	28.7	29.0	27.8	26.9	25.6	25.0	.	.	.
WAGES, SALARIES																
Total economy, gross	BGN	538	542	566	557	553	579	593	585	587	578	576	594	.	.	.
Total economy, gross	real, CMPY	12.8	10.9	10.8	8.6	10.1	10.4	10.6	11.9	9.9	10.0	10.6	10.2	.	.	.
Total economy, gross	EUR	275	277	289	285	283	296	303	299	300	296	295	304	.	.	.
Industry, gross[2)]	EUR	271	276	283	277	276	294	290	295	299	294	294	298	.	.	.
PRICES																
Consumer	PM	0.5	-0.1	-0.2	0.8	0.1	-0.2	0.7	-0.3	-0.4	-0.6	-0.2	0.0	0.1	0.1	0.5
Consumer	CMPY	10.9	9.1	7.8	7.1	6.0	4.9	4.8	3.9	3.7	1.6	1.3	0.2	-0.3	-0.1	0.6
Consumer	CCPY	13.2	12.8	12.3	7.1	6.5	6.0	5.7	5.3	5.1	4.5	4.1	3.7	3.3	3.0	2.8
Producer, in industry[2)]	PM	-0.8	-3.2	-5.7	-1.3	-0.9	1.1	-0.8	0.3	0.2	-0.9	-0.3	1.2	-0.4	0.3	0.9
Producer, in industry[2)]	CMPY	8.9	2.9	-1.0	2.2	0.6	-1.1	-2.3	-3.2	-5.1	-9.0	-9.8	-7.8	-8.2	-5.3	-0.8
Producer, in industry[2)]	CCPY	12.7	11.7	10.6	2.2	1.4	0.6	-0.2	-0.8	-1.5	-2.7	-3.6	-4.1	-4.5	-4.6	-4.3
FOREIGN TRADE[4)5)]																
Exports total (fob), cumulated	EUR mn	13251	14327	15278	813	1714	2681	3513	4419	5419	6447	7429	8479	9691	10803	.
Imports total (cif), cumulated	EUR mn	21736	23659	25334	1221	2538	4026	5397	6809	8224	9643	10954	12337	13885	15297	.
Trade balance, cumulated	EUR mn	-8485	-9331	-10056	-408	-824	-1345	-1884	-2390	-2805	-3196	-3525	-3857	-4194	-4494	.
Exports to EU-27 (fob), cumulated	EUR mn	7952	8637	9190	568	1192	1792	2303	2879	3495	4223	4831	5530	6290	6991	.
Imports from EU-27 (cif)[6)], cumulated	EUR mn	12121	13309	14330	728	1510	2413	3215	4056	4938	5787	6535	7404	8335	9199	.
Trade balance with EU-27, cumulated	EUR mn	-4169	-4673	-5140	-160	-318	-621	-911	-1177	-1443	-1565	-1703	-1873	-2045	-2208	.
FOREIGN FINANCE																
Current account, cumulated	EUR mn	-6827	-7688	-8653	-546	-855	-1409	-1964	-2321	-2565	-2430	-2216	-2211	-2464	.	.
EXCHANGE RATE																
BGN/USD, monthly average	nominal	1.470	1.536	1.460	1.479	1.530	1.496	1.481	1.426	1.395	1.388	1.371	1.344	1.320	1.311	1.338
BGN/EUR, monthly average	nominal	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956
USD/BGN, calculated with CPI[7)]	real, Jan04=100	127.4	124.2	131.9	130.6	125.5	127.9	129.7	133.9	135.2	135.2	136.5	139.0	141.6	142.5	140.6
USD/BGN, calculated with PPI[7)]	real, Jan04=100	115.5	112.8	115.7	112.6	109.1	113.5	113.1	116.6	117.2	117.7	117.2	121.3	122.4	122.2	120.9
EUR/BGN, calculated with CPI[7)]	real, Jan04=100	124.7	125.1	125.1	126.8	126.2	125.6	126.0	125.4	124.7	124.5	123.9	123.9	123.8	123.7	124.0
EUR/BGN, calculated with PPI[7)]	real, Jan04=100	118.3	116.6	111.7	110.8	110.0	111.8	111.9	112.2	112.1	111.8	111.0	112.6	111.7	111.7	.
DOMESTIC FINANCE																
Currency in circulation, end of period[8)]	BGN mn	7699	7583	8029	7433	7284	7023	7064	6961	7012	7099	7086	6925	6840	6778	7115
M1, end of period[8)]	BGN mn	19791	19245	19867	18645	17938	17750	17512	17554	17910	17684	17869	17686	17365	17738	18127
Broad money, end of period[8)]	BGN mn	44603	43928	45778	45020	44865	44892	45023	45162	45536	45822	46189	46424	46554	46761	47756
Broad money, end of period	CMPY	15.0	10.9	8.8	8.3	7.6	6.3	5.1	4.6	3.6	1.7	1.0	1.6	4.4	6.4	4.3
BNB base rate (p.a.),end of period	%	5.4	5.7	5.8	5.2	3.9	3.5	3.9	2.3	2.3	2.2	1.7	1.6	1.5	0.6	0.6
BNB base rate (p.a.),end of period[9)]	real, %	-3.2	2.7	6.8	2.9	3.3	4.6	6.4	5.6	7.9	12.4	12.8	10.2	10.6	6.2	1.3
BUDGET																
Central gov.budget balance,cum.	BGN mn	4586	4152	1423	631	300	322	352	211	-30	-512	-578	-590	-458	-441	-610

1) Enterprises with 10 and more persons.
2) From January 2009 according to NACE rev. 2.
3) Ratio of unemployed to the economically active.
4) Based on cumulated national currency and converted with the average exchange rate.
5) Cumulation starting January and ending December each year.
6) According to country of dispatch.
7) Adjusted for domestic and foreign (US resp. EU) inflation. Values more than 100 mean real appreciation.
8) According to ECB methodology.
9) Deflated with annual PPI.

C Z E C H REPUBLIC: Selected monthly data on the economic situation 2008 to 2009

(updated end of Jan 2010)

		2008 Oct	Nov	Dec	2009 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PRODUCTION																
Industry, total[1)]	real, CMPY	-7.7	-17.4	-14.6	-22.0	-23.0	-12.4	-21.6	-21.6	-12.2	-17.8	-8.8	-11.5	-7.2	-0.1	.
Industry, total[1)]	real, CCPY	3.9	1.7	0.4	-22.0	-22.5	-19.1	-19.7	-20.1	-18.8	-18.6	-17.6	-16.9	-15.9	-14.6	.
Industry, total[1)]	real, 3MMA	-6.1	-13.2	-18.0	-19.9	-19.1	-19.0	-18.5	-18.5	-17.2	-12.9	-12.7	-9.2	-6.3	.	.
Construction, total[1)]	real, CMPY	-1.2	-6.1	-2.6	-11.3	-14.3	-9.1	2.1	0.3	0.7	-3.7	0.1	3.5	0.1	7.8	.
LABOUR																
Employees in industry[1)2)]	th. persons	1163	1151	1131	962	946	927	906	900	889	882	876	876	876	873	.
Unemployment, end of period	th. persons	311.7	320.3	352.3	398.1	428.8	448.9	456.7	457.6	463.6	485.3	493.8	500.8	498.8	508.9	539.1
Unemployment rate[3)]	%	5.2	5.3	6.0	6.8	7.4	7.7	7.9	7.9	8.0	8.4	8.5	8.6	8.5	8.6	9.2
Labour productivity, industry[2)4)]	CCPY	3.1	1.0	0.2	.	.	.	.	.	.	.	.	.	.	.	.
Unit labour costs, exch.r. adj.(EUR)[2)4)]	CCPY	19.2	20.1	20.1	.	.	.	.	.	.	.	.	.	.	.	.
WAGES, SALARIES																
Industry, gross[1)2)]	CZK	22807	24843	24394	23020	21600	23299	23604	23612	23621	24300	22899	23460	24265	27220	.
Industry, gross[1)2)]	real, CMPY	-0.3	-1.9	6.0	-0.2	-1.6	0.2	0.5	0.6	1.2	2.1	5.2	6.9	3.6	7.0	.
Industry, gross[1)2)]	EUR	920	986	934	847	759	856	882	883	890	942	893	925	939	1054	.
PRICES																
Consumer	PM	0.0	-0.5	-0.3	1.5	0.1	0.2	-0.1	0.0	0.0	-0.4	-0.2	-0.4	-0.2	0.2	0.2
Consumer	CMPY	6.0	4.4	3.6	2.2	2.0	2.3	1.8	1.3	1.2	0.3	0.2	0.0	-0.2	0.5	1.0
Consumer	CCPY	6.8	6.6	6.4	2.2	2.1	2.1	2.0	1.9	1.8	1.5	1.4	1.2	1.1	1.0	1.0
Producer, in industry[1)]	PM	-1.2	-1.9	-1.5	1.1	0.3	-1.1	-0.5	-0.4	0.0	-0.4	0.2	-0.4	-0.2	0.4	0.1
Producer, in industry[1)]	CMPY	3.9	1.2	-0.2	-0.8	-0.6	-2.0	-2.5	-3.8	-4.4	-4.9	-5.1	-5.4	-4.6	-2.4	-0.8
Producer, in industry[1)]	CCPY	5.3	4.9	4.5	-0.8	-0.7	-1.2	-1.5	-2.0	-2.4	-2.8	-3.1	-3.4	-3.5	-3.4	-3.2
FOREIGN TRADE[5)6)]																
Exports total (fob),cumulated	EUR mn	85470	93199	99110	5895	11741	18866	25448	31626	38650	45237	51445	59006	66492	74016	.
Imports total (cif),cumulated	EUR mn	82351	90129	96415	5768	11313	17697	23763	29520	35739	41861	47659	54561	61376	68338	.
Trade balance,cumulated	EUR mn	3118	3070	2694	128	427	1169	1685	2106	2911	3375	3786	4444	5116	5678	.
Exports to EU-27 (fob), cumulated	EUR mn	73034	79606	84453	5127	10100	16200	21802	27084	33018	38741	44097	50714	57301	63888	.
Imports from EU-27 (cif)[7)], cumulated	EUR mn	55641	60679	64558	3464	7108	11382	15454	19422	23736	28017	32007	36847	41544	46313	.
Trade balance with EU-27, cumulated	EUR mn	17393	18927	19895	1662	2992	4818	6348	7662	9281	10725	12091	13867	15757	17575	.
FOREIGN FINANCE																
Current account, cumulated[5)]	EUR mn	-3146	-3806	-4562	37	730	839	1015	452	-182	-372	-709	-934	-469	-531	.
EXCHANGE RATE																
CZK/USD, monthly average	nominal	18.58	19.77	19.48	20.53	22.26	20.89	20.29	19.57	18.94	18.29	17.98	17.42	17.43	17.32	17.84
CZK/EUR, monthly average	nominal	24.79	25.18	26.11	27.17	28.46	27.23	26.76	26.74	26.55	25.79	25.65	25.35	25.84	25.83	26.08
USD/CZK, calculated with CPI[8)]	real, Jan04=100	138.5	132.0	135.1	129.4	118.8	126.6	129.8	134.2	137.6	142.0	143.9	147.8	147.2	148.4	144.6
USD/CZK, calculated with PPI[8)]	real, Jan04=100	125.7	122.2	126.4	121.0	113.2	120.1	122.3	125.0	126.8	131.8	132.6	136.7	135.6	135.6	131.7
EUR/CZK, calculated with CPI[8)]	real, Jan04=100	135.1	132.8	128.0	125.6	119.4	124.6	126.2	126.1	126.7	130.5	130.6	131.6	128.6	128.7	127.5
EUR/CZK, calculated with PPI[8)]	real, Jan04=100	128.4	126.2	121.9	119.0	114.1	118.6	121.1	120.7	121.3	125.1	125.4	126.8	123.6	123.8	.
DOMESTIC FINANCE																
Currency in circulation, end of period[9)]	CZK bn	364.7	368.1	365.5	362.8	363.7	359.3	360.3	358.8	354.3	352.4	351.4	351.3	353.2	354.2	.
M1, end of period[9)]	CZK bn	1630.6	1650.1	1675.0	1665.6	1686.5	1692.9	1686.3	1691.5	1723.6	1702.1	1736.1	1722.3	1732.7	1781.6	.
Broad money, end of period[9)]	CZK bn	2583.7	2621.9	2703.4	2714.8	2729.7	2702.8	2720.3	2737.9	2680.9	2670.1	2659.5	2623.5	2651.0	2664.9	.
Broad money, end of period	CMPY	12.7	12.4	13.6	13.8	13.3	12.3	11.2	10.6	9.1	6.4	4.5	3.2	2.6	1.6	.
Discount rate (p.a.),end of period	%	2.50	1.75	1.25	1.25	0.75	0.75	0.75	0.50	0.50	0.50	0.25	0.25	0.25	0.25	0.25
Discount rate (p.a.),end of period[10)]	real, %	-1.3	0.5	1.5	2.1	1.4	2.8	3.3	4.5	5.1	5.7	5.6	6.0	5.1	2.7	1.1
BUDGET																
Central gov.budget balance,cum.	CZK mn	10940	-6510	-20003	482	5390	-2340	-55660	-71410	-68260	-76160	-89580	-87290	-138090	-169410	-192400

1) From January 2009 according to NACE rev. 2.
2) Enterprises employing 20 and more, from January 2009 50 and more persons.
3) Ratio of job applicants to the economically active (including women on maternity leave), calculated with disposable number of registered unemployment.
4) Calculation based on industrial sales index (at constant prices).
5) Based on cumulated national currency and converted with the average exchange rate.
6) Cumulation starting January and ending December each year.
7) According to country of origin.
8) Adjusted for domestic and foreign (US resp. EU) inflation. Values more than 100 mean real appreciation.
9) According to ECB methodology.
10) Deflated with annual PPI.

H U N G A R Y: Selected monthly data on the economic situation 2008 to 2009

(updated end of Jan 2010)

		2008 Oct	Nov	Dec	2009 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PRODUCTION																
Industry, total[1]	real, CMPY	-7.0	-11.9	-19.6	-22.4	-29.0	-15.7	-27.1	-22.0	-18.6	-19.1	-19.8	-15.0	-12.9	-7.0	.
Industry, total[1]	real, CCPY	2.0	0.6	-1.1	-22.4	-25.8	-22.4	-23.6	-23.3	-22.5	-22.0	-21.8	-21.0	-20.1	-18.9	.
Industry, total	real, 3MMA	-6.4	-12.5	-18.0	-23.7	-22.4	-23.9	-21.6	-22.6	-19.9	-19.2	-18.0	-15.9	-11.6	.	.
Construction, total[1]	real, CMPY	-2.7	2.7	5.5	-13.5	-4.0	1.7	-7.9	-9.3	15.1	-3.8	-7.0	-1.2	-2.4	-14.4	.
LABOUR																
Employees total[1)2)]	th. persons	2751.6	2725.5	2682.1	2691.9	2674.0	2645.1	2652.3	2668.2	2666.2	2657.7	2654.2	2670.4	2668.6	2650.5	.
Employees in industry[1)2)]	th. persons	737.9	728.3	713.7	680.5	668.5	652.5	640.4	632.5	626.0	624.8	623.0	623.7	624.1	622.3	.
Unemployment, end of period	th. persons	424.6	446.0	477.4	509.1	543.1	563.9	568.9	563.8	549.4	557.9	564.0	566.3	569.7	580.5	.
Unemployment rate	%	9.7	10.1	10.8	11.6	12.3	12.8	12.9	12.8	12.5	12.7	12.8	12.9	12.9	13.2	.
Labour productivity, industry[1)2)]	CCPY	1.3	0.2	-1.5	-17.6	-20.2	-15.5	-16.0	-14.9	-13.5	-12.3	-11.6	-10.5	-9.5	-8.5	.
Unit labour costs, exch.r. adj.(EUR)[1)2)]	CCPY	6.5	6.8	8.1	14.6	15.6	8.4	8.6	6.1	4.8	3.3	2.7	1.8	1.7	1.6	.
WAGES, SALARIES																
Total economy, gross[1)2)]	HUF th	196.7	222.7	220.7	194.3	191.9	201.3	200.4	200.0	201.6	197.0	190.3	190.9	193.4	215.9	.
Total economy, gross[1)2)]	real, CMPY	3.0	4.1	1.1	-8.1	-1.0	1.4	0.1	-0.9	-2.5	-3.4	-4.2	-4.0	-6.0	-7.8	.
Total economy, gross[1)2)]	EUR	763	840	835	694	643	662	679	710	719	724	706	702	720	797	.
Industry, gross[1)2)]	EUR	729	797	799	651	605	641	671	697	716	719	708	716	729	823	.
PRICES																
Consumer	PM	0.2	-0.2	-0.3	0.6	1.0	0.5	0.8	1.5	0.1	1.3	-0.3	-0.1	0.0	0.3	0.0
Consumer	CMPY	5.1	4.2	3.5	3.1	3.0	2.9	3.4	3.8	3.7	5.1	5.0	4.9	4.7	5.2	5.6
Consumer	CCPY	6.5	6.3	6.1	3.1	3.1	3.0	3.1	3.2	3.3	3.6	3.8	3.9	4.0	4.1	4.2
Producer, in industry[1]	PM	3.4	0.1	-0.9	2.9	3.3	0.7	-2.0	-2.0	-0.1	-4.5	-0.5	0.1	0.0	0.5	.
Producer, in industry[1]	CMPY	7.8	7.1	5.8	5.7	8.4	9.1	7.1	6.2	6.6	5.9	4.6	3.3	-0.1	0.3	.
Producer, in industry[1]	CCPY	5.0	5.2	5.3	5.7	7.1	7.7	7.6	7.3	7.2	7.0	6.7	6.4	5.7	5.2	.
FOREIGN TRADE[3)4)]																
Exports total (fob), cumulated	EUR mn	62957	68904	73331	4191	8667	13940	18618	23311	28420	33503	37806	43391	49065	54792	.
Imports total (cif), cumulated	EUR mn	63245	69094	73622	4347	8488	13200	17462	21681	26333	30906	34950	40059	45271	50573	.
Trade balance, cumulated	EUR mn	-288	-191	-291	-156	180	739	1157	1630	2088	2597	2855	3332	3794	4219	.
Exports to EU-27 (fob), cumulated	EUR mn	49283	54093	57452	3514	7054	11202	14917	18609	22650	26634	29972	34374	38943	43524	.
Imports from EU-27 (cif)[5)], cumulated	EUR mn	43509	47271	50241	2894	5765	9017	11962	14967	18188	21391	24152	27707	31319	34875	.
Trade balance with EU-27, cumulated	EUR mn	5774	6822	7211	621	1288	2186	2955	3642	4462	5243	5820	6667	7625	8649	.
FOREIGN FINANCE																
Current account, cumulated[6)]	EUR mn	.	.	-7591	.	.	-588	.	.	-112	.	.	586	.	.	.
EXCHANGE RATE																
HUF/USD, monthly average	nominal	193.2	208.2	196.8	211.7	233.3	233.5	223.7	206.6	200.3	193.3	189.1	186.8	181.4	181.6	186.8
HUF/EUR, monthly average	nominal	257.9	265.2	264.1	279.8	298.5	304.4	295.1	281.9	280.6	272.1	269.7	272.0	268.6	271.0	273.1
USD/HUF, calculated with CPI[7)]	real, Jan04=100	119.0	112.3	119.8	111.5	101.5	101.8	106.8	117.0	119.8	125.9	128.1	129.3	133.1	133.2	129.8
USD/HUF, calculated with PPI[7)]	real, Jan04=100	98.1	96.1	104.2	99.5	94.3	95.5	97.1	102.1	103.2	103.0	103.3	104.9	107.5	106.8	.
EUR/HUF, calculated with CPI[7)]	real, Jan04=100	116.0	113.1	113.3	108.3	102.0	100.2	103.8	110.1	110.5	115.9	116.3	115.2	116.4	115.5	114.4
EUR/HUF, calculated with PPI[7)]	real, Jan04=100	100.1	99.2	100.4	97.9	95.0	94.3	96.2	98.7	98.8	97.8	97.8	97.3	98.1	97.5	.
DOMESTIC FINANCE																
Currency in circulation, end of period[8)]	HUF bn	2150.1	2190.5	2137.2	2115.0	2123.8	2204.7	2170.1	2125.1	2089.9	2042.6	2030.2	2002.1	1995.9	2003.6	.
M1, end of period[8)]	HUF bn	6236.9	6183.9	6162.0	5962.1	6051.1	6240.5	6035.1	5923.9	5982.7	5812.2	5931.7	5921.5	5794.9	5900.6	.
Broad money, end of period[8)]	HUF bn	14891.9	15070.3	15436.1	15595.0	15716.3	15952.9	15912.7	15886.2	15872.8	15728.3	15921.9	15803.3	15804.5	15782.3	.
Broad money, end of period	CMPY	7.8	8.8	8.7	10.0	7.2	8.6	8.4	10.3	11.9	7.0	9.3	7.6	6.1	4.7	.
NBH base rate (p.a.), end of period	%	11.5	11.0	10.0	9.5	9.5	9.5	9.5	9.5	9.5	8.5	8.0	7.5	7.0	6.5	6.3
NBH base rate (p.a.), end of period[9)]	real, %	3.4	3.6	4.0	3.6	1.0	0.4	2.2	3.1	2.7	2.5	3.3	4.1	7.1	6.2	.
BUDGET																
Central gov.budget balance, cum.	HUF bn	-828.0	-973.9	-861.7	11.6	-262.0	-555.5	-534.6	-497.4	-713.9	-703.2	-758.0	-855.6	-793.8	-914.0	-737.2

1) From January 2009 according to NACE rev. 2.
2) Economic organizations employing more than 5 persons. Including employees with second or more jobs.
3) Based on cumulated national currency and converted with the average exchange rate.
4) Cumulation starting January and ending December each year.
5) According to country of dispatch.
6) Excluding SPE (Special Purpose Entities).
7) Adjusted for domestic and foreign (US resp. EU) inflation. Values more than 100 mean real appreciation.
8) According to ECB methodology.
9) Deflated with annual PPI.

P O L A N D: Selected monthly data on the economic situation 2008 to 2009

(updated end of Jan 2010)

		2008 Oct	Nov	Dec	2009 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PRODUCTION																
Industry, total[1][2]	real, CMPY	-0.1	-9.2	-4.4	-15.3	-14.6	-1.9	-12.2	-5.2	-4.4	-4.5	0.1	-1.2	-1.3	9.9	7.4
Industry, total[1][2]	real, CCPY	5.8	4.3	3.6	-15.3	-14.9	-10.6	-11.0	-9.9	-9.0	-8.3	-7.4	-6.7	-6.1	-4.7	-3.2
Industry, total[1]	real, 3MMA	-0.9	-4.5	-9.6	-11.4	-10.6	-9.6	-6.4	-7.3	-4.7	-2.9	-1.9	-0.8	2.5	5.3	.
Construction[1][2]	real, CMPY	10.5	5.5	6.1	7.4	1.9	1.2	0.5	0.3	0.6	10.6	10.9	5.7	2.7	9.9	3.1
LABOUR																
Employees total[1][2]	th. persons	5406	5394	5360	5374	5352	5325	5309	5292	5280	5273	5270	5267	5267	5265	5255
Employees in industry[1][2]	th. persons	2619	2602	2576	2509	2489	2476	2457	2440	2431	2421	2415	2413	2413	2410	2405
Unemployment, end of period	th. persons	1352.3	1398.5	1473.8	1634.4	1718.8	1758.8	1719.9	1683.4	1658.7	1676.1	1689.0	1715.9	1744.3	1811.0	1892.7
Unemployment rate[3]	%	8.8	9.1	9.5	10.5	10.9	11.2	11.0	10.8	10.7	10.8	10.8	10.9	11.1	11.4	11.9
Labour productivity, industry[1][2]	CCPY	3.1	1.9	1.5	-12.5	-11.7	-6.7	-6.8	-5.3	-4.1	-3.2	-2.1	-1.2	-0.5	1.0	1.9
Unit labour costs, exch.r. adj.(EUR)[1][2]	CCPY	18.7	18.4	16.3	4.8	-2.6	-9.7	-10.3	-12.9	-15.1	-16.3	-17.2	-17.6	-17.7	-18.2	-17.1
WAGES, SALARIES																
Total economy, gross[1][2]	PLN	3242	3321	3420	3216	3196	3333	3295	3194	3288	3362	3269	3283	3312	3404	3652
Total economy, gross[1][2]	real, CMPY	5.4	3.6	2.0	5.1	1.7	2.0	0.8	0.2	-1.4	0.3	-0.7	-0.1	-1.1	-0.8	3.2
Total economy, gross[1][2]	EUR	904	893	851	762	688	721	746	724	729	781	791	789	785	816	882
Industry, gross[1][2]	EUR	892	918	856	750	688	716	738	720	737	777	788	788	769	834	907
PRICES																
Consumer	PM	0.4	0.2	-0.1	0.5	0.9	0.7	0.7	0.5	0.2	0.1	-0.4	0.0	0.1	0.3	0.0
Consumer	CMPY	4.2	3.7	3.3	2.8	3.3	3.6	4.0	3.6	3.5	3.6	3.7	3.4	3.1	3.3	3.5
Consumer	CCPY	4.5	4.4	4.3	2.8	3.1	3.6	3.8	3.8	3.8	3.9	3.9	3.9	3.8	3.8	3.8
Producer, in industry[2]	PM	-0.1	-0.3	-0.5	2.3	2.6	0.0	-0.9	-0.3	0.8	-1.5	-0.4	-0.2	0.3	-0.4	-0.2
Producer, in industry[2]	CMPY	2.6	2.4	2.6	3.6	5.7	5.5	4.8	3.7	4.1	2.8	2.2	1.6	2.0	1.9	2.1
Producer, in industry[2]	CCPY	2.6	2.6	2.6	3.6	4.7	4.9	4.9	4.7	4.6	4.3	4.1	3.8	3.6	3.4	3.4
FOREIGN TRADE[4][5]																
Exports total (fob), cumulated	EUR mn	99563	107846	113564	7062	14460	22798	30503	38075	46058	54138	61507	70575	79876	88362	.
Imports total (cif), cumulated	EUR mn	119836	130292	138156	8071	15948	24992	33410	41557	50337	59302	67526	76923	86666	95836	.
Trade balance, cumulated	EUR mn	-20273	-22447	-24592	-1009	-1488	-2194	-2907	-3482	-4279	-5164	-6019	-6348	-6790	-7475	.
Exports to EU-27 (fob), cumulated	EUR mn	77258	83776	87967	5869	11883	18468	24546	30541	36796	43039	48829	56042	63524	70122	.
Imports from EU-27 (cif)[6], cumulated	EUR mn	74303	80510	84897	4672	9559	15109	20346	25468	31009	36458	41416	47356	53364	58972	.
Trade balance with EU-27, cumulated	EUR mn	2955	3266	3070	1197	2323	3359	4201	5074	5787	6580	7413	8687	10160	11151	.
FOREIGN FINANCE																
Current account, cumulated	EUR mn	-15121	-16553	-18293	-754	36	-95	-546	-951	-1183	-2016	-2123	-2431	-2697	-3969	.
EXCHANGE RATE																
PLN/USD, monthly average	nominal	2.698	2.921	2.971	3.172	3.631	3.541	3.348	3.234	3.215	3.060	2.896	2.859	2.847	2.799	2.835
PLN/EUR, monthly average	nominal	3.586	3.721	4.018	4.218	4.644	4.624	4.419	4.411	4.508	4.305	4.131	4.163	4.217	4.173	4.143
USD/PLN, calculated with CPI[7]	real, Jan04=100	134.9	127.3	126.4	118.4	103.7	106.9	113.5	117.8	117.8	124.0	130.2	131.7	132.3	134.8	133.4
USD/PLN, calculated with PPI[7]	real, Jan04=100	118.9	115.5	116.8	111.7	101.2	104.5	108.9	111.3	110.8	115.6	119.9	121.6	121.9	122.1	120.3
EUR/PLN, calculated with CPI[7]	real, Jan04=100	132.2	128.1	118.7	114.3	104.2	105.1	110.3	110.9	108.5	114.2	118.2	117.3	115.7	117.0	117.7
EUR/PLN, calculated with PPI[7]	real, Jan04=100	121.9	119.2	111.7	109.3	102.1	103.0	107.8	107.7	105.9	109.9	113.6	112.8	111.2	111.6	.
DOMESTIC FINANCE																
Currency in circulation, end of period	PLN bn	90.7	90.1	90.8	88.6	90.8	91.1	92.3	92.1	92.3	91.5	91.0	89.7	89.4	88.2	89.8
M1, end of period[8]	PLN bn	345.5	344.9	349.9	341.3	347.6	356.9	352.0	359.9	370.6	363.7	371.1	372.8	378.6	381.5	388.9
Broad money, end of period[8]	PLN bn	635.7	648.3	666.2	668.9	680.9	683.7	680.0	685.4	693.7	689.4	685.4	691.3	711.2	699.9	720.3
Broad money, end of period	CMPY	17.3	18.1	18.6	17.6	17.8	17.5	14.4	14.2	14.4	11.9	9.0	9.6	11.9	8.0	8.1
Discount rate (p.a.), end of period	%	6.3	6.0	5.3	4.5	4.0	4.0	4.0	4.0	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Discount rate (p.a.), end of period[9]	real, %	3.6	3.5	2.6	0.9	-1.6	-1.4	-0.8	0.3	-0.3	0.9	1.5	2.1	1.7	1.8	1.6
BUDGET																
Central gov.budget balance, cum.	PLN mn	-11485	-14973	-24591	2918	-5251	-11220	-15306	-16357	-16629	-15037	-15656	-21344	-23919	-24342	.

1) Enterprises employing 10 and more persons.
2) From January 2009 according to NACE rev. 2.
3) Ratio of unemployed to the economically active.
4) Based on cumulated national currency and converted with the average exchange rate.
5) Cumulation starting January and ending December each year.
6) According to country of origin.
7) Adjusted for domestic and foreign (US resp. EU) inflation. Values more than 100 mean real appreciation.
8) According to ECB methodology.
9) Deflated with annual PPI.

R O M A N I A: Selected monthly data on the economic situation 2008 to 2009

(updated end of Jan 2010)

		2008 Oct	Nov	Dec	2009 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PRODUCTION																
Industry, total[1)2)]	real, CMPY	-2.8	-11.5	-18.0	-16.4	-14.5	-8.5	-10.0	-10.0	-4.5	-4.1	-5.7	-3.4	-2.7	5.3	.
Industry, total[1)2)]	real, CCPY	4.0	2.5	0.9	-16.4	-15.4	-13.0	-12.3	-11.8	-10.5	-9.6	-9.2	-8.5	-7.9	-6.4	.
Industry, total[1)]	real, 3MMA	-3.6	-10.4	-15.3	-16.3	-13.1	-11.0	-9.5	-8.2	-6.2	-4.8	-4.4	-3.9	-0.3	.	.
Construction, total[2)]	real, CMPY	16.7	15.8	17.9	14.0	6.4	-6.1	-16.0	-24.9	-4.4	-17.1	-24.6	-22.5	-26.2	-23.9	.
LABOUR																
Employees total[1)2)]	th. persons	4825.1	4791.2	4738.6	4736.7	4692.3	4654.4	4623.9	4589.7	4556.7	4519.5	4480.7	4448.9	4408.9	4364.9	.
Employees in industry[1)2)]	th. persons	1497.3	1477.4	1449.2	1379.6	1353.6	1331.3	1307.0	1285.6	1270.6	1255.6	1238.5	1224.7	1207.1	1197.1	.
Unemployment, end of period	th. persons	364.2	377.0	403.4	444.9	477.9	513.6	517.7	526.8	548.9	572.6	601.7	625.1	653.9	683.1	700.0
Unemployment rate[3)]	%	4.0	4.1	4.4	4.9	5.2	5.6	5.7	5.8	6.0	6.3	6.6	6.8	7.1	7.5	7.6
Labour productivity, industry[1)2)]	CCPY	7.7	6.4	4.8	-7.1	-5.2	-1.4	0.4	1.8	4.0	5.7	6.7	8.0	9.1	10.8	.
Unit labour costs, exch.r. adj.(EUR)[1)2)]	CCPY	2.5	3.6	4.9	10.0	6.0	2.0	-1.5	-3.4	-5.9	-8.0	-9.4	-10.9	-11.7	-13.1	.
WAGES, SALARIES																
Total economy, gross[1)2)]	RON	1795.0	1844.0	2023.0	1839.0	1836.0	1922.0	1930.0	1855.0	1887.0	1901.0	1845.0	1860.0	1881.0	1866.0	.
Total economy, gross[1)2)]	real, CMPY	13.6	13.5	10.0	5.3	11.3	11.0	3.5	2.8	2.6	2.3	1.7	1.2	0.5	-3.3	.
Total economy, gross[1)2)]	EUR	479	488	517	434	429	449	460	445	448	451	437	439	439	435	.
Industry, gross[1)2)]	EUR	437	434	472	382	374	394	423	409	414	432	419	425	419	419	.
PRICES																
Consumer	PM	1.1	0.3	0.2	1.2	0.9	0.5	0.3	0.0	0.2	-0.1	-0.2	0.4	0.4	0.7	0.3
Consumer	CMPY	7.4	6.7	6.3	6.7	6.9	6.7	6.4	5.9	5.9	5.1	5.0	4.9	4.3	4.7	4.7
Consumer	CCPY	8.1	8.0	7.8	6.7	6.8	6.8	6.7	6.5	6.4	6.2	6.1	5.9	5.8	5.7	5.6
Producer, in industry[2)]	PM	-0.1	-2.5	-1.9	1.9	0.6	-0.6	0.2	0.4	0.6	-0.6	0.7	0.2	0.3	0.6	.
Producer, in industry[2)]	CMPY	16.7	11.7	7.9	7.0	6.2	3.9	2.9	1.3	-0.1	-1.6	-1.1	-1.2	-0.7	2.6	.
Producer, in industry[2)]	CCPY	17.1	16.6	15.8	7.0	6.6	5.7	5.0	4.2	3.5	2.7	2.2	1.8	1.6	1.7	.
FOREIGN TRADE[4)]																
Exports total (fob), cumulated	EUR mn	29199	31769	33725	1923	4018	6608	8768	11066	13621	16414	18601	21213	23946	26688	.
Imports total (cif), cumulated	EUR mn	49368	53715	57240	2606	5548	8783	11850	14926	18222	21547	24479	28202	31838	35384	.
Trade balance, cumulated	EUR mn	-20169	-21946	-23516	-683	-1530	-2175	-3083	-3860	-4601	-5133	-5878	-6989	-7892	-8696	.
Exports to EU-27 (fob), cumulated	EUR mn	20573	22418	23765	1491	3089	4970	6549	8276	10156	12220	13725	15729	17853	19930	.
Imports from EU-27 (cif)[5)], cumulated	EUR mn	34241	37310	39838	1935	4106	6528	8757	11022	13497	15887	17918	20655	23392	25992	.
Trade balance with EU-27, cumulated	EUR mn	-13668	-14892	-16073	-445	-1017	-1558	-2208	-2745	-3341	-3667	-4193	-4926	-5539	-6062	.
FOREIGN FINANCE																
Current account, cumulated	EUR mn	-14205	-15299	-16157	-450	-444	-867	-1414	-1904	-2335	-2620	-2551	-3171	-3953	-4681	.
EXCHANGE RATE																
RON/USD, monthly average	nominal	2.813	2.963	2.903	3.200	3.348	3.285	3.178	3.055	3.003	2.994	2.958	2.911	2.890	2.874	2.895
RON/EUR, monthly average	nominal	3.745	3.775	3.915	4.233	4.284	4.282	4.195	4.169	4.213	4.217	4.219	4.239	4.285	4.288	4.225
USD/RON, calculated with CPI[6)]	real, Jan04=100	137.4	133.3	138.0	126.1	120.8	123.5	127.6	132.4	133.9	134.3	135.4	138.0	139.5	141.1	140.8
USD/RON, calculated with PPI[6)]	real, Jan04=100	151.5	147.9	153.3	141.4	137.4	140.2	144.4	149.3	150.0	150.8	151.6	154.8	155.6	155.7	.
EUR/RON, calculated with CPI[6)]	real, Jan04=100	134.3	134.2	129.9	122.4	121.4	121.6	124.0	124.6	123.3	123.7	123.0	122.9	121.8	122.4	124.4
EUR/RON, calculated with PPI[6)]	real, Jan04=100	155.1	152.7	146.9	139.1	138.5	138.5	142.9	144.4	143.4	143.3	143.6	143.6	141.9	142.2	.
DOMESTIC FINANCE																
Currency in circulation, end of period[7)]	RON mn	24457	25230	25287	24943	24822	23944	24389	24154	24221	24465	24408	23879	23705	23760	.
M1, end of period[7)]	RON mn	91710	92401	92549	87919	84835	81456	80477	79861	81705	81459	82798	80579	78205	78641	.
Broad money, end of period[7)]	RON mn	162523	164727	174028	176104	176205	175288	176366	177305	180326	181384	183963	183819	183992	185696	.
Broad money, end of period	CMPY	26.1	21.0	17.5	19.4	17.7	15.4	12.3	12.5	11.7	12.5	13.3	10.7	13.2	12.7	.
Discount rate (p.a.), end of period[9)]	%	10.3	10.3	10.3	10.3	10.3	10.1	10.1	10.0	9.7	9.5	9.0	8.5	8.5	8.0	8.0
Discount rate (p.a.), end of period[8)9)]	real, %	-5.5	-1.3	2.2	3.1	3.8	6.0	6.9	8.6	9.8	11.3	10.2	9.8	9.2	5.2	.
BUDGET																
Central gov.budget balance, cum.	RON mn	-8493	-13742	-19860	338	-4577	-10036	-10559	-12424	-15455	-18359	-21887	-25555	-26595	-30857	.

1) Enterprises with 4 and more employees.
2) From January 2009 according to NACE rev. 2.
3) Ratio of unemployed to economically active population as of December of previous year.
4) Cumulation starting January and ending December each year.
5) According to country of dispatch.
6) Adjusted for domestic and foreign (US resp. EU) inflation. Values more than 100 mean real appreciation.
7) According to ECB methodology.
8) Reference rate of RNB.
9) Deflated with annual PPI.

S L O V A K REPUBLIC: Selected monthly data on the economic situation 2008 to 2009

(updated end of Jan 2010)

		2008 Oct	Nov	Dec	2009 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PRODUCTION																
Industry, total[1]	real, CMPY	0.0	-9.2	-15.1	-26.1	-25.3	-13.2	-21.8	-25.2	-19.0	-22.9	-8.2	-7.9	-6.4	2.8	.
Industry, total[1]	real, CCPY	4.9	3.5	2.1	-26.1	-25.7	-21.5	-21.6	-22.3	-21.8	-21.9	-20.4	-19.0	-17.7	-15.9	.
Industry, total	real, 3MMA	-1.3	-7.7	-16.8	-22.2	-21.5	-20.1	-20.1	-22.0	-22.4	-16.7	-13.0	-7.5	-3.9	.	.
Construction, total[1]	real, CMPY	16.5	14.2	12.7	-25.6	-11.0	-5.7	-13.9	-3.9	-0.3	-5.7	-0.2	-16.9	-22.0	-13.5	.
LABOUR																
Employment in industry[1]	th. persons	592.7	584.3	571.6	552.5	536.2	520.0	507.1	495.8	488.4	485.5	484.1	479.9	477.8	478.5	.
Unemployment, end of period	th. persons	228.2	235.2	248.6	269.5	289.6	311.8	325.6	336.9	348.6	355.9	355.0	368.0	369.0	373.4	379.6
Unemployment rate[2]	%	7.5	7.8	8.4	9.0	9.7	10.3	10.9	11.4	11.8	12.1	12.1	12.5	12.4	12.4	12.7
Labour productivity, industry[1]	CCPY	2.6	1.5	0.5	-21.2	-19.3	-13.0	-12.0	-11.8	-10.3	-9.7	-7.4	-5.3	-3.4	-1.1	.
Unit labour costs, exch.r. adj.(EUR)[1]	CCPY	13.2	13.6	14.7	47.1	41.4	29.9	27.5	25.3	21.8	19.7	16.1	13.0	10.2	7.4	.
WAGES, SALARIES																
Industry, gross[1]	EUR-SKK	737	824	780	717	694	725	723	739	775	752	728	743	750	862	.
Industry, gross[1]	real, CMPY	-0.7	-4.3	-0.5	0.7	-0.9	0.4	0.4	-2.6	1.1	-0.8	0.9	1.2	0.5	3.1	.
PRICES																
Consumer	PM	0.4	0.2	-0.2	0.4	0.0	-0.2	-0.1	0.1	0.2	0.0	-0.1	0.0	0.1	0.3	-0.1
Consumer	CMPY	5.1	4.9	4.4	3.4	3.0	2.5	2.1	1.9	1.8	1.7	1.3	0.6	0.4	0.4	0.5
Consumer	CCPY	4.6	4.6	4.6	3.4	3.2	3.0	2.8	2.6	2.5	2.4	2.2	2.0	1.9	1.7	1.6
Producer, in industry[1]	PM	0.9	-0.2	-0.6	-1.7	0.9	-1.2	-0.6	-0.7	0.0	-0.4	0.0	-0.1	-0.1	0.6	-0.2
Producer, in industry[1]	CMPY	7.5	6.7	6.0	-4.5	-4.8	-6.0	-6.5	-8.2	-7.6	-8.2	-7.9	-7.7	-8.2	-5.3	-3.6
Producer, in industry[1]	CCPY	6.1	6.1	6.1	-4.5	-4.7	-5.1	-5.4	-6.0	-6.3	-6.6	-6.7	-6.8	-6.9	-6.8	-6.6
FOREIGN TRADE[3)4)]																
Exports total (fob),cumulated	EUR mn	40885	44749	47690	2734	5638	8976	12300	15319	18600	21651	24781	28499	32607	36602	.
Imports total (fob),cumulated	EUR mn	41065	45124	48419	2987	5863	9187	12190	15061	18328	21359	24258	27719	31474	35209	.
Trade balance,cumulated	EUR mn	-179	-375	-730	-253	-225	-211	110	258	272	292	523	781	1133	1393	.
Exports to EU-27 (fob), cumulated	EUR mn	33419	36764	39216	2425	4929	7857	10578	13117	15857	18397	21049	24252	27818	.	.
Imports from EU-27 (fob)[5)], cumulated	EUR mn	26770	29442	31590	2008	4000	6171	8172	10127	12321	14341	16303	18624	21216	.	.
Trade balance with EU-27, cumulated	EUR mn	6649	7322	7627	418	929	1687	2405	2990	3535	4057	4746	5628	6602	.	.
FOREIGN FINANCE																
Current account, cumulated[3]	EUR mn	-3262	-3564	-4227	-298	-424	-576	-475	-701	-948	-1251	-1126	-1266	-1298	-1358	.
EXCHANGE RATE																
EUR-SKK/USD, monthly average	nominal	0.7561	0.7921	0.7520	0.7553	0.7822	0.7663	0.7581	0.7326	0.7135	0.7098	0.7009	0.6867	0.6750	0.6705	0.6843
EUR-SKK/EUR, monthly average	nominal	1.0109	1.0088	1.0026	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
USD/EUR-SKK, calculated with CPI[6]	real, Jan04=100	143.2	139.6	148.4	147.6	141.7	144.0	145.0	149.8	152.9	153.8	155.3	158.3	161.1	162.5	159.4
USD/EUR-SKK, calculated with PPI[6]	real, Jan04=100	136.9	137.6	148.9	145.5	143.3	145.6	145.4	147.9	149.0	150.4	150.2	153.6	155.4	155.6	152.2
EUR/EUR-SKK, calculated with CPI[6]	real, Jan04=100	139.5	140.5	141.4	143.2	142.4	141.7	141.0	140.9	140.9	141.6	141.0	141.0	140.8	141.0	140.6
EUR/EUR-SKK, calculated with PPI[6]	real, Jan04=100	139.6	142.1	144.5	143.0	144.6	143.6	144.0	143.0	142.6	142.9	142.2	142.5	141.8	142.3	.
DOMESTIC FINANCE																
Currency in circulation, end of period[7]	EUR-SKK mn	4122	3695	1600	6250	6303	6485	6586	6635	6645	6724	6690	6665	6697	6770	.
M1, end of period[7]	EUR-SKK mn	19186	19102	19116	22625	22432	22677	22617	23304	23495	23326	22926	23121	22883	23570	.
Broad money, end of period[7]	EUR-SKK mn	36285	36674	37684	40343	39911	39522	39338	39631	38668	38295	38245	37795	37558	37871	.
Broad money, end of period	CMPY	5.1	6.1	4.9	12.3	10.0	9.8	8.6	7.7	6.4	4.4	3.5	3.0	3.5	3.3	.
Discount rate (p.a.),end of period[8]	%	3.8	3.3	2.5	2.0	2.0	1.5	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Discount rate (p.a.),end of period[8)9)]	real, %	-3.5	-3.2	-3.3	6.8	7.1	8.0	8.3	10.0	9.3	10.0	9.7	9.4	10.0	6.7	4.8
BUDGET																
Central gov.budget balance, cum.	EUR-SKK mn	262	318	-704	100	-185	-205	-347	-832	-1108	-914	-1206	-1360	-1537	-1576	.

Note: Slovakia has introduced the Euro from 1 January 2009. For statistical purposes all time series in SKK as well as the exchange rates have been divided by the conversion factor 30.126 (SKK per EUR) to EUR-SKK.

1) From January 2009 according to NACE rev. 2. Employment and wages data including water supply.
2) Ratio of disposable number of registered unemployment calculated to the economically active population as of previous year.
3) Based on cumulated national currency and converted with the average exchange rate. From 2009 original data in EUR.
4) Cumulation starting January and ending December each year.
5) According to country of origin.
6) Adjusted for domestic and foreign (US resp. EU) inflation. Values more than 100 mean real appreciation.
7) According to ECB methodology. Data from January 2009 refer to Slovakia's contributions to EMU monetary aggregates.
8) Corresponding to the 2-week limit rate of NBS. From January 2009 ECB official refinancing operation rate.
9) Deflated with annual PPI.

S L O V E N I A: Selected monthly data on the economic situation 2008 to 2009

(updated end of Jan 2010)

		2008 Oct	Nov	Dec	2009 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PRODUCTION																
Industry, total[1]	real, CMPY	-2.8	-13.9	-14.3	-17.9	-21.7	-16.5	-29.3	-22.0	-21.3	-20.1	-16.9	-16.4	-18.8	-0.3	.
Industry, total[1]	real, CCPY	0.9	-0.5	-1.5	-17.9	-19.8	-18.7	-21.5	-21.6	-21.5	-21.3	-20.9	-20.3	-20.2	-18.7	.
Industry, total	real, 3MMA	-3.9	-10.0	-15.4	-18.0	-18.7	-22.5	-22.6	-24.2	-21.1	-19.4	-17.8	-17.4	-11.8	.	.
Construction, total[1)2)]	real, CMPY	10.7	-3.6	-4.1	-26.9	-22.7	-9.7	-20.4	-20.8	-15.9	-20.8	-19.5	-32.0	-28.3	-18.1	.
LABOUR																
Employment total	th. persons	888.1	886.9	880.3	872.2	868.7	866.0	863.2	860.8	859.1	855.6	853.5	853.8	850.4	850.0	.
Employees in industry[1]	th. persons	235.0	233.5	229.9	215.6	213.5	210.9	207.6	205.2	203.2	201.5	200.3	199.6	196.2	.	.
Unemployment, end of period	th. persons	62.6	63.4	66.2	73.9	77.2	79.7	82.8	84.5	86.5	88.5	88.1	88.4	94.6	95.4	.
Unemployment rate[3]	%	6.6	6.7	7.0	7.8	8.2	8.4	8.8	8.9	9.1	9.4	9.4	9.4	10.0	10.1	10.5
Labour productivity, industry[1]	CCPY	1.1	-0.1	-0.9	-13.3	-14.9	-13.2	-15.6	-15.1	-14.5	-13.9	-13.1	-12.2	-11.6	.	.
Unit labour costs, exch.r. adj.(EUR)[1]	CCPY	7.8	8.1	8.8	16.5	18.1	16.0	19.1	18.2	17.6	16.8	15.6	14.7	14.0	.	.
WAGES, SALARIES																
Total economy, gross	EUR	1424	1550	1458	1416	1382	1425	1423	1415	1429	1424	1415	1434	1448	1571	.
Total economy, gross	real, CMPY	4.1	0.8	6.3	5.1	2.1	3.5	3.9	3.3	4.4	4.4	0.7	2.5	1.7	-0.3	.
Industry, gross[1]	EUR	1284	1394	1276	1205	1165	1218	1207	1195	1231	1236	1223	1252	1280	.	.
PRICES																
Consumer	PM	0.0	-0.7	-0.6	-0.4	0.5	1.0	0.1	0.6	0.5	-0.9	0.0	-0.2	0.1	0.9	-0.5
Consumer	CMPY	4.9	3.1	2.1	1.6	2.1	1.8	1.1	0.7	0.3	-0.6	0.0	-0.1	0.0	1.6	1.8
Consumer	CCPY	6.3	6.0	5.7	1.6	1.8	1.8	1.6	1.5	1.3	1.0	0.9	0.8	0.7	0.8	0.8
Producer, in industry[1]	PM	-0.3	-0.7	-0.4	-0.4	0.2	0.0	0.0	-0.7	0.3	-0.2	-0.1	0.3	0.2	-0.1	.
Producer, in industry[1]	CMPY	4.8	3.6	3.1	2.3	1.2	0.8	0.2	-0.7	-0.7	-1.3	-1.7	-1.6	-1.4	-1.1	.
Producer, in industry[1]	CCPY	6.1	5.9	5.6	2.3	1.8	1.4	1.1	0.8	0.5	0.3	0.0	-0.2	-0.3	-0.4	.
FOREIGN TRADE[4)5)]																
Exports total (fob), cumulated	EUR mn	17109	18620	19808	1204	2488	3904	5203	6525	7945	9336	10396	11879	13373	14832	.
Imports total (cif), cumulated	EUR mn	19785	21522	23046	1270	2620	4140	5527	6879	8271	9732	10972	12486	14015	15555	.
Trade balance total, cumulated	EUR mn	-2677	-2902	-3238	-65	-132	-235	-324	-355	-326	-396	-576	-607	-643	-723	.
Exports to EU-27 (fob), cumulated	EUR mn	11845	12891	13675	888	1797	2785	3668	4598	5598	6551	7262	8317	9367	10401	.
Imports from EU-27 (cif)[6], cumulated	EUR mn	15478	16809	17941	969	1998	3168	4232	5279	6388	7554	8541	9748	10984	12186	.
Trade balance with EU-27, cumulated	EUR mn	-3632	-3918	-4266	-81	-201	-383	-564	-681	-790	-1003	-1279	-1431	-1617	-1785	.
FOREIGN FINANCE																
Current account, cumulated	EUR mn	-1789	-1953	-2287	-47	-161	-223	-203	-141	-50	-76	-171	-134	-148	-114	.
EXCHANGE RATE[7]																
EUR/USD, monthly average[8]	nominal	0.7506	0.7854	0.7435	0.7553	0.7822	0.7663	0.7582	0.7326	0.7135	0.7098	0.7009	0.6867	0.6749	0.6705	0.6843
USD/EUR, calculated with CPI[9]	real, Jan04=100	105.8	102.3	108.6	106.0	102.2	105.2	106.1	110.1	112.7	112.4	113.6	115.6	117.6	119.4	116.6
USD/EUR, calculated with PPI[9]	real, Jan04=100	95.6	95.7	104.2	101.9	99.7	102.5	103.0	104.8	105.9	107.1	106.9	109.7	111.3	110.7	.
EUR/EUR, calculated with CPI[9]	real, Jan04=100	103.4	103.0	102.6	102.8	102.8	103.4	103.2	103.6	103.9	103.5	103.2	102.9	102.8	103.6	102.9
EUR/EUR, calculated with PPI[9]	real, Jan04=100	97.8	98.9	100.1	100.2	100.6	101.1	102.0	101.3	101.3	101.7	101.2	101.8	101.5	101.2	.
DOMESTIC FINANCE																
Currency in circulation, end of period[10]	EUR mn	2898	2932	2995	3043	3061	3075	3102	3136	3131	3166	3147	3151	3172	3182	.
M1, end of period[10]	EUR mn	6880	6888	6886	6716	6712	6838	6839	7184	7419	7135	7279	7340	7224	7330	.
Broad money, end of period[10]	EUR mn	16836	17472	18065	18103	17949	18401	18161	18606	18652	18244	18237	18241	18077	18115	.
Broad money, end of period	CMPY	0.9	9.9	8.9	9.3	9.3	11.8	10.1	13.6	12.4	9.3	9.4	6.9	7.4	3.7	.
Discount rate (p.a.),end of period[11]	%	3.8	3.3	2.5	2.0	2.0	1.5	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Discount rate (p.a.),end of period[12]	real, %	-1.0	-0.3	-0.6	-0.3	0.8	0.7	1.0	1.7	1.7	2.3	2.7	2.6	2.4	2.1	.
BUDGET																
General gov.budget balance, cum.	EUR mn	473	325	-103	3	-337	-594	-650	-1026	-1116	-1081	-1162	-1324	-1485	.	.

1) From January 2009 according to NACE rev. 2.
2) Effective working hours, construction put in place of enterprises with 20 and more persons employed.
3) Ratio of unemployed to the economically active.
4) Based on cumulated national currency and converted with the average exchange rate.
5) Cumulation starting January and ending December each year.
6) According to country of dispatch.
7) Slovenia has introduced the Euro from 1 January 2007.
8) Reference rate from ECB.
9) Adjusted for domestic and foreign (US resp. EU) inflation. Values more than 100 mean real appreciation.
10) According to ECB methodology.
11) From January 2007 ECB official refinancing operation rate.
12) Deflated with annual PPI.

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