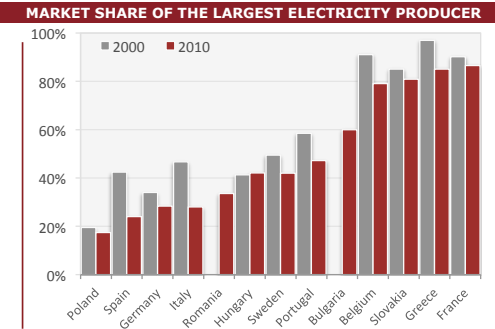
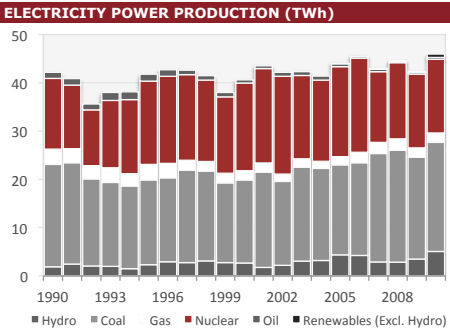
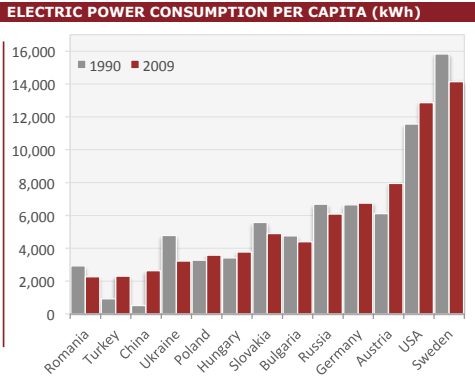
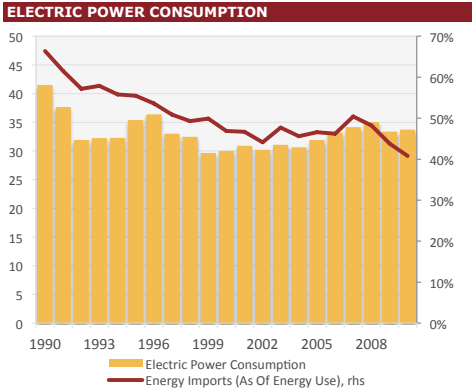
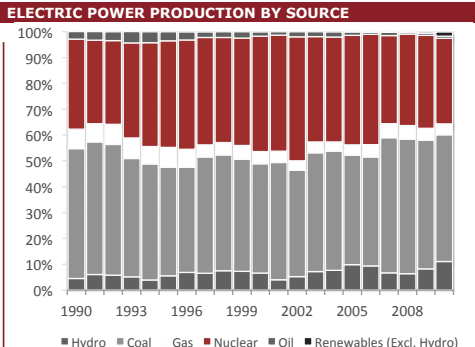
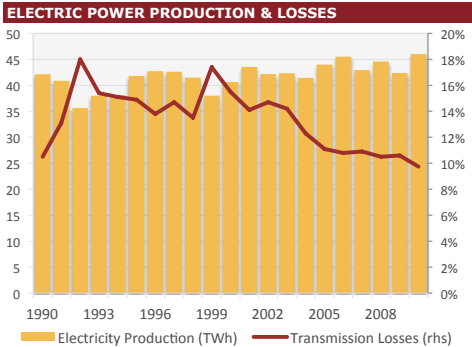
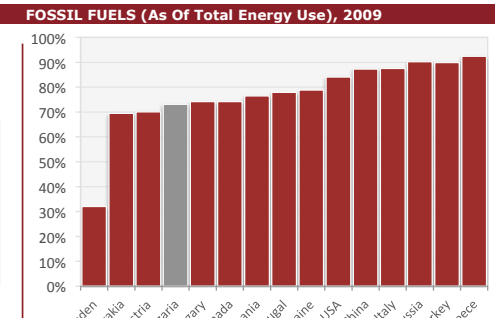
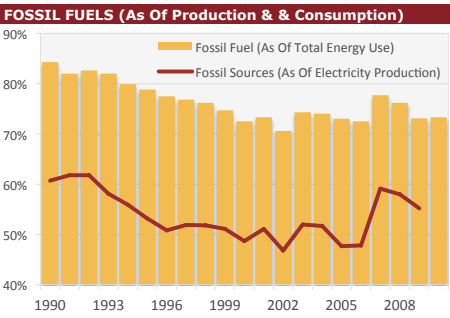


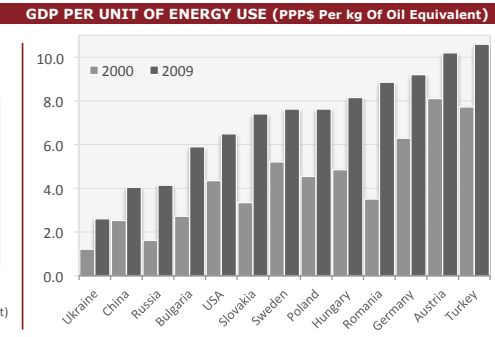
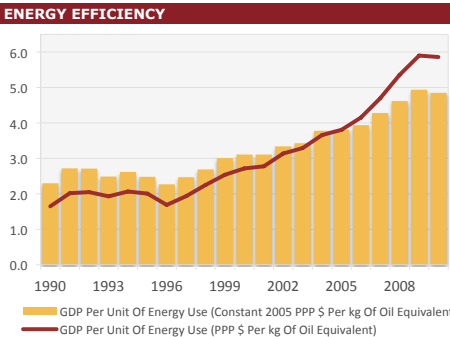
BULGARIAN ENERGY AT A GLANCE					
Electric Power Production (GWh)	42,141	41,789	40,646	43,972	46,017
Electric Power Consumption (GWh)	41,488	35,399	30,014	31,901	33,727
Electric Power Consumption Per Capita (kWh)	4,758	4,209	3,674	4,122	4,479
Energy Imports (As Of Energy Use)	66%	56%	47%	47%	41%
Electricity Production From Coal Sources (As Of Total)	50%	42%	42%	42%	49%
Electricity Production From Nuclear Sources (As Of Total)	35%	41%	45%	42%	33%
Electricity Production From Hydro Sources (As % Of Total)	4.5%	5.5%	6.6%	9.9%	11.0%
Electricity Production From Natural Gas (As Of Total)	7.6%	7.7%	4.7%	3.9%	4.3%
Electricity Production From Renewables (As Of Total)	4.5%	5.5%	6.6%	9.9%	12.6%
Fossil Fuel Consumption (As Of Total)	84%	79%	73%	73%	73%
CO2 Emissions (kt)	75,764	58,005	43,531	47,909	
CO2 Emissions Per Capita (metric kg)	8,689	6,897	5,328	6,190	
Total Gas Consumption (mil cubic metres)	8,510.9	7,358	6,809	6,735	2,706



Although Bulgaria is not very rich in natural fuels such as coal, oil and gas, it has a very well-developed energy sector which is of crucial importance for the Balkans and the whole of South-Eastern Europe. The country's strategic geographical location makes it a major hub for the transit and distribution of oil and gas from Russia to Western Europe and other Balkan states. Bulgaria is a major producer and exporter of electricity in the region (4th largest producer per capita in Eastern Europe), with a large part of its electricity produced from nuclear sources (around 35%).



Bulgaria has extensive deposits of coal but these are mostly lignite. Fossil sources, and coal in particular, still dominate Bulgarian electricity production, though their share has dropped by roughly 13% to around 70% in the last 20 years. When the whole energy picture is taken into consideration, the Bulgarian economy still remains very heavily dependent on fossil sources, with about 74% of energy consumption coming from very old animals and plants.

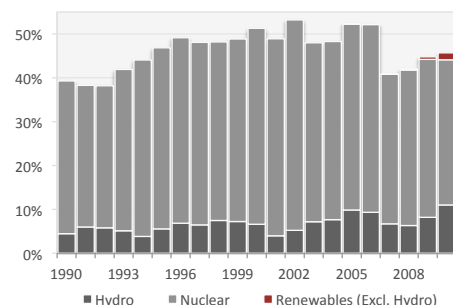


Bulgaria consistently ranks as the most energy-intensive economy in the European Union, in spite of the impressive improvement seen in the last decade. Apart from the possible underestimation of the official GDP figures (because of the large part played by the grey economy), the large share of energy-intensive industries such as metallurgy or the energy sector is to blame.

Source: World Bank, National Statistical Office, United Nations, OECD, EIA, Helgi Analytics calculation

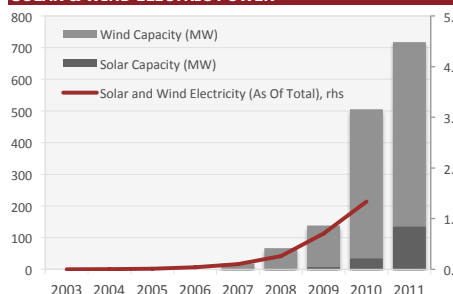
Source: World Bank, National Statistical Office, United Nations, OECD, EIA, Helgi Analytics calculation

ELECTRICITY PRODUCTION FROM RENEWABLES



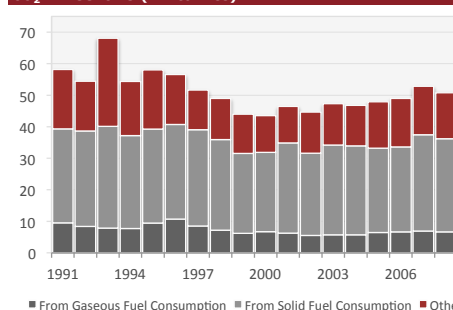
The Kozloduy Nuclear Power Plant (with 2 reactors online out of a total of six installed) provides around 35% of electricity generation in Bulgaria and partly balances the country's heavy dependence on fossil fuel and coal in particular. Apart from that, however, hydro sources are rather limited and other renewable resources are relatively little used in Bulgaria. A number of wind and hydro energy projects are under construction/in the pipeline, so the overall picture might improve in the coming years.

SOLAR & WIND ELECTRIC POWER



Bulgaria has a high potential for solar photovoltaic energy uptake as annual mean radiation reaches 4.2 kWh/sqm a day. However, the solar energy formed less than 0.1% of the total capacity installed at the end of 2011. Wind energy is currently more popular, with some 582 MW of capacity installed by the end of 2011. Similarly to the Czech Republic, for example, Bulgaria cut subsidies for solar and wind electricity massively in the middle of 2012 (by up to 54% and 22% respectively) to tackle rising electricity prices, so future investments in these areas will probably slow down.

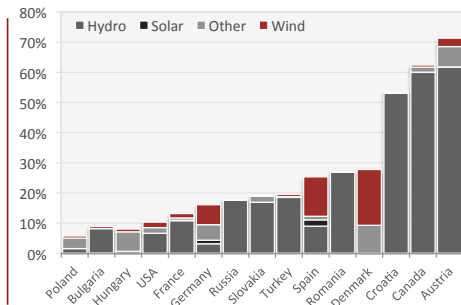
CO₂ EMISSIONS (mil tonnes)



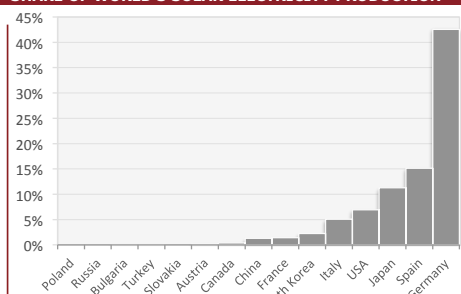
Thanks mainly to the relatively large share of industry and energy in the economy as a whole, Bulgaria generates relatively large CO₂ emissions. Compared to Romania, for example, which has a bigger proportion of clean energy and a smaller share of industry and energy in its total economic output, Bulgaria produces 50% more emissions per capita. On a positive note, Bulgarians have reduced their total CO₂ emissions by 35% since 1990.

Source: World Bank, National Statistical Office, United Nations, OECD, EIA, Helgi Analytics calculation

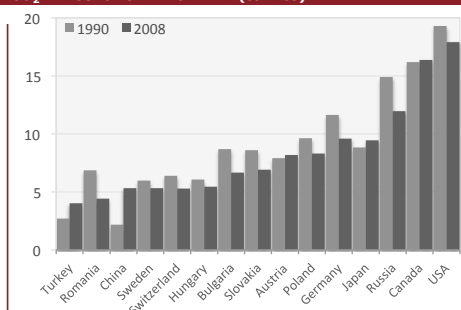
ELECTRICITY FROM RENEWABLES (Excluding Nuclear), 2009



SHARE OF WORLD'S SOLAR ELECTRICITY PRODUCTION



CO₂ EMISSIONS PER CAPITA (tonnes)



POPULATION		2003	2004	2005	2006	2007	2008	2009	2010	2011
Population	mil	7.82	7.78	7.74	7.70	7.66	7.62	7.59	7.53	7.48
Population (As % Of World Population)	%	0.12%	0.12%	0.12%	0.12%	0.12%	0.11%	0.11%	0.11%	0.11%
Persons Per Household	persons	2.70	2.70	2.69	2.68	2.67	2.64	2.62	2.65	2.62
Share Of Population (0-14 Years Of Age)	%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Share Of Population (15-64 Years Of Age)	%	69%	69%	69%	69%	69%	69%	69%	69%	68%
Share Of Population (65+ Years Of Age)	%	17%	17%	17%	17%	17%	17%	17%	18%	18%
Median Age	years	40.4	40.6	40.8	41.0	41.1	41.3	41.4	41.6	41.8
Old Age Dependency Ratio	%	25%	25%	25%	25%	25%	25%	25%	26%	26%
Youth Dependency Ratio	%	21%	20%	20%	20%	20%	20%	20%	20%	20%
Life Expectancy, both sexes	years	72.1	72.6	72.6	72.6	72.7	73.0	73.4	73.5	
Life Expectancy At 65, both sexes	years	14.5	14.8	14.7	14.8	15.0	15.3	15.5	15.4	
Total Fertility Rate	children	1.23	1.29	1.32	1.38	1.42	1.48	1.57	1.49	
Urban Population As Of Total	%	70%	70%	70%	71%	71%	72%	72%	73%	73%

ENERGY PRODUCTION & USE	2003	2004	2005	2006	2007	2008	2009	2010	2011
Electric Power Production	GWh	42,328	41,426	43,972	45,502	42,937	44,584	42,381	46,017
Electric Power Production Per Capita	kWh	5,413	5,325	5,681	5,909	5,605	5,851	5,584	6,111
Electric Power Consumption	GWh	31,085	30,650	31,901	33,193	34,130	35,024	33,379	33,727
Electric Power Consumption Per Capita	kWh	3,975	3,940	4,122	4,311	4,456	4,596	4,398	4,479
Electric Power Distribution & Transmission Losses	GWh	6,026	5,092	4,883	4,907	4,692	4,669	4,512	4,480
Electric Power Losses (As Of Output)	%	14%	12%	11%	11%	11%	11%	11%	9.7%
Market Share Of The Largest Electricity Generator	%								
Household Electric Power Consumption	GWh	9,311	8,770	9,046	9,305	9,376	10,027	10,302	10,559
Electricity Consumption Per Household	kWh	3,213	3,039	3,148	3,242	3,271	3,480	3,551	3,714
Energy Production (kt Of Oil Equivalent)	kt	10,195	10,271	10,649	11,037	9,972	10,244	9,826	10,569
Energy Use (kt Of Oil Equivalent)	kt	19,500	18,871	19,946	20,507	20,116	19,791	17,492	17,857
Energy Imports (As Of Energy Use)	%	48%	46%	47%	46%	50%	48%	44%	41%
Energy Use (kg Of Oil Equivalent Per Capita)	kg	292	264	263	254	234	217	203	206
Energy Use Per USD 1,000 Of GDP (2005 PPP)	kg	292	264	263	254	234	217	203	206
Fossil Fuel Consumption (As Of Total)	%	74%	74%	73%	73%	78%	76%	73%	73%
CO ₂ Emissions	kt	47,308	46,787	47,909	48,943	52,812	50,792	42,805	
CO ₂ Emissions Per Capita	kg	6,050	6,014	6,190	6,356	6,895	6,666	5,640	
CO ₂ Emissions (kg Per PPP USD Of GDP)	kg	0.74	0.68	0.63	0.57	0.56	0.48	0.41	
CO ₂ Emissions From Electricity And Heat Production	mil tonnes	29.0	28.2	28.1	28.3	31.6	31.6	28.6	30.2
CO ₂ Emissions From Gaseous Fuel Consumption	kt	5,728	5,710	6,421	6,645	6,894	6,674	4,950	
CO ₂ From Gaseous Fuel Consumption (As Of Total)	%	12%	12%	13%	14%	13%	13%	12%	
CO ₂ Emissions From Solid Fuel Consumption	kt	28,489	28,229	26,754	26,960	30,594	29,549	24,939	
CO ₂ From Solid Fuel Consumption (As Of Total)	%	60%	60%	56%	55%	58%	58%	58%	
CO ₂ Emissions From Manufacturing & Construction	mil tonnes	8.5	8.4	8.3	8.5	8.9	7.4	4.1	4.3
CO ₂ Emissions From Transport	mil tonnes	6.3	6.8	7.5	8.1	7.9	8.2	7.9	7.7
CO ₂ Emissions (As Of Total Worldwide Emissions)	%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Total Gas Consumption (cubic metres)	bil	6,737	6,611	6,735	6,984	4,178	4,003	2,582	2,706
Gas Consumption Per Capita (cubic metres)	'000	862	850	870	907	545	525	340	359

ENERGY DEPENDANCE & ALTERNATIVES	2003	2004	2005	2006	2007	2008	2009	2010	2011
Energy Dependence (Hard Coal & Derivatives)	%	97%	107%	95%	93%	99%	114%	94%	
Energy Dependence (Petroleum Products)	%	97%	98%	102%	99%	100%	99%	101%	
Energy Dependence (Natural Gas)	%	94%	96%	88%	90%	92%	96%	99%	
Comb. Renewables & Waste (Of Oil Equivalent)	metric tons	709	738	750	803	746	759	750	913
Comb. Renewables & Waste (As Of Total Energy)	%	3.6%	3.9%	3.8%	3.9%	3.7%	3.8%	4.3%	5.1%
Renewable Internal FreshWater Withdrawal Per Cap.	cubic metres					2,742			2,809
Biofuels Production (Barrels)	'000/day								
Biofuels Production (As Of Worldwide Production)	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Biofuels Production (Tonnes Of Oil Equivalent)	'000 tonnes	0	0	0	0	0	0	0	0
Electricity Production (As Of Worldwide Production)	%	0.25%	0.24%	0.24%	0.24%	0.22%	0.22%	0.21%	0.21%
Solar Capacity (Cum. Installed Photovoltaic Power)	MW	0	0	0	0	0	1	7	35
Solar Capacity (As Of Worldwide Total)	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.03%	0.09%
Wind Capacity (Cum. Installed Wind Capacity)	MW	-	-	0	0	18	66	131	470
Wind Capacity (As Of Worldwide Total)	%			0.00%	0.00%	0.02%	0.05%	0.08%	0.24%
Geothermal Capacity (Cum. Installed Capacity)	MW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Geothermal Capacity (As Of Worldwide Total)	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Source: World Bank, National Statistical Office, United Nations, OECD, EIA, Helgi Analytics calculation. For more details, description and explanation of particular indicators, please, visit www.helgilibrary.com

ELECTRICITY PRODUCTION BY SOURCE		2003	2004	2005	2006	2007	2008	2009	2010	2011
Electricity From Coal Sources	<i>GWh</i>	19,462	19,107	18,625	19,206	22,463	23,220	21,103	22,606	
Electricity From Coal Sources Per Capita	<i>kWh</i>	2,489	2,456	2,406	2,494	2,933	3,047	2,780	3,002	
Electricity From Coal Sources (As Of Total)	%	46%	46%	42%	42%	52%	52%	50%	49%	
Electricity From Nuclear Sources	<i>GWh</i>	17,280	16,815	18,653	19,493	14,643	15,765	15,256	15,249	
Electricity From Nuclear Sources Per Capita	<i>kWh</i>	2,210	2,161	2,410	2,532	1,912	2,069	2,010	2,025	
Electricity From Nuclear Sources (As Of Total)	%	41%	41%	42%	43%	34%	35%	36%	33%	
Electricity From Hydro Sources	<i>GWh</i>	3,029	3,168	4,337	4,238	2,874	2,824	3,470	5,057	
Electricity From Hydro Sources Per Capita	<i>kWh</i>	387	407	560	550	375	371	457	672	
Electricity From Hydro Sources (As Of Total)	%	7.2%	7.7%	9.9%	9.3%	6.7%	6.3%	8.2%	11.0%	
Electricity From Natural Gas Sources	<i>GWh</i>	1,762	1,494	1,729	2,159	2,336	2,360	1,961	1,967	
Electricity From Natural Gas Sources Per Capita	<i>kWh</i>	225	192	223	280	305	310	258	261	
Electricity From Natural Gas Sources (As Of Total)	%	4.2%	3.6%	3.9%	4.7%	5.4%	5.3%	4.6%	4.3%	
Electricity From Oil Sources	<i>GWh</i>	789	822	606	379	568	277	328	393	
Electricity From Oil Sources Per Capita	<i>kWh</i>	101	106	78.3	49.2	74.2	36.4	43.2	52.2	
Electricity From Oil Sources (As Of Total)	%	1.9%	2.0%	1.4%	0.8%	1.3%	0.6%	0.8%	0.9%	
Electricity From Oil, Gas & Coal Sources	<i>GWh</i>	22,011	21,417	20,975	21,750	25,376	25,859	23,394		
Electricity From Oil, Gas & Coal Per Capita	<i>kWh</i>	2,815	2,753	2,710	2,825	3,313	3,394	3,082		
Electricity From Oil, Gas & Coal (As Of Total)	%	52%	52%	48%	48%	59%	58%	55%		
Electricity From Renewable Sources	<i>GWh</i>	3,029	3,169	4,342	4,258	2,921	2,946	3,718	5,788	
Electricity From Renewable Sources Per Capita	<i>kWh</i>	387	407	561	553	381	387	490	769	
Electricity From Renewables (As Of Total)	%	7.2%	7.6%	9.9%	9.4%	6.8%	6.6%	8.8%	12.6%	
Electricity From Renewables (Excl. Hydro)	<i>GWh</i>	0.0	1.0	5.0	20	47	122	248	731	
Electricity From Renewables (Excl. Hydro) Per Capita	<i>kWh</i>	0.0	0.1	0.6	2.6	6.1	16	33	97	
Electricity From Renewables Excl. Hydro	%	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	0.6%	1.6%	
Electricity From Solar Photovoltaic	<i>GWh</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15	120
Electricity From Solar Photovoltaic Per Capita	<i>kWh</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	16
Electricity From Solar Photovoltaic (As Of Total)	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Electricity From Wind Power	<i>GWh</i>	0.0	1.0	4.7	19	45	116	300	600	
Electricity From Wind Power Per Capita	<i>kWh</i>	0.0	0.1	0.6	2.5	5.8	15	40	80	
Electricity From Wind Power (As Of Total)	%	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	0.7%	1.3%	

MACROECONOMIC ROUND-UP		2003	2004	2005	2006	2007	2008	2009	2010	2011
GDP	<i>USD bil</i>	20.7	25.3	28.9	33.2	42.1	51.8	48.6	47.7	53.5
GDP Growth	%	5.5%	6.7%	6.4%	6.5%	6.4%	6.2%	-5.5%	0.4%	1.7%
GDP Per Capita	<i>USD</i>	2,642	3,249	3,733	4,313	5,498	6,798	6,403	6,335	7,158
Industrial Production Growth	%	13.0%	12.8%	6.9%	6.0%	9.6%	0.6%	-17.4%	1.0%	4.9%
Retail Sales Growth	%									
Government Budget Balance (As % Of GDP)	%	-0.9%	2.2%	3.0%	2.2%	1.5%	0.8%	0.4%	-2.4%	
Public Debt (As % Of GDP)	%	46%	40%	29%	23%	19%	15%	16%	15%	15%
Unemployment Rate	%	13.7%	12.0%	10.1%	9.0%	6.9%	5.6%	6.8%	10.2%	11.2%
Gross Average Monthly Wage	<i>USD</i>	160	188	208	233	304	408	438	457	503
Foreign Debt (As % Of GDP)	%	65%	67%	62%	82%	101%	100%	114%	105%	
Imports (As % Of GDP)	%	59%	63%	56%	79%	79%	79%	56%	59%	66%
Exports (As % Of GDP)	%	49%	52%	41%	61%	60%	58%	48%	57%	67%
Current Account Balance (As % Of GDP)	%	-4.9%	-6.6%	-11.6%	-17.7%	-25.2%	-23.0%	-8.9%	-1.0%	0.9%
Foreign Exchange Reserves (Including Gold)	<i>USD bil</i>	6.8	9.3	8.7	11.8	17.5	17.9	18.5	17.2	17.2
Foreign Exchange Reserves (As % Of Imports)	%	56%	58%	54%	45%	53%	44%	68%	61%	49%
Foreign Direct Investments	<i>USD bil</i>	2.1	2.7	4.1	7.9	13.9	10.3	3.9	1.9	2.6
Foreign Direct Investments (As % Of GDP)	%	10.1%	10.5%	14.2%	23.7%	32.9%	19.9%	8.0%	3.9%	4.8%
Foreign Direct Investments (As % Of CA Deficit)	%	205%	159%	122%	134%	131%	86%	90%	375%	-515%
Workers' Remittances, Received (As % Of GDP)	%	8.3%	6.8%	5.6%	5.2%	4.0%	3.7%	3.3%	2.8%	2.8%
Portfolio Investments (As % Of GDP)	%	-1.0%	-2.1%	-4.5%	1.1%	-2.0%	-2.1%	-1.7%	-1.7%	-0.9%
Development Assistance (As % Of GDP)	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

INFLATION, FOREX & INTEREST RATES		2003	2004	2005	2006	2007	2008	2009	2010	2011
Inflation, CPI (Average)	%	2.2%	6.3%	5.0%	7.3%	8.4%	12.3%	2.5%	3.0%	3.4%
Long-Term Interest Rate (10-Year Gov. Bond Yield)	%	6.5%	5.4%	3.9%	4.2%	4.5%	5.4%	7.2%	6.0%	5.4%
Short-Term Interbank Interest Rate (3-Month)	%	3.7%	3.7%	3.6%	3.7%	4.9%	7.1%	5.7%	4.1%	
Interest Spread To USD, 10-Year Gov. Bond	%	2.4%	1.1%	-0.4%	-0.6%	-0.1%	1.7%	4.0%	2.8%	2.6%
Interest Spread To USD, 3M IBOR	%	2.5%	2.2%	0.1%	-1.5%	-0.4%	3.9%	4.8%	3.6%	-0.4%
FX Rate To USD (Average)	<i>per USD</i>	1.73	1.57	1.57	1.56	1.43	1.34	1.41	1.48	1.41
FX Rate To EUR (Average)	<i>per EUR</i>	1.95	1.95	1.96	1.96	1.96	1.96	1.96	1.96	1.96

Source: World Bank, National Statistical Office, National Central Bank, United Nations, OECD, EIA, Helgi Analytics calculation. For more details, description and explanation of particular indicators, please, visit www.helgilibrary.com

ABOUT HELGI ANALYTICS

Helgi Analytics is a consulting company based in the Czech Republic. The company mainly provides consultancy in the area of financial services and real estate and focuses primarily on the region of Central and Eastern Europe.

Helgi Analytics also runs a web application called Helgi Library, which is a database/library offering data and analyses on more than 95% of the world's economy and population. The Library aims to bring interesting statistical data and analyses to a wide audience under affordable conditions. If you wish to get more details, please visit www.helgilibrary.com or contact us at info@helgianalytics.com.

Helgi Analytics

Eliasova 38, Prague 6

160 00, Czech Republic

www.helgianalytics.com

DISCLAIMER

© 2012, HELGI ANALYTICS LTD. ALL RIGHTS RESERVED. All information contained herein is protected by Copyright Law and no such information may be copied or otherwise reproduced, in whole or in part, in any form or manner, by any Person or Company without Helgi Analytics' prior written consent. All information contained herein is obtained by Helgi Analytics from sources believed by it to be accurate and reliable. Because of the possibility of human and mechanical error, as well as other factors, however, all information contained herein is provided without warranty of any kind. Under no circumstances is Helgi Analytics under any liability to any person or entity for any loss or damage caused by any error, or other circumstance or contingency within or beyond the control of Helgi Analytics or any of its directors, employees, or agents in connection with the procurement, collection, compilation, analysis, interpretation, communication, publication, or delivery of any such information, or any direct or indirect damages whatsoever. The financial reporting, analysis, projections, observations, and other information contained herein are, and must be construed solely as, statements of opinion and not statements of fact or recommendations to purchase, sell, or hold any securities.