



OPEN QUESTIONS OF MONETARY INTEGRATION

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3. Alternatives to the exchange rate regime

In the following chapters, we shall analyse the non-standard ways of integration into the European Monetary Union (EMU)¹. The introduction of the euro on a unilateral basis, which in fact means the replacement of the domestic currency with the single European currency without participation in EMU, is one of the possible strategies. The advantages and disadvantages of eurisation are examined in detail, since they are closely connected with the adoption of the euro after entry into EMU. In the next issue, the same attention will be paid to the currency board, as a strategy applied by some of the candidate countries.

3.1. Unilateral introduction of the euro

The recent monetary crises, their unpredictability and tendency to spread from country to country, has given rise to numerous discussions about exchange rate policy and alternative exchange rate regimes. In an environment of increased integration within the world economy, a popular theory has it that economies with 'unclear' exchange rate regimes are more exposed to speculative attacks, irrespective of their economic fundamentals. According to this theory, only a floating or fixed exchange rate regime (currency board, adoption of a foreign currency – dollarisation and currency union) is considered to be an acceptable exchange rate system.

Although the assumptions in this theory are controversial, they have led to discussion about the possibility of changing the exchange rate regime in certain countries. In Argentina, where the monetary policy is based on a currency board, the government announced its intention to dollarise the economy, at the beginning of 1999. Later, however, this idea was abandoned in Argentina, but the outflow of capital, banking crisis, and continued recession in Ecuador for example, led to the replacement of the domestic currency by the US dollar (March 2000).

Discussions about the replacement of a national currency with another currency are ongoing not only in Latin America, but also in some of the transition economies of Central and Eastern Europe, where, for example, there is discussion as to the advisability of eurisation in Poland and Estonia, primarily at academic level. (Also, the Ger-

man mark was introduced as legal tender in Kosovo and as parallel currency in Montenegro).

At first sight, the idea of early introduction of the euro in Central and Eastern European countries seems to be a possible way of 'shortening' the period of monetary integration into the euro area. On the other hand, the European Union has clearly stated that unilateral introduction of the euro does not represent a feasible way of monetary integration for the candidate countries. The European Union recommends monetary integration in the following stages: membership in the EU, participation in ERM II, and finally entry into the euro area (EMU), which would be possible only after meeting the Maastricht criteria and passing the convergence test in accordance with the EC Treaty. On the stimulus of the European Commission, ECOFIN has examined this issue and arrived at the conclusion that unilateral introduction of the euro would be inconsistent with the philosophy of EMU defined in the EC Treaty, which requires a convergence process prior to the introduction of the euro. As a result, eurisation must not be seen as a way of circumventing the stages set out in the EC Treaty. This position is also shared with the European Central Bank (ECB) and the national central banks of euro-zone countries.

According to supporters of the unilateral adoption of the euro, candidate countries undergoing successful market-oriented reform and having good prospects for entry into the EU, are attractive to foreign investors, which could give rise to an accelerated inflow of foreign capital and a subsequent appreciation in the nominal exchange rate. This results in a strong appreciation in the real exchange rate, which reduces the competitiveness of domestic companies and increases the current account deficit. Thus, candidate countries are becoming very sensitive to changes in capital movements and subsequent monetary crises. According to the supporters of eurisation, such a situation cannot be avoided with the help of monetary and fiscal policy. Monetary policy may, through an increase in interest rates, cause the nominal exchange rate to appreciate and the current account deficit to increase further, or stimulate inflation through a reduction in interest levels. Similarly, fiscal policy may prove ineffective since the tightening of budgetary discipline with the aim of eliminating external instability could make the country attractive to investors again and increase the inflow of foreign capital. On the other hand, expansive fiscal policy stimulates domestic demand, increases the current account deficit, and creates conditions for an outflow of capital with its negative consequences. It is not possible to impose restrictions on capital flows, since

¹ The article has been written by a group of authors from the Monetary Division of the National Bank of Slovakia.

the free movement of capital is one of the main criteria for accession to the EU (the imposition of such restrictions would also be incompatible with the commitments of Slovakia in respect of OECD membership).

Another significant argument used by the advocates of eurisation is that the candidate countries will experience more dynamic economic growth driven by an increase in productivity, as a result of which it may be more difficult for them to reduce inflation to the level required for entry into EMU. Hence, the maintenance of inflation at a lower rate would require a marked appreciation in the nominal exchange rate, which would reduce the competitiveness of these countries. Eurisation would help them to avoid such a development.

Although the unilateral introduction of the euro has been the subject of much deliberation in recent years, the economic implications of this theory have still to be demonstrated. Therefore, it is necessary to draw a realistic picture of the economic implications of eurisation and evaluate the pros and cons of this policy. In this connection, we must emphasize that the advantages and disadvantages cannot offset each other, since they are of macro- and micro-economic, short- and long-term nature. In addition, they are interconnected and can be quantified only in part. The aim of this chapter is to give a brief description of the possible impact of the unilateral adoption of the euro and to evaluate the appropriateness of such a step in general.

We should also mention the technical prerequisite for the unilateral adoption of the euro, which is the fact that official foreign exchange reserves must cover the monetary base (currency issued and the reserves of commercial banks at the central bank), which would have to be exchanged for euro in the event of unilateral introduction. In the case of Slovakia, the foreign exchange reserves of the NBS amounted to USD 3.846 billion at the end of September 2001, which would cover the monetary base approximately 1.6 times, i.e. more than 100% of the M1 aggregate and roughly 30% of the M2 aggregate.

3.1.1. Potential advantages of the unilateral adoption of the euro

The main advantages of eurisation include lower interest rates, increased currency stability in the

form of low inflation, and reduced transaction costs and exchange rate volatility. All these advantages are expected to stimulate foreign trade and facilitate structural reform.

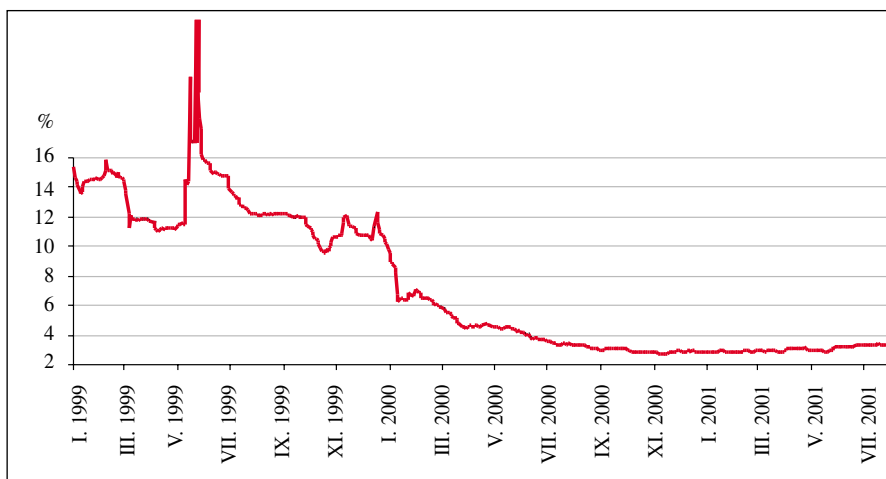
A) Fall in interest rates

In general, the risk premium of domestic interest rates consists of two components: currency risk and default risk. Eurisation would reduce the currency risk to zero and thus the level of risk premium would fall significantly. A cut in interest rates would have a positive effect on the fiscal position and economic performance of Slovakia.

If we express the risk premium in terms of the average spread between the three-month BRIBOR and the analogous EURIBOR rates (Graph 1), then the risk premium for the period February 2000 to July 2001 amounts to 3.6 percentage points (Note: we made this estimate with respect to the shift to qualitative monetary policy control in February 2000, when interbank money market rates had stabilised). The default risk, expressed in terms of the average spread between Slovak eurobonds and comparable German securities (Graph 2), reached 2.1%.

On the basis of the above, we may assume that the unilateral introduction of the euro would cause domestic interest rates to fall by roughly 1.5 – 2.0 percentage points

Graph 1 Spread between three-month interbank money market rates in Slovakia and EMU countries



Graph 2 Spread between Slovak eurobonds and comparable German government bonds





(elimination of the exchange rate risk). However, it should be noted that the above gross estimate relates only to short-term interest rates. If inflation falls to the expected level, we would assume that the reduction in medium- and long-term interest rates would be smaller, since they are determined by other factors as well (propensity to save, return on investment, default risk).

As we mentioned in the introductory part of this chapter, a fall in interest rates is expected to have a positive effect on the dynamics of real GDP. In the case of Slovakia, it is not possible to quantify the relationship between GDP and short-term rates in a reliable manner. We assume that a 1.5 – 2.0 percentage point fall in interest rates could stimulate a 0.45 – 0.6% growth in GDP. This assumption is based on an estimate of the average semi-elasticity of GDP in 1-month interbank money market rates for the period 1997 – 2001. This is only a one-off effect, whereas long-term effects must be quantified with respect to the fact that eurisation would change the behaviour of economic entities to a significant extent and would influence the country's GDP in the medium and long term.

Lower interest rates would have a positive effect on the fiscal position of the Slovak Republic, because they would reduce the costs of domestic debt financing. If we take into consideration that, at the end of the 1st quarter of 2001, the domestic debt of the central government reached Sk 227 billion, i.e. roughly 25% of GDP, then an interest rate cut of 1.5 – 2.0 percentage points would reduce fiscal expenditure by 0.4 – 0.6% of GDP. Naturally, it would not be an immediate reduction, since part of the debt is due in the medium or long term.

It is questionable whether eurisation will automatically lead to a fall in interest rates. The previous considerations were based on the assumption of *ceteris paribus*, but the introduction of the euro on a unilateral basis could change the functioning of the economy completely and distort the previous assumptions. Eurisation is expected to fix short-term interest rates, which will be determined by the monetary policy of the euro area, as well as the exchange rate. This means that any imbalance between aggregate demand and aggregate supply in the economy should be eliminated through wages and prices, which are characterised by downward nominal rigidities. At the same time, we must emphasize that the unilateral introduction of the euro will not fix long-term rates, which will be determined by other factors, e.g. propensity to save, return on investment, or the default risk. If a country has no mechanism for adaptation to the aforementioned imbalance, the default risk would increase, together with the risk premium. Therefore, the country would not be able to borrow funds without an increase in costs. Thus, the positive effect of eurisation, in the form of a reduction in the exchange rate risk, could be wiped out by an increase in the default risk.

Price development in Slovakia may be characterised by non-flexible prices, especially in the non-tradeable sector. The prices of tradeable goods (excluding foodstuffs) are

partly flexible, which is connected with their sensitivity to exchange rate fluctuations. Wages may also be characterised by downward nominal rigidity, since it is hardly likely that wage reductions could be achieved by negotiation.

B) Fall in transaction costs and elimination of exchange rate volatility

Another expected advantage of the unilateral introduction of the euro is the elimination of exchange rate volatility and reduced transaction costs, which would create appropriate conditions for an upturn in international trade and growth in the economy.

In general, transaction costs consist of two components: financial costs (difference between purchasing and selling prices, charges for exchange, and other administrative expenses) and in-house costs (costs incurred in connection with foreign exchange control, delays in payments, etc.). The potential effects of eurisation on the costs of foreign exchange transactions can be roughly expressed as follows:

$$T = p \frac{Y}{GDP};$$

where:

T – represents transaction costs (% of GDP); p – average charges for EUR/SKK transactions (expressed in %); and Y – the volume of EUR/SKK transactions.

The volume of transactions with euro-zone countries in 2000 was calculated from monthly statements of foreign exchange receipts and payments. If we assume that the average charge for conversion is 0.35% (in 1996, the European Commission estimated the average charge for interbank transfers at 0.10%, capital account transactions at 0.25%, and current account transactions at 0.50%), then total transaction costs could reach 0.25% of GDP.

It is far more difficult to determine the effect of exchange rate volatility on international trade than to calculate the fall in transaction costs. In general, the potential effect is expected to be low. In spite of this, recent analyses have confirmed that the volume of trade between countries having a single currency is several times higher than between countries with different currencies. These analyses have also shown that zero exchange rate volatility has less influence on trade than the single currency and that a reduction of 1.0 in standard exchange rate deviation stimulates a 1.8% growth in trade (Rose, 2000). In this connection, however, we should note that the introduction of the euro on a unilateral basis is not the same as the creation of a monetary union, since eurisation does not create a common market like a monetary union.

From January 1999 to July 2001, the standard deviation from the SKK/EUR exchange rate amounted to 1.07. According to the previous assumption, the elimination of exchange rate volatility would stimulate a roughly 1.9% growth in trade between the SR and the euro area. Subse-

quently, the openness of the Slovak economy is expected to increase by about 1.6 percentage points (openness is expressed as the share of exports and imports in GDP).

There are different views on the relationship between the openness of the economy and the level of economic activity. In literature (Baldwin & Sberg, 1999), there are theories about the non-linear nature of this relationship, which introduces an element of uncertainty into the estimates. On the other hand, there are views (Frankel and Romer, 1999) about a relatively strong relationship between the openness of the economy and economic growth. According to these views, a 1 percentage point increase in openness would stimulate a 0.5 – 2.0% growth in GDP per capita. This indicates that such an increase in economic openness would make a one-off contribution of 0.8 – 3.2% to the growth in per-capita GDP. Since the effect of the exchange rate on the openness of the economy and the effect of openness on the rate of economic growth are not clearly defined, we did not take them into account as decisive elements in quantifying the impact of eurisation.

C) Lowering the rate of inflation

In a certain sense, eurisation could be considered to be an anti-inflation strategy. The introduction of the euro would eliminate the domestic components of the money supply. At the same time, the rate of growth in the money supply would slow considerably, even if the rate of monetary expansion remains above the average level of the euro area due to an inflow of capital in connection with the process of accession. The slowdown in the rate of growth in the money supply is expected to lower the level of inflation. If the economy is accustomed to a certain level of inflation, a fall in the real money supply could have a temporary negative effect on the rate of economic growth and employment. On the other hand, increased monetary stability is expected to improve economic conditions in Slovakia and thus make the country more attractive to foreign investors.

In the case of Slovakia, the application of the above theoretical approach is questionable, because the function of demand for money characterising the relationship between inflation and the money supply is relatively unstable and therefore introduces some uncertainty to the theory.

D) Positive effect on macro-economic discipline and structural reform

Last but not least, the unilateral adoption of the euro in transition economies could have a positive effect on fiscal discipline and structural reform. The process of integration into the EU represents a significant stimulus for institutional and structural reforms, as well as for macro-economic stability, so it is not sure whether a change in the exchange rate regime and eurisation in particular, could support the existing stimuli for reform and sound macro-economic development.

3.1.2. Disadvantages of the unilateral introduction of the euro

A) Costs

Direct costs incurred in connection with the unilateral adoption of the euro include the renouncement of seigniorage revenues and the institution of the lender of last resort. If the euro is introduced in an inflationary environment, additional costs would be incurred in connection with the process of stabilisation.

Seigniorage

One of the clearly quantifiable costs incurred in connection with the withdrawal of a national currency from circulation is the loss of revenue from seigniorage. Under the EC Treaty, seigniorage revenue is shared by the Member States of EMU, which would not be possible if the euro was adopted on a unilateral basis.

The costs incurred in connection with the introduction of the euro would result from the withdrawal of the domestic currency from circulation and its replacement with a foreign currency using the foreign exchange reserves. In this way, the central bank could return the seigniorage revenues created in the past, to the public. In the case of Slovakia, we expressed these losses in terms of the share of the monetary base in GDP, which reached roughly 12.8% (Sk 113.6 billion) in 2000. (If we take into account only the M0 monetary aggregate, its share in GDP amounted to roughly 7.6% of GDP, i.e. Sk 67.0 billion, in 2000).

Further losses on eurisation could result from the loss of future revenues from seigniorage, defined as the existence of non-interest bearing liabilities, which make it possible for the central bank to draw profit from refinancing (active operations) and reduces the loss of the central bank from sterilisation (passive operations). Using an average monetary base and average sterilisation rate, this value would reach roughly 1% of GDP (Sk 9.4 billion). If we use the M0 monetary aggregate, the value for 2000 would reach 0.5% (Sk 4.9 billion).

If the M2 aggregate (excluding deposits in foreign currency) were to be fully covered by foreign exchange reserves, the SKK/EUR exchange rate would have to reach 117.2. If we were to take into account only the M1 aggregate, the SKK/EUR rate would stand at 42.7 (data for the end of 2000).

In making these assumptions, we left interest on required reserves out of account for the sake of simplicity. Otherwise, seigniorage revenues would have to be reduced by the amount of interest credited. In addition, we calculated the revenue from seigniorage without taking into account the costs of money production, which are generally very low. Also, we left out of account the operating costs of the central bank, which are not expected to fall significantly after eurisation.



Lender of last resort

After the unilateral introduction of the euro, the monetary authorities would no longer be able to act as lenders of last resort, i.e. banks cannot apply to the central bank for an emergency loan in the case of banking crisis, which could cause problems in a banking system which is not strong and sound enough. (Similarly, it is not possible to make a loan to the Deposit Protection Fund).

The institution of the lender of last resort (where there is no such lender) may be substituted in the following ways:

- The domestic banking system is owned by foreign institutions. For branches of foreign banks, it would, in general, be unimportant whether an euro transaction is carried out within the domestic economy or abroad. If the branch of a foreign bank is short of resources, the parent bank could provide the branch with the necessary funds. This means that foreign banks may substitute a lender of last resort effectively. On the other hand, the elimination of the central bank's ability to act as lender of last resort may provide foreign banks with a competitive advantage, for domestic banks will remain less attractive, which may lead to an outflow of deposits from domestic to foreign banks.

In the case of Slovakia, the share of foreign investors in the total subscribed capital of banks and permanent funds provided to branch offices, increased from 28.1% (31 December 2000) to 43.6% (30 June 2001). This was due primarily to an increase in the stakes of foreign investors in Poľnobanka, (Agrobank), Slovenská sporiteľňa (Slovak Savings Bank), and VÚB (General Credit Bank). The continued privatisation of banks (mainly VÚB) and the continued increase in the share of foreign capital in bank capital in Slovakia indicates that, in case of difficulty, the role of a lender of last resort could be taken over by foreign financial institutions.

- The remaining foreign exchange reserves (after the purchase of cash) is used to create a special fund, which could be used in case of liquidity problems in specific banks or in the event of a crisis. (In the case of Slovakia, the foreign exchange reserves of the NBS, remaining after the coverage of the monetary base, would cover roughly 66% of the deposits in the M1 aggregate and about 16% of the deposits in the M2 aggregate).

- Stricter requirements will be imposed on the liquidity of banks so that their vulnerability to changes in liquidity or profitability would diminish. This possibility is, however, connected with the additional costs of financial institutions, which may have a negative impact on investment and economic growth.

In general, the most important tasks are to increase the efficacy of the banking sector, improve the performance of banking supervision, and to bring the relevant regulations into harmony with the international standards, which should be accepted irrespective of the exchange rate regime. In the case of Slovakia, this condition was met with the enactment of the new Banking Act.

Costs connected with initial currency stabilisation

The unilateral introduction of the euro may have a dampening effect on inflation. In principle, it is a positive effect; however, temporary costs that could be incurred in the area of economic growth and employment, should not be ignored.

In an economy with a permanently increased rate of inflation, expectations of inflation are also higher and more fixed than in an economy with a lower level of inflation. The range of the aforementioned costs depends, to a considerable extent, on how quickly economic entities are able to adapt their expectations of inflation. The speed of adaptation also depends on the reliability of the new exchange rate system. On the other hand, the expectations of economic entities are not likely to change immediately. Reduction in the level of inflation will take some time and, even though eurisation represents a method for its reduction, it could have a negative (probably marked) effect in the form of a slowdown in the rate of economic growth and the process of real convergence.

B) Risks

Risk involved in exchange rate development in the process of nominal convergence

One of the arguments for eurisation is that, in an environment of flexible exchange rates, it would be difficult for candidate countries to reduce inflation to the level set out in the EC Treaty as a condition for entry into the euro area. The fulfilment of the Maastricht criterion for inflation would require a strong appreciation in the nominal exchange rate, which could lead to the loss of competitiveness, since the necessary fall in prices would be limited by nominal rigidity, i.e. the fulfilment of the inflation criterion could be made conditional on recession. Eurisation is expected to help us to avoid such a course of development.

However, the above arguments are not entirely convincing, since it is not clear whether the relatively rapid appreciation of real exchange rates, recorded in candidate countries during the last stage of transformation, would continue or not. Also, we should note that the Maastricht criteria will have to be met only several years after entry into the EU (a minimum of 1 year).

Like the currencies of other transition economies, the Slovak crown has also shown appreciation in the real exchange rate in recent years. The phenomenon of appreciation in the real exchange rate is usually ascribed to the Balassa-Samuelson effect, i.e. difference in productivity in the tradeable and non-tradeable sectors. The statement that the real effective exchange rate will appreciate in future at a slower rate than up to now, is based on the following arguments:

- the development of productivity at the beginning of transition was, to a certain extent, affected by specific one-off factors, e.g. better allocation of existing resources under the new economic conditions;

- the appreciation of the real exchange rate cannot only be explained by the Balassa-Samuelson effect; part of the appreciation is ascribable to the depreciation which took place at the beginning of transition and which created room for a subsequent appreciation; the changes in prices were also affected significantly by administrative adjustments to regulated prices (heating, electricity, rents, public transport), which increased at a faster rate than non-regulated prices.

The rate of appreciation will gradually slow down, so candidate countries should meet the inflation criterion even without a marked nominal appreciation and qualify for membership in the euro area without too much trouble.

Instruments of monetary and exchange rate policy

Another risk involved in eurisation is the complete disappearance of the tools of monetary and exchange rate policy from the set of macro-economic policy instruments. However, monetary policy applied in the euro area would not take the economic situation in Slovakia into account. The mitigation of possible shocks in the domestic economy will take place solely through changes in the real effective exchange rate. If the nominal exchange rate is fixed, the absorption of shocks will require flexible wages and prices. If the trend in price and wage developments is not adjusted promptly, the economy may run into recession or suffer a slowdown in the rate of growth. Thus, eurisation may cause negative fluctuation in the rates of economic growth and unemployment.

A standard approach applied in analysing the consequences of adoption of a foreign currency is the theory of Optimum Currency Area (OCA). This theory is analysed in detail in Chapter 2.1.

Exchange rate disequilibrium

Eurisation, as a form of fixed exchange rate regime, includes the risk of exchange rate disequilibrium. In the case of eurisation, this risk is higher since there is no strategy for escape. Every deviation in the real exchange rate from its equilibrium level would have an impact on interest rates, GDP, and employment. Factors, responsible for the deviation of the exchange rate from its equilibrium value, include demand and cost factors.

During the pre-transition period, services were more or less undeveloped and public consumption restricted. With a rise in the level of income, the structure of expenditure began converging towards the structure of spending in advanced countries with a higher share of the non-tradeable sector, mainly services. This development is important for the real exchange rate and the competitiveness of the tradeable sector.

A possible growth in demand for services may stimulate an accelerated increase in the prices of services, which would affect the inflow of foreign capital. In a two-sectoral economy, the inflow of capital is directed to the non-tradeable sector. Where savings fail to generate a suffi-

cient amount of domestic capital (typical of transition economies), the inflow of capital into the non-tradeable sector takes place at the expense of the tradeable sector. This restricts the growth of productivity in this sector, which will result in a deterioration in the current account.

The effect of demand may affect the labour market as well. The rise in the level of demand and prices in the non-tradeable sector improves its prospects. Together with the growth in profits and wages, the level of employment may increase in this sector. The effect of the non-tradeable sector on price developments in the tradeable sector would lead to growth in costs and decline in profits, which would have an effect on the competitiveness of the tradeable sector. The low rate of return on capital re-routes investments into the non-tradeable sector, where there is less competition. The unilateral introduction of the euro may increase these effects even further, in contrast with exchange rate fluctuations, which could eliminate them.

The appreciation of the real exchange rate is also affected by cost factors. In transition economies, administratively regulated prices are still in use. Such prices play a significant role in price developments in Slovakia. Their continued liberalisation may cause a real appreciation in the exchange rate, above the equilibrium level. In addition, certain goods and services produced in the non-tradeable sector are used as inputs in the tradeable sector. An increase in the prices of these goods and services affects the profitability of the tradeable sector and so reduces the profit margin and competitiveness of the economy as a whole. Furthermore, a fall in the competitiveness of the economy could affect the development of wages in the tradeable sector, if they grow at a faster rate than productivity.

Balance of payments and interest rates

The unilateral introduction of the euro is not an instrument for the solution of external imbalance. Eurisation could support the process of integration within the scope of international financial markets and enable access to financial resources and thus facilitate the financing of a potential external imbalance. In spite of this, no country is allowed to accumulate foreign debts above a certain limit. Should it occur, foreign investors could demand a higher premium, because the default risk is higher. Subsequently, the potential advantages of eurisation, arising from lower interest rates, would be reduced (or eliminated completely).

Risk of crisis

Eurisation may protect a country against a monetary crisis, but cannot prevent the occurrence of crises in the form of recession, bank failures, or the sudden outflow of capital. An unsustainable fiscal deficit or weak private sector may still lead investors to withdraw their investments from the country, or to sell government bonds or other domestic assets.

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