# Analysis of Convergence of the Slovak Economy

## Part 1

*Ing. Tibor Lalinský*
*The National Bank of Slovakia*

*By the beginning of 2008 Slovak Republic had met the Maastricht criteria with a margin and fulfilled all prerequisites required for the introduction of euro on 1 January 2009. The medium-term outlook for nominal criteria proves the ability to meet the Maastricht criteria in a sustainable manner, even if we consider the dynamic development of real convergence. The Slovak economy achieved double-digit year-on-year growth in 2007. Its performance came close to 70% and the relative price level exceeded 60% of the EU average. There is still large space to converge, indicating that Slovakia will continue to record a positive inflation differential compared to the EU average after the euro changeover. The first part of this article focuses exclusively on the issues of nominal and real convergence in Slovakia. The second part will be dedicated to a mutual comparison of convergence processes in the new EU member states and evaluates the fulfilment of Maastricht criteria in euro area countries after the introduction of euro.*

### Nominal convergence

Slovakia fulfilled the Maastricht criteria with a significant margin. The general government budget deficit reached a level of 2.2% of GDP,[1] i.e. a value sufficiently below the permitted level of 3% of GDP which is essential for the fulfilment of the fiscal criterion. This achieved level also includes pension reform expenses amounting to 1.3% of GDP. The ratio of public debt to GDP was lower than the reference value for a long time. In recent years it oscillated around the level of 30% of GDP and fell to 29.4% of GDP in 2007.[2] At the time of publishing the convergence reports of the European Central Bank and the European Commission (7 May 2008), Slovakia was not formally complying with the fiscal criterion because in this period it was still subject to the Excessive Deficit Procedure. The European Commission, however, mentioned in its report that the excessive deficit had been eliminated in a reliable and sustainable manner and recommended that the Economic and Financial Affairs Council of the EU (ECOFIN) abrogate the EDP in regard to Slovakia. All Maastricht criteria including fiscal deficit were officially met at the beginning of June 2008, at the time of abrogation of the EDP.

Inflation slowed down considerably in the course of 2007 and year-on-year inflation fell below the reference value. Slovakia has been complying with the inflation criterion since August 2008 when the 12-month average of year-on-year HICP inflation fell to 2.4%, i.e. below the reference value of 2.5%. In December the value of inflation criterion fell to the historically lowest value of 1.9%, although during the successive months, inflation again increased due to a faster growth in energy and food prices. The 12-month year-on-year average inflation increased to 2.2% in March

1 *The general government budget deficit was originally budgeted at the level of 2.9% of GDP. Higher income from taxes, lower interest expenses of debt, non-tax income and a better financial management of the Social insurance company all had a positive impact. On the other hand, an increase in the expenditures of the state budget up to the statutory limit (1%) and a fall in claims against foreign countries. The lower deficit was achieved thanks to a better economic result of public administration (an influence of 0.7% of GDP) and the impact of a higher economic growth (influence of 0.1% of GDP).*

2 *The debt-to-GDP ratio decreased mainly due to a fast year-on-year growth in the GDP and a strengthening of Slovak koruna. Public debt increased year-on-year (from SKK 505.2 billion in 2006 to SKK 543.9 billion in 2007), largely owing to an increase in government debt.*

*Table 1 Fulfilment of Maastricht criteria*

| | | Current value (March 2008) | Reference value | State of fulfilment (March 2008) |
|---|---|---|---|---|
| Fiscal criterion[1)] | Public deficit | 2.2% of GDP | 3% of GDP | YES |
| | Public debt | 29.4% of GDP | 60% of GDP | |
| Inflation rate (HICP) | | 2.2% | 3.2% | YES |
| Long-term interest rate | | 4.5% | 6.5% | YES |
| Nominal exchange rate | | Participation in ERM II since 28. 11. 2005[2)] | Participation in ERM II lasting for two years without major tensions | YES |

*1) The year 2007.*
*2) During the period from the change of parity until the elaboration of convergence reports, the exchange rate oscillated exclusively within the appreciation band up to -9% (towards appreciation).*
*Source: Ministry of Finance SR, NBS, Eurostat, own calculations.*

2008. With respect to the global nature of food and energy prices development, the reference value increased as well. Slovakia met the inflation criterion with a margin amounting to one percentage point. This advantage was maintained in the following months. In June 2008 the value of the 12-month year-on-year average of inflation in SR was still lower than the reference value by approx. one percentage point.

Increasing inflation expectations in the EU in 2007 caused a moderate rise in the average long-term interest rate and a slightly higher growth in the reference value. At the time of our assessment the long-term interest rate in Slovakia was significantly lower than the reference value, following the pattern set in previous years.

The exchange rate of Slovak koruna continued to strengthen in 2007 and reached the historically highest levels. Koruna remained exclusively on the appreciation side of the fluctuation band during the period after the first revaluation. The NBS executed two interventions against koruna's excessive volatility, both shortly after changes in the central parity. At the time of assessment (April 2008), the value of koruna oscillated at the level of approx. 9% above the central parity. In spite of interventions, the exchange rate stability was maintained naturally, without a need to stabilize the rate at the expense of the stability of the rest of economy. Central parity was again revaluated in May 2008 with respect to the continuing appreciation based on a very dynamic and healthy growth of the domestic economy, this time to the bottom level of the band for compulsory interventions.

The value of the new central parity, 1 euro = SKK 30.1260, was declared conversion rate on 8 July 2008.

### The way to the fulfilment of nominal criteria

Preparations for the introduction of euro in Slovakia commenced already before entering the EU and the Strategy of Euro Adoption in Slovakia was approved in 2003. Its main message was that it was favourable for Slovakia to adopt the euro as soon as possible, following the fulfilment of the Maastricht criteria. The initial outlook of a future development presupposed that we would be ready for accessing the euro area in 2008 – 2009. Some uncertainty as to the exact setting of the target date for euro adoption was caused by carrying out reforms and by their impact on the development of public finances. A particularly important milestone was the Eurostat's decision on classification of funded pension scheme. After it had become possible to objectively evaluate the pension reform impact on public finances, Concretization of the Strategy of Adopting the Euro was introduced in 2004, setting 1 January 2009 as the target date.

At the time of entering the European Union, the only criterion Slovakia had fulfilled was the long-term interest rate criterion. The first ECB and EC convergence reports published in October 2004, assessing the new EU member states, also saw the SR in this light. The general government deficit for the year 2003 fell below the reference value after later data revision. The year 2005 was an important milestone on the way to the fulfilment of all criteria within the scheduled period. Slovak koruna entered the ERM II exchange rate mechanism, which represented the fulfilment of a key condition for the exchange rate stability assessment. However, according to official convergence reports published in December 2006, Slovakia continued to fulfil merely the long-term interest rate criterion. Fulfilment of the remaining criteria commenced gradually at the end of 2007 in accordance with the target set beforehand. The 12-month average year-on-year HICP inflation fell below the reference value in August 2007. The requirement of a two-year membership in ERM II was met in November. At the beginning of 2008 preliminary data were published which proved that Slovakia fulfilled the fiscal criterion with a margin, too. ECB and EC convergence reports of

*Table 2 Development in fulfilment of Maastricht criteria*

| Criteria | | (Entry into the EU) May 2004 | (CR) Oct. 2004 | Dec. 2005 | (CR) Dec. 2006 | Dec. 2007 | (CR) May 2008 |
|---|---|---|---|---|---|---|---|
| Fiscal criterion[1] (% of GDP) | Public deficit | 3.5 | 3.7 | 3.3 | 3.1 | 3.7 | 2.2 |
| | Public debt | 42.8 | 42.6 | 43.6 | 34.5 | 30.4 | 29.4 |
| | State of Fulfilment | NO | NO | NO | NO | NO | YES |
| Inflation rate (HICP, %) | | 8.9 | 8.4 | 2.9 | 4.3 | 2.0 | 2.2 |
| | state | NO | NO | NO | NO | YES | YES |
| Long-term interest rate (%) | | 5.1 | 5.1 | 3.6 | 4.3 | 4.5 | 4.5 |
| | state | YES | YES | YES | YES | YES | YES |
| Stability of the exchange rate | | outside ERM II | outside ERM II | participation in ERM II | participation in ERM II | participation in ERM II | participation in ERM II |
| | state | NO | NO | NO | NO | YES | YES |

*1) Data for the preceding calendar year known as at the assessment date.*
*Explanatory note: CR – Convergence reports of the ECB and EC.*
*Note: revised public deficit values are 2.7% of GDP in 2003,2,4% of GDP in 2004,2,8% of GDP in 2005 and 3.6% of GDP in 2006. The public finance debt in 2003 was 42.4% of GDP, falling to 41.4% of GDP in 2004, to 34.2% of GDP in 2005 and to 30.4% of GDP in 2006. Source: Ministry of Finance of the SR, NBS, own calculations.*

May 2008 confirmed the fulfilment of all Maastricht criteria.

In May 2004 the year-on-year inflation in Slovakia was several times higher than the reference value. The end of 2005 was the first time when the 12-month year-on-year HICP inflation average, that is crucial for the analysis of the fulfilment of the price stability criterion, came closer to the reference value.

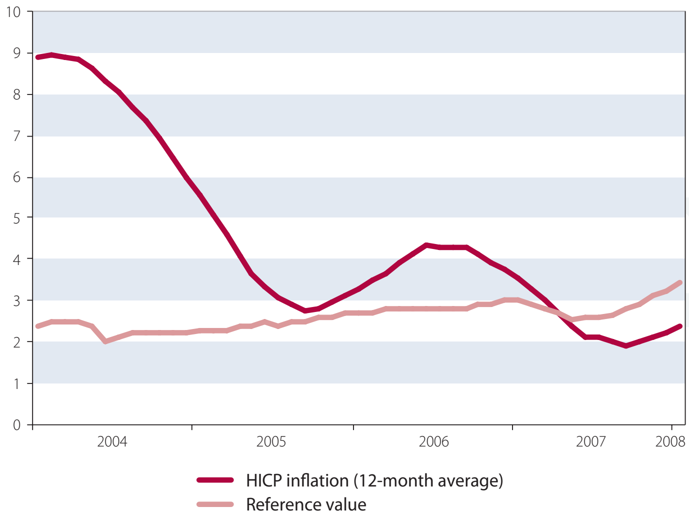
In December 2005 the inflation in the SR exceeded the reference value by only 0.2 percentage point. Due to rising energy prices inflation in Slovakia in 2006 moved away from the reference value. Slovakia began to fulfil the inflation criterion in August 2007.

The nominal exchange rate has been gradually appreciating since Slovakia's entry into the EU, with the exception of the parliamentary election period. Slovak koruna's entry into the exchange rate mechanism (ERM II) on 28 November 2005 was another important milestone in respect of the euro introduction preparations. The original central parity of koruna against the euro was set at the market exchange rate level of 38.4550 EUR/SKK. The period which began with entering the ERM II saw important structural changes carried out in Slovakia. Following healthy macroeconomic policies and a massive inflow of foreign direct investments there was a gradual acceleration of economic growth based on the growth in labour productivity recorded in Slovakia. The differential in growth of labour productivity against the euro area led to a significant appreciation of the equilibrium real exchange rate. With inflation rate being relatively low, this development also had an impact on the nominal exchange rate level. The original central parity no longer reflected the current economic situation. Upon Slovakia's request and following an agreement by the ministers of member states of the euro area together with ministers and governors of the central banks of Denmark, Estonia, Latvia and Lithuania, the central parity of Slovak koruna in ERM II was revaluated to the level of 35.4424 SKK/EUR with effect as of 19 March 2007. However, thanks to the continuous fast and simultaneously healthy economic development, even this level gradually lost its touch with the economic situation. With effect from 29 May 2008 a new central parity of Slovak koruna was set against the euro, at the level of 1 euro = 30.1260 SKK. This parity was later used as the conversion rate.

## Outlook for the fulfilment of Maastricht criteria in a sustainable manner

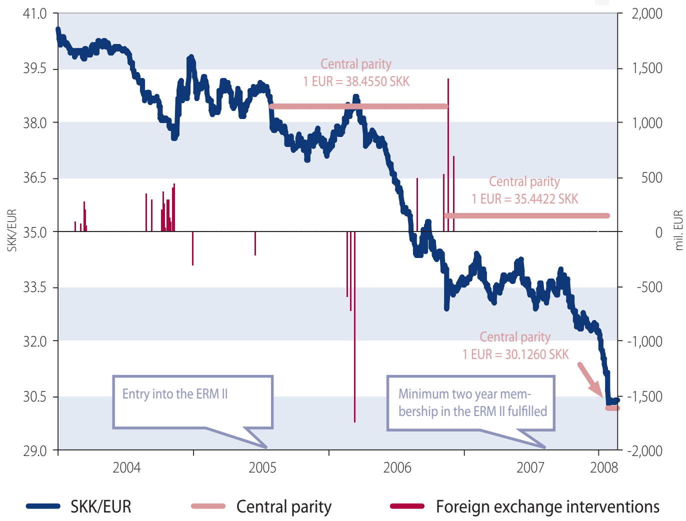
The Maastricht criteria are a key condition for entering the euro area. Once euro has been adopted there will be no need to formally adhere to these criteria, however, the country will be required to carry out its budget policy in accordance with the Stability and Growth Pact. This means that it should continue to consolidate its public finances until the medium-term target will be reached. A

*Chart 1 Inflation and reference value*




*Source: Eurostat, own calculations.*

*Chart 2 Nominal exchange rate of Slovak koruna after entering the EU*




*Note: A negative value represents sale of foreign exchange reserves. The total net volume of interventions during ERM II operation was close to zero.*
*Source: Eurostat.*

long-term fulfilment of both the fiscal and inflation criteria will also be beneficial for a healthy economic development in Slovakia.

Draft Framework of the General Government Budget for years 2009 to 2011 show that some effort is made to further consolidate public finances. A gradual reduction of the scheduled general government deficit should lead to a balanced budget in 2011. In relation to the reduction in the budget deficit and to a continuing positive economic development we can expect a further decrease in the ratio of public debt to the GDP. In order to fulfil the Stability and Growth Pact requirement related to an annual reduction in the structural deficit excluding one-off effects by 0.5% of GDP, it is desirable to proceed to a faster consolidation in 2008 and 2009.

*Table 3 Medium-term outlook for the fulfilment of Maastricht criteria*

| Criterion | | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| Fiscal criterion (% of GDP) | Public deficit | 2.0 | 1.7 | 0.8 | 0.0 |
| | Public debt | 29.2 | 28.2 | 27.1 | 25.2 |
| Inflation rate (HICP, %) | | 3.2 | 3.0 | 3.0 | – |

*Source: Ministry of Finance of the SR, NBS, own calculations.*

As per the current medium-term forecast of the NBS,[3] the average year-on-year HICP inflation will rise to 3.2%, and decrease to 3.0% in the following years. Both the NBS estimates and European Commission forecasts[4] indicate that the inflation in Slovakia should stay below the reference value in the coming years, confirming that Slovakia has fulfilled the price stability criterion in a sustainable manner.

On the basis of official documents of the Ministry of Finance of the SR[5] and the National Bank of Slovakia,[6] Slovakia will continue to fulfil the fiscal and the price stability criteria in the medium-term horizon.

The sustainability of public finances in the long-term horizon will depend largely on the development of expenses sensitive to the influence of an aging population. The major areas of concern are pension benefits and expenditures on healthcare, education and unemployment. The budget outlook published in the Convergence programme[4] indicates that if no corrective measures are taken, the negative demographic development will incite an increase in the general government deficit by 12.8% and public debt will rise to 163.8% of the GDP. And it should be noted that the outlook already takes into account the pension reform that contributed to an increase in the sustainability of public finances.

Should the current situation prevail, the largest cost item would comprise interest costs of the public debt. However, all these results are merely indicative, being based on a projection that did not take into account the possible additional measures. What it does clearly imply is that further reforms have to be carried out, consolidation of public finances beyond the medium-term target has to be continued and additional structural changes to the pension scheme as well as the healthcare scheme have to be effected. This will bolster the healthy development of public finances and economic growth.

The Slovak economic development has certain particularities which will influence the fulfilment of Maastricht criteria after entering the euro area. The strengthening exchange rate and its effect on the development of inflation were a major topic in the discussion on the sustainability of fulfilment of Maastricht criteria already at the time of assessing Slovakia's entry into the euro area. Slovakia is the first country to have a flexible exchange rate regime prior to the entry into the euro area. At the same time, it is a very open and converging country. And it is the continuing real convergence which should be expected to lead to a faster growth in consumer prices in Slovakia compared to the EU average, at least until the average EU performance is reached.

The development of consumer prices will be greatly influenced by price developments in the non-tradable sector. The current NBS estimates indicate that the Balassa-Samuelson effect may contribute to a total year-on-year increase in the price level by approximately 0.7 percentage point.[7] The influence of this effect is relatively low thanks to the growth in labour productivity exceeding growth in wages in the tradable sector, growth in wages in the non-tradable sector lagging behind growth in wages in the tradable sector, as well as a possible further growth in productivity in the non-tradable sector. Discontinuation of these positive factors constitutes the main risk for future development and an increase in the Balassa-Samuelson effect's impact on overall inflation. Despite the impact of an exchange rate strengthening on overall inflation is currently low (one-percent exchange rate appreciation slowed down the inflation by approximately 0.2 percentage point[8]), this positive influence is also to be considered eliminated after adopting the euro.

Taking into account several assumptions about the trajectory and speed of catching-up as well as about the mutual interconnection of nominal and real convergence, we came to an approximate point estimation of the inflation differential. We assume that the average annual inflation in Slovakia will be 1.2 percentage point higher than EU inflation in the long-term horizon (box 1). Depending on the future heterogeneity of the EU inflation development this may or may not mean that the inflation criterion will not be fulfilled during the period of catching up with the average performance of EU members.

## Risks to the sustainable fulfilment of Maastricht criteria

Other than forecast economic development may be considered a risk to the expected general government budget development to a higher degree than before. An increase in the world prices of energy raw materials and food as well as a slowdown in the growth of major business partners may have another negative influence. As for domestic development, it will be particularly important to maintain growth in the average real wages in line with the growth rate of labour productivity. The existing progress in lowering the deficit and a gradual heading towards a balanced budget created sufficient space for a sustainable fulfilment of the fiscal criterion in

3 *Medium-term forecast (P2Q-2008), NBS, April 2008.*
4 *Economic Forecast Spring 2008, European Commission, May 2008.*
5 *Slovakia's convergence programme for the years 2007 to 2010, MoF SR, November 2007 and a Proposal for the possible foundations of the public administration budget for the years 2009 to 2011, March 2008.*
6 *Medium-term forecast (P2Q-2008), NBS, April 2008.*
7 *The value of the estimated contribution of the Balassa-Samuelson effect depend on the calculation method used and on the reference period. Older estimates based on data from the period of1996 to 2004 oscillated at the level of1.5 to 2 p. p..*
8 *Doliak, M, Karmažin, B.: Analysis of the influence of the exchange rate on consumer prices. A disaggregated view. Biatec, volume 15.2007, No. 11, p. 4-8.*

Box 1

# Long-term development of inflation after adopting the euro

In 2008 the performance of Slovak economy expressed in GDP per capita at purchasing power parity (PPP) will exceed the value of 70% of the average performance in EU countries. However, Slovakia will still belong to the group of the EU countries with a relatively low achieved real convergence level, that have a large space for catching up, yet.

From the long-term point of view it is not possible to increase the economic development without changing the relative price level as both the sides of real convergence are mutually interconnected. This is also supported by real data from EU countries. It allows us to estimate the price level development and subsequently the amount of inflation differential based on the available forecast of economic performance/growth in Slovakia.

In the past years, the existing real convergence did not manifest significantly in a faster growth in consumer prices in Slovakia due to a notable appreciation of the exchange rate of Slovak koruna. Its curbing effect will be lost after the exchange rate is fixed at the conversion rate level. The continuing real convergence of Slovak economy to EU economy will probably cause the inflation to increase after the adoption of euro.

The existing development of GDP per capita in the purchasing power parity and relative price level in Slovakia confirms that the relative price level increased with a faster rate, on average, than economic performance.[1] As the level increases, there is a decrease in the catching-up rate as well as in the difference between the growth rate of the relative price level and economic performance. An estimate based on the data on development in all EU countries between 1997 and 2006 using the ECM *(Error Correction Model)* regression indicates that in the long-term horizon, with a growing convergence level, an increase in GDP per capita at PPP by one percentage point will lead to a 0.49 point increase in the relative price level.[2]

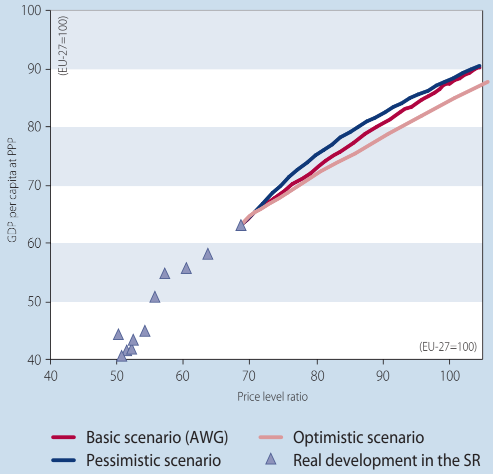
The speed of catching up is equally important as the trajectory of real convergence. No significant changes to the number of inhabitants are expected. We assume that the speed of convergence of the relative price level in SR to EU average will be largely dependent on Slovakia's economic growth and on the development of purchasing power parity.

The average growth rate of GDP per capita at PPP during 1997 to 2006 was 1.37 p.p. per annum. In 2007 the year-on-year growth reached record-breaking 5 points (economic performance increased from 63.7 to 68.7% of GDP). In relation to this we may consider three basic scenarios of Slovakia's future economic performance development. The first of them, very optimistic and highly unlikely, is a scenario where the 2007 record growth in performance (5.0 p.p. per annum) will continue. Pessimistic in the context of the achieved real convergence level and the current boom is the scenario where GDP per capita at PPP in Slovakia will approach the EU average with a rate of 1.37 p.p. per annum.

In order to ensure the most accurate estimate, we have chosen as key source of the future catching-up rate a long-term forecast of the development of GDP per capita at PPP[3] compiled by the AWG – Aging Working Group, which comes under the Economic Policy Committee. The AWG anticipates a gradual slowdown in Slovakia's economic growth, bringing it under the level of EU average in a horizon of 25-30 years.

Three possible stages of the duration of Slovak economy's real convergence to the EU av-

*Chart A Real convergence of Slovak economy to EU average*




*Explanatory note: PPP – purchasing price parity.*
*Source: NBS*

*1 Data for the years 1997 to 2006 indicate that the growth in GDP at PPP by one percentage point corresponded with a 1.35 point increase in the relative price level.*
*2 The estimated relation had the following form: $A(P_t) = 0.04 + 0.50A(Y_t) - 0.12(P_{t-1} - 39.65 - 0.49Y_{t-1}) + e_t$. The model explains 62% of variability of the relative price level (modified $R^2 = 0.62$).*
*3 The forecast for the development of GDP per capita at PPP is part of macroeconomic assumptions entering the long-term projection of budget situation in EU countries. Our assumptions are based on the basic scenario.*

*Box 1 – continued*

erage follow from the proposed scenarios of future development. In the optimistic one we will catch up with the EU average in 6 years, whereas the pessimistic one assumes this will take 23 years and the one based on AWG assumptions implies approximately 18 years.

As we suggested earlier, the curbing effect of exchange rate appreciation on the inflation will be lost after euro has been adopted. The growth in Slovak economic performance will thus effect growth in the price level in Slovakia in the coming years. If, for simplification, we bring in an assumption where the GDP deflator equals the growth in consumer prices, then growth in the relative price level will fully correspond to the inflation differential between Slovakia and the EU. This estimated trajectory and alternative real convergence rates allow us to predict the difference by which inflation in Slovakia will exceed the average EU inflation.

Assumptions about the growth in GDP per capita at PPP and the NBS-estimated real convergence indicate that within the next 10 years the year-on-year inflation in Slovakia will exceed EU inflation by 1.7 p.p. per annum on average. However, real convergence and its impact should be examined throughout a longer time period. In the horizon of the next 20 years the differential of year-on-year growth in prices in Slovakia and in the EU will constitute 1.2 p.p.[4]

*4 Should the pessimistic scenario of catching up with the EU average come true (1.37 p.p. per annum), we can expect that the average inflation in Slovakia will exceed the EU inflation by1.05 p.p. every year. In the improbable case of an optimistic economic growth, this inflation differential could reach as much as 2.87 p.p.*

the coming years. The medium-term target fulfilment plan could have been more ambitious. If the assumptions about continuing and relatively fast development of the Slovak economy come true, there will be enough space for an additional consolidation and for ensuring a year-on-year decrease in the structural budget deficit excluding one-off effects by 0.5% of GDP. Concentration of the strongest consolidation efforts in the year 2010 remains questionable, particularly in respect to the slowing-down economic growth as well as the fact that parliamentary elections will take place in 2010. The expected budget revenue in the given year is significantly influenced by a forecast of higher amounts of taxes collected from the income of legal persons. The development of other public administration entities' economic activities is uncertain. The largest risk is the failure to fulfil fiscal consolidation set by the Updated Convergence Programme (UCP) and a potential relaxation of the fiscal policy in the future. A certain risk is posed by the utilization of EU funds and the related co-financing expenditures.

Uncertainty exists because until now they have been used insufficiently and disproportionally. For this reason they were later moved to expenditure limits. But the uncertainty also persists in relation to a high growth rate of the volume of disposable sources usable in the coming years. There can be a significant increase in interest rates due to the current development in financial markets, which would effect an increase in the expected interest payments. It will be essential to take additional consolidation measures in order to reach the medium-term target set in the UCP (to lower the cyclically modified general government deficit excluding one-time effects to the level of 0.8% by 2010).

The sustainability of inflation is associated with several risks that have been identified in the past. Some of these risks include in particular the development of oil prices and its impact on an increase in regulated energy prices, being higher than expected. Food price development also remains uncertain, especially in relation to the developments in agricultural commodities prices. This growth in food prices could be mitigated by a potential strengthening of competition brought about by the announced investments in retail chains. A further growth in regulated energy and food prices may subsequently manifest in higher service prices, although they will also continue to be exposed to pro-growth risk originating from an increasing employment rate and nominal and real wages. The development in the first quarter of 2008, when the growth rate of real labour productivity was lagging behind that of real wages, indicated that it may be increasingly difficult to ensure that the growth in labour productivity is faster than that in wages. The increase in pressures on the growth in wages will also be bolstered by a shortage of labour force in some labour market segments. The influence of the Balassa-Samuelson effect on an increase in inflation may be stronger in an environment of fast economic growth based on growing labour productivity. Strengthening of the exchange rate had a low impact on inflation in 2007. In spite of that, not only in respect of the current convergence process but also due to fixation of the exchange rate at the time of transition to euro, it is necessary to reckon that the growth rate of prices within at least the next 10 to 20 years will be higher than in the euro area.

## Real convergence

In 2007 Slovakia made a significant progress in real convergence, too. The average economic growth exceeded ten percent and in the 4th quarter it reached the all-time highest value of 14.3%. The growth structure was balanced, having been influenced by foreign as well as domestic demand. The performance of Slovak economy measured by the ratio of GDP per capita at purchasing power parity increased to 68.7%[9] of the average EU performance.

The inflation differential between Slovakia and the EU was negative. However, catching up with the EU price level did not stop in 2007 owing to a record strengthening of the Slovak koruna. The relative price level in Slovakia exceeded 60% of EU average.

The annual percentage increase in foreign trade expressed in current prices slowed down. Simultaneous lead of growth in export over import resulted in a reduction of foreign trade balance deficit (1.2% of GDP). The balance of payments current account deficit decreased to 5.3% of GDP.

Growth in import lagged behind the growth in GDP in current prices. The overall openness of Slovak economy expressed by the ratio of foreign goods and services trade to the GDP decreased slightly in 2007 (to 173.2% of GDP).

One of the important factors that supported disinflation was a favourable development in the labour market. There was almost no change in unit labour costs[10] in 2007. Nominal compensations on employees increased by 8.2% and the growth in real productivity accelerated to 8.1%. The average real wages were growing at about half rate compared to productivity. The level of labour productivity in Slovakia reached 76.7% of the EU labour productivity level.

The downward trend of unemployment rate continued. Unemployment rate calculated on the basis of labour force survey fell from 13.3% to 11.0%, while the employment rate exceeded 60%. The ratio of long-term unemployment to total unemployment remains high (more than 70%) despite a noticeable reduction in the number of long-term unemployed people.

The assessment of changes to the structure of economy is interesting mainly in the horizon of several years. From the viewpoint of year-on-year development, however, we should mention the year-on-year fall in the importance of agricultural production. As little as 2.9% of added value was produced in agriculture in 2007. Contrary to the existing trend of a decrease in the importance of industry in favour of services there was recorded an increase in the industrial production's contribution to total value added. This is mainly related to the launching of production in new automobile and electrotechnological plants.

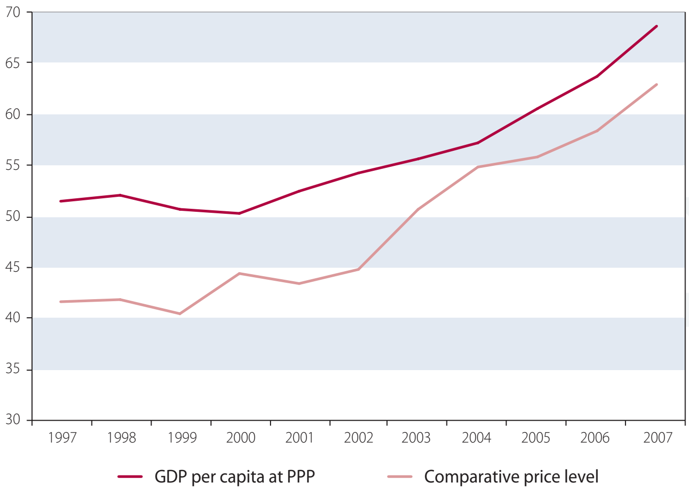
The added value of the non-financial sector was growing at the same rate as in the previous year. The year-on-year change in the volume of gross profit decreased, but a double-digit annual increase was retained.

## The state of structural and institutional reforms

The reform efforts slowed down considerably in recent years. Slight modifications of structural reforms already carried out are currently under way. After amending the income tax and a reintroduction of a decreased value added tax rate, changes were made to the pension system. The most important measure was the introduction of a temporary period during which savers could exit the capitalization pillar, together with a simultaneous increase in the maximum basis of assessment and an extension of the minimum saving period. There was also a tightening of conditions for awarding early pensions. The second pillar became voluntary for people entering the labour market for the first time. In reality, these measures had no significant impact on the improvement of sustainability of the pay-as-you-go system. Some improvement could be brought by correctly set up interventions focusing on a long-term stabilization of the pay-as-you-go system, to be carried out in the second stage.

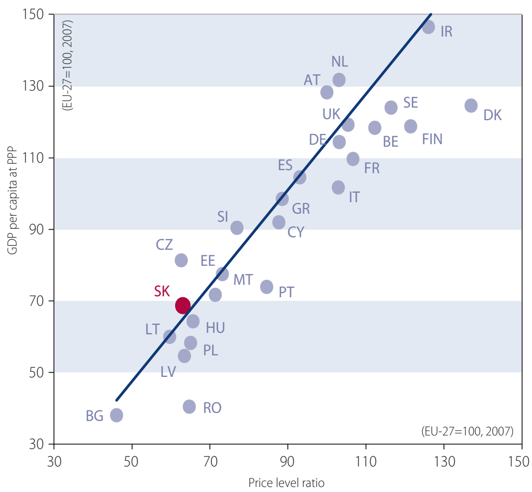
'Modernisation Programme Slovakia 21' was launched in order to keep the process of catching up with other euro area members' living standard fast and sustainable, but also in order to support

*Chart 3 Real convergence in Slovakia (EU-27average=100)*




*Source: Eurostat, own calculations.*

*Chart 4 Ratio of price levels and performance in EU countries*




*Source: Eurostat.*

9 *Eurostat estimation for 2007.*
10 *Definition as per ESA methodology. 95: Unit labour costs = Compensations on employees v b. c. / Labour productivity v. s. c. (ESA 95).*

*Table 4 Current real convergence and economic condition indicators (2007)*

| Real convergence indicator | | Comparable indicator in EU-27 |
|---|---|---|
| Ratio of GDP in the SR and in the EU (at PPP per capita) | 68.7%1) | 100% |
| Ratio of price levels in the SR and in the EU | 63.0%1) | 100% |
| Real GDP growth | 10.4% | 2.9% |
| Openness of economy | | |
| Export | 86.4% of GDP | |
| Import | 86.8% of GDP | |
| Current account balance of payments | -5.3% of GDP | -0.7% of GDP |
| Influx of FFDI inflow | 3.5% of GDP | 2.6% of GDP |
| Labour market and employment | | |
| Employment rate | 60.7% | 65.4% |
| Unemployment rate (Labour force sample survey) | 11.0% | 7.1% |
| Labour productivity growth (ESA 95) | 8.1% | 1.3% |
| ULC growth (ESA 95) | 0.2% | 1.7% |

*1) Eurostat estimate*
*Explanatory note: ULC – Unit Labour Costs; ESA 95 – ESA 95 Methodology of the European system of accounts.*
*Source: Statistical Office of the Slovak Republic, Eurostat, own calculations.*

the manifestation of positives and to mitigate any possible complications associated with the adoption of euro. The document aims at giving an impetus to the modernization efforts and outlining specific measures for the area of science and research, labour market and entrepreneurial environment. The proposed measures are formulated on the basis of the most important findings and recommendations of domestic and foreign expert analyses. Their implementation is to be provided for by the particular ministries, depending on their content. Short-term measures should be practically executed and long-term measures should be at least developed into specific action plans already during 2008.

The modernisation programme more or less follows the European Commission recommendations derived from the Strategic report on the renewed Lisbon strategy.[11] It is true for EU countries as a whole that although there is a common agreement as to what needs be done, results do not turn up uniformly. Certain marks of a "reform tiredness" became obvious during the last 12 months. The evaluation of the Progress Report on Implementation of the National Reform Programme of the Slovak Republic[12] indicates that Slovakia showed moderate progress in the fulfilment of obligations approved in the spring 2006 session of the European Council concerned with priority areas. The EC invited Slovakia to increase expenditure on education, research, development and innovations, improve the regulation environment, provide solutions to long-term unemployment, complete the reform of the education and specialized education systems and improve its quality in accordance with the labour market needs.

In its evaluation of the quality of entrepreneurial environment, the Doing Business study,[13] regularly published by the World Bank, confirms that Slovakia has made no progress in this area. Slovakia's overall position has not deteriorated significantly though, having dropped by one position to the 32nd place from among 178 countries. Within the EU countries, its position actually deteriorated in comparison with France whose own rank improved. The impact of executed reforms causes Slovakia to gradually lose its advantage over the other V4 countries. In respect of the improving situation in the compared countries, Slovakia's position was the worst in the area of foreign trade conditions and starting business.

### Real convergence outlook

The speed of catching up with developed countries will slow down unless additional development stimuli are provided. However, compared to the expected development in other EU countries, Slovakia will still be among the fastest-growing countries in a horizon until 2010.

According to our estimates, the ratio of GDP per capita in the SR and the EU (at PPP) will increase to 76% in 2010 and the ratio of price levels in the SR and in the EU will increase to 70%. The openness of Slovak economy will also rise in relation to the increasing volume of foreign trade.

Growth in export will continue to be higher than growth in import, owing to the gradual filling of production capacities in new industrial enterprises, which should manifest already in 2009 in a surplus balance of trade. Simultaneously there will be a fall in the CAD-to-GDP ratio, however, foreign demand will no longer constitute a decisive component of the economic development. Compared to 2007 there will also be some moderation of the final consumption of households although its share on the total GDP growth will increase in relation to other components. Gross fixed capital

*11 Strategic report on the renewed Lisbon strategy for growth and jobs: launching the new cycle (2008 – 2010), EC, December 2007.*
*12 Progress Report on Implementation of the National Reform Programme of the Slovak Republic for the years 2006 – 2008, October 2007.*
*13 Doing Business in 2008. World Bank, 2007.*

formation should remain the most dynamic component of GDP in fixed prices. On the basis of current forecasts,[14] Slovakia will maintain a relatively high economic growth in the coming years. Development of production and potential will both be dynamic, while the production gap should be positive, with a value of up to 0.5 p.p.

The expected increments in real labour productivity will be lower and the current growth rate of compensations per employee will remain the same; both of these will manifest in a partly higher growth rate of unit labour costs. However, growth in labour productivity should continue to exceed growth in real wages and dampen the undesirable demand pressures. There should be no additional inflation pressures, including those related to the development of the final consumption of general government. The existing commitments of the present government indicate that consumption of general government should remain the slowest-growing component of the GDP in the future.

## Bottlenecks of real convergence

Despite a significant year-on-year fall in unemployment that influenced a decrease in the long-term unemployment rate, both long-term and total unemployment remain the highest in the EU. The OECD mentions in its publication Economic Policy Reforms: Going for Growth 200815 that the level of GDP per capita in Slovakia has drawn itself significantly closer to the average value for OECD countries. At the same time there are large gaps between the usage and productivity of labour forces. Recommendations include a lowering of the tax wedge by introducing an employee benefit for low-income households with children. In the area of education it especially suggests to increase the accessibility of pre-school facilities, the efficiency of specialist education and the introduction of college fees. It would be good in the employment of older people to introduce indexation of retirement age on average life expectancy and to adjust the amount of pensions to the retirement age. To support labour force mobility, improve the efficiency of housing market and develop effective private rental market, OECD proposes to modify the legislation, to improve the efficiency of legal proceedings, to strengthen competition in the building industry and to start targeting state subsidies more effectively. In the area of enforceability of law, public procurement is seen as having the largest room for improvement.

The situation in research and development is not getting any better. Considering that Slovakia has the third lowest ratio of R&D expenditures to the GDP from among EU members, we could expect a relatively quick convergence to the average, in accord with the development in other areas. In fact, however, the ratio of R&D expenditures has been falling year-on-year in recent years. The Eurostat estimate for 2007 is mere 0.46% of GDP.[16] This development confirms that Slovakia will fail to reach not only the original EU target but its own target as well, set for 1.8% of GDP by 2010.

The Strategic Report[17] of the European Commission concludes that Slovakia should also focus on

*14 Medium-term forecast (P2Q-2008), NBS, April 2008.*

*15 Economic Policy Reforms: Going for Growth 2008, OECD, March 2007.*

*16 If Romania had maintained in 2007 the same growth that had been recorded in the previous years, Slovakia would have had the second-lowest ratio of R&D expenditures to GDP within the EU. Let us mention for comparison that investments in research and development are increasing even in Cyprus whose ratio of expenditures was lower by only 0.06% of GDP compared to Slovakia.*

*17 Strategic report on the renewed Lisbon strategy for growth and jobs: launching the new cycle (2008 – 2010), EC, December 2007.*

*Table 5 Outlook for performance, price level and openness of the Slovak economy*

| | 2008 | 2009 | 2010 |
|---|---|---|---|
| Ratio of GDP per capita in the SR and the EU (at PPP) | 70.7%1) | 73.5%2) | 76.4%2) |
| Ratio of price levels in the SR and in the EU | 65.2%2) | 67.7%2) | 70.0%2) |
| Export and Import, share in GDP | 176.8% | 177.4% | 177.2% |

*1) Eurostat estimate; 2) Own estimate.*
*Source: Eurostat, NBS, own calculations.*

*Table 6 Outlook for real economy indicators*

| | 2008 | 2009 | 2010 |
|---|---|---|---|
| GDP (real growth) | 7.4% | 6.9% | 6.5% |
| Final consumption of households (real growth) | 6.2% | 6.5% | 6.4% |
| Final consumption of general government (real growth) | 2.0% | 1.9% | 1.9% |
| Creation of gGross fixed assets capital formation (real growth) | 7.4% | 7.9% | 6.7% |
| Export of goods and services (real growth) | 11.2% | 8.6% | 7.2% |
| Import of goods and services (real growth) | 9.7% | 7.4% | 6.6% |
| Current account balance of payment (share of GDP) | -3.4% | -1.7% | -0.3% |
| Employment (LFSS, growth) | 1.9% | 1.5% | 1.0% |
| Average monthly wage (real growth) | 3.4% | 4.1% | 4.2% |
| Labour productivity (real growth) | 5.6% | 5.4% | 5.6% |

*Source: NBS*
*Explanatory note: LFSS – Labour force sample survey.*

18 *Lalinský, T.: Competitiveness Factors of Slovak Companies, Questionnaire survey 3/2008, NBS, May 2008.*

19 *Report on the state of entrepreneurial environment in the Slovak Republic and proposals for its improvement, MoE of the SR2007.*

a complete introduction of single contact points for starting businesses, on supporting information and communication technologies especially for the broadband network, on strengthening entrepreneurial education as well as intensifying economic competition in energy distribution, on tackling the issue of gender differences in remuneration and employment, on developing the active ageing strategy and creating jobs for young people.

The larger part of the foreign exchange risk which at present significantly influences the competitiveness of companies in Slovakia, will be eliminated by the adoption of euro. A possible continuing growth in the prices of energy raw materials will remain a threat. The significance of sector factors will be reinforced, including the accessibility of qualified labour force and labour force with international experience. Another narrow spot will be the accessibility and quality of specialized educational and research services, worsening the possibilities of a transition to a higher level of competitiveness based on innovations.[18]

The Report on the Condition of Entrepreneurial Environment[19] concludes that there are no serious barriers to running a business in Slovakia. The business sector perceives the burden of contributions as the most serious impediment to business development in the recent period. Two documents have been compiled and approved: Agenda of a Better Regulation in the Slovak Republic and a draft Action Programme for Lowering Administrative Burden to Business in the Slovak Republic for 2007 – 2012. The above agenda should lead to a real target being defined in 2009 as to by how many percent the administrative burden will decrease on the national level by 2012.

## Summary

The ECB and EC convergence reports of May 2008 confirmed the fulfilment of all Maastricht criteria. On 8 July 2008, the Economic and Financial Affairs Council of the European Union (ECOFIN) made a final decision on the adoption of euro in Slovakia as from 1 January 2009. Based on the current estimates of economic development for the coming years, Slovakia should continue to fulfil the inflation and fiscal criteria. However, in view of the ongoing catching up with developed EU countries, Slovakia will continue to record a positive inflation differential compared to the EU average for a relatively long time to come.

Real convergence is one of the areas where Slovakia is making notable progress. The record-breaking economic growth is accompanied by an increasing economic potential. The growth structure is balanced, with a high proportion of foreign demand. Increasing foreign demand is lowering the external imbalance. A rapid rise in labour productivity led to further slowdown in the growth rate of unit labour costs. Employment increased and the unemployment rate decreased. However, the labour market still remains a bottleneck of real convergence.

(To be continued)

*Bibliography:*

1. Benčík et al.: An estimation of the Balassa-Samuelson effect in the Slovak economy, NBS, December 2005.
2. Doing Business in 2008. World Bank, 2007.
3. Doliak, M, Karmažin, B.: Analysis of the influence of the exchange rate on consumer prices. Disaggregated view. Biatec, volume 15, 2007, No. 11, p. 4-8.
4. 15 Economic Policy Reforms: Going for Growth 2008, OECD, March 2007.
5. Concretization of the Strategy of Adopting the euro in the Slovak Republic, MoF SR and NBS, September 2004.
6. Convergence report 2004, ECB, October 2004.
7. Convergence report 2006, ECB, December 2006.
8. Convergence report 2008, ECB, May 2008.
9. The Convergence Programme of Slovakia for the period of 2007 to 2010, MoF SR, November 2007.
10. Lalinský, T.: Competitiveness Factors of Slovak Companies, Questionnaire survey 3/2008, NBS, May 2008.
11. The Monetary Programme of the National Bank of Slovakia until 2008, NBS, December 2004.
12. Proposed foundations of the general administration budget for the period of 2009 to 2011, MoF of the SR, March 2008.
13. Progress Report on Implementation of the National Reform Programme of the Slovak Republic for the years 2006 – 2008, October 2007.
14. Report on the state of entrepreneurial environment in the Slovak Republic and proposals for its improvement, MoE of the SR, 2007.
15. Strategy of the Slovak Republic for Adoption of the Euro, MoF SR and NBS, July 2003.
16. Strategic report on the renewed Lisbon strategy for growth and jobs: launching the new cycle (2008 – 2010), EC, December 2007.
17. Medium-term forecast (P2Q-2008), NBS, April 2008.
18. Vladová, A.: The operation of the Balassa-Samuelson effect in the Slovak economy. Biatec, volume 15, 2007, No. 11, p. 18-26.