ANNEXES

ANNEX 1. Potential risks and their impact on Lithuania’s economic development

Forecasts are always subject to uncertainty. There are various reasons due to which the economic development may be different from that envisaged in the main projection scenario. Presently the highest risk is posed by the public finance situation in some EU member states. An increasing number of countries recognize their public sector indebtedness problem – the situation in Greece is immensely serious, great concern confronts Ireland, Portugal, Spain, Italy. Therefore, contagion risk is assessed as substantially increased, particularly taking into account the fact that international financial markets are highly integrated. More profound problems of the public finance situation should primarily be reflected in interest rate spread, EU and the global economic development would also be negatively affected. The analysis of an alternative Lithuania’s economic development scenario is provided below. Such scenario encompasses three main impact channels on the economy: higher interest rates, lower foreign demand and a decreased oil price.

The described scenario is exercised under the assumption of no additional monetary and fiscal policy measures. Therefore, shocks included in the macroeconomic model are permanent. The size of the interest rate shock corresponds approximately to two standard deviations of the interest rate level during the recent decade. Two standard deviations of annual growth rates of the oil price and external demand variables within the same period are taken for the analysis. Such shocks are sufficiently strong – to compare with the main scenario, the interest rate is higher by 500 basis points, external demand drops by 7 percent, and the oil price is smaller by 60 percent. However, shocks of this size are not exceptional. For example, during the recent economic downturn the difference between 3 months VILIBOR and the ECB refinancing interest rates jumped by more than 600 basis points, foreign demand (calculated by the GDP of Lithuania’s main foreign partners) fell by one-tenth from its peak to the trough, and the oil price drop accounted for 56 percent. Results of all three shocks are presented in Table A. They show the difference of the annual growth rates as compared to those envisaged in the main scenario within a three year period.

An interest rate shock. The impact of a 500 basis points increase of the domestic market interest rate on Lithuania’s economic indicators is analysed here. In this case the interest rate would rise from approximately 1.6 percent within the nearest three years (as assumed in the main scenario) to 6.6 percent.

The shock of domestic market interest rates affects investment and consumption decisions. Due to higher capital costs, the enterprises tend to decline or postpone investments; higher interest rates encourage the households to save, thus reducing the private consumption spending. Weakening domestic demand in its turn affects other economic indicators, i.e., a poorer real sector development exercises a negative influence on the labour market and reduces inflation.

The results show that investments would have the most sensitive reaction to the 500 basis points domestic market interest rate shock. The annual growth of investment against the main scenario would drop by 24 percentage points. The development of private consumption would slow substantially less – by more than 2 percentage points, and the GDP growth would slacken by 2.5 percentage points. As the domestic market interest rate shock would have no effect on exports but significantly impact imports, the current account balance would improve noticeably.

A foreign demand shock. Analysing the external demand shock’s influence on Lithuania’s economic development, foreign demand was reduced by 7 percent. In this case the average annual growth of foreign demand during the three-year period would slow down from 2.9 percent (as envisaged in the main scenario) to 0.5 percent.

The drop of foreign demand has a direct impact on the country’s exports. A poorer development of exports negatively affects the demand of imports (particularly imports of intermediate goods) and GDP. As a result, a drop of foreign demand weakens the general economic development and domestic demand in Lithuania and indirectly influences the development
of labour market and prices as well. The shock results (Table A) show that the decline in the external demand by 7 percent would reduce the annual growth of real exports by close to 6 percentage points as compared to the main scenario projection. The growth of investments would weaken rather similarly; the annual growth of private consumption and total GDP would decline by about 4 percentage points. HICP inflation in the case of such shock would be close to 1 percentage point smaller, and the unemployment rate – 2 percentage points higher.

An oil price shock. The oil price was reduced by 60 percent, and its average annual growth rate over the nearest three years has fallen from -0.5 percent (this is the main scenario assumption constructed from oil futures prices) to -21 percent.

The drop of oil prices primarily affects the domestic price development. Energy HICP would decrease, lower energy costs would also impact non-energy consumer prices. Lower oil price reduces export, import and investment deflators as well. However, in the context of lower prices, propensity to invest and consume increases, thus this shock entails a positive impact on the real sector. The latter, in turn, defines a more favourable stance in the labour market.

With a 60 percent drop of the oil price, annual HICP inflation vis-à-vis the one envisaged in the main scenario would slow down by about 5 percentage points. The shock impact on the real sector is only indirect and rather negligible – the investment annual growth would accelerate by less than 3 percentage points, and the GDP development would speed up by 1 percentage point. This would also slightly reduce the unemployment rate.

When assessing the impact of potential risks on Lithuanian economic development, attention should be paid to several circumstances. Firstly, the estimated shocks are mainly external and entail the largest impact on the tradable sector. In other words, no regard is given to internal economic factors. For example, the recent economic downturn encompassed the fall in the real estate market, which made an immensely strong contribution to a drop of the non-tradable sector and severely aggravated situation in the labour market. Secondly, the econometric model used in the shock estimation is linear and allows no potential non-linearities, which may occur in the event of such sizeable shocks. Moreover, the model is backward-looking. Hence the variable reaction to shocks is slow: on the basis of the perceived precondition of adaptive expectations, equations include the lags. However, in the case of substantial shocks, the reaction of economic participants may be significantly quicker, and changes in indicators may occur not during several years but in a much shorter period.