Spring Forecasts of Economic Trends (2005)

The spring forecasts of economic trends are based on available official data on economic developments for 2004 and the first months of 2005 released up to 31 March 2005. The forecasts take into account the currently applied economic policy orientations and the adopted budget for 2005. The forecasts for the international environment are based on forecasts made by international institutions available at that time.

1. Assumptions about the international economic environment

After a two-year period of modest economic growth, the gross domestic product of the euro area rose by 2.0% (2.3% in the EU), which was in line with the autumn assumptions. Forecasts for 2005 have deteriorated slightly since autumn, anticipating a slowdown in economic growth, while acceleration is still expected in 2006. Due to the weak growth of domestic demand, in private consumption in particular (notably in Germany, but also in Italy and Austria), economic growth in the euro area remains hinged on the economic situation in the international environment, which will be less supportive in 2005 and 2006 than in 2004[1]. Among Slovenia's main trading partners, the biggest deterioration occurred in the forecasts for Germany and Italy, while the revisions for France and Austria were less pronounced (see Table 1). In addition, 2005 will be 4 working days shorter than 2004 when the number of working days contributed about 0.25 p.p. (in Germany even an estimated 0.5 p.p.) to the 2% economic growth in the euro area.

Table 1: **IMAD's forecasting assumptions for economic growth in Slovenia's main trading partners, 2005–2006**

	2004 (estimate)	2005 forecast		2006 forecast
		Autumn (Oct. 2004)	**Spring (Apr. 2005)**	**Spring (Apr. 2005)**
Euro area	2.0	2.0	1.7	2.2
EU	2.3	2.3	2.0	2.4
Germany	1.6	1.6	0.9	1.7
Italy	1.1	1.8	1.2	1.7
Austria	1.9	2.3	2.0	2.2
France	2.5	2.2	2.0	2.3
UK	3.0	2.6	2.8	2.8
Czech Republic	4.0	3.4	3.8	4.0
Hungary	4.0	3.6	3.9	4.1
Poland	5.4	4.5	4.5	4.6
Croatia	3.7	3.5	3.5	3.5
Bosnia & Herzegovina	6.0	4.5	5.0	5.0
Serbia	7.0	3.0	5.0	5.0
Macedonia	2.0	3.0	4.0	4.0
USA	4.4	3.5	3.5	3.4
Russia	6.8	5.5	5.5	5.3

Source: IMAD's estimates based on the European Commission's forecast, Consensus Forecasts, March 2005, WIIW Research Report No. 314, March 2005.

In 2005-2006, Slovenia's main trading partners from amongst the new EU member states are expected to sustain the relatively high economic growth rates already achieved in 2004. In 2004, economic growth in these countries was also encouraged by domestic consumption, while the recovery in the euro area and accession to the EU strongly boosted their external trade. Favourable trends in the economic growth of these countries are expected to continue in the next short-term period.

In the countries of former Yugoslavia the spring forecasts either remain unchanged compared to the autumn forecasts (Croatia) or are slightly revised upwards (other countries in this area). The softening of economic

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[1] World economic growth excluding the EU-25, which totalled 5.7% in 2004, is expected to ease and edge down again by 1 p.p.

growth seen in 2004 in Croatia was slightly below the autumn expectations and largely the result of the government's smaller investment in infrastructure that had added substantially to the growth in 2001-2003. In this and next year, Croatia's economic growth is set to sustain a similar level (3.5%). In Serbia and Montenegro, and in Bosnia and Herzegovina economic trends exceeded the expectations already in 2004. The favourable developments also impacted on the upward revisions of economic growth forecasts for 2005 and 2006 to around 5%. Macedonia's modest economic growth in 2004, partly caused by restrictive macroeconomic policies, is expected to rebound over the forecast horizon (to 4%).

The expected oil prices are considerably higher than the autumn assumptions After the autumn forecast was finalised, oil prices in world markets began to rise anew in October 2004 and overshot the level of USD 50/barrel (Brent crude), after which they fell to USD 40/barrel until the end of the year, averaging out at USD 38.2/barrel for 2004 as a whole (the autumn forecast assumption was USD 37). This year, oil prices have started to rise again, peaking in March (USD 56/barrel). The average oil price for this year's first quarter thus approached USD 48/barrel, while for the year as a whole as well as in 2006 a gradual slowdown is expected from the high level recorded at the beginning of Q2 to USD 45/barrel, according to the forecasts of international institutions and on the technical assumption of an unchanged euro/dollar exchange rate. Such dynamics would result in an average oil price of USD 48/barrel in 2005 and USD 45/barrel in 2006.

Table 2: **Oil price assumptions**

	2004	**2005 forecast**		**2006 forecast**
		autumn	**spring**	**spring**
average oil price per barrel, USD	38.2	37	48	45

Source: IMAD

The euro/dollar ratio is somewhat higher than forecast in autumn: 1.306 dollars for one euro (1.22 in the autumn forecast). This rate, used as a forecasting assumption, is fixed on the basis of the dynamics in recent months (October 2004-March 2005 average) and represents the "technical assumption" of an unchanged euro/dollar exchange rate over the total forecast horizon. The dollar/euro ratio averaged 1.24 in 2004; the dollar appreciated in the spring months and depreciated towards the end of the year.

2. ECONOMIC DEVELOPMENTS IN 2004

2.1. Economic growth in 2004

The economic growth achieved in 2004 (4.6%) was the highest in the last five years. This strengthening, paralleled by the recovery in the international environment, already began at the end of 2003 and continued at an accelerated pace until the third quarter of 2004 (5.0% real GDP growth year on year), slowing down slightly in Q4 yet still sustaining a relatively high level (4.3%; the slowdown was largely induced by the somewhat lower growth of investment and the negative contribution of changes in inventories)[2]. Real GDP growth thus totalled 4.6% in 2004 which was, in the SORS' estimate, partly due to the higher number of working days (5 more than in 2003)[3]. Such a strengthening was largely generated by strongly accelerated exports compared to the previous year (12.6% real growth over 3.2% in 2003) which also exceeded the autumn forecasts' expectations, while the real growth of domestic consumption sustained the sound 2003 level (4.7%).

The growth of exports to the EU, Croatia, Serbia and Montenegro, and Russia strengthened substantially in 2004. Changes in the regional distribution in trade in 2004, which were partly due to economic trends in the

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[2] According to seasonally and working-day adjusted data, gross domestic product decreased by 0.4% in real terms in Q4 over Q3 in 2004, while value added in manufacturing fell by 2.4%.

[3] Nominal GDP growth amounted to 7.7% in 2004, which is in line with the autumn forecast. The 4.6% real GDP growth figure therefore indicates that the implicit GDP deflator totalled 3%. The relatively low deflator value in 2004 was largely influenced by the deteriorated terms of trade, meaning that the growth of import prices was higher than in export prices which was mainly due to the accelerated rises of oil and commodity prices in 2004.

international environment already reflect the trade creation and diversion effects of EU accession. The year-on-year increase in total goods exports picked up in the second quarter and remained at a high level in the second half of the year to total 13.2% in 2004 as a whole. It was mainly driven by the accelerated exports to the old EU countries (where growth was modest in 2003), notably Italy, France and Austria and other less traditional trading partners (Belgium, Spain, Ireland, Portugal), while exports to Germany rose less rapidly and slowed down further towards the end of the year. Export growth to the new EU members remained close to the high levels seen in recent years. Among countries of former Yugoslavia, exports to Croatia and Serbia and Montenegro recorded high growth rates. The robust growth of exports to Russia from previous years doubled last year while exports to the USA dropped after their bumper growth seen in 2003. The rise in exports to BiH was modest in 2004 as a whole while exports to Macedonia even fell; the monthly dynamics of exports to both countries were strongly affected by the expiry of free-trade agreements when Slovenia joined the EU. Hence, robust growth rates were achieved in the first four months only to drop rapidly after May 2004. In contrast, the abolition of the free-trade agreement with Croatia had no visible effect on exports to this country because Croatia concluded an "interim agreement" with the EU whereby most imports of industrial products from the EU have been exempt from customs duties since 2004.

Domestic demand was encouraged by the somewhat stronger growth of private consumption and the sustained vibrant investment activity. Similarly, the contribution of the change in inventories to economic growth was again high. On the domestic demand side, the increase in private consumption strengthened within the expectations (3.5% over 2.7% in 2003) as did the real increase in gross fixed capital formation, which was at a slightly higher level in 2004 than in 2003 (6.8% over 6.3%), while the real growth of government consumption decreased (1.7% over 2.6%) and was also lower than projected in autumn. Inventories rose more than expected, contributing 0.8 p.p. to last year's annual economic growth following the high values recorded in 2002 and 2003. Alongside the modest rises in wages and employment (see labour market trends below), the rise in private consumption was also fuelled by the relatively strong growth of other remuneration which pushed up the disposable income and increased household borrowing in banks (mainly long-term) which, in turn, stimulated the consumption of durable and semi-durable goods. Increased household borrowing was driven by cuts in nominal interest rates linked to entry to the exchange rate mechanism ERM II and also, in our estimate, by the disburdening of household income from the repayment of loans taken out in 1999 whereby the population's creditworthiness rose again. In our estimate, the rise in gross fixed capital formation was largely based on investment in machinery and equipment; in addition, figures on issued building permits indicate a pick-up in housing investment while investment in civil engineering sustained its high level of 2003.

Supported by the rise in domestic consumption, which was at a relatively high level, and the accelerated export growth, imports also recorded high overall growth (12.4% in 2004 over 6.8% in 2003). The contribution of the external sector was still negative (-0.2 p.p.) but less so than in 2003 (-2.2 p.p.) and less than projected in autumn.

2.2. Labour market trends in 2004

2004 was generally positive in terms of employment growth, although the rise in formal employment remained low while informal employment was up considerably. Formal employment (employees and the self-employed according to monthly statistics) rose by 0.8% in 2004. On the other hand, informal employment (the difference between survey employment and formal employment)[4] expanded significantly in 2004. Survey employment rose by about 5%, of which informal employment surged by 35%. Employment growth according to the national accounts statistics totalled 0.1% according to the SORS' first estimate. The registered unemployment rate fell to 10.3% in 2004 (11.2% in 2003)[5], while the survey unemployment rate decreased to 6.3% (in 2003 it totalled 6.7%).

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[4] In our estimate, this difference is created mainly on account of unpaid family workers, contract-based work and the grey economy.
[5] Deletions from unemployment registers meanwhile totalled 24.3% of the total inflow into unemployment recorded in 2004 (starting position + new first-time job-seekers + people who lost work). The deletions were mostly voluntary or due to a failure to report, job refusal or training.

The real wage growth per employee totalled 2% in 2004, whereby the objective set in the Social Agreement (wage growth should be lower than productivity growth) was overshot. In the private sector, the real gross wage per employee was up 3.1%, largely on the back of more favourable economic trends, which was reflected in the wage disbursements made at the end of the year. Five working days more compared to the previous year additionally increased wage growth. The more modest total real growth of the gross wage per employee rested mainly on the dynamics of wages in the public sector since the real gross wage per employee in that sector was 0.8% lower in 2004 than in 2003 in real terms.

2.3. Price dynamics and price policy in 2004

The fall in inflation seen in 2003 was followed by its continued gradual slowdown in 2004. After consumer price rises decreased by 2.6 p.p. in 2003, they dropped by a further 1.4 p.p. in 2004. The year-on-year increase of consumer prices thus totalled 3.2% in December 2004. Average inflation similarly fell by around a third in 2004 and totalled 3.6% at the end of the year. Like in 2003, price growth was most pronounced in the first half of the year (2.8%), while it only totalled 0.4% in the second half. In spite of its considerable lowering, inflation still deviates sharply from the Maastricht criterion. In December 2004, the Maastricht criterion for adoption of the euro stood at 2.2%, while average inflation (measured by the HICP) in Slovenia totalled 3.7% at the end of the year and thus exceeded the Maastricht reference value by 1.5 p.p.

The sustainable lowering of inflation seen during the past two years has resulted from the co-ordinated implementation of measures adopted by the Bank of Slovenia and the government within the Programme for entering ERM II and introducing the euro. The main contributor to lowering inflation in 2004 was stabilisation of the tolar's exchange rate upon entry to the ERM II. The Bank of Slovenia continued to gradually slow down the tolar's depreciation in the first half of 2004, after which it stabilised the tolar's exchange rate when Slovenia joined the ERM II. The year-on-year growth of the exchange rate totalled 2.3% in June (3.3% in June 2003) and contributed 1.0 p.p. less to inflation than in the same period of 2003 considering the almost complete pass-through of the exchange rate to price rises. Hence, stabilisation of the tolar's exchange rate upon entry to the ERM II at the end of June 2004 eliminated a significant inflationary factor. Due to its gradual depreciation in the first half of 2004 the tolar's year-on-year appreciation totalled 1.3% in December, while its stabilisation is expected to see its full effect on inflation in 2005.

Other macroeconomic policies supported the reduction of inflation. The government continued implementing the Administered Prices Rise Plan, adjusting fiscal burdens in a co-ordinated manner and fulfilling the objectives of the Social Agreement. Nevertheless, the main goal of the administered prices policy (to ensure consistent growth of administered and market-determined prices) was, in contrast to 2003, not achieved. The main reason for the faster growth of administered prices (they rose by 9.0% in 2004 while market-determined prices were up 2.1%) were volatile external factors, i.e. higher prices of oil and consequently liquid fuels for transport and heating (their contribution to inflation amounted to 1.0 p.p. or 71% of the total administered prices increase). Rises on most other administered prices also deviated from the plan: the prices of basic utility services, non-profit rents and textbooks rose by more than 10%, contributing 0.2 p.p. more to inflation than planned in the Administered Prices Adjustment Plan. With the slower growth of other administered prices (their contribution was 0.1 p.p. lower than planned), the different than expected increase in administered prices added less than 0.1 p.p. to inflation. As oil price fluctuations had a comparatively stronger impact on inflation in Slovenia than in other EU countries, the government continued to counter-cyclically adjust excise duties on liquid fuels for transport and heating. At the same time, the process of harmonising excise duties on tobacco products with the EU tax system was underway, which pushed inflation up by a further 0.2 p.p. In the area of incomes policy, the government pursued the agreement with the social partners by keeping wage growth lower than productivity growth in 2004, thereby preventing any potential pass-through of wage rises into prices.

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Among measures linked to Slovenia's entry to the EU, the lowering of inflation was additionally enhanced by changes in trade regimes. The changed competitive situation in the market and abolition of customs duties, coupled with improved weather conditions compared with 2003, underpinned the lowering of food prices. The overall effect of these factors was reflected in the 1.1% lowering of food prices in 2004, which reduced last year's inflation by 0.2 p.p. After the 4% increase in food prices recorded in 2003, which contributed 0.8 p.p. to inflation, the contribution of food prices to inflation thus dropped by 1.0 p.p.

3. SPRING ECONOMIC FORECASTS FOR 2005-2006

3.1 Economic growth forecasts for 2005 and 2006

Compared with the autumn forecasts, the spring forecast of economic growth for 2005 (3.8%) is unchanged while the forecast for 2006 is slightly higher at 4.1% (3.9% in autumn). While the aggregate change is small the composition of GDP growth in 2005 has shifted slightly towards a larger contribution of external trade to growth, mainly on account of the upward revisions in export growth forecasts (see Table 3). The new forecast of domestic consumption growth in 2005 has been revised downwards due to the slightly lower growth forecasts for government consumption and investment.

Table 3: **Spring forecasts of GDP growth and consumption aggregates and a comparison with the autumn forecasts for 2005 and 2006**

Real growth rates (in %)

	2004	2005		2006	
	SORS	Autumn forecast (Oct. 2004)	Spring forecast (Apr. 2005)	Autumn forecast (Oct. 2004)	Spring forecast (Apr. 2005)
GROSS DOMESTIC PRODUCT	4.6	3.8	**3.8**	3.9	**4.1**
Exports of goods and services	12.6	5.8	**7.5**	6.6	**7.9**
Imports of goods and services	12.4	6.5	**6.5**	6.5	**6.6**
Private consumption	3.5	3.4	**3.4**	3.1	**3.1**
Government consumption	1.7	2.9	**2.5**	2.9	**2.5**
Gross fixed capital formation	6.8	7.0	**6.7**	5.5	**4.9**

Source: SORS, forecasts by IMAD.

This and next year are expected to record robust growth of exports to EU countries. Although slightly weaker economic growth than projected in autumn is expected in both years in most of Slovenia's major trading partners in the EU, the forecasts of export growth have been revised upwards (to 7.5% in 2005 and 7.9% in 2006; see Table 3) mainly due to last year's favourable trends in external trade. Within exports, growth of exports to the EU-25 is set to decelerate slightly this year over 2004, while a relatively stronger slowdown is expected in exports to Croatia, Serbia and Montenegro, and Russia, where high growth rates were achieved last year. Lower increases compared to last year are also expected in exports to other non-member states (except the USA[6]). In 2006, provided that trends in the international environment remain favourable, export growth is expected to retain a similar level. Specifically, growth is projected to strengthen slightly in exports to old EU member states while remaining at a high level in the new member states. On the other hand, export growth to Croatia, Serbia and Montenegro, Russia and other non-EU member states is estimated to decline slightly further. Hence we expect the continuation of the trade creation and diversion process resulting from EU membership.

The growth of private, investment and government consumption is projected to roughly sustain the level of the past two years during the forecast horizon. In both 2005 and 2006, the real growth rate of private consumption is expected to remain above 3% (3.4% and 3.1%, respectively). This forecast is based on the estimated disposable income and relatively small changes in the composition of its spending against the expected wage dynamics. The growth of gross fixed capital formation will sustain a relatively high level this

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[6] In 2004 the growth of exports to the USA was negative due to the strong acceleration in exports seen in 2003 (high comparative basis).

year (6.7%) – the accelerated growth of housing investment that began last year is set to continue while investment in non-residential construction is estimated to remain at the high level of the past two years. Investment in machinery and equipment is projected to soften marginally. The planned tax changes regarding investment relief that enter into force in 2006 are another factor that may boost investment in 2005 and dampen it in 2006. Given the sharp increase in inventories over the past two years and the expected favourable economic trends, this sector is projected to record smaller rises and a neutral overall contribution of changes in inventories to economic growth this and next year. This is the main reason for this year's weaker growth of domestic consumption compared to the previous two years and compared to the autumn forecast. Despite the upward revision of the forecast export growth, the projected import growth (6.5% in 2005 and 6.6% in 2006) remains unchanged compared to the autumn forecast given the anticipated growth of domestic consumption, which is at the level of the autumn forecast. The net contribution of external trade is thus expected to be positive in 2005 and 2006 for the first time after 2002 (0.5 and 0.7 p.p., respectively). The current account deficit is projected to remain at approximately the 2004 level in 2005, turning into a modest surplus in 2006[7].

3.2. Labour market outlook for 2005 and 2006

Supported by favourable economic growth, the labour market's performance is expected to improve gradually in 2005 and 2006. The pick-up in employment that started last year after a two-year decline is set to continue over the forecast horizon (0.5% in 2005 and 0.4% in 2006 according to the national accounts). Unemployment should accordingly decrease slightly faster (see Table 4).

Table 4: **Spring forecasts of labour market trends and a comparison with the autumn forecasts for 2005 and 2006**

	2004	2005		2006	
	SORS	Autumn forecast (Oct. 2004)	Spring forecast (Apr. 2005)	Autumn forecast (Oct. 2004)	Spring forecast (Apr. 2005)
LABOUR MARKET					
Employment according to the SNA (growth in %)	0.1	0.3	0.4	0.4	0.5
Registered unemployment rate (%)	10.3	10.1	9.8	9.6	9.3
ILO unemployment rate (%)	6.4	6.1	6.2	5.9	6.0
Gross wage per employee (real growth in %)	2.0	2.2	2.1	2.4	2.6

Source**: IMAD**

The real gross wage per employee will rise by 2.1% in 2005: by 2.5% in the private sector and by about 0.9% in the public sector. Wages policy in 2005 will follow the principle of real gross wage growth lagging behind productivity growth by one percentage point. In the *private sector*, the gross wage per employee is to increase slightly less than last year, partly due to the fewer working days this year (four). The adjustment mechanism for wages in the private sector agreed in the Wages Policy Agreement for the Private Sector for 2004-2005 does not provide for any downward revision (although the adjustment mechanism for 2005 takes into account the slightly higher consumer price rises than forecast for 2005). In the public sector, the real growth of the gross wage per employee incorporates the 2% adjustment of all wages agreed between the social partners in the 'Agreement on Adjusting the Amounts of Collectively Agreed Basic Wages and Base Wages in 2005', regular promotions and July's wage increase in education. The agreed adjustment means that, taking into account the mechanism set out in the 'Agreement on the Adjustment Mechanism for Base Wages and Holiday Allowances for 2004 and 2005', less funds will be allocated for the elimination of wage imbalances.

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[7] The available data from the balance of payments and national accounts statistics are not yet harmonised. According to the Bank of Slovenia, the current account ran a deficit of EUR 116 m in 2004, while the calculation based on figures from national accounts according to the SORS indicates a higher deficit totalling EUR 231 m.

The social agreement for 2006 should provide new wages policy guidelines for the ensuing period. The agreed guidelines will be taken into consideration in the talks between the social partners concerning wages policy for both the private and public sectors since the wages policy agreements expire in both sectors in 2005. The 2.6% growth estimate of real gross wage per employee in the spring forecast assumes that the basic guideline, according to which real wage growth should lag behind productivity growth by at least one percent, will remain unchanged. On this assumption, the real gross wage per employee in the private sector is set to rise by about 2.9% mainly thanks to the further pick-up in economic activity. In the public sector, given that wages are disbursed pursuant to the new law the real gross wage would only rise by about 1.8%.

3.3 Inflation forecasts for 2005 and 2006

After inflation fell by over 50% during the past two years it is expected to decelerate further in 2005 and 2006 so that the Maastricht criterion will be achieved by mid-2006. With continued implementation of macroeconomic policy measures aimed at cutting inflation and, to a lesser extent, with the maintenance of the favourable effects of EU accession we expect the year-on-year inflation to decrease to 2.5% in 2005 and then down to 2.3% in 2006. The same figures are projected for average inflation in both years.

Maintaining the current framework of the macroeconomic policies will be key for the further sustainable lowering of inflation in the next two years. Assuming that the effects with a predominantly one-off character (oil prices and abolition of customs duties on food prices) will have a weaker impact on price rises in the next two years than in 2004, the further lowering of inflation will depend crucially on implementation of the adopted orientations in monetary, fiscal, incomes and administered prices policies.

As far as monetary policy is concerned, we assume that the Bank of Slovenia will keep the tolar's exchange rate stable during the remaining period of participation in the exchange rate mechanism ERM II, thereby ensuring fulfilment of the Maastricht criterion and precluding price fluctuations resulting from changes in the exchange rate. Since the tolar's gradual depreciation has consistently contributed around 50% to the overall annual price increase in the past few years, the tolar's stable exchange rate will eliminate a significant inflationary factor.

Government policies are expected to further support the Bank of Slovenia's measures aimed at reducing inflation. After the revised policies concerning administered prices and the adjustment of excise duties helped bring inflation down in 2003 and 2004, we expect that these orientations will be upheld in 2005 and 2006. In the area of price regulation this means that the increase in prices under various regimes of regulation will not exceed the increase in market-determined prices and that none of the administered prices will deviate significantly from this target. In line with the effective plan of administered prices adjustments for 2004 and 2005 the increase in administered prices should not overshoot 2.3% this year, which would contribute 0.3 p.p. to inflation, while the already proposed revision of this plan would reduce this contribution to 0.2 p.p. Co-ordination between the government and independent regulators involved in price-determining in telecommunications, post and broadcasting, and electricity distribution is aimed at ensuring coherent rises of these and other prices.

The contribution of changes in excise duties to inflation is also expected to decrease this year compared with 2004. After having totalled 0.4 p.p. last year, it is projected to amount to 0.2 p.p. in 2005 and 2006, largely due to the further harmonisation of excise duties on tobacco. In addition, the forecast assumes that the government will continue to counter-cyclically adjust excise duties on liquid fuels to cushion any heavier oil price fluctuations and especially their second-round effects.

Table 5: **Spring inflation forecasts and a comparison with the autumn forecasts for 2005 and 2006**

	2005		2006	
	Autumn forecast (Oct. 2004)	**Spring forecast (Apr. 2005)**	**Autumn forecast (Oct. 2004)**	**Spring forecast (Apr. 2005)**
Inflation (annual average, %)	3.0	2.5	2.7	2.3

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Inflation (Dec/Dec, %)	2.9	2.5	2.7	2.3

Source: IMAD.

The inflation forecast also assumes that one-off factors will have smaller repercussions for price dynamics over the forecast horizon. In contrast to 2004, when higher prices of oil and hence liquid fuels for transport and heating made a direct contribution of 1.0 p.p. to inflation, we do not expect any further rises in oil prices above the level recorded at the end of this year's first quarter. The average price of Brent crude is expected to come close to USD 48/barrel in 2005 and drop to USD 45/barrel in 2006. On the other hand, price reductions during the rest of this year will no longer enjoy the effect of the abolition of customs duties on food products that cut inflation by around 1.0 p.p. after EU accession.

Provided that the abovementioned macroeconomic policy measures are consistently implemented, inflation persisting above the EU average in the coming years will be primarily due to the economy's catching-up with the more advanced EU countries. In our estimate, inflation may remain at a level of 1.0 p.p. to 1.5 p.p. above the EU average in the next few years due to the faster productivity growth in the Slovenian economy compared to the average of its main trading partners (the Balassa-Samuelson effect) and due to the structural imbalances that still persist in the Slovenian economy. The further sustainable lowering of inflation will therefore necessitate the completion of structural reforms, especially in those sectors where prices are still state-regulated and in the financial and labour markets.

The risks of inflation diverging from the central forecast in 2005 are still evenly distributed. While the risks that inflation will deviate from the central forecast have diminished since the previous forecast, they remain evenly distributed relative to the central forecast. In our estimate, price rises different than projected may occur due to shocks from the international environment, notably further oil price fluctuations. Inconsistent implementation of macroeconomic policy measures and a widening of the gap between the actual and potential GDP growth are regarded as less likely potential causes of higher price rises.

4. Main risks to the spring forecast

The autumn forecast indicated two risks to realisation of the forecasts linked to Slovenia joining the EU which, however, did not materialise. The first risk was the potential rapid decline of competitiveness in labour-intensive industries in 2004 which would translate into the lower growth of domestic output and higher unemployment. The figures on production and employment in labour-intensive industries for 2004 indicate that the risk of a faster fall in their competitiveness has not materialised, as the unfavourable trends were in line with the baseline scenario projections. Similar negative dynamics are expected in these industries in 2005; they are, however, already incorporated in the baseline scenario. The second downside risk was associated with the potentially accelerated growth of domestic consumption due to the lowering of nominal interest rates after entry to ERM II, which could have triggered macroeconomic imbalances in external trade and inflation. The figures for 2004 once again indicate that this risk did not materialise and that trends were in line with the baseline scenario expectations.

Nonetheless, due to the still active effect of interest rate cuts the risk of accelerated growth in domestic consumption still cannot be completely ruled out, especially in the first quarter/half of 2005. For this reason, the potential consequences of this risk being realised were reassessed during preparation of the spring forecast. Accelerated growth of domestic consumption relative to the baseline scenario in the context of stronger economic growth would undermine the external balance and increase inflationary pressures. Greater responsiveness of domestic consumption to lower interest rates, which is still regarded as possible though less likely than in the baseline scenario, may result in around 3 p.p. higher real growth of gross fixed capital formation and 0.5 p.p. higher growth of private consumption. The faster growth of domestic consumption would, coupled with higher imports, accelerate economic growth in 2005 by about 0.5 p.p. In this event, the current account deficit would expand by over EUR 100 m (0.4% of GDP) in 2005, nevertheless remaining

within sustainable limits. At the same time, the lowering of inflation would be somewhat slower on account of the increased domestic spending; this effect would amount to around 0.2 p.p. in 2005.

This year's spring forecast contains an additional alternative scenario based on the assumption that economic growth in some, mostly old EU member states, will average out at around 0.5 p.p. below the baseline scenario in 2005. This risk rests on the potentially stronger effect of high oil prices and euro appreciation on economic activity in these countries and the possibility of a further deterioration in global macroeconomic imbalances that would dampen economic growth in the USA and Europe. The European Commission also highlighted these risks in its analyses published in spring this year. For Slovenia, the realisation of these assumptions would translate into a lower rise in export demand in 2005 than assumed in the spring forecast baseline scenario, which would be reflected mainly in a lower real export growth rate (by about 0.7 p.p.) and partly in lower investment consumption growth (by about 0.6 p.p., largely due to the private sector's investment). Weaker growth of orders would slow down the growth of manufacturing's production volumes and, consequently, imports of intermediate goods. Imports would therefore also be affected by the lacklustre recovery in international economic activity so that imports would grow less rapidly than projected in the basic scenario. Were the mentioned assumptions to be realised, the real GDP growth rate would decrease by around 0.3 p.p. in 2005 relative to the baseline scenario.

The dynamics of oil price rises in global markets seen in March and beginning of April this year pose a risk to realisation of the spring forecast for 2005. Any lasting oil price rises in the world market would, with conditions remaining the same, lead to decelerated economic growth and faster consumer price rises. The alternative scenario calculation, which takes account of the effect of higher oil prices on the dynamics of macroeconomic aggregates, assumes a USD 10 higher average oil price per barrel in 2005 relative to the baseline scenario. Taking into consideration its negative impact on the world economy, such a development would slow down the expansion of Slovenia's export markets by around 0.5 p.p., which would in turn decelerate real export growth by 0.2 p.p. The smaller export demand and higher costs of intermediate goods would depress value-added growth in manufacturing. Higher oil prices would push up average inflation by around 0.3 p.p. which would, coupled with deteriorated terms of external trade, impact negatively on the real growth of domestic consumption aggregates (particularly of investment and slightly less of private consumption). The overall impact of the described effects would result in around 0.2 p.p. lower economic growth in 2005.

5. Comparison with forecasts made by other institutions

The IMAD's spring forecasts were presented to other forecasting institutions (the Bank of Slovenia's Analysis and Research Centre, the Department of Economic Analysis and Economic Policy of the Chamber of Commerce and Industry, the IMF) and compared with results of the model of leading indicators developed by the Faculty of Economics and Business at the University of Maribor (EPF). The available expectations of these institutions (their official forecasts have not been published yet) are congruent: a softening of economic growth is expected this year, followed by a slight acceleration in 2006. Inflationary forecasts predict a further reduction of inflation; the projected year-on-year inflation growth rates of the institutions are similarly very close. The EPF's econometric model, like the IMAD's forecast, predicts a slowdown in industrial activity up until the end of the year followed by acceleration at the beginning of 2006, although the model projects a slightly milder slowdown than our estimate.

Table 6: **Spring forecasts of main macroeconomic aggregates for 2005 and 2006**

real growth rates (%) unless otherwise indicated

	2004	2005		2006	
	SORS	**Autumn forecast Oct. 2004**	**Spring forecast (Apr. 2005)**	**Autumn forecast Oct. 2004**	**Spring forecast (Apr. 2005)**
GDP – real growth rates, in %	4.6	3.8	3.8	3.9	4.1
GDP in SIT m (current prices)	6,191,161	6,626,000	6,571,200	7,066,400	7,039,800
GDP in SIT m (2000 constant prices)	4,836,895	4,993,300	5,018,800	5,190,300	5,223,000
INFLATION (Dec/Dec of the previous year, %)	3.2	2.9	2.5	2.7	2.3
INFLATION (Jan-Dec/Jan-Dec annual average, %)	3.6	3.0	2.5	2.7	2.3
GDP deflator, %	3.0	3.1	2.3	2.6	2.9
USD **EXCHANGE RATE** (BS)	192.4	196.3	183.2	196.3	183.6
EUR EXCHANGE RATE (BS)	238.9	239.6	239.7	239.6	239.7
EUR/USD exchange rate	1.242	1.22	1.308	1.22	1.306
EMPLOYMENT according to the SNA (% growth)	0.1	0.3	0.4	0.4	0.5
REGISTERED UNEMPLOYMENT RATE, %	10.3	10.1	9.8	9.6	9.3
ILO UNEMPLOYMENT RATE (%)	6.3	6.1	6.2	5.9	6.0
PRODUCTIVITY (GDP per employee)	4.5	3.5	3.4	3.5	3.6
GROSS WAGE PER EMPLOYEE	2.0	2.2	2.1	2.4	2.6
EXPORTS OF GOODS AND SERVICES	12.6	5.8	7.5	6.6	7.9
- exports of goods	13.2	6.0	8.1	6.8	8.2
- exports of services	9.4	5.0	5.2	5.8	6.5
IMPORTS OF GOODS AND SERVICES	12.4	6.5	6.5	6.5	6.6
- imports of goods	13.2	6.5	6.7	6.4	6.7
- imports of services	6.6	6.7	5.4	7.0	6.2
GROSS FIXED CAPITAL FORMATION	6.8	7.0	6.7	5.5	4.9
- as % of GDP	24.7	25.2	25.8	25.6	25.8
PRIVATE CONSUMPTION	3.5	3.4	3.4	3.1	3.1
- as % of GDP	54.0	53.9	54.0	53.6	53.2
GOVERNMENT CONSUMPTION	1.7	2.9	2.5	2.9	2.5
- as % of GDP	19.8	19.8	19.7	19.7	19.4

Sources of data: SORS, Bank of Slovenia (BS), estimates and forecasts by IMAD.

IMAD

6. Assessment of the quality of the IMAD's forecasts

A comparison with the forecasts made by other forecasting institutions repeatedly shows that the IMAD is successful in forecasting economic categories. This year the IMAD had the lowest calculated values of absolute accuracy measures of economic growth forecasts – both for mean absolute errors (MAE) and root mean square errors (RMSE)[8] – among all institutions that produce forecasts of Slovenian economic trends. In inflation forecasts only the BS achieved slightly better results. The same holds for the standardised values (MAE/SD in RMSE/SD). Compared with the European Commission's forecasts for old EU member states, the absolute accuracy measures are slightly higher, whereas in relative accuracy measures the differences are marginal (for methodological explanations, see Spring Report 2004, the Box on p. 142).

*All institutions underestimated the economy's real growth in their forecasts for **2004**. The 2003 autumn forecast errors ranged from 0.7 p.p. to 1.6 p.p. while the 2004 spring forecast errors ranged between 0.8 p.p. and 1.5 p.p.* In spring 2004, the IMAD left the 3.6% real GDP growth rate forecast in autumn 2003 unchanged, thereby underestimating the actual growth rate by 1.0 p.p. or 22%. Table 7 shows that only the WIIW, having underestimated economic growth by 0.7 p.p. or 15% in its autumn forecast for the following year, and by 0.8 p.p. or 17% in its spring forecast for the current year, made a more accurate forecast of Slovenian GDP growth than the IMAD. In comparison with other institutions, the IMAD had the smallest error in the economic growth forecast. Minor errors were detected in the forecast of nominal economic growth which is made solely by the IMAD: in autumn 2003 it was overestimated by 0.3 p.p. (4%), whereas in spring 2004 it was underestimated by 0.5 p.p. (6%). Smaller errors in nominal growth forecasts are favourable in view of budgetary planning; the discrepancies in the real growth forecasts are attributable to errors in deflator estimates.

Table 7: **Errors made by forecasting institutions in the forecasts of real economic growth for 2004**

Real economic growth	Year ahead autumn forecast			Current year spring forecast			Current year autumn forecast
	Forecast	Error in p.p.	Error in %	Forecast	Error in p.p.	Error in %	Forecast
Realised	**4.60**			**4.60**			**4.60**
IMAD[1]	3.6	1.0	22%	3.6	1.0	22%	4.0
DEAEP[2]	3.5	1.1	24%	3.5	1.1	24%	3.9
BS[3]	3.2	1.4	30%	3.1	1.5	33%	3.8
IMF[4]	3.0	1.6	35%	3.5	1.1	24%	3.9
EC[5]	3.1	1.5	33%	3.2	1.4	30%	4.0
WIIW[6]	3.9	0.7	15%	3.8	0.8	17%	3.8

Sources:
[1] IMAD's Spring and Autumn Reports, Ljubljana, various issues.
[2] Chamber of Commerce and Industry, Department of Economic Analysis and Economic Policy, Economic Trends, Ljubljana, various issues.
[3] BS, Monetary Policy Framework Reports, Implementation of Short-term Monetary Policy Framework and Monetary Policy Report, Ljubljana, various issues.
[4] IMF, World Economic Outlook and Country Report, Washington, various issues.
[5] EC, Spring and Autumn Economic Forecasts and Economic Forecasts for the Candidate Countries, Brussels, various issues.
[6] WIIW, Research Reports, Vienna, various issues.

In autumn 2003, all institutions overestimated the year-on-year inflation for 2004; errors ranged between 0.1 p.p. (3%) and 1.8 p.p. (41%). All institutions made downward revisions to their forecasts in spring 2004. Table 8 shows that the downward corrections totalled between 0.3 p.p. and 1.6 p.p., while errors ranged from 0.1 p.p. (6%) and 0.5 p.p. (16%). The IMAD's year-on-year inflation forecast was 4.5% in autumn 2003; in the next two forecasts, it was revised: in spring 2004 the forecast was lowered by 1.2 p.p. to 3.3%, followed by an upward correction to 3.5% in autumn. The IMAD's last forecast thus overestimated the year-on-year inflation by 0.3 p.p. or 9%.

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[8] For definitions of accuracy measures, see the Spring Report 2004.

IMAD

Table 8: **Errors made by forecasting institutions in year-end forecasts of year-on-year inflation for 2004**

Year-on-year inflation	Year ahead autumn forecast			Current year spring forecast			Current year autumn forecast
	Forecast	Error in p.p.	Error %	Forecast	Error in p.p.	Error in %	Forecast
Realised	**3.2**			**3.2**			**3.2**
IMAD	4.5	-1.3	-41%	3.3	-0.1	-3%	3.5
DEAEP	n/a			n/a			n/a
BS*	3.5	- 0.1	-3%	3.2	0.2	6%	3.5
IMF	5.0	-1.8	-56%	3.7	-0.5	-16%	3.7
EC	n/a			n/a			n/a
WIIW	n/a			n/a			n/a

Note: *The BS releases the year-on-year inflation figure as a percentage change in the current year's final quarter relative to the previous year's final quarter; the comparable realisation used in all comparisons totals 3.4.
Source: see Table 7.

Like with year-on-year inflation, most institutions overestimated the average inflation for 2004 in autumn 2003, and subsequently all of them lowered their forecasts in spring 2004. We can see in Table 9 that absolute errors in the forecasts made in autumn 2003 ranged from 0.1 p.p. to 1.6 p.p. while errors in the forecasts for the current year made in spring 2004 were smaller, ranging from 0.0 p.p. to 0.3 p.p. in absolute terms. The IMAD's forecast of average inflation was 4.9% in autumn 2003; in the next two forecasts, this figure was revised. Average inflation was underestimated by 0.3 p.p. in spring and therefore revised upwards by the same amount in autumn 2004 (see Autumn Report 2004); the actual average inflation forecast was thereby made accurate.

Table 9: **Errors made by forecasting institutions in forecasts of average inflation for 2004**

Average inflation	Year ahead autumn forecast			Current year spring forecast			Current year autumn forecast
	Forecast	Error in p.p.	Forecast	Forecast	in p.p.	Error in %	
Realised	**3.6**			**3.6**			**3.6**
IMAD	4.9	-1.3	-36%	3.3	0.3	8%	3.6
DEAEP	4.5	-0.9	-25%	3.7	-0.1	-3%	3.7
BS	4.0	-0.4	-11%	3.4	0.2	6%	3.6
IMF	n/a			n/a			n/a
EC	5.2	-1.6	-44%	3.6	0.0	0%	3.9
WIIW	3.5	0.1	3%	n/a			4.0

Source: see Table 7.

In the 1997-2004 period *errors in economic growth forecasts were small; they averaged out at close to zero for both real and nominal growth rates.* Over the forecast horizon, real growth rates were more often overestimated than underestimated in the forecasts for the current year (the average error totalled -0.04 p.p.), whereas in real growth rates for the year ahead and in nominal GDP growth rates for both years, over- and under-estimations were roughly equally common (error averages totalled 0.01 p.p., -0.08 p.p. and 0.14 p.p., respectively).

In the forecasts for the year ahead, both year-on-year and average inflation were more often overestimated than underestimated. The same goes for the forecasts of average inflation for the current year, while year-on-year inflation estimates for the current year were more often too low rather than too high. The average error was higher than in economic growth forecasts, i.e. 0.34 p.p. in average inflation forecasts for the year ahead and 0.13 p.p. for the current year. Average errors in the forecasts of year-on-year inflation were even higher, 0.69 p.p. for the year ahead and 0.15 p.p. for the current year.

IMAD

The accuracy measures of the IMAD's economic growth forecast are relatively low, and their standardised values are even about 50 % lower. The IMAD's mean absolute errors in forecasts of real and nominal GDP growth total between 0.64 p.p. and 0.89 p.p., while root mean square errors are just slightly higher, ranging between 0.84 p.p. and 1.06 p.p., which reflects the IMAD's high level of accuracy in forecasting these variables. Although the IMAD's relative accuracy measures for real GDP growth are slightly higher, this also holds for all other institutions that made forecasts of economic growth in the analysed period. In contrast, the relative values of accuracy measures in nominal economic growth forecasts are more than 50% lower.

The absolute accuracy measures of the IMAD's inflation forecasts for 1997-2004 are slightly higher than the accuracy measures of economic growth forecasts. Again, the relative accuracy measures of the IMAD's forecasts are about 50% lower. The mean absolute errors are lower in the forecasts of average inflation, totalling 0.48 p.p. in the forecasts for the current year and 0.94 p.p. in the forecasts for the year ahead. The IMAD's root mean square error for average inflation totals 0.61 p.p. for the current year and 1.26 p.p. for the year ahead. The mean absolute error in the year-on-year inflation forecasts amounted to 1.05 p.p. for the current year and 1.63 p.p. for the year ahead. The root mean square errors are also higher in year-on-year inflation forecasts, totalling 1.38 p.p. for the current year and 2.23 p.p. for the year ahead.

The accuracy measures of inflation forecasts made for a shorter span, from 2001 onwards, are considerably lower, reflecting the improved methodology used in forecasting this variable. Only indicatively, we also give accuracy measures for inflation forecasts for a shorter period (from 2001 onwards). There are two reasons for this: first, the changed forecasting methodology and, second, comparability with the forecasts made by the Bank of Slovenia, which had not released its own forecasts prior to that period. Both absolute and relative accuracy measures of the inflation forecasts for 2001-2004 are appreciably lower than for the entire period and are comparable with the accuracy measures of economic growth forecasts. Compared with the Bank of Slovenia, the IMAD's accuracy measures are slightly higher, which is not surprising in view of the BS' specific position.

Table 10: **Comparison of errors in economic growth and inflation forecasts made by forecasting institutions for the current year**

	Current year – spring forecast				
	ME	**MAE**	**MAE/SD**	**RMSE**	**RMSE/SD**
Real economic growth					
IMAD, 1997-2004[1]	-0.04	0.64	0.71	0.84	0.93
IMAD, 2002-2004[1]	0.03	0.63	0.55	0.74	0.64
DEAEP, 1997-2004[2]	0.13	0.73	0.80	0.87	0.96
BS, 2002-2004[3]	0.30	0.77	0.66	0.96	0.83
IMF, 1998-2004[4]	0.11	0.88	0.90	0.95	0.97
ECFIN, 1969(70)-2001[2]	-0.09	0.51	0.29	0.75	0.42
ECFIN, forecasts for member states[5]	-0.69–0.4	0.55–1.66	0.28–0.57	0.75–1.99	0.37–0.78
ECFIN, 1997-2001[5]	-0.10	0.34	0.53	0.52	0.81
Nominal economic growth					
IMAD, 1997-2004[1]	-0.08	0.89	0.38	1.06	0.46
Average inflation					
IMAD, 1997-2004[1]	0.13	0.48	0.25	0.61	0.32
IMAD, 2001-2004[1]	0.23	0.28	0.13	0.34	0.16
DEAEP, 1997-2004[2]	0.30	0.65	0.34	0.78	0.41
ECFIN, 1969(70)-2001[2]	-0.02	0.35	0.11	0.51	0.16
ECFIN, forecasts for member states[5]	-0.26–0.15	0.32–1.04	0.11–0.24	0.43–1.40	0.16–0.31
ECFIN, 1997-2001[5]	-0.04	0.16	0.57	0.23	0.82
Year-on-year inflation					
IMAD, 1997-2004[1]	0.15	1.05	0.50	1.38	0.66
IMAD, 2001-2004[1]	-0.08	0.58	0.30	0.66	0.34
BS, 2002-2004[3]	0.03	0.17	0.09	0.17	0.09
IMF, 1998-2004[4]	0.78	1.12	0.60	1.68	0.90

Note: negative values indicate an overestimation, positive values indicate an underestimation.

Abbreviations:
- ME ... Mean Error
- MAE ... Mean Absolute Error
- SD_R ... Standard Deviation of Realisations
- MAE/SD ... Standardised Mean Absolute Error
- RMSE ... Root Mean Square Error
- RMSE/SD ... Standardised Root Mean Square Error

Sources:
[1] IMAD, Spring and Autumn Reports, Ljubljana, various issues.
[2] CCI, DEAEP, Economic Trends, Ljubljana, various issues.
[3] BS, Monetary Policy Framework Reports, Implementation of short-term monetary policy framework and Monetary Policy Report, Ljubljana, various issues.
[4] IMF, World Economic Outlook and Country Report, Washington, various issues.
[5] Keereman, Filip: External assumptions, the international environment and the track record of the Commission Forecasts, ECFIN Economic Papers No. 189, Brussels, 2003; forecasts for the current year cover the 1969-2001 period; forecasts for the year ahead cover the 1970-2001 period (data exclude Austria, Finland and Sweden; data for Denmark, Ireland and the UK cover the period from 1973(74) onwards; data for Greece the period from 1981(82) onwards; and data for Spain and Portugal the period from 1986(87) onwards); calculations by IMAD.

Table 11: **Comparison of errors in economic growth and inflation forecasts made by forecasting institutions for the year ahead**

	Year ahead – autumn forecast				
	ME	MAE	MAE/SD	RMSE	RMSE/SD
Real economic growth					
IMAD, 1997-2004[1]	0.01	0.81	0.83	0.91	0.93
IMAD, 2002-2004[1]	-0.27	0.93	0.81	1.02	0.88
DEAEP, 1997-2004[2]	-0.05	0.98	1.00	1.18	1.21
BS, 2002-2004[3]	0.17	0.97	0.83	1.08	0.93
IMF, 2000 – 2004[4]	-0.18	1.14	1.11	1.20	1.17
ECFIN, 1969(70)-2001[2]	-0.32	0.89	0.54	1.28	0.78
ECFIN, forecasts for member states[5]	-0.76–0.63	0.32–1.04	0.50–0.68	1.05–2.82	0.63–0.88
ECFIN, 1997-2001[5]	-0.20	0.52	0.80	0.76	1.16
Nominal economic growth					
IMAD, 1997-2004[1]	0.14	0.84	0.39	1.03	0.48
Average inflation					
IMAD, 1997-2004[1]	0.34	0.94	0.51	1.26	0.67
IMAD, 2001-2004[1]	0.13	0.78	0.36	0.90	0.42
DEAEP, 1997-2004[2]	0.64	1.16	0.62	1.53	0.82
ECFIN, 1969(70)-2001[2]	0.25	0.91	0.27	1.41	0.42
ECFIN, forecasts for member states[5]	-1.21–0.18	0.72–1.89	0.21–0.46	0.78–2.84	0.31–0.58
ECFIN, 1997-2001[5]	-0.18	0.26	0.89	0.32	1.10
Year-on-year inflation					
IMAD, 1997-2004[1]	0.69	1.63	0.83	2.23	1.13
IMAD, 2001-2004[1]	-0.08	0.83	0.43	1.02	0.53
BS, 2002-2004[3]	0.23	0.63	0.34	0.81	0.43
IMF, 2000 – 2004[4]	1.70	2.26	1.03	2.65	1.21

Note: see Table 10 for the abbreviations and sources.

IMAD