



THE EFFECTS OF EURO ADOPTION ON THE SLOVAK ECONOMY

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In March 2006 the NBS Research Department has published an extensive analysis of the effects of euro adoption on the Slovak economy.¹ Now we are publishing here an executive summary of the study. Future issues of Biatec will present more detailed views on some topics.

Euro introduction will be the largest integration step in the coming decade. This step will affect all the inhabitants of Slovakia. Already when entering the European Union the Slovak Republic has committed to adopt euro once it fulfills the conditions, Maastricht criteria, which the Maastricht Treaty sets for monetary union candidates. Convinced that euro adoption will be beneficial for the majority of citizens and businesses the Slovak government together with the National Bank of Slovakia have set year 2009 as a target date for euro area accession.

In this study we assess the effects of euro adoption from an economic perspective. The benefits and disadvantages of Slovak entry to the euro area were discussed already when the euro adoption strategy was adopted. This analysis utilizes the latest information, using the set euro adoption date and the chosen euro adoption scenario. We attempt to quantify the most important effects, so that the costs and benefits can be compared. The costs and risks related to the euro area entry will depend on economic conditions and policies. Therefore we analyze the economic policies, which should support euro adoption, the issues of optimal timing of euro area entry and the impacts of euro adoption on citizens, businesses and the state administration.

Direct benefits of euro adoption

Euro adoption will immediately save some costs or remove some risks, what should permanently increase the gross domestic product. The most important direct benefit is the elimination of transaction costs on trades in euros. Slovakia is one of the most open economies in the EU, with foreign trade turnover over 160% GDP. More than 80% of this trade includes trade with European countries settled in euros. Businesses and citizens do not have to buy and sell euros for each foreign financial transaction. If they have both revenues and expenditures in euros, they have to exchange only the net difference. However, the sales and purchases of euros account for 98 % of spot foreign exchange trades.

Currently the citizens, businesses and investors pay fees when exchanging euros or they perform the exchanges at

less beneficial exchange rates. The margin between bid and offer exchange rates ranges from 5 haliers on the inter-bank market to 96 haliers on the commercial banks retail market. We take half of the margin, i.e. the difference between buy/sell rate and the average rate to be the price of exchanging foreign currency. This price has a downward trend, but the volume of transactions is increasing. In total the financial transaction costs of trades in euro are estimated at 0.3% GDP, which will be saved after euro adoption.

On top of the gap between the buy and sell exchange rates the businesses have to bear also administrative costs when dealing with foreign currencies. These include the costs of foreign currency management, accounting of foreign exchange losses and gains, additional reporting and so on. We estimate the euro adoption will decrease these costs by around 0.06% GDP. Overall we estimate the savings of transaction costs at 0.36% GDP.

Euro introduction will eliminate a major part of the exchange rate risk Slovak businesses have to bear. The enterprises can hedge against this risk using appropriate derivatives, e.g. options. The option price of a model option for one euro is 17 haliers. However, most enterprises are not using hedging strategies against exchange rate risk, either the price is too high or they are discouraged by administrative costs. We estimate the true economic price of exchange rate risk is one half of the option price. The volume of transaction exposed to euro exchange rate risk is about 10% GDP. Overall we estimate the value of exchange rate risk that will be eliminated by euro adoption is 0.02 % GDP. Euro introduction should also slightly decrease the exchange rate volatility against other important currencies, especially the US dollar, since historically the euro/dollar exchange rate is more stable than koruna/dollar rate.

One of the direct benefits of the euro for consumers will be much easier comparability of prices at home and in other euro area countries. This will create pressure on the producers and sellers of traded goods to decrease prices, since the competition in the euro area will be stronger than on the domestic market only. The experiences from current euro area countries show that prices have partially converged between countries, although sizable differences still remain.

Euro adoption should lead to lower cost of capital for enterprises and thus stimulate investment activities. The

¹http://www.nbs.sk/PUBLIK/06_KOL1A.PDF



investment rate in euro area countries was 2.5% higher than in other European countries. Small and medium enterprises in peripheral euro area countries benefited most from euro adoption. For example, in Greece the euro has led to 4 percentage points decline in interest rates on loans to non-financial corporations. In a similar way we can expect decline in the costs of credit in the Baltic states, Slovenia and Cyprus by 1.4 to 1.7 percentage points. The expected benefit is slightly lower in Slovakia, because the interest rates for corporations have declined significantly already in 2004 and 2005, they can fall by up to 1 additional percentage point before euro adoption. This cheaper financing should stimulate investment. However, lower credit costs cannot be expected to significantly increase the profits of enterprises, because the interest rates from deposits will also decline, although most likely by less than the interest rates on credit.

All the benefits arising from euro adoption will eventually bring much wider indirect benefits. We expect a growth of foreign direct investment and foreign trade of Slovakia, which will contribute to faster GDP growth and increase in the living standards.

Long-term growth of international trade and living standards

Economic literature has dealt mostly with the impact of monetary unions on foreign trade. In his seminal study in 2000 Andrew Rose came to a conclusion that a monetary union may even triple the trade among its members. Such estimates were, however, based on a rather small sample of monetary unions most of which were very small or undeveloped countries. More recent research has focused on making such estimates more precise and realistic, which could be more applicable to such a large monetary union as the euro area. Our estimate is based on Rose and Stanley's cross-section analysis of 2005. We expect that after entry of Slovakia to the euro area its trade with partners within the monetary union will increase by 30 to 90%. Such growth will not come immediately; it may take even two decades until it is manifested in full. During that period our neighbors – the Czech Republic, Poland and Hungary – will also become members of the euro area, and therefore, the trade of Slovakia with other euro area countries will represent over 80% of the total trade. Euro adoption should increase in the long run the total foreign trade by approximately 50%.

Euro adoption will facilitate the inflow of foreign investment into Slovakia. Entry to the euro area will significantly increase the stability of Slovakia as perceived by foreign investors. Investors will also save on transaction costs, they will not be exposed to exchange risk both in placing investment and in exporting output and profit repatriation. Foreign direct investments will be one of the "driving forces" for increasing foreign trade.

Higher inflow of foreign investment and growth of international trade should ultimately lead to a growth of GDP.

Strong links with GDP have been empirically proven both in foreign investment and trade. The growth of foreign trade by 1% should increase the GDP by one third of a percentage point. Due to the euro adoption we expect total increase of the Slovak GDP by 7 to 20% in the long run. Such growth will take place gradually; annual contribution of euro to economic growth is estimated to be 0.7%. The effect will be stronger during the first years following the euro adoption, and it will gradually fade out after a period of approximately 20 years. It should be noted, however, that this estimate involves a rather high degree of uncertainty; the actual impact may be by a half higher or lower, as well.

The costs and disadvantages of euro adoption

The benefits arising from the euro adoption should be contrasted with disadvantages and costs. Immediately before and after euro changeover the state and entrepreneurs will incur costs on the adjustment of information systems, currency exchange, conversion of prices, dual pricing, personnel training etc. Estimates of such costs for the current euro area member states are in range from 0.3 to 0.8% of GDP. Slovak enterprises and public administration have not yet devoted much attention to such analyses within their organizations; therefore, we derived our estimates from foreign experiences. Several facts indicate that technical costs of euro adoption in Slovakia should be lower than in the twelve euro area countries. The euro changeover in Slovakia will be done in the "big bang" scenario, i.e. without transitional period, which would have increased the extent of preparations. Short dual circulation period should minimize costs of retailers. Since a large number of the Slovak enterprises have already been actively trading in euro, their preparations will not be as complex as in the case of the creation of a new currency. Moreover, the owners of many enterprises, in particular financial institutions, come from the euro area, and thus their experiences can be utilized. For these reasons we estimate technical costs of euro changeover at 0.3% of GDP. It should be emphasized that these will be one-off costs. If enterprises took e.g. a medium-term loan to cover such costs, the installments would be less than 0.06% of GDP per year. Such value is better comparable with benefits from euro adoption, which will be permanent.

Euro adoption will have a partially negative impact on the banking business. Banks operating in Slovakia obtain a significant proportion of their profit from foreign exchange transactions. Cancellation of the Slovak koruna will eliminate transaction costs for enterprises while, at the same time, reduce bank revenues from foreign exchange operations. Having regard of a strong competitive environment within banking sector we do not, however, expect banks to have excessively high profits from exchange operations. Accordingly, after the loss of the euro-koruna exchange trades banks should be able to reduce some of their expenses or to extend their activities into other areas



without significant decrease of the total profit rate. Banks should also indirectly experience benefits arising from euro for the entire economy. Higher profits and better financial situation of enterprises after joining the euro area will also improve credit portfolio of banks.

Loss of independent monetary policy is considered to be the most significant cost of joining the euro area. Setting of the common monetary policy by the European Central Bank may not be always adequate for Slovakia. National Bank of Slovakia will not be any more able to respond to external shocks by its interest rates and thus stabilize price level and output. However, the effectiveness of the Slovak monetary policy is limited even now. Slovakia has fully deregulated capital flows, which several times exceed the possibilities of monetary policy to influence them. The Central Bank is not able to simultaneously stabilize the exchange rate of koruna, price level and real economy. The exchange rate of koruna is often affected by foreign impulses, in particular from the neighboring countries. The exchange rate is often rather a source of shocks for the economy than their absorber.

The loss of independent monetary policy will be the less important the more similar the development of the Slovak economy to that of the euro area will be. Till lately the business cycles of Slovakia have been only slightly synchronized with the euro area. Weak synchronization in the past can be partially explained by important government reform and stabilization programs of the past years which should not be repeated any more such strongly. We can also analyze the similarity of shocks affecting the Slovak economy and euro area. These are just slightly symmetric. However, in the future an increased symmetry can be expected since the trade with euro area partners will develop fast, in particular intra-industry trade, and the structure of the Slovak economy will approximate to the core of the euro area.

We simulate the impact of the loss of independent monetary policy in a prognostic model of the NBS. In spite of an expectation that Slovakia will gradually become more synchronized with the euro area, we use the current estimates for symmetry of shocks. After joining the euro area real economic fluctuations measured as a standard deviation of output gap will increase only slightly – from 1.04% to 1.11%. A negative impact on the price stability will be higher; inflation fluctuation will increase from 0.24% to 0.68%. These results prove that currently the Slovak monetary policy already has a very limited capability to respond to real shocks. Very indicatively we also estimate the value of a more stable economic environment created by the monetary policy. The abandonment of independent monetary policy represents a loss of approximately 0.04% of GDP.

Euro adoption is connected with further risks or concerns which we cannot, however, precisely quantify, but nonetheless we can assess them qualitatively. The consu-

mers are most concerned about increases in prices when converted into euros. In the countries of the current euro area an increase in prices occurred in some areas, caused by incorrect price conversion to euro or by rounding up. However, the overall impact of euro on the increase in prices was very low, according to Eurostat estimates it was about 0.2%. In Slovakia the competition within retail trade is very strong, which should prevent unreasonable increases of prices. An extensive program of dual pricing is also under preparation; therefore, consumers should not lose orientation in price levels after euro adoption. Accordingly, we expect that the rounding effects during euro conversion will have only a minimal impact on the price level.

A concern about higher inflation in the long-term perspective is more justified. Living standards and price level of Slovakia is only a little higher than half an average of the EU. With fast economic growth Slovakia will be catching up with the EU not only in the living standards, but inevitably also in price levels. After euro changeover, and accordingly after irrevocable fixing of the exchange rate, higher inflation in Slovakia will be the only channel for catching up in price levels. Based on several methods we estimate that for several years after joining the euro area our inflation will be on average by approximately 1.5 percentage point higher than the average inflation within the euro area. In case of non-adoption of euro, however, the Slovak inflation would be also slightly higher than in the euro area, similarly as in other V4 countries whose inflation goal is up to 1 percentage point higher than the ECB target.

A slightly higher inflation in Slovakia than the euro area average will be caused mainly by equilibrium factors: by faster productivity growth and consequently Balassa-Samuelson effect and by increasing weight of services in the consumption basket while prices of services will increase faster than prices of goods. Such equilibrium inflation will not represent a risk of instability or loss of competitiveness for the economy nor a negative impact on the living standards of citizens.

An increase in prices, or inflation, respectively, is closely related with a concern about a decline in the real value of savings or pensions. The currency changeover itself does not pose any risk of decreasing the value of savings or pensions because, as we have already noted, currency conversion should not increase the price level. Prices of goods and services will be converted to the euro by the same conversion rate as savings and pensions, thus their purchasing power will remain unchanged. This also shows that real purchasing power of savings and pensions will remain the same regardless of the level of conversion rate. Therefore, some proposals to postpone euro adoption until the exchange rate is more favorable are not justified.

A concern that higher inflation after joining the euro area will decrease the real value of savings is, however, justified. Real interest rate on household deposits is cur-



rently negative and it will probably remain negative also after euro adoption. However, interest rates would be very low even if Slovakia did not adopt the euro. Slightly lower interest on savings after euro adoption will be accompanied also by lower interest on credits. While with respect to the entrepreneurs we have argued that a decrease in the interest rate will be for their benefit, because enterprises are net debtors, such decline in interest rate will represent a loss for households which are net savers. However, as long as the current trend of fast growth of credits is sustained, the net position of households will be very low after the euro adoption and consequently also the loss from real interest rates decline will be low.

Potentially higher inflation will not represent a threat to the value of pensions. Pensions are regularly valorized; therefore pensioners will be compensated for higher inflation by the nearest valorization. A small difference between the time of increase in prices and the date of valorization, which we assess to be valued at approximately SKK 200 in the first year after euro adoption, can be easily compensated by exceptional one-off increase of pensions. Because valorization of pensions depends also on the wage growth which is expected to be higher after joining the euro area, pensioners should enjoy higher real income already in the second year after euro adoption.

The expected higher growth in wages should be taken into consideration in overall evaluation of the development of savings and pensions. High growth in wages will enable an accumulation of higher current and pension savings, which will partially compensate for lower real interest rates caused by higher inflation.

The euro area is not an ideal group with fully open market for all members. There are several administrative barriers limiting and decreasing its attractiveness. There is in fact free movement of goods and capital within the euro area. However, in spite of efforts made by some European institutions, a common market for services has not been established yet. The largest restrictions exist, however, in the labor market where majority of old EU member limited the possibility to enter their labor market for workers from the new member states. Limited labor force mobility weakens member states resistance to potential asymmetric shocks, in particular if such shock was of a very large magnitude. Administrative barriers and other market rigidities mean that the euro area is not an entirely optimum currency area.

A disadvantage of the present arrangement of the euro area lies also in the existence of decentralized fiscal policy with a common monetary policy. Disorderly fiscal policy of one union member may cause damage to all its members, e.g. if it leads to an increase in interest rates or fluctuation of the exchange rate. In order to solve such problem the Stability and Growth Pact has been developed which should prevent excessive government deficits. The effect of the Pact proved to be lower, however, than

the pressure of markets on individual countries before their entry to the euro area. From a long-term perspective it will be necessary to support the functioning of the monetary union also by closer political integration and better coordination of economic policies.

Economic policies to support euro adoption

The above summarized analyses have shown that in the case of Slovakia the advantages from euro adoption will prevail over disadvantages, but also that the functioning of euro area is not quite ideal. Appropriately set policies will be required for Slovakia to be able to adopt the euro, to fully utilize its advantages and to limit its disadvantages. Their short-term objective is to fulfill the Maastricht criteria, and in the long-term perspective they must strengthen the flexibility of economy.

Main objective of the monetary policy is to achieve low inflation and simultaneously maintain stable exchange rate in ERM II. Along with that, however, monetary policy is gradually more and more limited, what prepares Slovakia for the loss of its own monetary policy after joining the euro area. Therefore, support on the part of other economic policies will be required.

An immediate goal of fiscal policy is to continue in the budget consolidation and to eliminate excessive deficit in Slovakia. Fast economic growth should contribute to a significant consolidation. In order to secure long-lasting sustainability of public finances it will be necessary to continue in the budgetary consolidation also after joining the euro area and to aim at balanced budget. At the same time, fiscal policy undertakes still more responsibility for the stabilization of the entire economy while monetary policy will lose its independence.

Appropriate structural policies should also support fiscal policy and contribute to the long-lasting sustainable development. Labor market policies are the most important ones. Furthermore, for successful functioning within the monetary union in good times as well as in bad times, flexibility of wages should be increased and in particular, labor force mobility should be supported. The support of science and research and education will be also important.

Maastricht criteria and the optimal euro adoption date

When all policies are appropriately set, Slovakia should meet all Maastricht criteria in 2007 or at the beginning of 2008 unless it is affected by extremely large external shocks. At present the criterion for interest rates is being fulfilled, and the level of government debt is safely under the reference level of 60%. Until 2007 further decrease of inflation is expected and also the condition of two-year membership in ERM II will have been fulfilled. General government deficit should also decrease so that fiscal criterion is met also including the pension reform effects. Our predictions show that by the end of 2007 all Maas-



tricht criteria should be met with some reserves. In spite of that, however, inflation and exchange rate criteria contain certain risks which cannot be prevented by domestic policies. Although events like significant impacts on exchange rate from Central-European region, extremely high energy prices or extremely low inflation in some EU countries are unlikely, should they occur it may pose risk to the fulfillment of Maastricht criteria.

Because from the point of view of Slovakia the advantages of euro adoption will significantly prevail over disadvantages, it will make efforts to adopt the euro as soon as possible after the fulfillment of Maastricht criteria. Positive evaluation of the fulfillment of Maastricht criteria will be possible in the first half of 2008. Accordingly, the euro adoption will be optimal in 2009, which has been also officially declared.

Euro adoption later than in 2009 would mean a loss of net benefits expected from the euro. The size of such loss will depend on the reasons for the postponement. If it were caused by external shocks, and Slovakia continued maintaining sound economic policy, the loss of postponed euro adoption would not be very high. Such external shocks may involve, e.g. further increase in prices of oil and energy supplies, which would delay the fulfillment of Maastricht criteria for a short time. However, if Slovakia changed its economic policy, decided to postpone the fulfillment of Maastricht criteria and set forth other priorities, markets would probably lose confidence in its direction. Such confidence loss would result in a significant weakening of exchange rate, higher inflation, increase in interest rates and outflow of foreign investment. Such unfavorable phenomena would preclude the fulfillment of Maastricht criteria

for several years. Potential benefits of euro adoption would get lost for a longer period of time and the existing instability would result also in direct economic damages.

The effects of euro adoption on the businesses and households

Euro adoption will have not only anonymous macroeconomic impacts, but it will be manifested in the life of all citizens. Enterprises will profit most from the euro, which will immediately decrease their transaction costs and eliminate exchange rate risks. One-off direct costs of euro changeover should be covered by cost savings already after the first year. The euro will have the most significant impact on international trade and economic growth which will directly increase profitability of enterprises. The effect of euro will, however, vary for each enterprise. For some enterprises disadvantages will prevail over benefits, some enterprises will be exposed to strong competition from abroad, and some will lose their markets. Other enterprises will achieve benefits above average.

The euro should be a benefit for majority of the citizens. It will be felt in particular by working people whose wages should grow in proportion to the economic growth. Since we expect higher real growth by approximately 0.7 % due to euro adoption, real wages should accelerate similarly. The growth of wages will be reflected also in pension growth with a short delay and with only a half the size. People will also save some resources through the elimination of exchanging korunas into euros. On the other hand, some slight losses will be caused by errors in rounding after the conversion of prices to euros and by slightly lower interest rates on the household savings.

Table Benefits and costs of euro adoption in Slovakia

Euro adoption effects	Estimated impact
Benefits	
Reduction of financial transaction costs	Savings amounting to 0.30% GDP
Reduction of administrative costs	Savings amounting to 0.06% GDP
Elimination of the exchange rate risk against euro	Savings due to risk elimination amounting to 0.02% GDP (range 0.01–0.08% GDP)
Reduction of exchange rate volatility against currencies of other trading partners	Reduction of the overall effective volatility to 0.35% (from 0.63% in 2001-2005), after entry of all V4 countries to euro area to 0.17%
Reduction of capital costs	Decrease of current real interest rates for business from approximately 2 % to the level of 1 – 1.5%
Increase of foreign trade	Increase of foreign trade by 50%
Increase of the GDP per capita due to increases in trade and FDI inflows	Increase of the GDP per capita between 7–20% in the long term. Increase of the annual GDP growth by 0.7% (range 0.4–1% annually)
Increase of FDI	
Increase of price transparency and competition	Increase of pressure on prices and prevention of their growth
Costs	
Technical and organizational costs of euro conversion	One-off costs of 0.3% GDP
Specific costs of the banking sector and reduction of the range of activities and revenues of banks.	Costs in connection with the task of providing free conversion of the domestic currency to euro
Loss of the independent monetary policy – abandoning an instrument for mitigation of asymmetric shocks	The value of the loss of the monetary policy is estimated at approximately 0.04% GDP
Possibly higher inflation rate in the long term	Additional contribution to the inflation in comparison with the euro area average amounting to 1.5 percentage point annually.