WIFO
AUSTRIAN INSTITUTE
OF ECONOMIC RESEARCH

AUSTRIAN ECONOMIC QUARTERLY

ECONOMIC OUTLOOK FOR 1996 AND 1997: CYCLICAL WEAKENING LEADING TO HIGHER UNEMPLOYMENT

MEDIUM-TERM FORECASTS FOR THE AUSTRIAN ECONOMY UNTIL 2000

THE MEASUREMENT OF POTENTIAL OUTPUT FOR AUSTRIA

EXCHANGE RATE REGIME AND ECONOMIC ACTIVITY IN THE EU

OPENING UP OF EASTERN EUROPE AND EASTWARD ENLARGEMENT OF THE EU

THE ROLE OF FOREIGN DIRECT INVESTMENT IN EASTERN EUROPE

2/1996

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AUSTRIAN INSTITUTE OF ECONOMIC RESEARCH

Organization, Objectives, Tasks

The Austrian Institute of Economic Research (WIFO) is a private non-profit institution. It is the largest and most influential institute in the field of empirical economic research in Austria. WIFO was founded in 1927 by F. A. von Hayek and L. von Mises, two prominent figures of the "Austrian School" of Economics.

The task of WIFO is to investigate the conditions and trends of economic performance and development in Austria and abroad by means of advanced methods, and to disseminate the results of these investigations so as to promote the general comprehension of the functioning of the national and international economy.

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WIFO currently has a staff of about 100 professional and non-professional employees. It entertains close relations with similar research bodies in Austria, in Europe and in other parts of the world. Its senior economists are members of numerous consulting groups and have university teaching assignments. Outstanding members of the academic world assist WIFO and its staff as permanent consultants.

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MARKUS MARTERBAUER

CYCLICAL WEAKENING LEADING TO HIGHER UNEMPLOYMENT

ECONOMIC OUTLOOK FOR 1996 AND 1997

The persistent weakness of the international business cycle calls for a downward revision of projections for GDP growth. Thus, the Austrian economy is now expected to expand by only ¾ percent in 1996 and 1 percent in 1997 causing a marked deterioration in the labor market. However, government deficits now appear under better control than during the past years; the new fiscal consolidation package should pave the way for Austria to participate in the European Monetary Union.

Since last December when the latest WIFO projections were published economic activity in the OECD area has slackened further Growth projections have been revised downwards for most European countries, although judgments on the business cycle outlook differ substantially: thus, for German GDP growth in 1996 they cover a range from 0 to +2 percent

Major reasons for the faltering of the recovery in Europe since mid-1995 are a temporary slowdown of activity in the U.S. (as the "growth engine" for the rest of the world), simultaneous fiscal retrenchment nearly everywhere in Europe, the inventory build-up in Europe leveling off, and the exchange rate turmoil of March 1995. Among the few encouraging signs for further developments is that, for the first time in six months, business confidence within the EU has stopped falling in January Hope may also be gathered from the fact that in the past there have been similar setbacks to business cycle recoveries which were overcome within one year or less.

On the other hand, there is widespread pessimism among European consumers which may gain even further ground with imminent fiscal tightening The highly synchronized consolidation efforts of many countries are likely to dampen activity in the near term. A strong rebound in demand and output in Europe may therefore be expected only as from mid-1997.

The weak international scenario is responsible for a downward revision to merchandise volume exports from +6 to +4 percent for 1996 A further shrinking should be expected for exports of tourism services, at least in 1996 In view of

All members of the Austrian Institute of Economic Research contribute to the Economic Outlook.

Main results

		1993	1994	1995	1996	1997
		Percentage changes from previous year				
GDP						
In real terms		+ 0 4	+ 3 0	+ 1 8	+ 0 7	+ 1 0
In nominal terms		+ 3 8	+ 6 5	+ 4 0	+ 2 7	+ 2 6
Private consumption in real terms		+ 0 7	+ 2 5	+ 1 9	+ 0 8	+ 0 3
Gross fixed investment, in real terms		– 1 6	+ 6 8	+ 2 3	+ 0 2	+ 1 5
Machinery and equipment		– 8 2	+ 8 8	+ 6 1	+ 2 5	+ 4 0
Construction		+ 2 9	+ 5 6	– 0 2	– 1 5	– 0 5
Exports of goods						
In real terms		– 3 4	+ 8 7	+ 8 1	+ 4 0	+ 4 5
In nominal terms		– 4 2	+ 9 7	+ 9 2	+ 5 0	+ 5 5
Imports of goods						
In real terms		– 4 4	+ 10 3	+ 6 8	+ 2 5	+ 3 0
In nominal terms		– 4 9	+ 11 3	+ 7 4	+ 2 7	+ 3 5
Trade balance	(billion ATS)	–97 7	–116 4	–115 8	–105 9	–97 7
Current balance	(billion ATS)	– 8 2	– 20 6	– 47 3	– 40 5	–30 7
Percent of GDP	(%)	– 0 4	– 0 9	– 2 0	– 1 7	– 1 2
Yield of long-term government bonds[1]	(%)	6 7	7 0	7 1	6 2	6 2
Consumer prices		+ 3 6	+ 3 0	+ 2 2	+ 2 1	+ 1 9
Unemployment rate						
Percent of dependent labor force[2]	(%)	6 8	6 5	6 6	7 3	8 0
Percent of total labor force[3]	(%)		3 6	3 8	3 9	4 2
Dependent employment[4]		– 0 3	+ 0 5	+ 0 0	– 1 0	– 0 8

[1] 10-year central government bonds (benchmark). – [2] According to labor exchange statistics. – [3] According to EU Labour Force Survey (microcensus) – [4] Excluding parental leave and military service

sluggish foreign demand, firms may remain cautious and hold back with planned investment projects despite a likely further fall in interest rates Given the weaker outlook for sales and profits investors may be discouraged even by interest rates as low as 6 percent on loans

Policy discussion in Austria has recently been dominated by the Federal consolidation program and strategies for higher employment. The fiscal "package" has been designed such as to ensure that, despite cyclical weakness, the general government deficit be brought down to 3 percent of GDP by 1997, allowing Austria to meet the relevant convergence criterium and be among the first group of countries to form the European Monetary Union. However, a crucial requirement is that the European economy does not slip into recession.

The construction sector should be saved from a severe slump in activity by a Federal infrastructure investment program which, however, will not take effect before 1997 Development of overall domestic demand will largely depend on how consumers react to the fiscal policy measures Past experience as well as econometric evidence suggest that in a situation like this the household saving ratio should fall markedly Private consumption is therefore expected to advance moderately despite some squeeze in household disposable income.

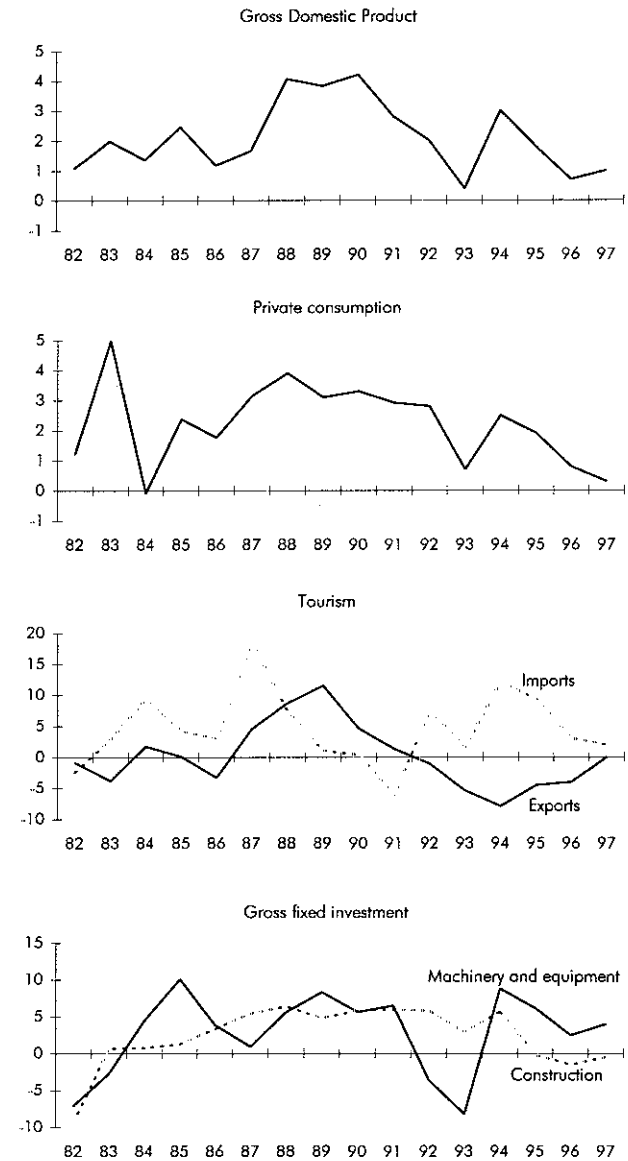
Sluggish domestic demand should provide relief for the current external account, where the deficit is projected to narrow to ATS 30 billion by 1997. The structural problems in the balance on tourism services will remain.

Trends in the labor market will be even more unfavorable than assumed so far Apart from adverse weather conditions early this year, the major reasons are weaker exports, rising competitive pressure, and personnel cuts in public services. The net loss in the number of jobs may amount to 30,000 in 1996 and 25,000 in 1997, with unemployment rising by more than 20,000 in each year. For 1997, the unemployment rate is projected at 8 percent according to the conventional Austrian way of counting (based on registration), corresponding to 4¼ percent of the labor force on harmonized EU definitions (survey method)

Inflation is firmly under control. In Germany, the consumer price rise moderated to a year-on-year rate of

Demand and output

Percentage changes from previous year, in real terms



1 5 percent in January, in Austria it may stabilize around 2 percent. The rate of inflation is lower in Austria than in the weaker-currency countries thereby partly offsetting their competitive advantage from devaluation, although inflation differentials are generally much smaller than in the early 1980s

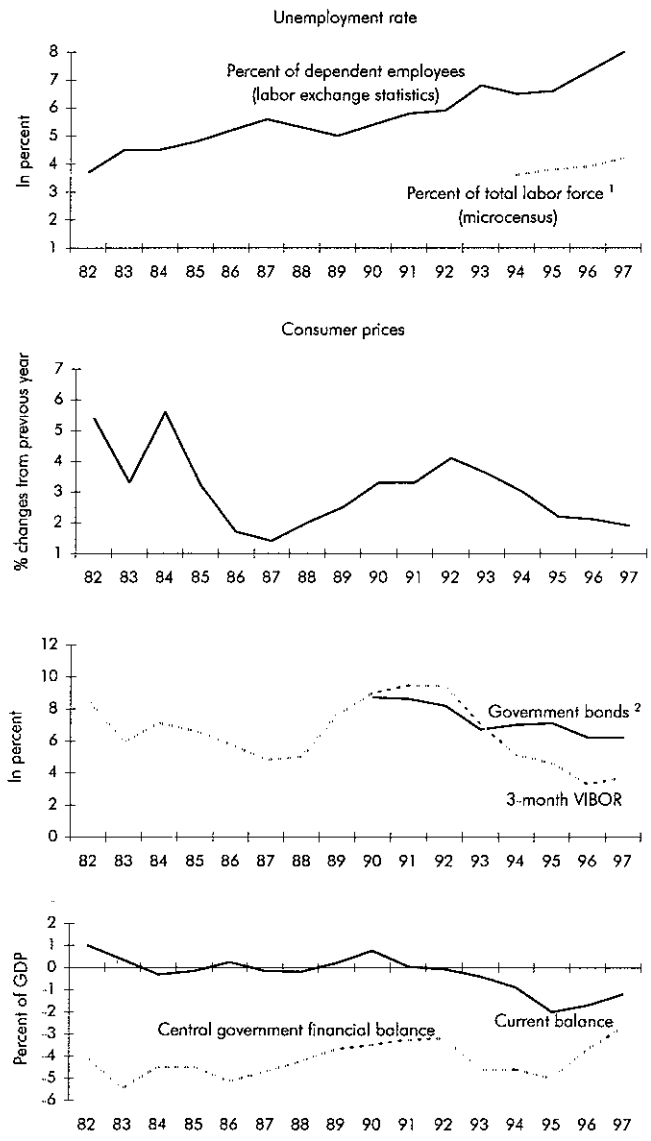
MARKED SLACKENING OF GROWTH IN EUROPE

Since mid-1995, the pace of the recovery in Europe has decelerated markedly Some leveling-off after an initial strong rebound has been observed in previous cycles and is often related to restocking being completed and pent-up investment demand being satisfied. However, the present weakness appears to be more severe and persistent. It strikes in particular the hard-currency block while the weaker-currency countries still benefit from repercussions of devaluations over the last years

At present, several policy elements effectively dampen the pace of economic activity in Europe: most EU countries still have some way to go in order to meet the fiscal convergence criteria of the Maastricht treaty. Widespread and highly synchronized consolidation efforts constrain not only domestic demand for consumer as well as investment goods, but also each country's external demand. While over the past twelve months European exchange rates have been broadly stable their future course remains uncertain in view of preparations for the European Monetary Union. Thus, not only countries with weaker currencies, but also some with a good track record in price stabilization are struggling with relatively high long-term interest rates Moreover, the overshooting of exchange rate shifts during 1992-93 and the implicit over-valuation of the strong currencies have so far been only partly corrected Uncertainty about monetary conditions and sluggish overall demand undermine business confidence and induce firms to postpone investment projects despite the generally favorable profit situation

Germany has been particularly hard hit by the cyclical setback. The pronounced weakness in the second half of 1995 extended to all major components of domestic demand While a recession in the construction industry had been widely expected, given the long duration of the last boom and the phasing-out of a number of subsidy schemes, the sudden deterioration of the investment climate came as a surprise to many observers Private consumption also remained below expectations. The household saving ratio which had fallen considerably in the wake of past years' massive tax increases rebounded as

Main economic indicators



[1] According to EU Labour Force Survey — [2] 10-year central government bonds (benchmark)

World economy

		1993	1994	1995	1996	1997
		Percentage changes from previous year				
Real GDP						
Total OECD		+ 1 0	+ 2 9	+ 2 3	+ 2 0	+ 2.3
USA		+ 3 1	+ 4 1	+ 3 0	+ 2 5	+ 2 5
Japan		− 0 2	+ 0 5	+ 0 3	+ 1 8	+ 2 5
EU		− 0 6	+ 2 8	+ 2 5	+ 1 5	+ 1 8
Germany		− 1 2	+ 2 9	+ 1 9	+ 0 8	+ 1 3
Eastern Europe		+ 0 7	+ 3 6	+ 4 5	+ 4 5	+ 4 3
World trade, volume		+ 3 6	+10 3	+ 9 2	+ 8 0	+ 7 5
Market growth[1]		− 2 5	+ 7 0	+ 5 7	+ 4 0	+ 4 5
Primary commodity prices						
HWWA index in US$		− 9 9	+ 2 4	+ 10 1	+ 2 0	+ 1 0
HWWA index without energy, in US$		− 8 1	+16 5	+ 13 3	+ 2 0	+ 1 0
Crude oil prices, average import price for OECD countries	(US$/barrel)	16 4	15 7	17 2	17 0	17 0
Exchange rate	(ATS/US$)	11 63	11 42	10 08	10 70	11 10

[1] Real import growth of trading partners weighted by Austrian export shares

households used the long-awaited gains in disposable income for an, albeit partial, restoration of saving levels Also the general income tax cut effective from the beginning of 1996 will therefore boost final demand only to a certain extent. Leading indicators suggest the cyclical weakness will extend at least until mid-year, such that year-on-year GDP growth for the whole of 1996 will remain below 1 percent. Some recovery may be expected during 1997, although general conditions still appear unlikely to support a strong upturn.

On the other hand, a number of factors may be conducive to a pickup of growth in Europe. The dollar keeps strengthening which should allow the European parity grid to remain stable. High price stability and sluggish activity should encourage Central Banks to cut policy-controlled interest rates further Long-term interest rates have recently hit a floor from where investors have shifted portfolios towards shares and real estate values. Still, the upward drift of bond yields during February and March should reverse subsequently, securing favorable financial conditions at least for the nucleus of the hard-currency block.

Stimulus to growth may also be expected from economies outside the EU The U.S. managed to keep activity on the growth track by means of a pragmatic policy mix. Investment and exports provide major support; despite strong demand for labor and relatively low unemployment there is little evidence for an acceleration of inflation. Since 1992, GDP has expanded notably faster in the U.S. than in Europe In Japan, the long-awaited recovery finally appears to be under way Rising activity in the fourth quarter 1995 was based not only on the continued expansionary stance of fiscal policy, but also on higher industrial output However, a return to the rapid growth pace obtaining until the end-1980s seems unlikely, given the uncertain exchange rate outlook and the still ongoing balance sheet adjustment in the private sector

In eastern Europe, demand and output growth should keep strong momentum, thereby stimulating exports in neighboring western countries However, the current account situation often acts as a constraint in the transformation process, which may tighten with demand in western Europe slackening

STAGNATION IN EUROPEAN MARKETS WEAKENS FOREIGN TRADE

The cyclical downturn in major trading partner countries is the most important reason for the revision of the projection of Austrian GDP growth. The dampening effects of the fiscal consolidation program had essentially been worked already into the forecast of last December, though measures were not known in detail at that time Merchandise exports are now expected to rise by no more than 4 percent in volume in 1996, accelerating only slightly in the following year. Compared with developments in 1995, this represents a considerable slowdown, even if exports will remain the driving force of GDP growth In 1995, Austrian suppliers benefited from EU integration effects as well as from restocking and a rebound in investment in the early part of the year Close trade relations with the dynamic economies in eastern Europe, but also with Italy, constituted a further advantage.

Data for the fourth quarter 1995 already suggest a distinct slowing of export growth which is likely to extend into the first half of 1996, given the less favorable short-term outlook for Germany and other important trading partners in western Europe Lackluster demand in foreign markets plays a greater role than a lack of competitiveness: on the assumption of stable exchange rates, with strong productivity advances in manufacturing industry and continued wage moderation, Austrian firms should see a marked improvement in their external competitiveness The real-effective exchange rate is set to fall slightly. Relative unit labor costs (in a common currency) may fall by about 3½ percent in each year. The still favorable export outlook may be significantly worse only in the event of a severer recession in western Europe or renewed exchange rate turmoil.

Foreign demand for tourism services remains an area of concern Relative prices remain the single most important determinant of foreign travel. Past exchange rate shifts and the continued slump in air fares will further depress Austria's competitiveness in international tourism in 1996 An even more important element for the shrinking of Austria's net surplus on invisibles in recent years was the rise in expenditure by Austrians abroad. This trend is likely to abate with the squeeze in household disposable income as a result of weaker activity and fiscal consolidation Likewise, the boom in cross-border shopping, caused by exchange rate shifts and the abolition of border controls with EU accession, should now subside

CURRENT ACCOUNT DEFICIT SHRINKING TOWARDS 1 PERCENT OF GDP

The slackening of domestic demand and the assumed stability of exchange rates will allow the current account deficit to fall from its 1995 peak of ATS 47 billion to around 31 billion or 1.2 percent of GDP, a level deemed tolerable However, a structural problem, originating from the shrinking net surplus on tourism services, will remain If the external account is to stay in broad equilibrium over the longer term, a sustained improvement of the trade balance is crucial

HESITANT RECOVERY OF MANUFACTURING OUTPUT

The fall in external demand hits primarily manufacturing output. From its peak in early summer 1995, it has fallen by some 7 percent on a seasonally adjusted basis. Production of investment goods fell particularly strongly, reflecting greater caution of investors at home and abroad in view of the uncertain business outlook. Capital spending on machinery and equipment is therefore expected to post only small gains, mainly induced by companies' widespread need for rationalization in order to stay competitive

Latest results from the quarterly WIFO business test give no indication for an imminent recovery in the manufacturing sector. Yet, output expectations have stabilized, albeit on a low level; a tentative improvement is apparent in the basic goods, the chemical and the technical manufactures branches. The fall in output may bottom out by mid-year and slowly reverse subsequently, but the year-on-year gain for the whole of 1996 is likely to be small.

Output growth is likely to stay moderate in 1997 and may be accompanied by further job losses. In the past, cyclical movements of output and productivity have been highly synchronized: firms adjusted personnel numbers to a much smaller extent than in many other countries to variations in capacity utilization. Increasing competitive pressure may now lead to a change in behavior: despite sluggish output growth hourly productivity in manufacturing is projected to advance strongly, by 6 percent p.a.

CONTINUING RECESSION IN THE CONSTRUCTION SECTOR

Major parts of manufacturing are also adversely affected by the downturn of construction activity. Production of construction inputs – building materials and other supplies – fell significantly in the second semester 1995, with no turnaround being signaled by leading indicators. Bad weather conditions depressed construction output mainly in Austria's eastern regions. Municipalities, which account for almost two-thirds of public construction orders, are facing severe budget constraints and the need to trim deficits; this has largely contributed to the recent fall in orders and output in civil engineering. Residential construction, on the other hand, may still expect further output gains, given favorable financial conditions and still generous subsidies

Following a seven-year boom period, the construction industry has now entered a recession. The cyclical component is superseded by a structural element, i.e., oversized supply capacities. The Federal government has recently proposed a set of measures designed to stem the fall in construction employment and at the same time bring about badly-needed improvement in infrastructure, e.g., road and railway connections with eastern Europe or telecommunication facilities. These measures, if timely implemented, may provide relief for both construction firms and the labor market

AMBITIOUS FISCAL CONSOLIDATION PROGRAM TO REACH EMU TARGET

Domestic demand in 1996 and 1997 will be under the auspices of fiscal consolidation. In this respect, the Federal government has decided upon a comprehensive program of expenditure cuts and revenue increases, extending also to households of the Federal states (Länder) and the municipalities. The overall volume of the package is estimated at ATS 120 billion by which the general government deficit is to be cut within two years. With the tax schedule (brackets and marginal tax rates) of direct taxes remaining unchanged, additional revenue will be raised by broadening the tax base. On the expenditure side, the bulk of cuts will fall on the public sector wage bill and on social transfers. The measures adopted should ensure that general government borrowing will be cut in half to 3 percent of GDP by 1997

The fiscal consolidation strategy is, however, burdened by the slow advance of nominal GDP – of less than 3 percent per year – and by the negative operation of automatic stabilizers as a consequence of a marked increase in unemployment. The achievement of stated objectives is contingent upon economic activity not being substantially weaker than projected and upon private sector spending cushioning the squeeze in disposable income. Furthermore, revenues from privatization as well as structural reform measures may create some leeway for additional spending on infrastructure, technology and employment promotion, thereby giving additional stimulus at least in the medium run.

MODERATE CONSUMPTION GROWTH SECURED BY A FALLING SAVINGS RATIO

Slower wage growth, a fall in overall employment and the measures of fiscal retrenchment will all dampen the advance of household income. Adjusted for inflation, disposable income will decrease by ¾ percent both in 1996 and 1997. Nevertheless, private consumption may continue rising, if only at a slow pace. Experience shows that, in a situation like this, consumers try to protect their living standards by saving less. Thus, the household savings ratio may fall by as much as 2 percentage points from its present high level to just over 11 percent by 1997. A lower propensity to save should keep the economy from slipping into recession

Private consumption

	1993	1994	1995	1996	1997
	Percentage changes from previous year at constant prices				
Private consumption	+ 0 7	+ 2 5	+ 1 9	+ 0 8	+ 0 3
Durables	– 4 0	+ 0 9	+ 1 5	– 0 6	– 2 5
Non-durables and services	+ 1 4	+ 2 8	+ 2 0	+ 1 0	+ 0 7
Net wages and salaries	+ 2 2	+ 1 7	+ 0 6	– 0 2	– 1 2
Household disposable income	+ 0 3	+ 4 1	+ 1 7	– 0 8	– 0 7
	As a percentage of disposable income				
Household saving ratio	12 2	13 6	13 4	12 0	11 1

FALL IN EMPLOYMENT, JOBLESS RATE HITTING RECORD HIGH

Slow growth of demand and output will cause employment to fall by an estimated 30,000 in 1996 and maybe a further 25,000 in 1997, to a level obtaining in the early 1990s. Job losses will extend beyond the manufacturing sector since an increasing number of services branches, coming under greater competitive pressure, are constrained to mobilize productivity reserves. Even the public sector, the main source of demand for new labor over the past decades, has started cutting personnel.

Productivity

	1993	1994	1995	1996	1997
	Percentage changes from previous year				
Real GDP	+ 0 4	+ 3 0	+ 1 8	+ 0 7	+ 1 0
Employment[1]	– 0 4	+ 0 1	– 0 3	– 1 1	– 1 0
Productivity (GDP per employment)	+ 0 8	+ 2 9	+ 2 1	+ 1 8	+ 2 0
Industrial production[2]	– 2 6	+ 5 5	+ 4 6	+ 1 0	+ 2 0
Industrial employment	– 6 5	– 3 6	– 1 0	– 5 0	– 3 0
Productivity per hour in industry	+ 4 4	+ 8 1	+ 6 3	+ 6 0	+ 6 0
Working hours per day for industrial workers	– 0 2	+ 1 2	– 0 6	± 0 0	– 1 0

[1] Dependent and self-employed according to National Accounts – [2] According to index of industrial production

Earnings and international competitiveness

	1993	1994	1995	1996	1997
	Percentage changes from previous year				
Gross earnings per employee	+ 4 2	+ 3 1	+ 3 8	+ 2 6	+ 2 3
Gross real earnings per employee	+ 0 7	+ 0 1	+ 1 5	+ 0 5	+ 0 4
Net real earnings per employee	– 0 6	+ 0 7	+ 0 8	– 0 3	– 1 0
Net wages and salaries	+ 5 7	+ 4 8	+ 2 8	+ 1 9	+ 0 7
Unit labor costs					
Total economy	+ 3 8	+ 0 5	+ 1 9	+ 1 0	+ 0 6
Manufacturing	+ 0 9	– 3 6	– 0 9	– 2 6	– 3 0
Relative unit labor costs					
Vis-à-vis trading partners	+ 1 2	+ 0 7	+ 1 9	– 3 6	– 3 4
Vis-à-vis Germany	– 2 6	+ 2 6	– 1 2	– 3 6	– 3 0
Real effective exchange rate	+ 2 7	+ 0 9	+ 3 2	– 1 1	– 0 6
Manufactures	+ 2 7	+ 0 6	+ 2 6	– 0 7	– 0 5
Nominal effective exchange rate	+ 2 9	+ 1 2	+ 3 9	– 0 2	+ 0 5
Manufactures	+ 2 7	+ 0 6	+ 3 0	± 0 0	+ 0 4

Labor market

	1993	1994	1995	1996	1997
	Absolute changes from previous year (in 1 000)				
Demand for labor					
Employment (including self-employed)	– 11 0	+ 5 8	– 12 3	– 41 0	– 36 0
Dependent employment[1]	– 0 9	+ 15 8	– 2 5	– 34 0	– 29 0
Excluding parental leave and military service	– 7 9	+ 15 8	+ 0 6	– 30 0	– 25 0
Percentage changes from previous year	*– 0 3*	*+ 0 5*	*+ 0 0*	*– 1 0*	*– 0 8*
Parental leave and military service[1]	+ 7 0	+ 0 0	– 3 2	– 4 0	– 4 0
Foreign workers[2]	+ 2 1	+ 15 0	+ 9 3	± 0 0	± 0 0
Self-employed[3]	– 10 1	– 10 0	– 9 8	– 7 0	– 7 0
Labor supply					
Total labor force	+ 18 2	– 1 5	– 11 6	– 19 0	– 14 0
Foreign	+ 7 1	+ 11 9	+ 8 7	+ 2 5	± 0 0
Migration of nationals	+ 2 5	+ 1 5	+ 1 3	+ 2 5	± 0 0
Indigenous	+ 8 6	– 14 9	– 21 6	– 24 0	– 14 0
Surplus of labor					
Registered unemployed[4]	+ 29 2	– 7 3	+ 0 8	+ 22 0	+ 22 0
In 1,000	222 3	214 9	215 7	237 7	259 7
Unemployment rate					
Percent of dependent labor force[4] (%)	6 8	6 5	6 6	7 3	8 0
Percent of total labor force[4] (%)	6 1	5 9	5 9	6 5	7 2
Percent of total labor force[5] (%)		3 6	3 8	3 9	4 2

[1] According to Hauptverband der österreichischen Sozialversicherungsträger. – [2] Corrected for statistical breaks. – [3] According to WIFO. – [4] According to labor exchange statistics – [5] According to EU Labour Force Survey (microcensus)

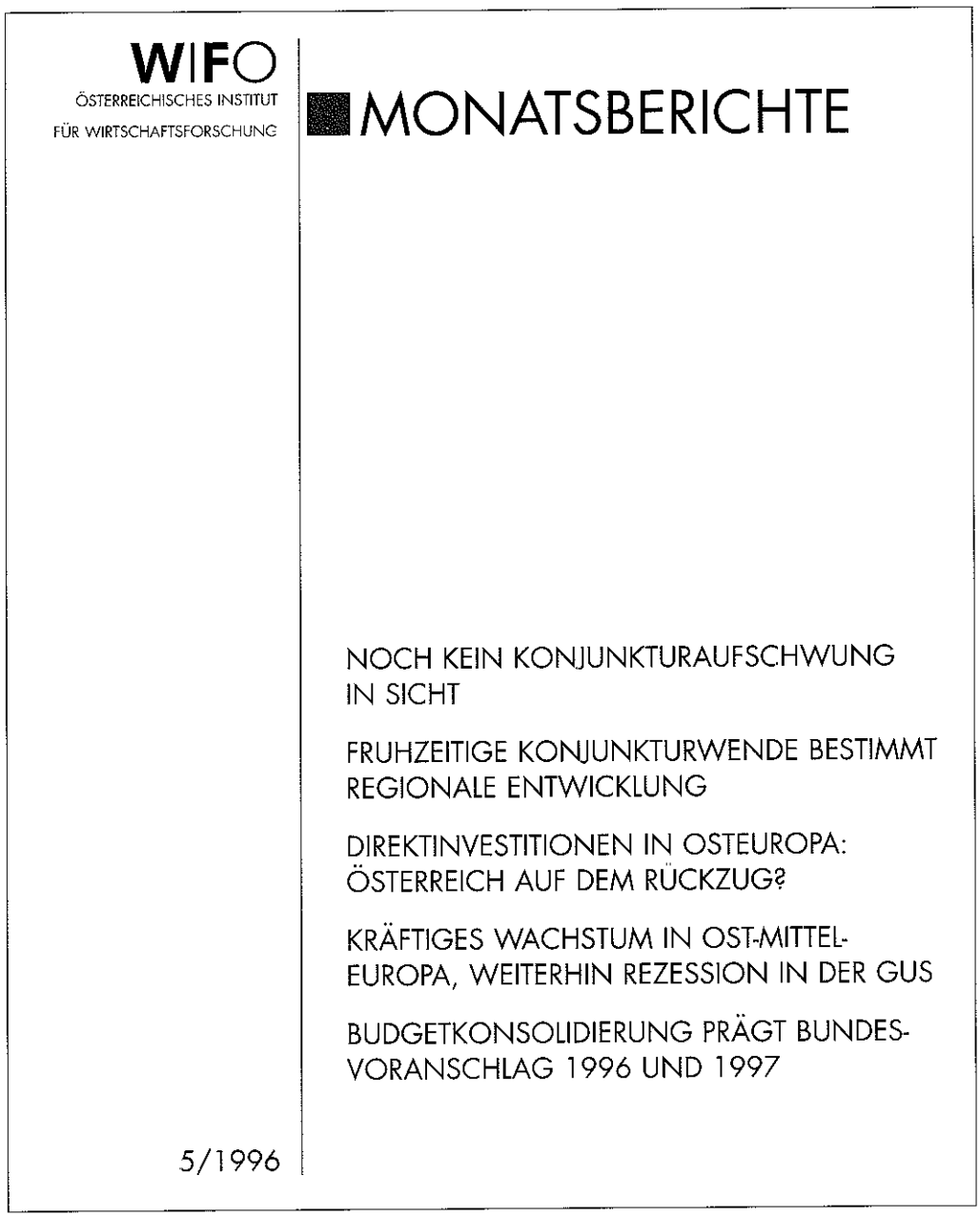
Job losses may not fully translate into higher unemployment as the labor force may continue to shrink. Still, the number of people out of job may rise by 20,000 in each year, reaching a record 260,000 on average 1997. The unemployment rate, as conventionally measured in Austria will rise to 8 percent of the dependent labor force, on international definitions (based on EU labor force survey data) the expected 1997 rate of 4¼ percent is still comparatively low.

HIGH PRICE STABILITY

Under the impact of heightened competition in the single European market and restrictive fiscal policies, inflation remains low nearly everywhere in Europe. In Austria, consumer price inflation will hover around an annual rate of 2 percent in both 1996 and 1997. Prices of manufactures are virtually stable, while the initial dampening effect of EU accession on food prices is now wearing off. Above-average price rises are still recorded for services, in particular rents and other housing costs. In the context of fiscal consolidation, some indirect taxes and communal charges will be raised, possibly preventing inflation from further losing momentum.

Cut-off date: March 29, 1996.

"Monatsberichte", the Monthly Review in German language, is the central publication of the Austrian Institute of Economic Research. Each issue contains an update of current economic developments in Austria and the major OECD countries. A more comprehensive assessment of the business cycle is given in the quarterly revisions of the short-term projections reprinted in the series. Articles covering a broad array of subjects intend to clarify topical issues and facilitate policy decisions based on empirical facts and economic analysis. "Monatsberichte" is therefore addressed not only to the academic reader, but in particular to policy makers and administrators in government and other public institutions, managers in private business, research staff in international organizations and all those who take a professional or private interest in developments of the Austrian economy. Each article includes the necessary background statistics (tables and diagrams) as well as a short English summary; the regular business cycle analysis is supplemented by a 300-time-series set of macroeconomic indicators.



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Leading Indicators

Percentage changes from previous period (seasonally adjusted)

	1993 3rd qu.	1993 4th qu.	1994 1st qu.	1994 2nd qu.	1994 3rd qu.	1994 4th qu.	1995 1st qu.	1995 2nd qu.	1995 3rd qu.	1995 4th qu.	1995 May	1995 June	1995 July	1995 August	1995 Sept.	1995 Oct.	1995 Nov.	1995 Dec.	1996 January	1996 February
OECD total	+ 1.3	+ 2.0	+ 1.8	+ 1.4	+ 1.0	+ 0.7	– 0.1	– 0.4	– 0.1	+ 0.2	+ 0.1	– 0.1	+ 0.0	+ 0.0	– 0.2	– 0.0	+ 0.3	+ 0.3	+ 0.2	+ 0.3
U.S.	+ 1.3	+ 2.5	+ 1.5	+ 0.7	+ 0.4	+ 0.2	– 0.1	– 0.9	– 0.4	– 0.1	– 0.2	– 0.2	+ 0.1	– 0.2	– 0.5	– 0.1	+ 0.3	+ 0.6	+ 0.5	+ 0.4
Japan	+ 0.5	+ 1.1	+ 2.3	+ 2.0	+ 2.1	+ 1.5	+ 0.7	+ 0.7	+ 1.2	+ 1.6	+ 0.4	+ 0.2	+ 0.3	+ 0.6	+ 0.5	+ 0.3	+ 0.9	+ 0.4	+ 0.0	+ 0.6
EU	+ 1.8	+ 2.2	+ 2.1	+ 1.8	+ 1.1	+ 0.8	– 0.5	– 0.6	– 0.6	– 0.4	+ 0.1	– 0.4	– 0.2	– 0.2	– 0.4	– 0.2	+ 0.1	+ 0.1	+ 0.1	+ 0.1
Germany	+ 2.6	+ 2.1	+ 2.8	+ 3.1	+ 1.6	+ 1.5	– 0.4	– 0.6	– 1.4	– 0.1	+ 1.0	– 1.2	– 0.8	– 0.2	– 0.3	+ 0.0	+ 0.2	+ 0.1	– 0.1	– 0.5
Italy	+ 2.6	+ 2.0	+ 1.8	+ 0.7	+ 0.6	– 0.2	– 0.9	– 0.7	+ 0.9	– 1.1	+ 0.2	+ 0.4	+ 0.7	+ 0.2	– 0.6	– 0.9	– 0.1	+ 0.5	+ 0.2	
France	+ 0.6	+ 2.8	+ 1.9	+ 2.0	+ 0.5	+ 0.0	– 1.0	– 0.3	– 1.6	– 1.6	– 0.3	– 0.5	– 0.4	– 0.6	– 1.3	– 0.6	+ 0.0	+ 0.0	+ 0.9	+ 1.0
U.K.	+ 1.4	+ 1.6	+ 1.4	+ 0.2	+ 1.0	+ 0.5	+ 0.2	+ 0.1	– 0.4	– 0.4	– 0.0	– 0.1	– 0.1	– 0.2	– 0.1	– 0.2	– 0.2	+ 0.1	+ 0.2	+ 0.3
The Netherlands	+ 1.4	+ 1.5	+ 2.7	+ 2.0	+ 1.2	+ 0.4	+ 0.0	– 0.9	+ 0.1	+ 0.9	– 0.1	+ 0.0	– 0.1	+ 0.1	+ 0.3	+ 0.3	+ 0.2	+ 0.5	+ 0.4	+ 0.4
Sweden	+ 4.9	+ 3.6	+ 2.4	– 0.3	– 0.4	+ 0.4	– 1.0	– 1.3	+ 0.6	– 0.3	– 0.4	– 0.5	+ 0.4	+ 0.7	+ 0.6	– 0.4	– 0.5	– 0.5	+ 0.4	

Industrial production

Percentage changes from previous period (seasonally adjusted)

	1990	1991	1992	1993	1994	1995	1994 3rd qu.	1994 4th qu.	1995 1st qu.	1995 2nd qu.	1995 3rd qu.	1995 4th qu.	1995 June	1995 July	1995 August	1995 Sept.	1995 Oct.	1995 Nov.	1995 Dec.	1996 January
OECD total	+ 1.6	– 0.3	– 0.3	– 0.5	+ 4.9	+ 2.8	+ 1.6	+ 1.4	+ 0.4	– 0.0	+ 0.2	+ 0.3	– 0.3	– 0.3	+ 1.1	– 0.7	– 0.4	+ 0.7	+ 0.8	
U.S.	– 0.2	– 2.1	+ 4.3	+ 3.8	+ 6.5	+ 3.5	+ 1.3	+ 1.9	+ 1.0	– 0.6	+ 0.7	+ 0.3	+ 0.2	+ 0.0	+ 0.7	+ 0.6	– 0.4	+ 0.1	+ 0.2	– 0.3
Japan	+ 4.0	+ 1.8	– 6.1	– 4.6	+ 0.8	+ 3.3	+ 1.5	+ 2.1	+ 1.3	+ 0.0	– 2.3	+ 2.3	– 0.7	– 2.7	+ 2.5	– 1.7	+ 1.3	+ 1.6	+ 0.7	– 0.1
EU	+ 2.0	+ 0.0	– 1.3	– 3.2	+ 4.9	+ 3.3	+ 1.8	+ 1.2	– 0.0	+ 0.9	+ 0.4	– 0.6	– 0.3	+ 0.3	+ 0.3	– 0.8	– 1.0	+ 0.5	+ 1.5	
Germany			– 2.4	– 7.8	+ 4.0	+ 1.0	+ 1.5	+ 2.0	– 1.8	+ 1.1	– 0.6	– 2.1	– 1.4	+ 1.5	– 2.3	+ 0.3	– 1.8	+ 0.4	– 0.1	+ 2.6
Italy	– 0.3	– 0.9	– 1.2	– 1.9	+ 6.0	+ 5.5	+ 4.4	– 0.2	+ 1.2	– 1.2	+ 7.1	– 4.3	– 0.3	+ 0.3	+14.2	– 10.3	– 1.7	– 0.9	+ 2.8	+ 0.4
France	+ 1.9	– 1.4	– 1.3	– 4.6	+ 5.0		+ 2.0	+ 1.5	– 0.1	+ 0.3	– 0.2	– 1.8	+ 0.2	+ 0.0	+ 0.0	– 2.0	+ 0.0	– 0.4	– 0.7	
U.K.	– 0.2	– 5.4	– 0.7	+ 1.3	+ 4.3	+ 2.0	+ 1.2	+ 0.7	– 0.2	+ 0.5	+ 0.4	– 0.3	+ 0.3	– 0.2	+ 0.8	– 0.6	+ 0.2	– 0.1	– 0.8	+ 0.3
The Netherlands	+ 3.9	+ 0.4	– 0.7	– 2.5	+ 3.8	+ 2.6	+ 1.9	+ 2.3	– 1.7	+ 1.4	+ 0.2	+ 0.8	+ 1.8	– 1.8	+ 0.4	+ 1.2	– 2.1	+ 1.2	+ 3.9	
Sweden	+ 1.1	– 5.2	– 1.5	– 0.1	+ 10.6	+10.4	+ 1.6	+ 6.7	+ 1.5	+ 2.7	– 0.7	+ 1.2	+ 1.9	– 1.8	+ 0.2	+ 1.5	– 0.1	+ 0.5	– 0.4	– 3.0

Unemployment rate

In percent (seasonally adjusted)

	1990	1991	1992	1993	1994	1995	1994 3rd qu.	1994 4th qu.	1995 1st qu.	1995 2nd qu.	1995 3rd qu.	1995 4th qu.	1995 July	1995 August	1995 Sept.	1995 Oct.	1995 Nov.	1995 Dec.	1996 January	1996 February
OECD total	6.1	6.7	7.4	8.0	7.9	7.5	7.8	7.6	7.5	7.5	7.5	7.6	7.6	7.5	7.5	7.5	7.6	7.6	7.7	
U.S.	5.5	6.7	7.3	6.8	6.1	5.6	6.0	5.6	5.5	5.6	5.6	5.6	5.7	5.6	5.6	5.5	5.6	5.6	5.8	5.5
Japan	2.1	2.1	2.2	2.5	2.9	3.2	3.0	2.9	2.9	3.1	3.2	3.3	3.2	3.2	3.2	3.2	3.4	3.4	3.4	3.3
EU	8.4	8.7	9.3	10.9	11.4	11.0	11.3	11.2	11.1	11.0	11.0	11.1	11.0	11.0	11.0	11.0	11.0	11.3	11.1	
Germany			7.7	8.9	9.6	9.4	9.5	9.3	9.3	9.3	9.5	9.7	9.4	9.4	9.6	9.6	9.7	9.9	10.1	10.4
Italy	11.4	10.9	10.7	10.3	11.3	12.0	11.1	11.7	12.1	11.9	12.0	11.9								
France	8.9	9.4	10.4	11.7	12.3	11.6	12.3	12.0	11.8	11.6	11.5	11.6	11.5	11.5	11.5	11.6	11.6	11.7	11.8	11.8
U.K.	5.8	8.0	9.7	10.3	9.3	8.3	9.3	8.8	8.5	8.3	8.2	8.0	8.3	8.2	8.1	8.1	8.0	8.0	7.9	7.9
The Netherlands	7.5	7.0	5.6	6.2	6.8	6.5	6.7	6.9	6.8	6.4	6.4	6.4	6.4	6.4	6.3	6.3	6.5	6.5	6.6	
Sweden	1.8	3.3	5.8	9.5	9.8	9.2	9.6	9.6	9.3	9.2	8.9	9.4	8.8	8.7	9.1	9.2	9.3	9.6	9.2	

Consumer prices

Percentage changes from previous year

	1990	1991	1992	1993	1994	1995	1994 4th qu.	1995 1st qu.	1995 2nd qu.	1995 3rd qu.	1995 4th qu.	1996 1st qu.	1995 August	1995 Sept.	1995 Oct.	1995 Nov.	1995 Dec.	1996 January	1996 February	1996 March
OECD total	+ 6.8	+ 6.1	+ 4.9	+ 4.3	+ 4.4	+ 5.5	+ 4.8	+ 5.3	+ 5.6	+ 5.6	+ 5.5		+ 5.6	+ 5.7	+ 5.6	+ 5.4	+ 5.5	+ 5.6	+ 5.5	
U.S.	+ 5.4	+ 4.2	+ 3.0	+ 3.0	+ 2.6	+ 2.8	+ 2.7	+ 2.8	+ 3.1	+ 2.7	+ 2.6	+ 2.8	+ 2.6	+ 2.6	+ 2.8	+ 2.6	+ 2.5	+ 2.8	+ 2.7	+ 2.8
Japan	+ 3.1	+ 3.3	+ 1.6	+ 1.1	+ 0.5	– 0.3	+ 0.6	– 0.1	– 0.1	– 0.3	– 0.7		– 0.5	– 0.1	– 0.7	– 0.8	– 0.4	– 0.6	– 0.4	
OECD Europe	+ 8.1	+ 7.8	+ 7.5	+ 6.4	+ 7.6	+ 7.6	+ 8.6	+ 9.0	+ 7.6	+ 7.4	+ 6.6		+ 7.5	+ 7.4	+ 7.0	+ 6.6	+ 6.2	+ 6.4		
EU	+ 5.7	+ 5.2	+ 4.5	+ 3.6	+ 3.0	+ 3.1	+ 2.9	+ 3.0	+ 3.2	+ 3.1	+ 3.1		+ 3.1	+ 3.2	+ 3.0	+ 3.0	+ 3.1	+ 2.9	+ 2.8	
Germany			+ 5.1	+ 4.5	+ 2.7	+ 1.8	+ 2.6	+ 2.0	+ 1.9	+ 1.7	+ 1.7		+ 1.7	+ 1.8	+ 1.8	+ 1.7	+ 1.8	+ 1.5	+ 1.6	
Italy	+ 6.5	+ 6.2	+ 5.2	+ 4.5	+ 4.0	+ 5.2	+ 3.9	+ 4.3	+ 5.2	+ 5.6	+ 5.6	+ 5.0	+ 5.7	+ 5.6	+ 5.5	+ 5.7	+ 5.6	+ 5.5	+ 5.0	+ 4.5
France	+ 3.5	+ 3.2	+ 2.4	+ 2.1	+ 1.7	+ 1.8	+ 1.6	+ 1.7	+ 1.6	+ 1.8	+ 1.9	+ 2.1	+ 1.9	+ 2.0	+ 1.8	+ 1.9	+ 2.1	+ 2.0	+ 2.0	+ 2.3
U.K.	+ 9.5	+ 5.8	+ 3.7	+ 1.6	+ 2.5	+ 3.4	+ 2.6	+ 3.4	+ 3.4	+ 3.7	+ 3.2		+ 3.7	+ 3.8	+ 3.2	+ 3.1	+ 3.2	+ 2.8	+ 2.7	
Belgium	+ 3.4	+ 3.2	+ 2.4	+ 2.7	+ 2.4	+ 1.5	+ 2.0	+ 1.8	+ 1.4	+ 1.2	+ 1.4	+ 1.9	+ 1.2	+ 1.2	+ 1.3	+ 1.5	+ 1.4	+ 2.0	+ 1.9	+ 1.9
Denmark	+ 2.6	+ 2.4	+ 2.1	+ 1.3	+ 2.0	+ 2.1	+ 2.1	+ 2.3	+ 2.3	+ 1.9	+ 1.9		+ 1.7	+ 2.1	+ 1.8	+ 1.9	+ 1.8	+ 1.7	+ 1.8	
Finland	+ 6.1	+ 4.3	+ 2.9	+ 2.2	+ 1.1	+ 1.0	+ 1.7	+ 1.8	+ 1.4	+ 0.5	+ 0.3		+ 0.4	+ 0.4	+ 0.3	+ 0.3	+ 0.4	+ 0.5	+ 0.5	
The Netherlands	+ 2.5	+ 3.2	+ 3.2	+ 2.6	+ 2.8	+ 1.9	+ 2.7	+ 2.4	+ 2.2	+ 1.6	+ 1.5		+ 1.5	+ 1.5	+ 1.3	+ 1.6	+ 1.7	+ 1.9	+ 1.8	
Spain	+ 6.7	+ 5.9	+ 5.9	+ 4.6	+ 4.7	+ 4.7	+ 4.3	+ 4.8	+ 5.1	+ 4.4	+ 4.4	+ 3.6	+ 4.2	+ 4.4	+ 4.4	+ 4.4	+ 4.3	+ 3.9	+ 3.6	+ 3.4
Sweden	+10.5	+ 9.4	+ 2.3	+ 4.6	+ 2.2	+ 2.5	+ 2.3	+ 2.6	+ 2.8	+ 2.4	+ 2.3		+ 2.4	+ 2.2	+ 2.3	+ 2.4	+ 2.2	+ 1.7	+ 1.4	
Norway	+ 4.1	+ 3.4	+ 2.3	+ 2.3	+ 1.4	+ 2.5	+ 1.8	+ 2.7	+ 2.7	+ 2.3	+ 2.2	+ 0.9	+ 2.2	+ 2.4	+ 2.3	+ 2.2	+ 2.2	+ 1.2	+ 0.8	+ 0.7
Switzerland	+ 5.4	+ 5.9	+ 4.0	+ 3.3	+ 0.8	+ 1.8	+ 0.5	+ 1.4	+ 1.9	+ 2.0	+ 2.0	+ 1.1	+ 1.9	+ 2.1	+ 2.0	+ 2.0	+ 2.0	+ 1.6	+ 0.8	+ 0.9

International indicators (continued)

	1990	1991	1992	1993	1994	1995	1994 3rd qu.	1994 4th qu.	1995 1st qu.	1995 2nd qu.	1995 3rd qu.	1995 4th qu.	1995 July	1995 August	1995 Sept.	1995 Oct.	1995 Nov.	1995 Dec.	1996 January	1996 February
											In percent									
3-months interest rate																				
U.S.	8.1	5.8	3.7	3.2	4.6	5.9	4.9	5.9	6.2	6.0	5.8	5.7	5.8	5.8	5.7	5.8	5.7	5.6	5.4	5.2
Japan	7.7	7.4	4.5	3.0	2.2	1.2	2.2	2.3	2.3	1.4	0.8	0.5	1.0	0.8	0.6	0.5	0.6	0.5	0.6	0.6
Germany	8.5	9.2	9.5	7.3	5.4	4.5	5.0	5.3	5.1	4.6	4.4	4.0	4.6	4.5	4.2	4.1	4.0	3.9	3.6	3.3
France	10.3	9.6	10.3	8.6	5.8	6.6	5.6	5.7	6.6	7.5	6.1	6.1	6.5	5.9	6.0	6.9	5.9	5.6	4.7	4.4
Italy	12.2	12.2	14.0	10.2	8.5	10.5	8.7	8.9	9.7	10.8	10.6	10.7	11.0	10.5	10.4	10.8	10.7	10.6	10.1	9.9
U.K.	14.8	11.5	9.6	5.9	5.5	6.7	5.5	6.1	6.7	6.7	6.8	6.6	6.8	6.8	6.7	6.7	6.6	6.5	6.4	6.2
The Netherlands	8.7	9.3	9.4	6.9	5.2	4.4	5.0	5.3	5.1	4.5	4.1	3.8	4.2	4.1	3.9	3.9	3.8	3.7	3.3	3.1
Sweden	13.7	11.6	12.9	8.4	7.4	8.7	7.6	8.0	8.2	8.9	9.1	8.8	9.3	9.1	8.9	8.9	8.8	8.6	8.2	7.7
Switzerland	8.8	8.1	7.8	4.8	4.0	3.0	4.1	4.0	3.8	3.3	2.8	2.0	2.8	2.8	2.7	2.1	2.0	1.9	1.6	1.6
Government bond yield																				
U.S.	8.7	8.2	7.5	6.5	7.4	6.9	7.7	8.1	7.7	7.0	6.7	6.3	6.7	6.9	6.6	6.4	6.3	6.1	6.1	6.3
Japan	7.5	6.4	5.1	4.0	4.2	3.2	4.6	4.7	4.2	2.9	2.9	2.8	2.9	3.1	2.7	2.8	2.7	2.9	3.0	3.4
Germany	8.8	8.5	7.9	6.5	6.9	6.8	7.3	7.6	7.4	6.9	6.7	6.2	6.8	6.7	6.5	6.5	6.2	6.0	5.8	6.1
France	10.4	9.5	9.0	7.0	7.5	7.7	8.0	8.3	8.1	7.8	7.5	7.2	7.5	7.4	7.6	7.6	7.2	6.9	6.8	7.0
Italy	13.5	13.1	13.7	11.3	10.6	11.8	11.6	11.8	12.2	12.3	11.5	11.2	11.9	11.4	11.3	11.5	11.2	10.8	10.0	10.0
U.K.	11.1	9.9	9.1	7.9	8.0	8.3	8.6	8.5	8.5	8.2	8.2	8.0	8.4	8.2	8.1	8.3	8.0	7.8	7.8	8.1
The Netherlands	8.9	8.7	8.1	6.7	7.2	7.2	7.5	7.8	7.8	7.3	7.1	6.7	7.2	7.1	6.9	6.9	6.7	6.5	6.3	6.6
Sweden	13.2	10.7	10.0	8.5	9.5	10.2	11.0	10.8	11.0	10.9	10.1	9.0	10.6	10.2	9.6	9.3	9.0	8.6	8.6	8.8
Switzerland	6.4	6.2	6.4	4.6	5.0	4.5	5.3	5.3	5.2	4.7	4.4	3.8	4.6	4.5	4.2	4.0	3.6	3.7	4.1	4.1

Seasonally adjusted indicators for Austria

	1993 3rd qu.	1993 4th qu.	1994 1st qu.	1994 2nd qu.	1994 3rd qu.	1994 4th qu.	1995 1st qu.	1995 2nd qu.	1995 3rd qu.	1995 4th qu.	1995 March	1995 April	1995 May	1995 June	1995 July	1995 August	1995 Sept.	1995 Oct.	1995 Nov.	1995 Dec.
										Percentage changes from previous period										
Manufacturing industry																				
Production	– 0.7	– 0.0	+ 1.8	+ 0.0	+ 2.5	+ 4.3	+ 0.0	+ 1.1	+ 0.4	– 3.9	– 2.0	+ 1.9	+ 3.1	– 3.5	+ 3.7	– 3.4	+ 1.3	– 2.7	– 0.6	– 1.8
Basic and semi-manufactures	+ 1.3	– 0.6	+ 2.7	+ 0.5	+ 2.5	+ 5.2	+ 1.1	+ 0.2	– 0.1	– 2.8	– 0.2	– 0.8	+ 4.6	– 3.9	+ 2.7	– 2.6	+ 0.6	– 2.6	+ 0.7	– 0.4
Investment goods	– 0.6	+ 3.4	+ 0.3	– 3.7	+ 2.4	+ 5.3	+ 1.5	+ 4.5	+ 1.9	– 6.5	– 6.0	+ 9.6	– 1.8	– 0.9	+ 4.3	– 3.6	+ 3.9	– 7.4	+ 0.6	– 2.3
Consumer goods	– 2.3	+ 0.3	+ 1.7	– 0.4	+ 1.5	– 0.0	– 0.7	– 0.9	+ 0.2	– 0.2	– 2.2	+ 0.7	+ 1.8	– 2.3	+ 2.6	– 2.3	+ 0.6	+ 0.4	– 1.0	+ 1.2
Industrial orders (excl. machine tools)	+ 2.4	– 2.7	+ 8.5	+ 1.5	+ 3.6	+ 2.4	– 1.2	– 1.0	+ 3.0	– 2.1	– 3.0	– 1.6	+ 2.1	– 0.2	+ 3.0	– 2.1	+ 2.5	– 4.0	+ 1.2	+ 0.9
Domestic	+ 1.1	+ 1.1	+ 2.5	+ 1.9	+ 1.3	+ 0.8	– 3.5	– 3.6	+ 2.9	– 0.3	– 1.5	– 5.2	+ 1.0	+ 2.4	+ 2.4	– 1.7	– 0.7	– 0.6	– 3.5	+11.5
Foreign	+ 6.1	– 2.5	+ 11.6	+ 12.4	+ 2.0	+ 6.8	– 4.4	– 5.3	+ 3.9	+ 0.0	– 4.8	– 1.1	– 2.0	– 2.7	+ 6.6	– 2.6	+ 5.1	– 7.6	+ 1.1	+14.5
Trade																				
Retail sales, volume	– 0.1	– 0.8	+ 1.7	– 0.2	+ 0.0	+ 0.5	– 0.6	+ 0.3	+ 0.1	– 0.2	– 1.1	+ 1.1	+ 0.9	– 1.4	+ 0.8	+ 0.1	– 0.1	– 1.2	+ 1.4	+ 0.3
Consumer durables	– 0.1	– 3.4	+ 3.3	– 1.3	+ 1.8	+ 1.1	– 0.6	+ 1.0	+ 0.0	+ 0.7	– 2.1	+ 1.8	+ 2.7	– 1.9	+ 1.2	– 0.5	– 1.2	– 0.1	+ 2.4	+ 0.5
Whole sale trade, volume	– 2.6	+ 1.3	+ 3.8	– 0.9	+ 0.8	+ 2.6	– 0.8	– 1.0	– 1.3	– 0.4	– 4.3	+ 3.7	– 2.3	– 2.0	+ 2.5	– 2.7	+ 0.4	+ 0.3	– 0.8	+ 1.7

	1991 2nd qu.	1991 3rd qu.	1991 4th qu.	1992 1st qu.	1992 2nd qu.	1992 3rd qu.	1992 4th qu.	1993 1st qu.	1993 2nd qu.	1993 3rd qu.	1993 4th qu.	1994 1st qu.	1994 2nd qu.	1994 3rd qu.	1994 4th qu.	1995 1st qu.	1995 2nd qu.	1995 3rd qu.	1995 4th qu.	1996 1st qu.
										Balance of positive and negative responses									
Business survey, manufacturing industry																				
Order stocks	–14.9	–20.4	–23.4	–26.1	–27.3	–30.0	–38.8	–42.9	–46.6	–45.8	–40.9	–30.7	–18.3	–12.8	– 9.9	– 7.2	–19.0	–29.7	–35.7	–46.8
Stock of export orders	–29.5	–31.1	–36.4	–36.8	–40.4	–43.5	–50.7	–53.6	–57.2	–55.4	–51.3	–42.4	–31.3	–23.9	–18.3	–13.6	–25.5	–34.6	–39.6	–47.2
Inventory level, finished goods	+13.5	+17.2	+18.1	+17.3	+16.9	+16.5	+22.0	+25.5	+24.4	+21.9	+20.3	+14.9	+11.4	+10.2	+ 7.9	+ 8.6	+14.8	+19.2	+21.5	+25.5
Spare capacity	+61.9	+62.8	+66.1	+69.0	+69.3	+75.3	+75.2	+77.8	+81.0	+79.1	+76.3	+74.9	+70.2	+67.8	+63.0	+61.0	+67.8	+70.3	+72.7	
Outlook for production	+ 8.3	+ 4.9	+ 1.4	+ 1.0	+ 0.0	– 1.3	–12.0	–18.0	–17.4	–14.9	– 7.9	– 1.2	+ 5.1	+ 9.3	+10.2	+ 7.5	– 0.6	– 7.1	– 8.5	– 8.0
Outlook for sales prices	+ 9.3	+ 6.6	+ 5.8	+ 5.2	+ 4.5	+ 2.6	– 8.1	–11.6	–10.1	– 9.0	– 9.8	– 4.0	+ 3.7	+ 7.8	+ 6.6	+ 8.0	– 1.1	– 9.4	– 3.2	–14.1

	1993 4th qu.	1994 1st qu.	1994 2nd qu.	1994 3rd qu.	1994 4th qu.	1995 1st qu.	1995 2nd qu.	1995 3rd qu.	1995 4th qu.	1996 1st qu.	1996 June	1996 July	1995 August	1995 Sept.	1995 Oct.	1995 Nov.	1995 Dec.	1996 January	1996 February	1996 March
										Percentage changes from previous period									
Labor market																				
Employment (dependent)	+ 0.0	+ 0.2	+ 0.2	+ 0.1	+ 0.2	+ 0.0	– 0.2	– 0.2	– 0.4	– 0.4	– 0.1	– 0.0	– 0.1	– 0.1	– 0.1	– 0.1	– 0.2	– 0.1	– 0.2	– 0.1
Manufacturing industry	– 1.2	– 0.8	– 0.5	– 0.1	+ 0.0	+ 0.0	– 0.3	– 0.6	– 1.4		– 0.2	– 0.1	– 0.2	– 0.4	– 0.5	– 0.6	– 0.4			
Unemployment	– 1.2	– 2.3	– 1.4	– 0.9	– 0.8	– 0.3	+ 0.4	+ 2.3	+ 3.3	+ 4.8	+ 0.5	+ 1.0	+ 0.9	+ 0.2	+ 1.1	+ 2.1	+ 0.8	+ 1.0	+ 2.8	+ 1.9
Vacancies	– 6.3	+ 2.9	– 2.2	– 1.1	+ 0.6	– 7.5	– 6.3	– 7.2	– 8.4	– 5.2	– 2.5	– 1.8	– 4.1	– 1.9	– 3.0	– 4.3	– 0.2	– 0.7	– 3.7	– 1.4
Unemployment rate in percent (acc. to EU)		4.1	3.8	3.4	3.6	3.5	3.6	3.6	3.7	3.8	3.6	3.5	3.6	3.7	3.7	3.7	3.8	3.7	3.8	3.9

Gross domestic product[1]

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1993		1994				1995			
											3rd qu.	4th qu.	1st qu.	2nd qu.	3rd qu.	4th qu.	1st qu.	2nd qu.	3rd qu.	4th qu.
	Percentage changes from previous year																			
Contribution to GDP																				
Agriculture, forestry	+ 4.2	– 0.8	+ 4.2	– 6.6	– 3.1	– 0.2	+ 2.8	– 3.0	+ 1.1	+ 0.0	– 4.9	+ 0.1	– 1.2	+ 0.6	+ 8.9	+ 2.0	– 5.3	– 1.5	– 4.0	– 1.8
Mining	– 5.3	– 11.0	– 1.3	+43.1	–20.6	– 4.2	– 2.6	+ 11.4			+ 4.3	+ 11.6	+ 2.6	– 4.8	– 6.3	– 1.3	+ 5.4	+18.2	+15.0	+ 6.9
Manufacturing	+ 7.9	+ 4.1	+ 5.0	+ 2.5	+ 0.4	– 3.2	+ 4.1	+ 3.4	+ 1.0	+ 1.8	– 3.3	– 1.1	+ 2.3	+ 3.3	+ 4.0	+ 6.5	+ 6.2	+ 4.9	+ 3.1	– 0.2
Industrial	+ 8.4	+ 4.5	+ 4.6	+ 1.3	+ 0.3	– 3.7	+ 4.2	+ 3.6	+ 1.0	+ 2.0	– 4.1	– 1.2	+ 1.9	+ 3.4	+ 4.1	+ 7.2	+ 7.1	+ 5.2	+ 3.3	– 0.6
Small-scale	+ 6.6	+ 3.2	+ 6.4	+ 6.3	+ 0.8	– 1.5	+ 3.7	+ 2.7	+ 1.0	+ 1.0	– 0.8	– 1.0	+ 3.7	+ 2.9	+ 3.7	+ 4.5	+ 3.6	+ 4.0	+ 2.5	+ 0.7
Energy and water supply	– 7.1	+ 9.2	+ 1.5	+ 3.7	+ 3.9	+ 3.4	– 0.6	+ 4.8	+ 1.3	+ 1.4	+12.1	+ 4.2	+ 0.0	+ 7.7	– 4.3	– 4.9	+ 2.6	+ 2.9	+ 9.6	+ 4.9
Construction	+ 2.9	+ 4.4	+ 3.3	+ 5.9	+ 5.5	+ 5.4	+ 5.6	– 0.7	– 2.0	– 1.0	+ 7.5	+ 6.7	+12.8	+ 5.2	+ 3.2	+ 5.4	– 0.4	+ 1.2	– 0.9	– 2.1
Trade	+ 4.9	+ 4.1	+ 6.7	+ 2.8	+ 1.7	– 0.7	+ 1.9	+ 0.2	– 0.2	+ 0.1	– 1.2	+ 0.3	+ 3.9	+ 0.6	+ 1.2	+ 1.9	+ 0.6	+ 2.4	– 1.1	– 0.8
Transport, communication	+ 4.0	+ 6.5	+ 5.6	+ 6.7	+ 4.9	+ 1.8	+ 5.2	+ 2.9	+ 2.5	+ 2.0	+ 2.4	– 0.6	+ 4.7	+ 4.9	+ 5.3	+ 6.0	+ 4.9	+ 3.8	+ 1.7	+ 1.6
Banking, insurance	+ 2.6	+ 4.8	+ 4.0	+ 3.8	+ 3.7	+ 2.8	+ 1.6	+ 2.6	+ 2.0	+ 2.0	+ 3.5	+ 0.6	+ 3.6	+ 1.4	+ 1.9	– 0.5	+ 0.8	+ 3.6	+ 3.0	+ 3.1
Other private services	+ 6.5	+ 3.6	+ 4.9	+ 4.0	+ 1.7	+ 3.5	+ 1.6	+ 1.9	+ 1.5	+ 1.6	+ 3.5	+ 3.3	+ 1.5	+ 1.7	+ 1.7	+ 1.8	+ 2.5	+ 1.8	+ 1.7	+ 1.7
Public sector	+ 0.7	+ 0.6	+ 1.9	+ 1.6	+ 2.5	+ 2.6	+ 2.0	+ 0.8	+ 0.0	+ 0.0	+ 2.5	+ 2.6	+ 2.5	+ 1.9	+ 1.9	+ 1.7	+ 1.2	+ 1.4	+ 0.7	+ 0.2
Total	+ 4.2	+ 3.8	+ 4.5	+ 3.1	+ 2.0	+ 0.5	+ 2.9	+ 1.8	+ 0.7	+ 1.0	+ 0.9	+ 1.0	+ 3.2	+ 2.6	+ 2.7	+ 3.1	+ 2.6	+ 3.1	+ 1.5	+ 0.4
Minus imputed bank charges	+ 2.4	+ 5.0	+ 6.4	+ 6.8	+ 1.9	+ 2.0	+ 0.2	+ 1.1			+ 4.3	– 2.5	+ 5.3	– 0.1	– 0.1	– 4.0	– 1.5	+ 3.4	+ 1.5	+ 1.0
Import duties	+ 6.7	+ 7.9	+ 2.0	+ 0.2	– 1.4	– 1.1	+ 3.7	+ 6.4			+ 4.1	– 2.3	+ 9.4	+ 3.9	+ 2.3	+ 0.0	+ 6.7	+11.3	+ 5.6	+ 1.6
VAT	+ 1.4	+ 4.3	+ 2.9	+ 2.8	+ 2.3	+ 0.0	+ 2.8	+ 0.7			+ 0.4	+ 0.1	+ 4.0	+ 2.4	+ 1.9	+ 3.0	+ 0.8	+ 1.7	+ 0.3	– 0.0
Gross domestic product	+ 4.1	+ 3.8	+ 4.2	+ 2.8	+ 2.0	+ 0.4	+ 3.0	+ 1.8	+ 0.7	+ 1.0	+ 0.7	+ 1.1	+ 3.2	+ 2.7	+ 2.8	+ 3.5	+ 2.7	+ 3.0	+ 1.4	+ 0.3
Spending on GDP																				
Private consumption	+ 3.9	+ 3.1	+ 3.3	+ 2.9	+ 2.8	+ 0.7	+ 2.5	+ 1.9	+ 0.8	+ 0.3	+ 1.4	+ 0.3	+ 2.2	+ 1.9	+ 3.4	+ 2.6	+ 2.1	+ 2.8	+ 1.7	+ 1.1
Public consumption	+ 0.3	+ 0.8	+ 1.2	+ 2.6	+ 2.2	+ 3.1	+ 2.2	+ 2.1	+ 0.0	– 0.5	+ 3.0	+ 3.1	+ 2.7	+ 2.2	+ 2.1	+ 2.0	+ 2.4	+ 2.6	+ 1.9	+ 1.4
Gross fixed investment	+ 6.0	+ 6.2	+ 5.7	+ 6.3	+ 1.7	– 1.6	+ 6.8	+ 2.3	+ 0.2	+ 1.4	– 0.1	– 0.3	+ 16.3	+ 5.3	+ 2.4	+ 7.2	+ 4.3	+ 4.3	+ 1.9	– 0.2
Machinery and equipment (net of VAT)	+ 5.6	+ 8.3	+ 5.7	+ 6.5	– 3.6	– 8.2	+ 8.8	+ 6.1	+ 2.5	+ 4.0	– 9.6	– 7.2	+ 19.5	+ 5.6	+ 0.7	+ 10.3	+ 7.7	+ 8.3	+ 6.7	+ 2.2
Construction (net of VAT)	+ 6.4	+ 4.8	+ 5.8	+ 6.0	+ 5.8	+ 2.9	+ 5.6	– 0.2	– 1.5	– 0.5	+ 5.0	+ 4.2	+ 12.9	+ 5.2	+ 3.3	+ 5.4	+ 0.1	+ 1.7	– 0.4	– 1.7
Final domestic demand	+ 3.7	+ 3.5	+ 3.6	+ 3.7	+ 2.4	+ 0.5	+ 3.6	+ 2.0	+ 0.5	+ 0.5	+ 1.2	+ 0.6	+ 5.0	+ 2.8	+ 2.9	+ 3.7	+ 2.6	+ 3.2	+ 1.8	+ 0.8
Change in stockbuilding																				
Contribution to GDP growth[2]	+ 0.7	– 0.5	+ 0.6	– 0.5	– 0.1	+ 0.3	+ 1.0	+ 0.9	+ 0.2	+ 0.2	– 1.1	– 0.2	– 1.0	+ 1.3	+ 3.1	+ 0.3	+ 1.2	+ 1.8	+ 0.1	+ 0.8
Billion ATS	+15.9	+ 9.4	+17.3	+ 9.6	+ 8.7	+12.6	+27.2	+42.1	+44.9	+48.6	–13.6	+ 0.2	+14.1	+13.3	– 1.4	+ 1.2	+18.4	+20.1	– 1.0	+ 4.6
Total domestic demand	+ 4.4	+ 2.9	+ 4.1	+ 3.2	+ 2.3	+ 0.7	+ 4.5	+ 2.9	+ 0.7	+ 0.7	+ 0.1	+ 0.4	+ 3.8	+ 4.0	+ 6.1	+ 4.0	+ 3.7	+ 4.7	+ 1.9	+ 1.6
Exports, goods and services	+ 9.4	+10.7	+ 7.7	+ 5.8	+ 1.2	– 1.6	+ 5.2	+ 5.0	+ 2.9	+ 3.9	+ 3.5	+ 0.2	+ 7.0	+ 4.2	+ 0.6	+ 9.1	+ 6.2	+ 7.7	+ 6.3	+ 0.3
Imports, goods and services	+10.0	+ 8.3	+ 7.4	+ 6.4	+ 1.8	– 0.7	+ 8.2	+ 7.1	+ 2.7	+ 3.1	+ 2.2	– 1.4	+ 8.3	+ 6.8	+ 7.7	+ 9.8	+ 8.2	+10.8	+ 7.0	+ 2.9
Net exports (contribution to GDP growth)[2]	– 0.4	+ 0.8	+ 0.1	– 0.3	– 0.3	– 0.4	– 1.5	– 1.2	– 0.0	+ 0.3	+ 0.6	+ 0.7	– 0.5	– 1.5	– 3.3	– 0.6	– 0.9	– 2.0	– 0.5	– 1.3

[1] Volume (1983 prices); 1996–1997: projections. – [2] Percentage points.

Income[1]

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1993		1994				1995			
											3rd qu.	4th qu.	1st qu.	2nd qu.	3rd qu.	4th qu.	1st qu.	2nd qu.	3rd qu.	4th qu.
	Percentage changes from previous year																			
National income	+ 6.2	+ 6.8	+ 8.4	+ 7.3	+ 6.4	+ 3.4	+ 5.3	+ 5.4	+ 0.5	+ 1.6	+ 5.1	+ 1.9	+ 9.6	+ 6.0	+ 2.1	+ 4.3	+ 7.1	+ 7.9	+ 4.4	+ 2.5
Compensation of employees	+ 4.4	+ 6.4	+ 7.5	+ 8.6	+ 6.6	+ 4.2	+ 3.6	+ 3.8	+ 1.7	+ 1.6	+ 3.9	+ 3.3	+ 3.2	+ 3.0	+ 4.3	+ 3.7	+ 4.0	+ 5.1	+ 3.3	+ 2.8
Other income	+11.0	+ 7.7	+10.7	+ 4.3	+ 5.6	+ 1.4	+ 9.9	+ 9.3	– 2.3	+ 1.6	+ 7.5	– 1.6	+31.1	+15.2	– 2.0	+ 5.9	+15.2	+15.8	+ 6.5	+ 1.6
Net household income[4]																				
Current values	+ 2.3	+ 8.5	+ 6.3	+ 7.6	+ 6.2	+ 5.7	+ 4.8	+ 2.8	+ 1.9	+ 0.7	+ 6.4	+ 5.2	+ 5.7	+ 4.1	+ 5.1	+ 4.4	+ 3.2	+ 4.2	+ 2.4	+ 1.5
Employment income	+ 3.3	+ 6.4	+ 7.6	+ 8.7	+ 6.4	+ 3.9	+ 3.5	+ 3.8	+ 1.6	+ 1.5	+ 3.6	+ 3.0	+ 3.2	+ 3.0	+ 4.3	+ 3.7	+ 4.0	+ 5.0	+ 3.3	+ 2.8
Private wage bill	+ 3.8	+ 6.9	+ 7.9	+ 8.8	+ 6.0	+ 3.1	+ 3.0	+ 4.0			+ 2.6	+ 2.1	+ 2.1	+ 2.6	+ 4.0	+ 3.4	+ 4.2	+ 5.6	+ 3.5	+ 2.6
Public wage bill	+ 1.5	+ 4.6	+ 6.5	+ 8.2	+ 7.7	+ 6.9	+ 5.3	+ 3.1			+ 7.1	+ 6.6	+ 6.4	+ 4.3	+ 5.3	+ 4.8	+ 3.3	+ 2.8	+ 2.7	+ 3.8
Transfer income	+ 2.3	+ 4.4	+ 7.4	+ 7.6	+ 8.0	+11.3	+ 6.3	+ 2.9			+12.2	+12.1	+ 7.9	+ 5.5	+ 6.4	+ 5.7	+ 3.4	+ 4.1	+ 3.8	+ 0.4
Deductions	+ 5.8	– 4.4	+12.6	+11.6	+ 9.7	+ 8.2	+ 3.3	+ 5.8			+ 5.7	+ 8.4	+ 1.6	+ 2.8	+ 4.6	+ 4.0	+ 6.1	+ 6.7	+ 7.2	+ 3.6
Constant 1983 values	+ 0.8	+ 5.6	+ 2.9	+ 4.1	+ 2.2	+ 2.3	+ 1.7	+ 0.6	– 0.2	– 1.2	+ 2.8	+ 1.9	+ 2.1	+ 1.1	+ 2.0	+ 1.7	+ 0.9	+ 1.9	+ 0.0	– 0.6
Gross wages and salaries per employee																				
Current values	+ 2.8	+ 4.6	+ 5.2	+ 6.5	+ 5.6	+ 4.2	+ 3.1	+ 3.8	+ 2.6	+ 2.3	+ 4.0	+ 3.3	+ 3.2	+ 2.7	+ 3.8	+ 2.8	+ 3.5	+ 4.8	+ 3.4	+ 3.5
Constant 1983 values	+ 1.4	+ 1.8	+ 1.8	+ 3.1	+ 1.6	+ 0.7	+ 0.1	+ 1.5	+ 0.5	+ 0.4	+ 0.5	+ 0.1	– 0.3	– 0.3	+ 0.7	+ 0.2	+ 1.2	+ 2.5	+ 1.0	+ 1.3
National income per employee[5]	+ 5.9	+ 5.4	+ 6.4	+ 5.5	+ 5.8	+ 3.8	+ 4.8	+ 6.0												
Productivity																				
Real GDP per employee[5]	+ 3.8	+ 2.5	+ 2.4	+ 1.1	+ 1.5	+ 0.8	+ 2.9	+ 2.1	+ 1.8	+ 2.0										
Real GDP per dependent employee	+ 3.5	+ 2.0	+ 1.9	+ 0.8	+ 1.3	+ 0.6	+ 2.6	+ 1.8			+ 1.1	+ 1.5	+ 3.1	+ 2.4	+ 2.3	+ 2.7	+ 2.2	+ 2.8	+ 1.5	+ 0.9
	In percent																			
Wage ratio	71.7	71.5	70.9	71.7	71.9	72.4	71.2	70.1	71.0	71.0										
Household saving ratio	11.5	12.6	13.7	14.1	12.6	12.2	13.6	13.4	12.0	11.1										

[1] 1996-1997: projections. – [4] From employment and social transfers. – [5] Incl. self-employed.

Manufacturing industry

	1990	1991	1992	1993	1994	1995	1994		1995				1995						
							3rd qu.	4th qu.	1st qu.	2nd qu.	3rd qu.	4th qu.	May	June	July	August	Sept.	Oct.	Nov.	Dec.
	Percentage changes from previous year																			
Production index (calendar adjusted)																				
Total (excl. energy)	+ 7.8	+ 1.8	– 1.1	– 2.5	+ 5.0	+ 5.5	+ 6.2	+ 8.6	+ 6.9	+ 8.8	+ 7.1	– 0.2	+ 5.4	+10.1	+ 9.1	+ 6.8	+ 5.5	– 0.8	– 0.4	+ 0.4
Basic and semi-manufactures	+ 6.5	+ 0.5	– 0.1	– 2.5	+ 6.9	+ 6.6	+ 7.2	+11.8	+ 9.5	+ 9.9	+ 7.6	+ 0.0	+ 6.9	+11.4	+ 8.9	+ 9.2	+ 5.0	– 1.4	– 0.8	+ 2.5
For food, tobacco	+12.5	+ 5.8	+ 0.7	– 0.8	+ 6.1	+ 2.4	+ 9.5	– 0.7	+ 0.1	+ 2.2	+ 3.8	+ 3.4	– 5.8	+ 8.3	– 3.2	+ 5.3	+ 9.3	– 3.0	+ 0.1	+14.5
Textile, leather	+ 7.8	– 5.1	+ 0.4	– 7.5	+ 0.5	+ 0.8	+ 4.1	+ 1.0	+ 3.7	+ 2.4	+ 1.1	– 3.7	– 1.9	+ 2.3	+ 0.4	– 1.4	+ 3.5	– 4.9	– 2.0	– 4.3
Wood, paper, printing	+ 5.6	+ 3.1	+ 2.8	– 0.8	+10.9	+ 1.6	+10.8	+15.0	+ 7.7	+ 3.3	+ 0.9	– 4.8	+ 1.4	+ 5.0	+ 0.7	+ 2.4	+ 0.0	– 5.0	– 6.6	– 2.3
Chemicals	– 2.1	+ 0.9	+ 0.0	– 4.2	+ 5.2	+ 5.3	+ 6.4	+ 9.9	+ 9.4	+ 1.2	+ 7.4	+ 3.5	– 6.6	+10.6	+10.8	+ 7.4	+ 4.3	+ 0.9	+ 4.8	+ 5.0
Stone, glass	+ 5.0	–12.7	– 7.3	– 4.9	+ 9.8	+ 7.5	+16.7	+ 3.2	+ 4.6	+18.9	+ 4.3	+ 2.8	+ 9.7	+16.3	– 3.2	+ 7.2	+10.0	+ 0.5	– 5.9	+18.8
Basic metals	– 6.8	– 4.1	– 7.3	– 2.5	+ 4.8	+12.9	+ 4.8	+ 5.5	+10.9	+21.1	+14.6	+ 6.2	+ 18.1	+21.9	+21.4	+14.4	+ 8.1	+ 6.1	+ 1.6	+11.1
Technical manufactures	+10.6	– 1.9	– 0.7	– 4.6	+ 8.4	+11.6	+10.8	+17.7	+16.1	+14.6	+12.8	+ 4.0	+14.4	+14.3	+11.2	+17.9	+10.7	+ 3.5	+ 2.8	+ 5.8
Construction	+ 3.5	+ 0.4	+ 1.1	+ 1.0	+ 9.1	+ 6.1	+ 6.3	+18.1	+14.0	+ 8.6	+ 6.8	– 2.9	+ 4.3	+ 9.3	+10.9	+ 7.7	+ 2.5	– 1.0	– 4.0	– 3.9
Other industries	+11.6	+ 9.3	+ 1.9	+ 0.6	+ 2.9	– 0.1	+ 0.5	+ 2.9	– 2.6	+ 8.4	+ 1.4	– 6.7	+ 4.6	+10.4	+ 7.3	+ 0.7	– 3.7	–12.7	– 4.9	– 2.7
Investment goods	+13.3	+ 5.3	– 2.6	– 4.7	+ 3.3	+ 8.5	+ 4.0	+ 6.1	+ 6.2	+16.1	+14.7	– 0.5	+ 7.4	+18.6	+18.7	+ 9.3	+15.5	+ 2.4	+ 2.2	– 4.8
Vehicles	+24.9	+14.5	–13.0	–14.3	–12.4	+20.7	– 8.9	–28.8	+ 5.1	+45.5	+42.0	+ 3.9	+36.7	+45.9	+41.9	+29.0	+52.7	–12.4	– 4.1	+23.7
Machinery, electrical equipment	+15.1	+ 2.1	– 3.8	– 3.5	+ 5.8	+10.9	+ 4.7	+13.5	+ 7.9	+17.3	+18.4	+ 2.2	+ 6.6	+21.5	+24.4	+ 9.5	+20.4	+ 7.6	+ 8.7	– 5.9
Other	+ 2.8	+11.7	+ 6.1	– 4.1	+ 2.2	– 2.1	+ 5.7	+ 2.7	+ 1.7	+ 4.4	– 2.1	–10.6	+ 1.1	+ 3.0	– 2.2	+ 3.7	– 6.5	– 7.4	–12.9	–11.3
Consumer goods	+ 6.8	+ 2.2	– 2.1	– 1.1	+ 1.7	– 0.3	+ 5.2	+ 3.0	+ 0.8	– 0.3	– 0.7	– 0.8	– 0.5	– 0.5	+ 1.5	– 1.7	– 1.8	– 2.2	– 1.6	+ 1.7
Non-durables	+ 6.8	+ 5.4	+ 0.4	+ 0.3	+ 2.5	– 0.5	+ 7.2	+ 2.9	– 1.6	– 1.5	– 0.1	+ 1.3	– 1.5	– 1.5	+ 0.6	– 4.2	+ 3.3	+ 3.3	– 0.4	+ 1.1
Semi-durables	+ 2.2	– 1.6	– 5.5	–11.0	– 4.2	– 3.8	– 3.1	– 1.5	– 2.5	– 3.5	– 3.2	– 6.0	– 4.9	– 3.5	– 4.7	– 1.2	– 3.3	– 9.7	– 7.5	+ 0.3
Durables	+13.9	+ 0.4	– 2.8	+ 7.9	+ 5.8	+ 3.3	+ 9.7	+ 7.1	+ 8.4	+ 4.7	+ 0.4	– 0.2	+ 5.6	+ 4.2	+ 9.3	+ 4.5	– 8.4	– 5.3	+ 1.5	+ 3.8
Productivity per employee	+ 6.1	+ 2.9	+ 2.5	+ 4.3	+ 8.9	+ 6.6	+ 8.9	+ 10.2	+ 7.6	+ 9.2	+ 8.0	+ 2.1	+ 5.7	+10.7	+ 9.7	+ 7.6	+ 6.8	+ 0.7	+ 2.1	+ 3.4
Productivity per hour	+ 6.7	+ 4.6	+ 3.7	+ 6.1	+ 8.2	+ 7.4	+ 9.3	+ 9.7	+ 5.5	+10.6	+ 9.9	+ 4.2	+ 2.8	+15.0	+10.3	+ 8.2	+10.8	– 0.9	+ 3.5	+11.4
Hours worked per worker	– 0.3	– 1.0	+ 0.0	– 0.2	+ 1.2	– 0.6	– 0.1	+ 0.6	+ 1.9	– 1.2	– 1.5	– 1.6	+ 2.9	– 3.6	– 0.6	– 0.3	– 3.3	+ 2.2	– 0.8	– 6.7
Orders (excl. machine tools)	+ 3.1	+ 1.6	+ 0.3	– 2.5	+17.8	+ 0.8	+16.0	+27.1	+14.1	– 3.7	– 2.1	– 5.1	– 5.8	– 3.7	+ 0.8	– 3.8	– 3.0	– 2.1	–10.8	– 2.2
Domestic	+ 5.4	– 0.8	+ 0.1	– 1.1	+ 8.6	– 2.1	+ 5.7	+16.6	+ 4.1	– 4.6	– 3.5	– 4.2	– 8.3	– 1.5	+ 1.9	– 4.4	– 7.3	+ 0.1	–10.3	– 2.1
Foreign	+ 1.4	+ 3.5	+ 0.5	– 3.5	+24.8	+ 2.6	+24.6	+34.7	+20.5	– 3.1	– 1.1	– 5.7	– 4.1	– 5.1	– 0.0	– 3.3	– 0.1	– 3.5	–11.2	– 2.2
Order stocks (excl. machine tools)	+ 7.3	– 1.8	– 1.3	– 2.4	+ 9.8	+ 6.5	+13.2	+12.3	+16.2	+ 8.1	+ 1.2	+ 0.4	+ 8.0	+ 4.5	+ 4.7	– 0.4	– 0.7	– 0.7	+ 1.6	+ 0.5

Construction

	1990	1991	1992	1993	1994	1995	1994		1995				1995						
							3rd qu.	4th qu.	1st qu.	2nd qu.	3rd qu.	4th qu.	May	June	July	August	Sept.	Oct.	Nov.	Dec.
	Percentage changes from previous year																			
Output, current values	+ 9.9	+12.2	+ 7.7	+ 1.7	+ 7.3	– 1.1	+ 3.1	+ 7.2	– 0.8	+ 2.5	– 1.7	– 3.8	+ 7.8	+ 0.2	+ 3.0	– 0.5	– 7.0	+ 3.5	– 1.9	–14.2
Buildings	+ 9.5	+16.9	+10.4	+ 1.0	+ 6.8	+ 1.7	+ 3.1	+ 7.5	+ 0.8	+ 6.8	+ 0.6	– 1.5	+13.6	+ 3.9	+ 5.7	+ 1.4	– 4.7	+ 7.1	+ 2.3	–14.4
Residential	+ 3.3	+11.9	+19.4	+20.6	+25.4	+ 5.5	+18.9	+27.2	+10.4	+12.3	+ 4.1	– 2.1	+20.9	+ 6.2	+ 7.5	+ 8.3	– 2.7	+ 6.0	+ 7.3	– 19.6
Civil engineering	+ 8.2	+ 9.2	+ 0.0	+ 3.7	+ 5.8	– 3.5	– 0.2	+ 4.8	– 5.4	– 1.0	– 2.9	– 5.5	+ 3.6	– 3.6	+ 1.2	– 2.2	– 7.3	+ 0.2	– 4.0	– 14.3
Order stocks	+ 7.9	+16.5	+ 3.4	+13.2	+ 7.6	– 4.1	+ 6.9	+ 9.6	+ 0.7	– 3.7	– 6.5	– 7.0								
To be carried out within 12 months	+ 8.6	+12.0	+ 7.1	+10.4	+10.0	– 3.2	+10.1	+11.3	– 0.4	– 1.4	– 6.6	– 4.4								
Price index buildings	+ 4.3	+ 6.1	+ 3.7	+ 3.0	+ 2.9	+ 2.3	+ 2.9	+ 3.2	+ 2.8	+ 2.5	+ 2.2	+ 1.9								
Residential	+ 4.1	+ 5.9	+ 4.5	+ 3.1	+ 3.0	+ 2.3	+ 2.7	+ 3.0	+ 2.9	+ 2.3	+ 2.2	+ 2.0								
Price index civil engineering	+ 3.0	+ 3.8	+ 1.7	+ 2.3	+ 2.0	+ 2.6	+ 1.7	+ 2.3	+ 2.2	+ 2.8	+ 2.6	+ 2.9								

Wholesale and retail trade

	1990	1991	1992	1993	1994	1995	1994		1995				1995						1996
							3rd qu.	4th qu.	1st qu.	2nd qu.	3rd qu.	4th qu.	June	July	August	Sept.	Oct.	Nov.	Dec.	January
	Percentage changes from previous year																			
Wholesale sales (net)																				
Volume	+ 2.2	+ 5.3	– 0.4	– 3.1	+ 3.9	– 0.5	+ 4.4	+ 5.5	+ 2.3	+ 1.0	– 1.7	– 3.2	– 2.9	+ 2.2	– 0.7	– 5.9	+ 1.5	– 4.8	– 6.0	+ 0.0
Agricultural products, food, tobacco	+ 1.0	+ 2.5	+ 1.9	– 5.2	+ 3.0	– 4.0	+ 9.1	+ 2.3	– 0.7	– 4.6	– 5.5	– 4.6	– 5.1	– 3.6	+ 2.2	–14.5	– 2.4	– 3.8	– 7.6	+ 2.0
Raw materials, semi-manufactures	+ 3.3	+ 4.9	– 4.3	– 2.7	+ 2.6	– 1.7	+ 1.0	+ 4.9	+ 7.2	+ 1.4	– 5.8	– 8.3	– 2.4	– 2.4	– 7.4	– 7.4	– 3.1	– 7.2	– 15.2	– 2.4
Finished goods	+ 5.7	+ 6.7	+ 2.4	– 0.9	+ 6.4	+ 1.4	+ 4.0	+ 8.8	+ 0.8	+ 5.1	+ 1.1	– 1.2	– 0.4	+ 6.7	– 0.4	– 2.2	+ 3.4	– 3.7	– 2.7	– 0.1
Value	+ 4.9	+ 5.6	– 0.8	– 4.1	+ 4.6	– 0.8	+ 5.4	+ 8.0	+ 4.6	+ 2.6	– 3.5	– 6.0	– 1.9	+ 1.3	– 3.2	– 8.0	– 1.4	– 7.2	– 9.3	– 1.1
Retail sales (net)																				
Volume	+ 4.5	+ 4.7	+ 0.9	– 2.0	+ 1.0	– 0.2	+ 0.5	+ 1.4	– 0.9	+ 1.2	– 0.2	– 1.0	– 0.4	+ 0.6	+ 1.0	– 2.0	– 1.7	+ 1.6	– 2.7	+ 2.9
Non-durables	+ 3.9	+ 3.9	+ 0.3	– 1.3	+ 1.3	– 1.1	+ 1.1	+ 0.2	– 1.7	+ 0.1	– 0.6	– 2.0	– 0.8	– 1.7	+ 0.3	– 0.3	– 2.9	– 0.3	– 2.7	+ 2.3
Food, beverages	+ 5.3	+ 4.0	+ 2.4	– 0.2	+ 3.8	– 0.6	+ 3.0	+ 2.2	– 1.0	+ 0.3	+ 0.7	– 2.5	+ 1.2	– 0.1	+ 1.0	+ 1.4	– 0.9	– 2.1	– 4.0	+ 0.7
Durables	+ 5.8	+ 5.6	+ 2.1	– 3.3	+ 0.5	+ 1.5	– 0.8	+ 4.0	+ 0.8	+ 3.3	+ 0.8	+ 1.1	+ 0.2	+ 5.7	+ 2.9	– 5.8	+ 0.9	+ 5.9	– 2.5	+ 4.0
Vehicles	+ 1.6	+12.9	+ 1.7	– 7.7	– 0.1	– 0.9	+ 0.3	+ 4.7	– 5.1	+ 0.5	– 3.0	+ 4.9	– 6.1	+ 3.1	– 4.7	– 8.3	+ 5.8	+12.0	– 4.2	+ 0.8
Furniture, domestic equipment	+ 7.8	– 3.0	+ 3.5	+ 1.4	+ 2.9	+ 2.1	+ 1.3	+ 4.2	+ 5.8	+ 3.7	+ 3.5	– 2.6	+ 4.2	+ 4.6	+ 9.8	– 3.0	– 3.5	+ 0.8	– 4.6	+ 6.2
Value	+ 7.0	+ 7.5	+ 3.8	+ 0.3	+ 3.1	– 0.3	+ 2.9	+ 3.3	+ 0.0	+ 1.5	– 0.7	– 2.0	– 0.1	+ 0.0	+ 0.4	– 2.4	– 2.3	+ 0.9	– 4.0	+ 2.3

Tourism

	1990	1991	1992	1993	1994	1995	1994		1995				1995			1995			1996	
							3rd qu.	4th qu.	1st qu.	2nd qu.	3rd qu.	4th qu.	July	August	Sept.	Oct.	Nov.	Dec.	January	February
							Percentage changes from previous year													
Overnight stays																				
In all accomodations	– 0.1	+ 5.2	+ 0.3	– 2.6	– 3.7	– 4.3	– 6.8	– 0.8	– 6.6	+ 2.9	– 7.1	+ 0.8	– 6.9	– 7.2	– 7.1	– 0.3	– 3.2	+ 3.1	– 7.8	– 1.4
Austrians	+ 0.1	+ 5.5	+ 0.8	– 1.4	– 0.2	– 0.1	– 0.9	– 2.4	– 0.2	+ 2.1	– 2.0	+ 2.7	+ 0.9	– 2.7	– 5.4	+ 2.0	+ 0.7	+ 5.2	– 6.0	– 2.5
Foreigners	– 0.2	+ 5.1	+ 0.1	– 2.9	– 4.8	– 5.7	– 8.5	– 0.2	– 8.3	+ 3.2	– 8.7	+ 0.1	– 9.3	– 8.7	– 7.7	– 1.3	– 6.5	+ 2.6	– 8.2	– 1.1
From Germany	– 5.2	+13.1	+ 0.7	+ 0.4	– 4.6	– 5.7	– 9.8	– 0.6	–10.4	+ 5.9	– 8.6	+ 0.6	– 11.5	– 6.3	– 7.4	+ 1.0	–14.9	+ 3.3	– 8.4	+ 1.1
Italy	+10.9	+ 7.0	+ 9.1	–22.9	– 5.2	–16.2	– 3.0	+ 4.4	– 4.6	– 1.7	–26.5	– 1.1	–28.2	–27.4	–18.1	–27.5	+22.6	+ 1.3	–24.7	– 8.7
The Netherlands	– 5.7	+ 1.4	– 2.6	– 6.2	– 5.0	– 6.3	– 9.0	– 1.3	– 6.7	– 8.5	– 6.3	– 0.8	+ 2.0	–14.2	–11.6	–14.0	– 4.8	+ 2.0	–11.4	–16.3
U.S.	+26.0	–44.3	+28.1	–10.2	+ 1.6	– 4.7	+ 7.4	+ 2.1	– 5.4	+ 2.9	– 9.1	– 5.5	– 9.0	–16.1	– 1.6	– 3.7	–12.5	– 3.5	–10.3	+15.8
Japan	+26.5	–11.9	+ 9.7	– 2.6	+ 8.2	+ 4.3	+12.6	+10.2	– 7.9	+ 1.8	+ 2.5	+20.0	+ 4.2	– 1.8	+ 7.1	+ 8.3	+46.5	+13.6	+ 7.5	+ 8.4

Transportation

	1990	1991	1992	1993	1994	1995	1994		1995				1995			1995			1996	
							3rd qu.	4th qu.	1st qu.	2nd qu.	3rd qu.	4th qu.	July	August	Sept.	Oct.	Nov.	Dec.	January	February
							Percentage changes from previous year													
Goods																				
Railway	+ 7.0	+ 1.4	– 5.1	– 3.4	+11.1	+ 4.7	+12.1	+13.2	+15.0	+ 4.5	+ 6.7	– 4.1	+18.6	+ 4.2	– 1.9	+13.4	–11.1	–12.0	+26.1	
Domestic	+ 1.5	– 5.5	– 2.6	– 1.8	+ 3.6	– 2.9	+ 3.2	– 0.6	+ 4.3	+10.0	–11.8	–10.5	– 8.8	– 9.1	–17.4	– 9.8	– 7.6	–14.8	+46.3	
Export, Import	+12.5	+ 6.2	– 5.0	– 0.9	+10.8	+ 3.3	+12.2	+16.3	+12.1	– 2.4	+11.0	– 4.2	+23.3	+ 3.5	+ 5.9	+25.7	–18.6	–12.4	+36.2	
Trucks, new registrations	+12.5	+ 2.8	– 2.6	– 6.6	– 0.2	+ 1.1	– 2.5	– 6.4	– 1.6	– 0.6	+ 1.3	+ 5.9	+ 6.8	– 2.2	– 1.0	+ 9.2	+ 0.5	+ 8.4	– 1.0	+ 4.1
Persons																				
Railway	+ 4.7	+ 3.9	+ 3.6	– 1.2	– 1.1	+ 1.8	– 2.2	– 1.8	+ 0.8	+ 0.7	– 1.8	+ 7.9	– 1.2	– 2.2	– 2.1	+ 4.8	+ 4.3	+14.5	+ 1.7	
Air transport passengers	+11.3	+ 0.9	+17.7	+ 5.9	+ 7.0	+11.1	+ 5.6	+10.7	+ 6.4	+16.6	+ 9.1	+11.8	+ 7.1	+ 9.2	+11.2	+12.1	+11.3	+11.8	+ 6.3	+14.1
Passenger cars, new registrations	+ 4.6	+ 5.2	+ 5.4	–10.9	– 4.0	+ 2.2	+ 2.5	+ 2.4	– 2.3	+ 5.5	– 3.3	+12.0	– 5.4	– 0.6	– 3.0	+ 8.8	+ 7.0	+28.6	+ 4.4	+ 8.0
Up to 1,500 cm³ vol.	– 3.4	+11.9	+ 5.6	–14.1	– 7.7	+ 7.3	– 6.4	+ 3.3	+11.6	+15.9	– 1.5	– 1.5	+ 2.9	+12.1	–16.5	– 0.7	– 8.6	+11.8	– 5.5	– 1.6
1,501 to 2,000 cm³ vol.	+ 8.8	– 1.4	+ 8.0	– 9.7	– 3.6	– 0.9	+ 7.5	+ 4.4	– 9.3	+ 0.8	– 4.2	+16.8	–10.5	– 4.8	+ 5.2	+11.7	+14.6	+32.5	+ 9.5	+12.4
2,001 cm³ and above vol.	+ 4.5	+23.7	– 5.9	– 8.5	+ 2.9	+ 5.0	+ 3.3	– 6.4	+ 2.2	+ 5.0	– 3.3	+21.8	+ 1.0	– 9.4	– 2.3	+19.6	+11.3	+42.9	+ 2.9	+12.2

Labor market

	1990	1991	1992	1993	1994	1995	1994		1995			1996			1995				1996	
							4th qu.	1st qu.	2nd qu.	3rd qu.	4th qu.	1st qu.	August	Sept.	Oct.	Nov.	Dec.	January	February	March
							In 1,000													
Employment (dependent)	2,929	2,997	3,056	3,055	3,071	3,068	3,070	3,023	3,069	3,133	3,047	2,984	3,141	3,105	3,079	3,054	3,010	2,974	2,978	3,000
Male	1,719	1,752	1,767	1,756	1,762	1,757	1,764	1,714	1,765	1,804	1,747	1,679	1,809	1,789	1,776	1,757	1,708	1,669	1,671	1,697
Female	1,210	1,245	1,289	1,299	1,309	1,311	1,306	1,310	1,303	1,330	1,300	1,305	1,332	1,316	1,303	1,296	1,302	1,305	1,306	1,303
Foreign	218	266	274	278	291	300	294	291	302	312	296	289	313	310	303	297	288	286	287	293
Manufacturing industry	545	539	521	487	470	466	470	466	466	471	460		472	468	465	460	455			
Construction industry	101	102	107	108	109	106	115	82	112	118	109		119	118	116	114	98			
Building	52	54	57	56	57	56	59	45	59	62	57		62	61	60	59	51			
Civil engineering	34	34	33	36	35	34	38	24	37	39	36		39	39	39	38	32			
Unemployment	166	185	193	222	215	216	224	256	193	179	234	285	180	182	204	232	267	296	294	264
Vacancies	56	49	44	33	30	25	27	26	29	25	19	20	25	24	22	18	18	19	19	21
							Changes from previous year in 1,000													
Employment (dependent)	+66.4	+68.7	+58.5	– 0.9	+15.8	– 2.5	+26.3	+12.8	+ 4.5	– 4.9	–22.6	–39.5	– 6.4	– 9.7	–13.5	–21.8	–32.5	–33.1	–43.5	–42.0
Male	+36.8	+33.4	+14.7	–10.6	+ 5.4	– 4.2	+13.3	+ 4.7	+ 0.4	– 4.6	–17.4	–34.5	– 4.4	– 8.7	–10.5	–17.4	–24.5	–25.6	–37.4	–40.6
Female	+29.6	+35.3	+43.7	+ 9.7	+10.5	+ 1.7	+12.9	+ 8.1	+ 4.0	– 0.2	– 5.1	– 5.0	– 2.0	– 1.0	– 3.0	– 4.4	– 8.0	– 7.5	– 6.1	– 1.4
Foreign	+50.2	+48.9	+ 7.4	+ 3.6	+13.5	+ 9.3	+14.2	+14.5	+11.8	+ 8.2	+ 2.6	– 2.3	+ 8.7	+ 6.1	+ 5.0	+ 3.3	– 0.6	+ 0.2	– 3.7	– 3.4
Manufacturing industry	+ 8.5	– 5.9	–18.4	–33.1	–17.3	– 4.4	– 6.5	– 2.3	– 1.5	– 3.5	–10.2		– 3.1	– 5.3	– 6.7	–10.9	–12.9			
Construction industry	+ 4.2	+ 0.9	+ 4.9	+ 0.9	+ 1.4	– 3.7	+ 0.3	– 2.3	– 3.2	– 3.4	– 6.0		– 3.5	– 4.1	– 3.9	– 5.1	– 8.9			
Building	+ 1.1	+ 2.3	+ 2.6	– 0.8	+ 0.7	– 1.1	+ 0.0	– 1.4	– 0.3	– 0.4	– 2.2		– 0.4	– 0.5	– 0.3	– 1.9	– 4.4			
Civil engineering	+ 1.4	– 0.8	– 0.2	+ 2.4	– 0.5	– 1.2	– 0.8	– 0.6	– 1.2	– 1.1	– 2.0		– 1.2	– 1.4	– 1.6	– 1.4	– 2.8			
Unemployment	+16.6	+19.2	+ 8.1	+29.2	– 7.3	+ 0.8	–14.1	– 5.9	– 3.4	+ 1.7	+10.7	+28.4	+ 3.9	+ 0.3	+ 3.3	+13.1	+15.7	+16.6	+32.9	+35.7
Vacancies	+10.0	– 6.2	– 5.3	–11.2	– 2.7	– 5.2	+ 0.2	– 2.9	– 4.5	– 6.1	– 7.3	– 6.3	– 6.9	– 6.5	– 7.0	– 8.3	– 6.5	– 5.6	– 6.9	– 6.5
							In percent													
Unemployment rate	5.4	5.8	5.9	6.8	6.5	6.6	6.8	7.8	5.9	5.4	7.1	8.7	5.4	5.5	6.2	7.1	8.2	9.0	9.0	8.1
Male	4.9	5.3	5.7	6.7	6.4	6.4	6.4	8.6	5.4	4.7	6.9	9.8	4.7	4.9	5.4	6.3	9.0	10.4	10.3	8.8
Female	6.0	6.5	6.2	6.9	6.7	6.8	7.3	6.8	6.7	6.3	7.5	7.2	6.4	6.4	7.4	8.0	7.1	7.3	7.2	7.2
Below age 25 (as percent of total unemployment)	23.0	21.6	19.5	18.7	17.3	16.9	17.7	16.1	16.6	17.1	17.7	16.3	16.9	18.4	18.2	18.2	17.0	16.5	16.0	16.3
Unemployment per 100 vacancies	298	374	438	675	712	863	839	983	665	704	1,209	1,443	719	753	936	1,283	1,461	1,532	1,549	1,264

Foreign trade

	1990	1991	1992	1993	1994	1995	1993		1994				1995							
							3rd qu.	4th qu.	1st qu.	2nd qu.	3rd qu.	4th qu.	January	February	March	April	May	June	July	August
	Percentage changes from previous year																			
Exports, value	+ 8.6	+ 2.8	+ 1.8	- 4.2	+ 9.7	+ 9.2	- 2.4	+ 0.7	+ 5.7	+ 8.4	+10.1	+14.3								
Intra-EU	+ 8.4	+ 3.1	+ 1.9	- 7.8	+ 8.5		- 7.4	- 3.5	+ 3.2	+ 7.1	+ 9.8	+13.8								
Germany	+13.4	+ 7.2	+ 3.8	- 6.1	+ 7.2		- 3.4	- 3.7	+ 2.2	+ 7.0	+ 6.9	+12.6								
Italy	+ 1.2	- 2.0	- 4.4	-14.0	+12.7		-18.6	- 0.5	+ 5.9	+10.2	+19.4	+15.9								
Extra-EU	+ 8.9	+ 2.2	+ 1.5	+ 3.6	+12.0		+ 8.4	+ 9.2	+11.0	+10.7	+10.7	+15.1								
East Central Europe	+24.1	+32.7	+16.9	+ 5.5	+14.5		+ 6.9	+ 4.7	+12.6	+13.5	+17.5	+14.2								
South East Europe	+25.7	-19.0	- 1.3	+ 9.8	+24.1		+21.8	+ 7.4	+15.1	+24.6	+22.2	+32.9								
Former USSR	-12.2	- 7.4	-13.1	- 3.8	+21.2		- 4.3	+22.9	+22.3	+39.5	+10.3	+14.5								
NAFTA	- 2.7	-11.2	- 1.3	+16.1	+15.5		+21.7	+29.4	+20.6	+13.9	+18.1	+10.4								
Japan	+19.1	+10.2	- 8.6	- 4.3	+11.2		+ 5.0	- 2.5	+ 3.0	- 2.4	+22.1	+21.3								
OPEC	+12.8	+ 7.6	+ 0.3	- 8.2	-14.7		+14.0	+ 3.9	- 9.7	- 8.6	-31.8	- 5.8								
NOPEC	+12.3	+ 6.8	+ 1.6	+11.2	+12.9		+10.6	+14.3	+ 9.4	+ 9.5	+10.8	+20.7								
Agricultural commodities	- 0.9	+ 0.9	+ 4.5	+ 0.4	+16.7		- 3.8	+17.6	+14.8	+16.7	+18.8	+16.5								
Raw materials, energy	+ 0.7	-10.8	- 3.4	- 5.6	+21.1		- 2.1	+ 4.2	+20.2	+20.7	+18.2	+25.3								
Manufactures	+ 9.5	+ 3.8	+ 2.0	- 4.3	+ 8.8		- 2.4	- 0.0	+ 4.7	+ 7.3	+ 9.3	+13.6								
Chemicals	- 0.8	+ 7.9	- 1.0	- 0.3	+11.5		+ 3.0	+ 8.3	+13.8	+ 3.7	+14.7	+13.8								
Semi-manufactures	+ 3.0	- 0.9	- 0.7	- 6.2	+ 9.8		- 3.9	- 1.5	+ 5.6	+ 6.8	+10.6	+16.2								
Machinery, transportation equipment	+18.3	+ 5.1	+ 3.3	- 3.8	+ 9.5		- 2.2	+ 0.7	+ 3.5	+10.6	+ 9.4	+13.8								
Other	+10.6	+ 8.4	+ 6.1	- 4.1	+ 3.6		- 2.9	- 4.1	+ 0.0	+ 2.2	+ 3.7	+ 8.0								
Imports, value	+ 8.1	+ 6.4	+ 0.3	- 4.9	+11.3	+ 7.5	- 4.0	- 3.9	+ 9.4	+ 9.3	+ 7.4	+18.7								
Intra-EU	+ 8.4	+ 5.0	+ 0.7	- 6.4	+ 9.8		- 5.4	- 5.4	+ 9.5	+ 9.4	+ 6.0	+14.3								
Germany	+ 7.9	+ 4.0	- 0.0	- 8.0	+ 7.5		- 8.5	- 6.9	+ 6.9	+ 7.0	+ 3.9	+12.0								
Italy	+ 9.0	+ 4.0	- 2.1	- 0.6	+ 9.0		+ 5.0	+ 0.0	+12.4	+10.8	+ 1.5	+11.8								
Extra-EU	+ 7.3	+ 9.8	- 0.4	- 1.4	+14.7		- 0.8	- 0.2	+ 9.4	+ 9.2	+10.7	+28.5								
East Central Europe	+ 6.5	+21.9	+14.1	- 1.0	+20.3		- 2.6	+ 5.1	+18.4	+18.8	+19.1	+24.3								
South East Europe	+ 2.9	- 5.3	- 6.2	- 6.7	+22.2		- 4.3	+ 0.4	+10.1	+21.8	+18.3	+37.8								
Former USSR	+20.2	- 4.8	-11.1	+ 2.4	+35.0		- 0.0	+13.1	+23.3	+ 6.2	+44.2	+64.2								
NAFTA	+ 8.5	+14.1	+ 2.0	+ 0.6	+18.2		- 5.3	- 5.8	+19.4	+14.2	+10.7	+27.4								
Japan	- 0.8	+13.4	- 2.0	-11.7	+ 8.6		- 8.7	- 9.2	- 0.2	- 7.0	+ 3.5	+41.1								
OPEC	+25.2	+ 4.2	- 6.5	+ 3.1	- 6.5		+16.6	-13.8	- 22.3	- 3.4	- 4.8	+ 7.3								
NOPEC	+ 6.3	+12.3	- 2.7	+ 2.8	+15.4		+ 3.8	+10.2	+10.8	+10.7	+ 6.6	+32.5								
Agricultural commodities	+ 2.7	+ 5.9	- 1.0	+ 0.6	+12.2		+ 1.1	+ 4.7	+ 7.6	+ 9.8	+11.4	+18.8								
Raw materials, energy	+ 5.4	+ 0.7	- 9.2	- 8.4	+ 7.6		- 9.5	- 1.6	+ 1.8	+ 6.7	+11.8	+10.0								
Manufactures	+ 8.8	+ 7.2	+ 1.6	- 4.8	+11.7		- 3.7	- 4.6	+10.4	+ 9.6	+ 6.7	+19.6								
Chemicals	+ 5.8	+ 4.3	+ 1.4	+ 0.8	+11.0		+ 1.7	+ 1.8	+ 6.9	+ 9.8	+ 6.3	+20.7								
Semi-manufactures	+ 5.0	+ 2.3	+ 1.8	- 4.5	+14.9		- 3.8	- 3.7	+ 9.0	+11.4	+11.7	+27.2								
Machinery, transportation equipment	+10.5	+ 9.8	+ 1.3	- 9.3	+12.2		- 7.9	- 9.8	+12.4	+ 9.2	+ 6.4	+20.1								
Other	+10.9	+ 8.9	+ 2.0	+ 1.5	+ 7.9		+ 1.2	+ 2.7	+ 9.3	+ 8.0	+ 3.5	+11.0								

Wages and prices

	1990	1991	1992	1993	1994	1995	1994	1995			1996	1995					1996		
							4th qu.	1st qu.	2nd qu.	3rd qu.	4th qu.	1st qu.	August	Sept.	Oct.	Nov.	Dec.	January	February	March
	Percentage changes from previous year																			
Contractual wages, all employees	+ 5.6	+ 6.9	+ 5.6	+ 4.9	+ 3.5	+ 3.4	+ 3.4	+ 3.4	+ 3.4	+ 3.5	+ 3.4	+ 2.6	+ 3.4	+ 3.4	+ 3.4	+ 3.4	+ 3.4	+ 2.6	+ 2.6	+ 2.5
Effective monthly earnings[1]: Industrial employees	+ 7.5	+ 5.7	+ 6.0	+ 4.9	+ 4.1	+ 4.5	+ 4.3	+ 5.7	+ 4.4	+ 3.8	+ 4.4		+ 4.2	+ 2.6	+ 4.3	+ 3.9	+ 5.0			
Effective hourly earnings																				
Industrial workers[2]	+ 6.6	+ 6.1	+ 5.9	+ 4.6	+ 4.3	+ 4.2	+ 4.5	+ 4.7	+ 4.3	+ 4.1	+ 4.0		+ 3.9	+ 4.7	+ 2.9	+ 4.0	+ 5.1			
Construction workers[1]	+ 5.2	+ 9.5	+ 9.8	+ 6.0	+ 5.7	+ 3.2	+ 4.8	+ 3.1	+ 3.9	+ 3.3	+ 2.7		+ 3.0	+ 2.6	+ 4.2	+ 2.0	+ 2.2			
Consumer price index	+ 3.3	+ 3.3	+ 4.1	+ 3.6	+ 3.0	+ 2.2	+ 2.8	+ 2.5	+ 2.5	+ 2.1	+ 1.9		+ 2.1	+ 2.0	+ 1.9	+ 1.9	+ 1.8	+ 1.7	+ 1.5	
Excl. seasonal goods	+ 3.1	+ 3.2	+ 4.2	+ 3.7	+ 3.0	+ 2.2	+ 2.7	+ 2.3	+ 2.5	+ 2.2	+ 2.0		+ 2.2	+ 2.1	+ 2.1	+ 2.0	+ 1.9	+ 1.6	+ 1.6	
Excl. energy	+ 3.2	+ 3.6	+ 4.1	+ 4.0	+ 3.1	+ 2.1	+ 2.9	+ 2.6	+ 2.4	+ 1.9	+ 1.6		+ 2.0	+ 1.7	+ 1.6	+ 1.6	+ 1.6	+ 1.3		
Foodstuff	+ 2.8	+ 4.1	+ 3.7	+ 2.3	+ 1.4	- 1.7	+ 1.7	- 0.1	- 1.4	- 2.4	- 3.0		- 2.7	- 2.7	- 3.2	- 3.1	- 2.8	- 1.0		
Manufactured goods	+ 2.9	+ 3.2	+ 3.1	+ 3.3	+ 2.5	+ 1.3	+ 2.3	+ 2.2	+ 2.0	+ 0.7	+ 0.2		+ 0.7	+ 0.5	+ 0.4	+ 0.1	+ 0.1	- 0.5		
Services	+ 3.7	+ 3.7	+ 4.8	+ 5.4	+ 3.8	+ 3.4	+ 3.4	+ 2.9	+ 3.5	+ 3.8	+ 3.6		+ 3.9	+ 3.8	+ 3.6	+ 3.5	+ 3.6	+ 3.0		
Housing costs	+ 4.2	+ 4.8	+ 6.5	+ 5.2	+ 6.4	+ 7.6	+ 6.1	+ 7.4	+ 7.1	+ 7.6	+ 8.1		+ 7.6	+ 7.8	+ 8.1	+ 8.3	+ 7.9	+ 6.2		
Energy	+ 4.2	+ 0.0	+ 3.0	- 0.7	+ 1.4	+ 3.7	+ 1.4	+ 0.5	+ 3.9	+ 4.7	+ 5.8		+ 3.9	+ 5.2	+ 6.0	+ 6.4	+ 5.1	+ 5.8		
Wholesale price index	+ 2.9	+ 0.8	- 0.2	- 0.4	+ 1.3	+ 0.4	+ 3.2	+ 1.8	+ 2.0	- 0.3	- 2.2	- 0.5	- 0.6	- 1.1	- 1.7	- 2.4	- 2.5	- 0.4	- 0.6	- 0.5
Excl. seasonal goods	+ 2.7	+ 0.6	+ 0.1	- 0.4	+ 1.5	+ 0.2	+ 3.0	+ 1.5	+ 2.0	- 0.3	- 2.3	- 0.6	- 0.4	- 1.2	- 1.7	- 2.5	- 2.6	- 0.3	- 0.7	- 0.9
World market commodity prices, HWWA index																				
USD basis	+17.5	-12.9	- 1.0	- 9.9	+ 2.4	+10.1	+16.8	+25.2	+15.5	+ 0.7	+ 2.1	+ 0.9	+ 1.1	+ 2.6	- 0.4	+ 0.5	+ 6.1	+ 1.2	- 1.2	+ 2.7
ATS basis	+ 0.2	- 9.9	- 6.9	- 4.5	+ 0.3	- 2.5	+ 7.4	+ 7.5	- 2.9	- 7.8	- 5.9	+ 0.1	- 6.7	- 3.3	- 7.3	- 7.7	- 2.8	- 3.4	- 3.6	+ 7.8
Excl. energy	-14.0	- 7.2	- 8.7	- 3.8	+16.8	+ 1.0	+22.1	+11.1	+ 1.9	- 1.7	- 6.2	- 5.0	+ 0.5	- 3.5	- 5.1	- 5.9	- 7.6	- 8.3	- 6.0	- 0.4
Food, tobacco	-21.9	- 3.7	- 6.1	+ 9.1	+21.3	- 8.3	+15.2	+ 2.8	- 6.5	-14.5	-13.8	- 4.1	-10.2	-16.6	-15.4	-13.2	-12.8	- 9.4	- 3.4	+ 0.8
Industrial commodities	-10.6	- 8.6	- 9.8	- 9.2	+14.5	+ 5.9	+25.9	+15.3	+ 6.2	+ 5.5	- 2.5	- 5.4	+ 6.4	+ 3.8	+ 0.2	- 2.3	- 5.2	- 7.8	- 7.2	- 1.0
Energy	+ 7.9	-11.0	- 6.1	- 4.9	- 7.0	- 4.5	+ 0.3	+ 5.5	- 5.5	-11.2	- 5.7	+ 3.1	-10.6	- 3.2	- 8.6	- 8.7	+ 0.1	- 0.5	- 2.3	+12.7
Crude oil	+ 9.1	-12.0	- 7.1	- 5.6	- 8.0	- 4.7	+ 0.6	+ 6.8	- 5.5	-12.3	- 6.4	+ 3.4	-11.7	- 3.7	- 9.6	- 9.7	+ 0.2	- 0.7	- 2.5	+14.1

[1] Incl. bonus payments. – [2] Excl. bonus payments.

Money and credit

	1990	1991	1992	1993	1994	1995	1994 4th qu.	1995 1st qu.	1995 2nd qu.	1995 3rd qu.	1995 4th qu.	1996 1st qu.	1995 August	1995 Sept.	1995 Oct.	1995 Nov.	1995 Dec.	1996 January	1996 February	1996 March
											In percent									
Interest rates																				
Discount rate	6.5	7.2	8.1	6.4	4.7	3.9	4.5	4.5	4.0	3.8	3.4	3.0	3.9	3.5	3.5	3.5	3.2	3.0	3.0	3.0
Call money rate	8.5	9.1	9.3	7.2	5.0	4.4	4.7	4.8	4.4	4.2	4.0	3.3	4.3	4.0	4.1	4.1	4.0	3.7	3.0	3.2
3-months rate (VIBOR)	9.0	9.5	9.5	7.0	5.1	4.6	5.1	5.0	4.7	4.4	4.2	3.5	4.5	4.1	4.2	4.3	4.1	3.8	3.3	3.3
Prime rate	10.8	11.6	12.1	10.8	9.6	9.3	9.4	9.5	9.5	9.3	9.1		9.3	9.3	9.1	9.1	9.1			
Bond yield, average				6.7	6.7	6.5	7.3	7.2	6.6	6.3	5.9	5.4	6.3	6.1	6.1	5.9	5.6	5.3	5.5	5.6
											Percentage points									
Interest rate differential vis-a-vis Germany																				
Call money rate	+ 0.6	+ 0.3	– 0.1	– 0.3	– 0.3	– 0.1	– 0.2	– 0.2	– 0.2	– 0.2	– 0.0	– 0.2	– 0.1	– 0.2	– 0.0	0.1	– 0.1	0.1	– 0.3	– 0.2
3-months rate	+ 0.5	+ 0.2	– 0.1	– 0.3	– 0.2	+ 0.0	– 0.2	– 0.1	+ 0.1	– 0.0	+ 0.2	+ 0.0	+ 0.0	– 0.1	+ 0.1	+ 0.3	+ 0.1	+ 0.2	– 0.0	– 0.0
Bond yield, average				+ 0.4	– 0.0	– 0.0	– 0.2	– 0.1	+ 0.0	– 0.1	+ 0.1	– 0.2	– 0.1	– 0.0	+ 0.0	+ 0.1	+ 0.1	+ 0.0	– 0.2	– 0.2

	1990	1991	1992	1993	1994	1995	1994 3rd qu.	1994 4th qu.	1995 1st qu.	1995 2nd qu.	1995 3rd qu.	1995 4th qu.	1995 June	1995 July	1995 August	1995 Sept.	1995 Oct.	1995 Nov.	1995 Dec.	1996 January
												End-of-period value, percentage change from previous year								
Monetary aggregates																				
Enlarged monetary base	+ 3.6	+ 1.8	+ 9.8	+ 7.7	+ 4.3	+ 5.0	+ 9.5	+ 4.3	+ 3.8	+ 2.9	+ 9.4	+ 5.0	+ 2.9	+ 2.1	+ 5.7	+ 9.4	+ 3.3	+ 5.9	+ 5.0	– 1.6
Money supply M1'	+ 5.4	+ 8.2	+ 6.2	+10.9	+ 6.3		+11.4	+ 6.3	+ 5.9	+ 6.5	+ 8.6		+ 6.5	+ 6.4	+ 6.7	+ 8.6	+ 6.5	+ 9.1		
Money supply M3'	+ 7.3	+ 7.7	+ 4.0	+ 3.9	+ 5.4		+ 4.9	+ 5.4	+ 4.7	+ 4.5	+ 4.5		+ 4.5	+ 3.5	+ 3.4	+ 4.5	+ 4.3	+ 5.6		
Savings deposits, total	+ 9.7	+ 9.3	+ 7.2	+ 4.7	+ 5.0		+ 5.8	+ 5.0	+ 4.4	+ 3.9	+ 3.5		+ 3.9	+ 3.8	+ 3.5	+ 3.5	+ 3.4	+ 3.5		
ATS monetary capital formation	+ 7.3	+ 6.8	+ 4.8	+ 6.0	+ 6.2		+ 6.1	+ 6.2	+ 6.1	+ 7.1	+ 6.5		+ 7.1	+ 5.8	+ 5.9	+ 6.5	+ 6.4	+ 6.8		
Credits to domestic non-banks	+ 9.3	+ 8.0	+ 6.8	+ 3.4	+ 5.2		+ 4.4	+ 5.2	+ 4.9	+ 5.0	+ 6.0		+ 5.0	+ 5.7	+ 5.9	+ 6.0	+ 6.1	+ 6.1		

Balance of payments[1]

	1990	1991	1992	1993	1994	1995	1994 3rd qu.	1994 4th qu.	1995 1st qu.	1995 2nd qu.	1995 3rd qu.	1995 4th qu.	1995 June	1995 July	1995 August	1995 Sept.	1995 Oct.	1995 Nov.	1995 Dec.	1996 January
											Billion ATS									
Merchandise trade payments	–52.3	–69.8	–67.8	–74.4	–78.9	– 73.3	–20.1	–20.5	–17.3	–23.4	–16.8	–18.9	– 8.9	– 6.6	– 2.3	– 7.9	– 6.5	– 6.6	– 5.8	– 0.9
Tourism services	64.7	74.8	67.4	61.4	42.8	29.5	9.2	1.5	20.7	2.3	4.6	– 1.6	0.3	2.3	2.5	– 0.2	– 1.3	– 2.9	2.5	7.8
Capital revenues	–11.0	–17.6	–13.1	–11.5	–10.8	– 9.9	– 1.0	– 1.2	– 3.2	– 3.2	0.3	– 3.2	– 0.9	– 0.5	0.3	0.4	– 1.0	– 1.2	– 1.0	– 1.4
Transfer balance	– 0.0	– 0.2	–11.6	–12.7	– 8.3	– 21.5	– 3.3	1.5	– 5.5	– 2.7	– 3.1	– 3.8	– 0.2	– 2.2	– 1.5	0.6	– 2.9	0.2	– 1.0	– 1.9
Current account	13.6	0.8	– 1.6	– 8.2	–20.6	– 47.3	– 7.6	– 9.9	0.4	–20.9	– 9.9	–20.3	– 7.5	– 5.9	0.5	– 4.5	–10.1	– 8.4	– 1.8	6.3
Long-term capital transactions	–10.2	–24.4	7.9	75.3	9.3	79.3	–25.5	2.5	59.5	38.3	–42.2	26.2	7.9	–17.8	– 5.5	–18.9	17.5	3.9	4.8	1.2
Direct investment	–11.6	–10.9	–10.2	– 5.6	1.3	– 5.2	0.7	– 1.9	0.8	– 0.7	– 2.0	4.2	– 0.8	– 1.5	– 0.3	– 0.2	1.5	– 0.5	3.2	3.4
Securities	15.5	13.1	37.7	99.5	1.4	101.1	–29.2	18.7	49.0	47.3	–31.4	36.3	3.3	–17.6	– 1.1	–12.7	16.9	13.0	6.4	2.0
Short-term capital transactions	8.9	24.8	13.2	–34.9	24.4	– 21.6	30.3	– 4.1	–57.3	10.4	28.9	–18.3	3.8	28.6	–10.1	10.5	– 5.7	– 8.3	– 4.3	–15.9
Reserves	– 3.1	1.1	2.2	7.6	– 4.8	5.8	– 0.4	– 1.3	0.0	– 2.0	3.0	2.1	0.1	0.8	4.8	– 2.5	– 0.3	2.4	0.0	3.8
Errors and omissions	–13.0	7.9	8.3	– 5.6	– 2.7	3.8	– 1.4	–17.9	7.0	– 7.4	24.5	– 1.6	– 0.8	– 2.8	17.9	9.3	–20.1	17.7	0.8	15.9
Change in official reserves	– 3.7	10.3	30.0	34.2	5.5	20.1	– 4.6	–10.8	9.6	18.4	4.4	–11.8	3.4	2.8	7.6	– 6.1	–18.6	7.3	– 0.5	11.2
											Cumulative changes from previous year, billion ATS									
Merchandise trade payments	+ 0.2	–17.5	+ 2.0	– 6.7	– 4.5	+ 8.9	– 1.3	– 5.0	– 0.7	– 3.8	– 0.6	+ 1.1	– 3.8	– 2.0	+ 1.8	– 0.6	– 1.3	+ 1.2	+ 1.1	+ 1.8
Tourism services	+ 5.8	+10.2	– 7.4	– 6.0	–18.6	–14.2	–15.2	– 20.1	– 5.3	– 6.1	–10.7	– 13.8	– 6.1	– 7.5	– 9.6	–10.7	–12.3	– 14.0	– 13.8	– 0.7
Capital revenues	+ 1.3	– 6.6	+ 4.5	+ 1.5	+ 0.7	+ 0.3	+ 0.7	+ 1.8	+ 2.1	+ 1.7	+ 3.0	+ 1.0	+ 1.7	+ 1.7	+ 2.0	+ 3.0	+ 2.7	+ 2.4	+ 1.0	– 0.4
Transfer balance	+ 1.6	– 0.2	–11.4	– 1.1	+ 4.5	–13.1	+ 0.3	+ 4.4	– 2.8	– 3.6	– 3.4	– 8.8	– 3.6	– 4.6	– 5.3	– 3.4	– 5.6	– 6.3	– 8.8	– 0.0
Current account	+10.4	–12.8	– 2.4	– 6.6	–12.4	–25.0	–12.6	– 13.2	– 7.4	–14.6	–16.9	– 27.2	–14.6	–16.1	–15.6	–16.9	–21.9	– 23.0	– 27.2	+ 2.7
Long-term capital transactions	–16.3	–14.2	+32.3	+67.4	–66.0	+68.5	–60.1	– 63.7	+51.5	+80.6	+63.9	+ 67.6	+80.6	+71.6	+76.9	+63.9	+75.6	+ 73.1	+ 67.6	–28.3
Direct investment	– 7.9	+ 0.7	+ 0.6	+ 4.6	+ 6.9	– 5.9	+ 7.9	+ 8.1	+ 2.1	– 2.0	– 4.6	+ 1.4	– 2.0	– 4.6	– 4.7	– 4.6	– 2.4	– 3.3	+ 1.4	+ 2.7
Securities	– 4.3	– 2.4	+24.6	+61.8	–98.1	+99.3	–82.4	–101.4	+44.8	+85.0	+82.8	+100.5	+85.0	+74.7	+91.9	+82.8	+98.3	+104.0	+100.5	–23.5
Short-term capital transactions	– 1.5	+15.9	–11.6	–48.0	+59.2	–42.8	+78.1	+ 48.5	–36.4	–36.9	–38.3	– 52.5	–36.9	–21.0	–37.9	–38.3	–47.1	– 61.6	– 52.5	+16.3
Reserves	– 0.3	+ 4.2	+ 1.0	+ 5.4	–12.4	+10.7	– 7.6	– 12.4	+ 0.6	+ 1.0	+ 4.5	+ 8.0	+ 1.0	+ 1.9	+ 7.2	+ 4.5	+ 6.0	+ 6.3	+ 8.0	– 3.6
Errors and omissions	– 4.6	+20.9	+ 0.4	–14.0	+ 2.9	+ 3.2	+14.0	+ 11.9	–10.8	–22.9	+ 3.0	+ 19.4	–22.9	–25.8	– 8.3	+ 3.0	–10.7	+ 13.7	+ 19.4	+ 9.0
Change in official reserves	–12.6	+14.0	+19.6	+ 4.2	–28.7	+14.6	+12.1	– 28.8	– 2.6	+ 7.1	+16.1	+ 15.1	+ 7.1	+10.6	+22.4	+ 6.1	+ 1.9	+ 8.3	+ 15.1	– 3.9

[1] Monthly and quarterly data provisional.

Exchange rates

	1990	1991	1992	1993	1994	1995	1994 4th qu.	1995 1st qu.	1995 2nd qu.	1995 3rd qu.	1995 4th qu.	1996 1st qu.	1995 August	1995 Sept.	1995 Oct.	1995 Nov.	1995 Dec.	1996 January	1996 February	1996 March
											ATS per foreign currency									
Average foreign exchange value																				
USD	11.37	11.68	10.99	11.63	11.42	10.08	10.88	10.41	9.82	10.07	10.02	10.33	10.16	10.29	9.96	9.97	10.14	10.28	10.31	10.39
DEM	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.03	7.03	7.04	7.03	7.03	7.03	7.04	7.04	7.04	7.03	7.03	7.03
ECU	14.47	14.45	14.20	13.60	13.51	13.03	13.42	13.15	12.95	13.11	12.93	12.97	13.16	13.13	12.93	12.92	12.93	12.97	12.92	13.03
100 LIT	0.95	0.94	0.90	0.74	0.71	0.62	0.68	0.64	0.59	0.63	0.63	0.66	0.63	0.64	0.62	0.63	0.64	0.65	0.66	0.67
SFR	8.20	8.14	7.82	7.87	8.35	8.53	8.38	8.38	8.51	8.53	8.71	8.67	8.49	8.64	8.69	8.72	8.70	8.71	8.62	8.69
											Percentage changes from previous year									
Effective exchange rate index																				
Nominal	+ 3.0	+ 0.0	+ 2.5	+ 2.9	+ 1.2	+ 3.9	+ 1.9	+ 4.7	+ 5.3	+ 3.0	+ 2.9	+ 0.1	+ 2.5	+ 2.5	+ 3.0	+ 2.9	+ 2.6	+ 1.4	+ 0.7	– 1.9
Manufactures	+ 2.3	– 0.2	+ 1.9	+ 2.7	+ 0.6	+ 3.0	+ 1.1	+ 3.5	+ 4.0	+ 2.3	+ 2.3	+ 0.0	+ 1.9	+ 2.0	+ 2.5	+ 2.4	+ 2.0	+ 1.1	+ 0.5	– 1.6
Real	+ 1.6	– 1.4	+ 2.2	+ 2.7	+ 0.9	+ 3.2	+ 1.5	+ 4.0	+ 4.7	+ 2.2	+ 2.0		+ 1.8	+ 1.6	+ 2.1	+ 2.1	+ 1.7	+ 0.7	– 0.3	
Manufactures	+ 1.2	– 1.3	+ 1.9	+ 2.7	+ 0.7	+ 2.6	+ 1.0	+ 3.2	+ 3.8	+ 1.8	+ 1.7		+ 1.5	+ 1.5	+ 1.9	+ 1.8	+ 1.4	+ 0.7	– 0.2	

FRITZ SCHEBECK

MEDIUM-TERM FORECASTS FOR THE AUSTRIAN ECONOMY UNTIL 2000

BUDGET CONSOLIDATION IN ANTICIPATION OF THE ECONOMIC AND MONETARY UNION

Weak foreign demand and real income losses of private households will at first dampen the expansion of the Austrian economy. The economy is expected to recover in 1998, however, and by the year 2000 to attain a growth rate of almost 3 percent. During the period 1995 to 2000 real GDP is likely to grow by no more than 1.8 percent per year on average, a rate slightly less than the growth rate forecast for the entire EU (2.1 percent)

The growing globalization of economic activity and the opening up of the Central and Eastern European countries has intensified the competitive pressure on European industrialized countries. Structural changes now occur more rapidly than in earlier periods. The liberalization of international trade and capital markets and the increase in labor mobility help to close the gap between the more and the less developed economies The adjustment processes engendered by this development, however, work in both directions The counterpart of the catching-up process in the emerging markets are drastic changes in the structure of production, in labor markets, and in the social standards of the mature industrialized countries, especially in Europe. These transformations are likely to dampen economic growth for a considerable period and might even trigger serious social tensions

These long-term adjustment difficulties will be exacerbated well into 1998 by austerity measures taken by a number of EU countries which are still far from meeting the Maastricht convergence criteria According to the timetable agreed upon by the European Commission in Madrid in December of 1995, the Monetary Union is to begin in 1999 The list of countries participating in the EMU will be determined in 1998 The process leading up to the realization of the Monetary Union and the introduction of the common currency will go through several critical phases and raise a number of questions (*Breuss*, 1996).

Fritz Schebeck is economist at the Austrian Institute of Economic Research. The author thanks Fritz Breuss, Norbert Geldner, and Gerhard Lehner for valuable suggestions and ideas. The processing and analysis of the data was accomplished with the aid of Martha Steiner.

Austria's economic activity suffers from the current recession in Europe. At the same time, the federal, provincial, and local governments have begun a two-year program to consolidate their budgets with the goal of reducing net government borrowing to 3 percent of GDP by 1997.

This forecast for the Austrian economy, fully consistent with the WIFO forecast of spring 1996 for the years 1996 and 1997 (*Marterbauer,* 1996), is based on the medium-term forecast of the world economy by *Schulmeister* (1996). The projections were carried out with the aid of the WIFO macroeconomic model. Structural changes and the austerity measures taken by the federal government subject the projections to considerable risks; the behavioral patterns observed for enterprises and private households in the past could prove a less reliable guide to the future

THE INTERNATIONAL ECONOMIC BACKGROUND AND FOREIGN DEMAND

A number of factors caused the incipient recovery to turn into a downswing in the second half of 1995: the effects of the changes in exchange rates of spring 1995, the end of the stock building cycle, and the budget consolidation measures being implemented in a number of EU countries These measures not only weaken domestic demand but, by reducing import demand, reinforce each other and depress economic activity in the EU and beyond.

The European economy is not expected to slide into a recession; a recovery is, however, unlikely to set in before mid-1997 Such a pick-up in economic activity might be favored by a modest rise in the value of the dollar (exchange rates within Europe are not expected to change); price stability and cyclical weakness might prompt central banks to further reduce interest rates. Some countries might boost investment in infrastructure in order to combat unemployment. Further growth impulses will come from the U.S and Japan As a result of the restrictive fiscal course pursued by many countries well into 1998, economic recovery will be rather subdued at first and only begin to gain momentum in 1999

Over the forecast period 1995-2000, EU's GDP is expected to grow by 2 percent per year, at a slightly higher rate in the soft-currency countries, at a lower rate in the hard-currency countries (e.g , Germany 1.6 percent; Table 1). Japan's economy will expand by 2 percent per year, slightly faster than in the previous five year period (1.2 percent) As in the first half of the 1990s, the growth rate of the U.S. economy will surpass that of Western Europe and of Japan

The former centrally planned economies are likely to experience a vigorous upturn In East-Central Europe output will expand by 5½ percent. As in the past, the highest growth rate (6½ percent) will be recorded by the non-oil-exporting countries (East Asia)

The forecast is based on the expectation that the Austrian economy, benefiting from stable exchange rates, sustained productivity increases, and modest wage increases, will be able to maintain its competitiveness in world trade Unit labor costs in the business sector will rise only modestly (1 3 percent per year) Austria's export growth should accelerate as soon as Germany's economy emerges from the recession and economic activity in the EU picks up. Austria's share in exports to the fast growing areas outside of Europe is still low. As during the past five years, Austrian exporters will benefit from the catching-up process in the reform countries; increasing competition in this area will no longer, however, allow gains in market shares

Table 1: Gross domestic product
In real terms

	Ø 1979/ 1985	Ø 1985/ 1990	Ø 1990/ 1995	Ø 1995/ 2000
	Year-to-year percentage change			
Austria	+ 1 6	+ 3 0	+ 2 0	+ 1 8
Total OECD	+ 2 2	+ 3 2	+ 1 7	+ 2 3
EU	+ 1 6	+ 3 1	+ 1 3	+ 2 1
Germany			+ 2 3	+ 1 6
Eastern Europe	+ 2 0	+ 1 6	- 9 6	+ 4 4

During the period 1995-2000 the volume of merchandise exports is likely to expand by 6 percent per year (during the preceding five years the rate of increase was no more than 4 percent).

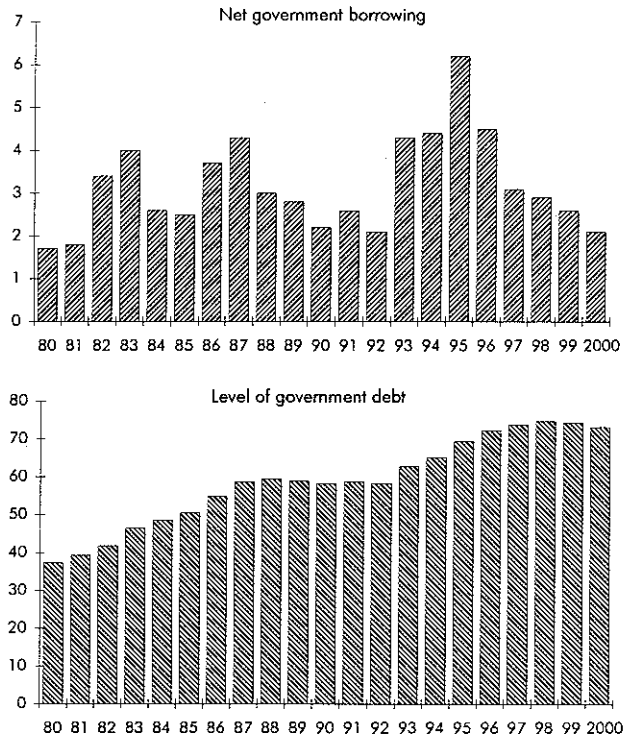
The appreciation of the schilling, the weakness in private consumption in Germany, markedly lower prices for air travel (over long distances, in particular), changes in leisure preferences, as well as structural weaknesses in the Austrian tourism industry have depressed receipts from foreign tourists since 1992. The outlook is for stagnation until 1997; 1998 should see a modest recovery if the potential increase in demand from abroad is met by improvement in the supply of tourism services Furthermore, the disadvantages resulting from the changes in real effective exchange rates should eventually disappear. The average growth over the whole period from 1995 to 2000 will barely reach 1 percent; this follows a five year period during which tourism export volumes fell by 3½ percent per year.

FISCAL POLICIES AND THE PUBLIC SECTOR

The austerity measures taken by the Austrian government are likely to lower net government borrowing to 3 percent of GDP by 1997, allowing Austria to meet the convergence criteria for participation in the monetary union. The pick-up in economic activity and a continuation of fiscal discipline might even reduce the net deficit rate to 2 percent by the year 2000

Between 1987 and 1992, net government borrowing was reduced from 4.3 percent to almost 2 percent of GDP. During the downturn of 1993 the operation of automatic stabilizers served to push this rate to 4.1 percent; in the same year, the ratio of government debt to GDP, which had remained about 58¾ percent in the preceding four years, exceeded the mark of 60 percent. The tax reform of 1994, though coinciding with a recovery, did not permit a reduction in the deficit ratio. A further jump in 1995 (by 1¾ percentage points to 6.2 percent of GDP) was the result of Austria's entry into the EU (with net transfers amounting to about 2 percent of GDP; Figure 1)

Figure 1: Net government borrowing and the level of government debt
Percent of GDP



With the budget proposals for 1996 and 1997, the federal, provincial, and local governments have taken on the difficult task of lowering the net deficit to 3 percent within a short time period (federal government 2.7 percent, provinces 0.3 percent). The macroeconomic effects of these budgets have been incorporated into the medium-term forecast (as well as in the WIFO short-term forecast). In some areas, the effects of the austerity package will reach beyond the year 1997. This forecast assumes that fiscal discipline will be maintained in the future, though the restrictive stance might be eased somewhat in the years 1998 to 2000. It also assumes that any maneuvering room, resulting from lower expenditures or higher revenues (from privatization receipts, in particular), will be used to foster investment, and that there will be no tax relief, as for example lower income tax rates. The restrictive effects of increases in tax revenues and savings in expenditures on economic activity will be compensated only in part and with some delay by a rise in investment outlays.

The following assumptions were made for important government expenditure categories: compensation per employee in the public sector (in the wide sense) will stagnate in 1996 and 1997, but will rise in the following years by 2 to 3 percent. With the expected slight increase in the number of government employees, growth in the government wage bill is likely to accelerate from less than 3 percent to 4 percent in the years 1998 to 2000. Government expenditures for goods and services will expand at a more moderate pace, so that government consumption is forecast to rise at a rate ranging from 2¾ to 3¾ percent.

Some transfer payments from the government sector to private households (such as pensions and family allowances) will rise at a rate markedly lower rate than that of wages and salaries.

The investment programs provided for in the budget proposals will boost investment activity, but with a two year delay. Direct government expenditures for investment will expand by 3 percent; investment in infrastructure, however, worth some ATS 12 billion per year (with a major portion of the funds allocated to railroad construction) will provide the main stimulus to the economy.

The net burden on the public households occasioned by membership in the EU (net transfers and reduction in revenues) will drop by ATS 18 billion to 30½ billion in 1996 and will total about ATS 33 billion in the following years.

The recent changes in direct and indirect taxation as well as in social security legislation will increase government revenues. Beginning with 1998 a reduction in revenues from corporate income taxes must be expected, however,

as a delayed reaction to changes in tax rules (regarding losses carried over). Moreover, the Post and Telecommunication Administration will pay less corporate income tax than in 1997. The average direct tax burden of private households, which reached a low in 1994 with the tax reform, will continuously rise over the forecast horizon. The elimination of the standard deduction will raise the income tax elasticity.

The implementation of the government's austerity program is likely to lower net government borrowing as a percentage of GDP to 3 percent by 1997 (Maastricht criteria). The ratio of gross public debt to GDP will then reach almost 74 percent. In 1998, the net deficit is expected to remain constant. The upturn in economic activity forecast for 1999 and 2000 and a slight acceleration of inflation will further lower the government deficit. A deficit ratio of about 2 percent in the year 2000 would create a certain leeway for fiscal policy: during a slowdown, the government would be in a position to take counter-cyclical measures; a low deficit would also afford the opportunity of finally implementing a structural budget reform.

THE DEVELOPMENT OF DOMESTIC DEMAND

The components of domestic demand, such as government consumption, private consumption, and investment, will be strongly affected by fiscal measures taken during the period under consideration. Both consumption aggregates will be affected negatively and investment positively.

Government consumption will expand at an average rate of only ½ percent in real terms, after having expanded by 2½ percent between 1990 and 1995.

The stagnation of compensation of public sector employees, the overall employment losses, tax increases, and markedly lower transfer payments will result in significant income losses for private households; disposable income (adjusted for price increases) will fall by ¾ percent in 1996 as well as in 1997. As past experience shows, consumer expenditures do not react promptly and completely to changes in income. This behavior is adequately described by a consumption function incorporating an error correction mechanism. This forecast is based on the assumption that consumers will not alter their spending behavior despite the austerity measures and rise in unemployment. Thus, real consumption expenditures are expected to rise slightly, at the expense of saving. Real disposable income is expected to increase only after 1998; during the period 1995-2000, the average growth rate will be as low as ½ percent. Real private consumption will expand by 1 percent per year, half the rate posted for the first half of the 1990s. The saving rate of private households is likely to fall from its high of 13.6 percent in 1994 (tax reform) to 11 percent in 1998, and to rise to 11.7 percent in the year 2000.

Investment activity will pick up markedly in 1998, partly due to public sector projects. By improving the economic infrastructure, the investment programs for the railroads and for the telecommunications sector will also further the attractiveness of Austria as a location of business activity. These programs will also reduce spare capacities in the construction industry.

In the business sector, capital outlays are undertaken mainly to rationalize and modernize existing plants. The current slack in business activity may delay the realization of some investment projects.

Because of the link of the Austrian schilling to the German mark, interest rates in Austria closely follow those in Germany. Interest rates are expected to decline slightly in 1996, then to stabilize in 1997. 1998 is likely to see a small increase in interest rates. The interest rate differential to Germany will remain marginal.

As the recovery progresses, demand for machinery and equipment in the business sector will become livelier. Total fixed capital investment will rise by 3½ percent per year in real terms during the forecast period, slightly faster than in the preceding five-year period.

The development of demand and of relative prices produces an expansion in the volume of merchandise imports by 5 percent on average. This projection takes into account the fact that the buying restraint exercised by private households will mainly affect imported goods, and that the import content of infrastructure investment is relatively low.

The current boom in expenditures by Austrian tourists abroad (a substantial part of this category consists of merchandise purchases) will end soon; in view of the flat development of real disposable income, more moderate growth rates are likely during 1995-2000 (2.6 percent per year against 4.6 percent during the first half of the 1990s).

Foreign trade prices are expected to rise by no more than 1 percent per year; some improvement in the terms of trade seems feasible. In 1995 the deficit in the current balance hit a record high of ATS 47 billion. The deficit is likely to drop to ATS 30 billion by 1997 and then to remain at this level; this implies a decline in the deficit/GDP ratio to 1 percent by the year 2000. The strong increase in the deficit during the past years was brought about by the slump in the tourism balance and, in 1995, by transfer payments to the EU. According to the medium-term forecast, the trade balance as well as the tourism balance will improve over the next few years, but transfer payments to other countries will be on the

Table 2: The current balance

	Ø 1979/ 1985	Ø 1985/ 1990	Ø 1990/ 1995	Ø 1995/ 2000
	Year-to-year percentage change			
In real terms				
Exports				
Goods[1]	+ 6 0	+ 6 2	+ 3 8	+ 6 1
Tourism services	+ 0 3	+ 5 1	– 3 6	+ 0 8
Imports				
Goods[1]	+ 3 4	+ 6 6	+ 3 9	+ 5 0
Tourism services	+ 1 4	+ 5 9	+ 4 6	+ 2 6
In nominal terms				
Exports				
Goods[1]	+ 9 4	+ 5 7	+ 3 7	+ 7 6
Tourism services	+ 5 6	+ 7 5	+ 0 1	+ 2 7
Imports				
Goods[1]	+ 8 1	+ 5 2	+ 4 0	+ 6 1
Tourism services	+ 6 0	+ 8 3	+ 6 5	+ 4 0
Trade balance[1] (billion ATS)	–77 3	–75 7	–109 8	–100 1
(percent of GDP)	– 6 7	– 4 8	– 5 1	– 3 9
Current balance (billion ATS)	– 6 3	3 0	– 15 7	– 32 1
(percent of GDP)	– 0 6	0 2	– 0 7	– 1 2

[1] Until 1994 according to foreign trade statistics

rise; net payments to the EU will increase from ATS 13½ billion to about 20 billion per year in 2000

The pick-up in aggregate demand toward the end of the forecast period will pull the economy out of a phase of near-stagnation (1996 and 1997), and support higher growth and a better utilization of productive capacities But even with a rate of 1.8 percent per year, economic growth in Austria will fall short of that expected for the EU economies (2 1 percent) Thus, the growth deficit of the years 1996 and 1997 will not be made up by the year 2000. Weak economic activity in the years 1996 and 1997 (with real GDP advancing by 0.7 percent and 1 percent) will be followed by a moderate recovery (1 7 percent) in 1998; with the restrictive effects of the austerity measures in Europe finally subsiding, the last two years will see a return to the normal growth path (2.6 and 2.9 percent).

Over the last few years, the business sector has come under increasing pressure to economize on labor. The public sector as well has stopped expanding its labor force. Thus, the number of jobs will remain constant and unemployment will rise considerably. In 1998, the rate of unemployment (according to the conventional definition) will reach 8 percent; a slight fall to 7½ percent is expected by the year 2000.

EMPLOYMENT EXPANSION ENDS – UNEMPLOYMENT ON THE RISE

Globalization, the international division of labor, and the intensification of competition determine to an increasing extent conditions on the labor market. Measures to rationalize the production process often start by cutting employment. In manufacturing, this process has long been observed; as the service industry becomes exposed to more competition, such measures also spread to this sector At the same time, the government budget constraints have also put an end to the employment expansion in the public sector. As a result, productivity increases are on the rise, and economic growth is associated with lower employment gains

Between 1995 and 2000, output per employee (output per person in employment) is expected to grow by 1 9 percent (2 1 percent) per year (the corresponding figures for the first half of the 1990s are 1.4 percent and 1 7 percent). Dependent employment is forecast to drop in 1996 and 1997; this loss will not be made up during the remainder of the forecast period The supply of labor reacts relatively strongly to demand fluctuations: some of the people who lost their jobs withdraw from the labor

Table 3: Aggregate demand
In real terms

	Ø 1979/ 1985	Ø 1985/ 1990	Ø 1990/ 1995	Ø 1995/ 2000
	Year-to-year percentage change			
Private consumption	+ 1 7	+ 3 0	+ 2 2	+ 0 9
Public consumption	+ 1 9	+ 0 9	+ 2 4	+ 0 5
Gross fixed investment	- 0 1	+ 4 9	+ 3 0	+ 3 6
Business sector	+ 0 2	+ 5 6	+ 3 3	+ 4 1
Final domestic demand	+ 1 3	+ 3 1	+ 2 4	+ 1 6
Change in stockbuilding (billion ATS)	9 1	11 6	20 1	47 3
Total domestic demand	+ 1 3	+ 3 2	+ 2 7	+ 1 7
Exports goods and services	+ 4 8	+ 5 4	+ 3 1	+ 5 2
Imports goods and services	+ 3 9	+ 5 8	+ 4 5	+ 4 8
GDP	+ 1 6	+ 3 0	+ 2 0	+ 1 8
In nominal terms	+ 6 6	+ 6 0	+ 5 5	+ 3 6

Table 4: Labor market and income

	Ø 1979/ 1985	Ø 1985/ 1990	Ø 1990/ 1995	Ø 1995/ 2000
	Year-to-year percentage change			
Dependent employment	+ 0 0	+ 1 2	+ 0 9	– 0 2
Excluding parental leave and military service	+ 0 0	+ 1 2	+ 0 6	– 0 1
Business sector	– 0 6	+ 1 0	+ 0 0	– 0 5
Registered unemployed[1]	+16 2	+ 3 5	+ 5 4	+ 2 8
Unemployment rate				
Percent of dependent labor force[2] (%)	3 6	5 3	6 3	7 7
Percent of total labor force[1] (%)	3 1	4 6	5 7	7 0
Labor productivity (GDP per dependent employee)[3]	+ 1 6	+ 1 8	+ 1 4	+ 1 9
Business sector	+ 2 5	+ 2 3	+ 2 1	+ 2 4
Gross wages and salaries	+ 6 0	+ 5 7	+ 5 3	+ 3 0
Per employee	+ 5 7	+ 4 3	+ 4 6	+ 3 1
Public sector	+ 5 1	+ 2 7	+ 3 6	+ 1 5
Business sector	+ 5 8	+ 4 8	+ 5 0	+ 3 6
Unit labor costs, business sector	+ 4 1	+ 2 4	+ 3 1	+ 1 3
Property and entrepreneurial income	+ 7 8	+ 8 2	+ 6 2	+ 3 3
Household disposable income	+ 1 2	+ 6 5	+ 2 1	+ 2 5
Household savings ratio (%)	8 9	12 2	13 2	11 5

[1] According to labor exchange statistics. – [2] Excluding parental leave and military service

market; others are discouraged to enter or reenter the labor market.

Unemployment is on the rise in Austria The number of unemployed as a percentage of the total labor force[1] will rise to 7 2 percent by 1998 This development continues a pattern that has been observed since the beginning of the 1980s: only a small part of unemployment that has arisen during the downswing or recession can be broken down during the upswing, with the consequence that unemployment keeps rising in a stepwise fashion. This development not only pushes up the number of persons without a job, it also changes the composition of unemployment, as long-term unemployment rises. The stricter qualifications for early retirement, which has served as a shock absorber, will not only increase unemployment among the older work force but might also raise youth unemployment

A small open economy such as Austria cannot cope with the problem of unemployment on its own; at present, there are no Europe-wide employment initiatives in sight The proposals from the Delors White Book of the EU on "Growth, Competitiveness and Employment" (1993) have not been realized for lack of funds. The measures proposed so far can bring about only marginal improvements The link between labor market flexibility and job creation is still very controversial, both at the theoretical and empirical level

In general, increasing labor market flexibility has the effect of dampening wage growth and of making more efficient use of labor and of capital, thus improving cost competitiveness

LOWER REAL INCOME GAINS AND SUBDUED INFLATION

The worsening of the labor market situation, the liberalization of the goods market and changes in the structure of the economy are reflected in the wage formation process According to the Phillips curve, wage increases are negatively correlated with the unemployment rate. Within the framework of the institutions of Austria's Social Partnership, it is also in the unions' interest to maintain the economy's international competitiveness The liberalization of the economy has reduced the size of the sheltered sector The splitting-up and privatization of several major national enterprises, the outsourcing of production processes and of services, as well as the internationalization of the economy have lowered union membership and have weakened the position of the unions.

[1] The EU Labour Force Survey (on the basis of Austria's Mikrozensus) yields an unemployment rate of about 4¼ percent. This rate cannot be predicted with the macroeconomic model used to produce this forecast

Table 5: Deflators

	Ø 1979/ 1985	Ø 1985/ 1990	Ø 1990/ 1995	Ø 1995/ 2000
	Year-to-year percentage change			
Private consumption	+ 5 4	+ 2 1	+ 3 2	+ 1 9
Public consumption	+ 5 4	+ 3 7	+ 4 2	+ 2 0
Gross fixed investment	+ 4 7	+ 2 7	+ 2 5	+ 1 5
Exports, goods and services	+ 4 0	+ 0 4	+ 0 8	+ 1 2
Goods[1]	+ 3 3	- 0 5	- 0 1	+ 1 4
Tourism services	+ 5 3	+ 2 3	+ 3 8	+ 1 9
Imports, goods and services	+ 4 7	- 0 5	+ 0 7	+ 1 2
Goods[1]	+ 4 5	- 1 3	+ 0 1	+ 1 1
Tourism services	+ 4 5	+ 2 3	+ 1 8	+ 1 4
GDP	+ 4 9	+ 2 9	+ 3 4	+ 1 8
Terms of Trade				
Goods and services	- 0 6	+ 1 0	+ 0 1	+ 0 1
Goods[1]	- 1 2	+ 0 8	- 0 1	+ 0 3

[1] Until 1994 according to foreign trade statistics

Given these conditions, real compensation per employee in the business sector will advance at a markedly slower pace than labor productivity. In the public sector, wage restraint is enforced by the budget problems facing the federal government. The wage and salary bill is likely to rise by 3 percent per year on average, at a rate ⅓ percentage point below the yearly rise in business earnings The (adjusted) labor share in national income will decline steadily; the improvement in 1996 is merely a statistical artifact

Neither the development of import prices nor of wage costs will fuel inflation. The initial weakness in demand and the rising competitive pressure, which now extends to previously sheltered sectors, will dampen inflation to 1¾ percent by 1998 As in previous periods, rents will post the highest price increase With the pick-up in economic activity expected towards the year 2000, inflation might again accelerate slightly The rate of inflation, though, should average less than 2 percent. Thus, the economy will be much closer to reaching the goal of price stability than in the early 1990s, when a rate of 3 2 percent was recorded on average.

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Fiscal Consolidation in View of the Completion of EMU
Medium Term Projections for the Austrian Economy – Summary

The Austrian economy has been struck by the most recent business cycle downturn in Europe. At the same time, a two-year program of fiscal consolidation has been launched comprising all levels of government, with the aim of bringing down public sector borrowing to 3 percent of GDP by 1997.

In the short run, lackluster demand from abroad and real income losses of private households will considerably dampen the pace of activity. As from 1998, demand and output should rebound strongly and attain nearly 3 percent p.a. by the year 2000. On average for the period 1995-2000, real GDP may rise by only 1.8 percent p.a., thereby falling somewhat behind the pace in the EU (projected at 2.1 percent).

A more competitive environment adds to the pressure for rationalization and efforts to save labor as input for production. The public sector is unlikely to expand its personnel capacities in the foreseeable future. Therefore, the number of jobs may not increase over the projection period, leading to a marked increase in unemployment. In 1998, the jobless rate may attain 8 percent (of the dependent labor force, as conventionally measured), before abating to 7½ percent by 2000.

Labor market and wage developments are closely interrelated. Real wages are expected to increase at a markedly slower pace than labor productivity.

Inflation should remain firmly under control, as neither import prices nor wage costs are likely to exert significant upward pressure.

The new setting of fiscal policy and the projected international scenario will allow government borrowing to decline to a ratio of 3 percent of GDP by 1997, thereby meeting the relevant convergence criterion for participation in the European Monetary Union. Thereafter, with economic growth accelerating and public authorities maintaining tight control over expenditure, the deficit/GDP ratio may continue falling to 2 percent by the year 2000.

23RD ANNUAL E.A.R.I.E. CONFERENCE

SEPTEMBER 7–10, 1996, VIENNA, AUSTRIA

The European Association for Research in Industrial Economics will hold its 23rd Annual Conference in Vienna, September 7–10, 1996

Venue:	Austrian Economic Chamber, Vienna
Local Organizers:	Austrian Institute of Economic Research (WIFO)
Program Organization:	Karl Aiginger, WIFO (aig@wsr.ac at)
Conference Secretariat:	Kristin Smeral, Andrea Luger, WIFO (earie96@wsr.ac at) A-1103 Vienna, P.O. Box 91 Phone (+43 1) 798 26 01 Fax: (+43 1) 798 93 86

Registration:	until May 31, 1996	until July 31, 1996	after July 31, 1996
Participants	ATS 4,000	ATS 4,400	ATS 4,800
Students	ATS 2,000	ATS 2,200	ATS 2,400
Accompanying persons	ATS 1,500	ATS 1,500	ATS 1,500

Registration forms and additional information about the 23rd Annual Conference are available from the Conference Secretariat. In addition, up-to-date conference information is available as of December 1, 1995 at http://www.wsr.ac.at/wifo/earie96/

Accommodations:	Hotel rooms for the E.A.R.I.E. Conference have been set aside in a select number of 3- and 4-Star hotels located near the Federal Chamber of Commerce
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Registration and hotel accommodations will be handled directly by Imperial Tours

FRANZ R. HAHN
GERHARD RÜNSTLER

THE MEASUREMENT OF POTENTIAL OUTPUT FOR AUSTRIA

Aggregate potential output is a concept of analytical significance to many areas of economic policy and research. On a macroeconomic level, potential output serves as an indicator of long-term sustainable growth; whereas the deviation of actual output from potential output – the output gap – reveals the short-term dynamics of output fluctuation. Potential output, as well as output gap, are frequently used as analytical criteria in the assessment of a country's macroeconomic performance.

Franz R. Hahn and Gerhard Rünstler are economists at the Austrian Institute of Economic Research and the Institute for Advanced Studies, respectively. The authors wish to thank Robert Kunst, Karl Pichelmann, Gerhard Thury, and Michael Wüger for valuable comments and suggestions. Research assistance was provided by Dagmar Guttman. The article is based on a study conducted by the Austrian Institute of Economic Research and the Institute for Advanced Studies, commissioned by the Austrian Federal Ministry of Finance.

For short-term economic analysis, measures of aggregate potential output (PO) and output gap (OG) provide two important types of insights. First, regularities in the dynamics of OG over time, and corresponding developments in employment and inflation, facilitate substantially the assessment of future near-term cyclical developments. Second, the degree of deviation between actual and potential output has proved to be very helpful in detecting the extent and intensity of inflationary pressure caused by imbalances between supply and demand in product markets. In many industrial countries, the output gap is therefore a particularly important means for monetary authorities to fine-tune low-inflation policies

With respect to long-term economic analysis, the development of PO provides valuable information as to the recent and prospective growth performance of a country's economy. This is particularly important with respect to fiscal analysis where future developments in underlying structural budget deficits are a focus of specific concern. Short-term cyclical influences are superimposed on the long-term structural factors which influence budgetary developments, thereby distorting the true appearance of public finances. When calculated on the basis of PO, budget balances convey to policy makers a more authentic overall impression of the actual budgetary situation, and of the long-term requirements for consolidation

There is unfortunately no consensus as to which technique of conceiving and measuring PO is theoretically and empirically most suitable. Endeavors to evaluate PO empirically often differ in method, as well as in concept.

In the recent past, however, PO concepts which are compatible over the long-term with natural rate equilibria in the product and labor markets, have been the pre-

ferred measurement of a country's aggregate growth potential, especially by international organizations such as the OECD and IMF. In this case, the relationship between growth potential and the so-called *non accelerating inflation rate of unemployment* (NAIRU) is deemed particular significant. This concept of PO complies most closely with the classical practice of business cycle analysis which decomposes aggregate output into a trend component or permanent growth (PO), and a transitory component (OG) or business cycle (BC). Although the OECD and the IMF share a uniform policy regarding the theoretical concept of PO, there is (still) no consensus on a suitable technique for statistical measurement. The OECD, for example, is presently utilizing two methods – astructural (Hodrick-Prescott (HP) filter) and structural (production function approach) – for the statistical evaluation of PO.

This article proposes a new method of calculating the aggregate potential output. The approach suggested attempts to measure PO as an unobserved variable within a system of equations. Methodologically, it builds on a multivariate extension of structural time series (STS) models supplemented with structural information as contained in standard price-wage equations. After a short description of the estimation procedure, this paper presents PO estimates and related results for Austria on the basis of quarterly data.

ESTIMATION PROCEDURE

The majority of empirical approaches to measuring PO are based on methods of trend extraction. This is also true for estimating PO on the basis of production functions. Trend extraction methods are applied in structural, production function-based approaches, for example, when determining potential employment, or the long-term path of productivity. Detrending methods are therefore of central importance to empirical PO measurement, regardless of whether the PO is estimated according to a structural or astructural approach.

Based upon these considerations, attempts have recently been made to integrate both conventional procedures on the basis of a well-defined statistical methodology. In this very active area of empirical research, most work has been directed towards measuring PO and NAIRU with the aim of improving our ability to forecast future inflationary pressure in the economy. In this respect, an inter-

Figure 1: GDP and potential output

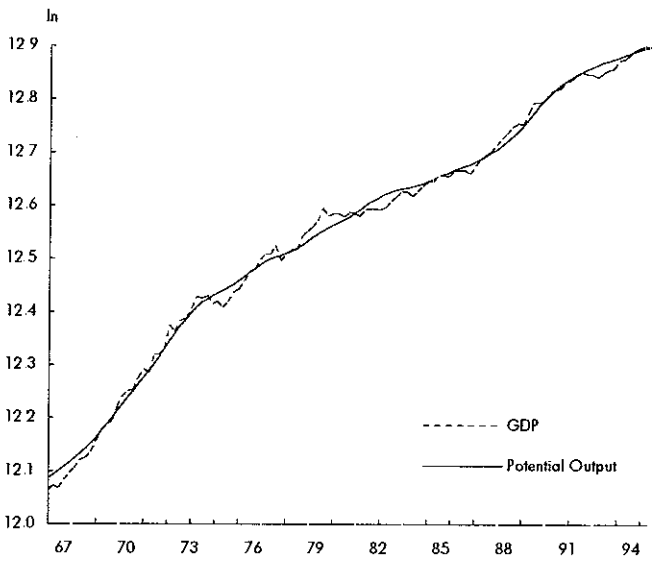


Figure 2: Cyclical component of GDP

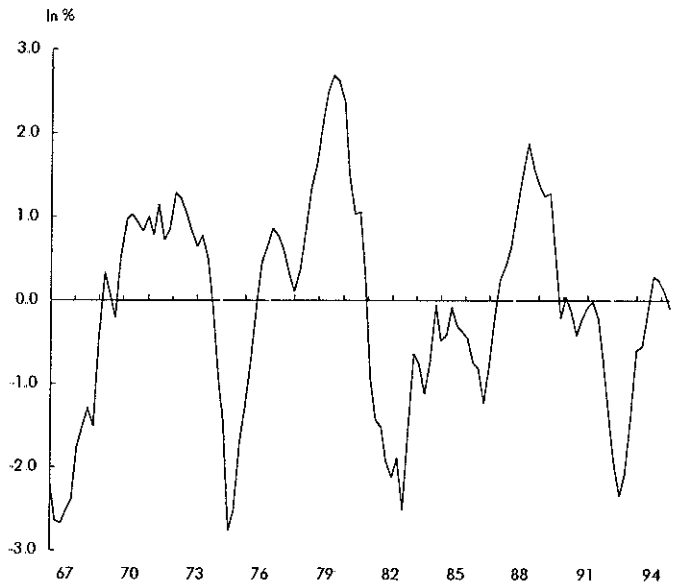


Figure 3: Year-to-year percentage change of potential output

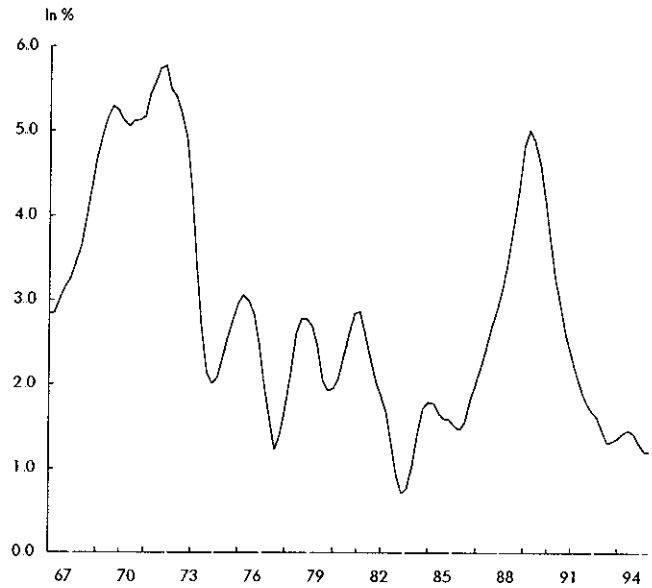
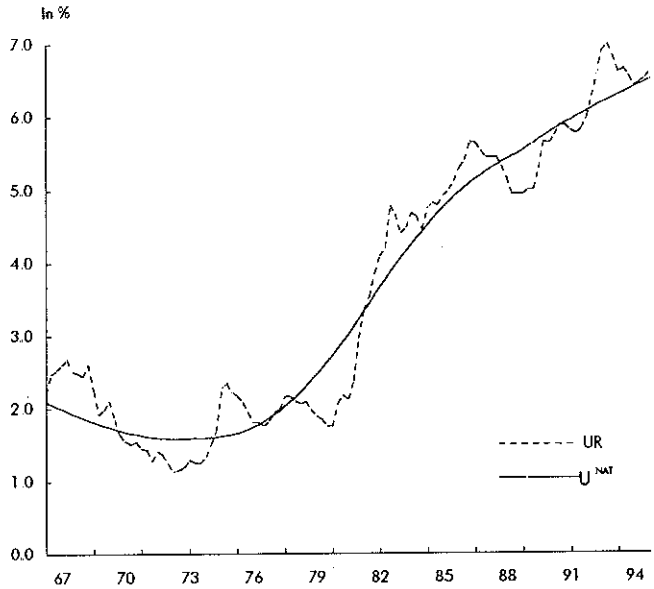
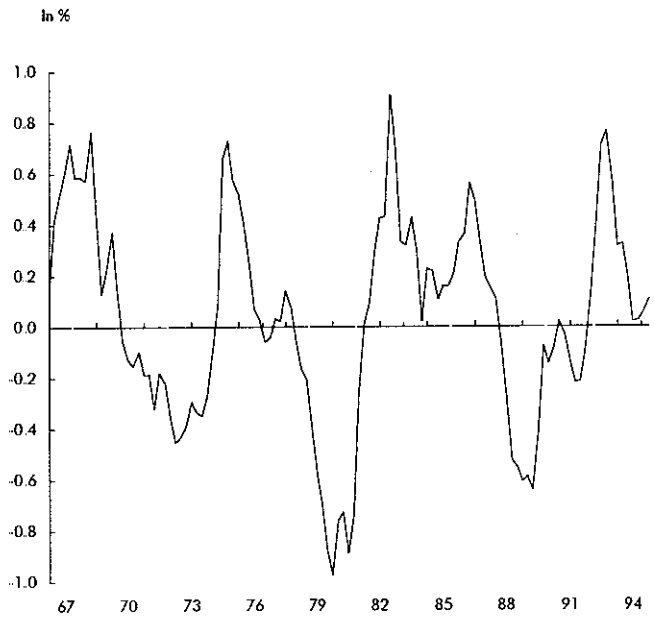


Figure 4: The unemployment rate and the natural rate of unemployment



esting combination of structural and astructural elements in the measurement of PO has been suggested by *Cote – Hostland* (1994). The method proposed by the authors involves treating the PO as an unobserved variable in a system of price-wage equations. Cote – Hostland used the cyclical components of gross domestic product GDP and the unemployment rate *UR*, as obtained by the HP filter, as lagged explanatory variables in a system of standard price-wage equations. The HP filter "smoothness" parameter, one for PO and one for the NAIRU, was

Figure 5: Cyclical component of the unemployment rate



chosen so as to maximize the likelihood of the price-wage block.

Our approach refines this technique. We construct a bivariate STS model for *GDP* and *UR* and, in order to implement Okun's law, impose a close co-movement of the two cyclical components. We propose a generalization of the common cycles restriction (*Harvey*, 1989) that binds the cycles closely together, while allowing for a constant phase shift between them; we then estimate a traditional Phillips curve where the cycles enter wage and price equations in levels. Exploiting the information contained in prices and wages, the full systems estimation allows us to improve the decomposition of *GDP* and *UR*. Thus, via the price-wage block, information regarding the economic system and structure indirectly flows into the computation of *PO* and of the natural rate of unemployment U^{NAT}.

Structural Time Series Models

STS models are designed to decompose a time series into several unobserved components, i.e., a non-stationary trend, a cycle, and an irregular term. The particular components are specified as parametric stochastic processes and the formulation of the system in state-space form allows for a maximum likelihood (ML) estimation of the variances of the innovations in the particular components and other parameters in question.

The following univariate *PO* model, founded on seasonally adjusted GDP, is based, among others, on *Harvey* (1989):

$$(1) \qquad GDP_t = PO_t + BC_t + i_t,$$

$$(2) \qquad PO_t - PO_{t-1} = a_{t-1} + e_t,$$

$$(3) \qquad a_t = a_{t-1} + u_t,$$

$$(4) \qquad \begin{bmatrix} BC_t \\ BC_t^* \end{bmatrix} = \rho \begin{bmatrix} \cos\lambda & \sin\lambda \\ -\sin\lambda & \cos\lambda \end{bmatrix} \begin{bmatrix} BC_{t-1} \\ BC_{t-1}^* \end{bmatrix} + \begin{bmatrix} k_t \\ k_t^* \end{bmatrix}$$

where $0 \leq \rho < 1$, $0 < \lambda < \pi$.

GDP is comprised of *PO* and *BC*, as well as of an irregular component i_t.

According to this model, *PO* follows a so-called local linear trend, which is a random walk with stochastic drift, while the cyclical component is specified as a so-called stochastic cycle. The latter is derived from a dampened cosine wave of fixed length λ, subject to shocks k_t and. The parameter ρ represents the damping factor of the amplitude.

The hyperparameters (ρ, λ, var (i_t), var (e_t), var (u_t), var (k_t) = var (k_t^*)) are estimated by maximum likelihood (ML) using the Kalman filter.

Table 1: Data, PO estimates and related results

		GDP	PO	Δ PO	BC	UR	U^{NAT}	UC
1990	First quarter	359 188	352 674	+ 4 87	1 28	4 98	5 63	- 0 64
	Second quarter	359.152	357 003	+ 4 59	0 56	5 27	5 68	- 0 41
	Third quarter	361 096	361.096	+ 4 17	- 0 21	5 65	5 72	- 0 08
	Fourth quarter	366 224	364 908	+ 3 69	0 04	5 63	5 77	- 0 14
1991	First quarter	368 612	368 280	+ 3 24	- 0 13	5 73	5 82	- 0 09
	Second quarter	368.760	371 276	+ 2 90	- 0 42	5 88	5 86	0 02
	Third quarter	373.921	373.958	+ 2 58	- 0 24	5 87	5 90	- 0 03
	Fourth quarter	375 082	376 359	+ 2 35	- 0 08	5 80	5 94	- 0 14
1992	First quarter	378 435	378 587	+ 2 13	- 0 02	5 76	5 98	- 0 22
	Second quarter	380 636	380 636	+ 1 92	- 0 22	5 81	6 02	- 0 21
	Third quarter	379 382	382.468	+ 1 77	- 0 73	5 97	6 06	- 0 09
	Fourth quarter	378 587	384.154	+ 1 68	- 1 40	6 24	6 10	0 14
1993	First quarter	385 771	385 771	+ 1 61	- 1 95	6 54	6 14	0 40
	Second quarter	387 317	387 317	+ 1 44	- 2 34	6 89	6 18	0 71
	Third quarter	388 714	388.714	+ 1 30	- 2 09	6 98	6 22	0 76
	Fourth quarter	389 999	389 999	+ 1 32	- 1 37	6 82	6 25	0 57
1994	First quarter	391 288	391 288	+ 1 36	- 0 60	6 60	6 28	0 31
	Second quarter	392.621	392.621	+ 1 42	- 0 55	6 64	6 32	0 32
	Third quarter	393 998	393 998	+ 1 45	- 0 17	6 55	6 35	0 20
	Fourth quarter	395 419	395 419	+ 1 41	0 28	6 40	6 38	0 02
1995	First quarter	396 845	396 845	+ 1 30	0 24	6 45	6 42	0 03
	Second quarter	398.117	398 117	+ 1 20	0 09	6 51	6 46	0 06
	Third quarter	399 313	399 313	+ 1 20	- 0 09	6 60	6 49	0 10

GDP ... gross domestic product, in real terms, at 1983 prices, million ATS, *PO* ... potential output, in real terms, at 1983 prices, million ATS, Δ *PO* ... year-to-year percentage change, *BC* ... cyclical component of GDP, *UR* ... unemployment rate in percent, U^{NAT} ... natural rate of unemployment in percent, *UC* ... cyclical component of the unemployment rate

DATA AND PO ESTIMATES – CONCLUDING REMARKS

Computation is based on Austrian quarterly data, with the estimation period ranging from 1966:1 to 1995:3. The various STS models were estimated using the optimization procedure of GAUSS.

The accuracy of the actual cyclical position estimates was a very important criterion in evaluating the quality of the models in question. In this respect, the multivariate STS models clearly proved to be superior to mechanistic filter methods (for example, HP filter). With respect to standard diagnosis criteria, the so-called generalized common cycle model which endogenously accounts for the flexible bond between BC and UC turned out to be – in combination with standard price-wage equations – best suited for measuring Austria's PO. These bivariate STS models support a *PO* following a smooth GDP trend with slowly changing slope (Figure 1). The estimates imply an average business cycle length of 28 quarters, whereas the cyclical component of the unemployment rate (*UC*) lags behind those of GDP (*BC*) by three quarters, on average.

According to these estimates, the highest annual growth rates of potential output, at over 5 percent, were observed in the early 1970s (1970-1973), and in 1989. The lowest growth rate for PO was computed for the years 1983 and 1984 at just under 1 percent. Since the year of record growth in 1989, PO growth has been exhibiting a marked downward tendency. During the last three quarters of the sample period, (1995:1 to 1995:3) PO growth is estimated to be just slightly above 1 percent, only marginally above the lowest values within the sample period. Since the early 1990s, actual GDP has nearly always remained below its estimated potential value.

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The Measurement of Potential Output for Austria – Summary

Most empirical approaches to measuring potential output (PO) are based on variants of the method of trend extraction. This is also true for estimating PO on the basis of production functions. Thus, trend adjustment methods are of central importance for the measurement of PO, regardless of whether PO is estimated through a structural or astructural approach. These considerations have led some economists to attempt to combine astructural methods (e.g., mechanistic trend extrapolation) with structural approaches in such a way that the disadvantages of both methods are diminished. One such method of combining structural and astructural elements computes aggregate PO on the basis of a trend adjustment method (e.g., the HP filter) and on the basis of specific "structural information" deduced from price-wage equations. This article has refined this technique. The extension concerns above all the method of optimal extraction of cyclical components from GDP and the unemployment rate through the use of bivariate structural time series models.

Potential output exhibited the highest annual growth rates (over 5 percent) in the early seventies (1970-1973) and in 1989. The lowest growth rate for PO (less than 1 percent) was computed for 1983 and 1984. In the period after 1989, a year of record growth, PO growth shows a marked downwards tendency. PO growth during the last three quarters of the sample period (1995:(1) to 1995:(3)) is estimated to be just slightly above 1 percent, marginally higher than during the troughs of the sample period. Since the beginning of the 1990s, actual GDP was almost always below PO. The PO estimates imply that the average length of the cycle in the variables *BC* and *UC* is 28 quarters. The cyclical component of the unemployment rate lags behind that of GDP by close to 3 quarters on average.

STEPHAN SCHULMEISTER

EXCHANGE RATE REGIME AND ECONOMIC ACTIVITY IN THE EU

The monetary disintegration of the EU since September 1992 together with a policy of synchronous restrictive measures were the major cause of the slow-down in economic growth in the European hard-currency countries as early as in 1995, the renewed upsurge in unemployment and the failure of budget consolidation to attain its target. With the DM showing the highest gains of all the EU currencies, Germany's economy suffered the most from the destabilization of exchange rates and became less attractive as a location for business activities.

The monetary split of the EU since September 1992 into a central "hard-currency block" under the "leadership" of the Bundesbank (Germany, France, the Netherlands, Belgium, Denmark, and Austria) and the soft-currency countries had considerable real economic consequences: between 1992 and 1995 countries with depreciating currencies achieved real growth in exports of goods and services of 9 percent per year, whereas the countries with appreciating currencies registered an average growth of merely 3 percent per year. As a consequence the economies of the soft-currency countries were able to achieve growth rates more than ½ percent higher than the economies of the hard-currency block

The combined effect of monetary disintegration in the EU and a policy of synchronous restrictive measures with the aim of fulfilling the Maastricht criteria was the slow-down in economic growth which took place as early as in the second recovery year (1995), a renewed upsurge in unemployment and the failure of the budget consolidation drive to reach its targets

Against this background an increasing number of observers holds the project of monetary union *itself* responsible for the economic problems and not the specific contents of the participation criteria or the way they are realized by economic policies

This paper deals with an aspect essential to the debate on a single European currency, namely, the economic performance of the EU countries under floating exchange rates on the one hand and under stable exchange rates on the other hand.

Stephan Schulmeister is economist at the Austrian Institute of Economic Research. The author wishes to extend his thanks to Fritz Breuss, Peter Mooslechner, and Ewald Walterskirchen for valuable suggestions and ideas. The processing and analysis of the data was accomplished with the aid of Eva Sokoll.

This study compares the economic performance of the EU in three different phases of the European Monetary System (EMS) and hence under three different exchange rate regimes (Figure 1)[1]:

- From early 1982 to late 1986 the parities between the major currencies which had joined the Exchange Rate Mechanism (ERM) of the EMS were altered in several realignments (*"adjustable peg"*).
- Between early 1987 and September 1992 a system of *stable exchange rates* was established within the ERM system
- Since September 1992 exchange rate determination has been increasingly *left to the foreign exchange markets*. As a consequence, exchange rate instability has considerably increased

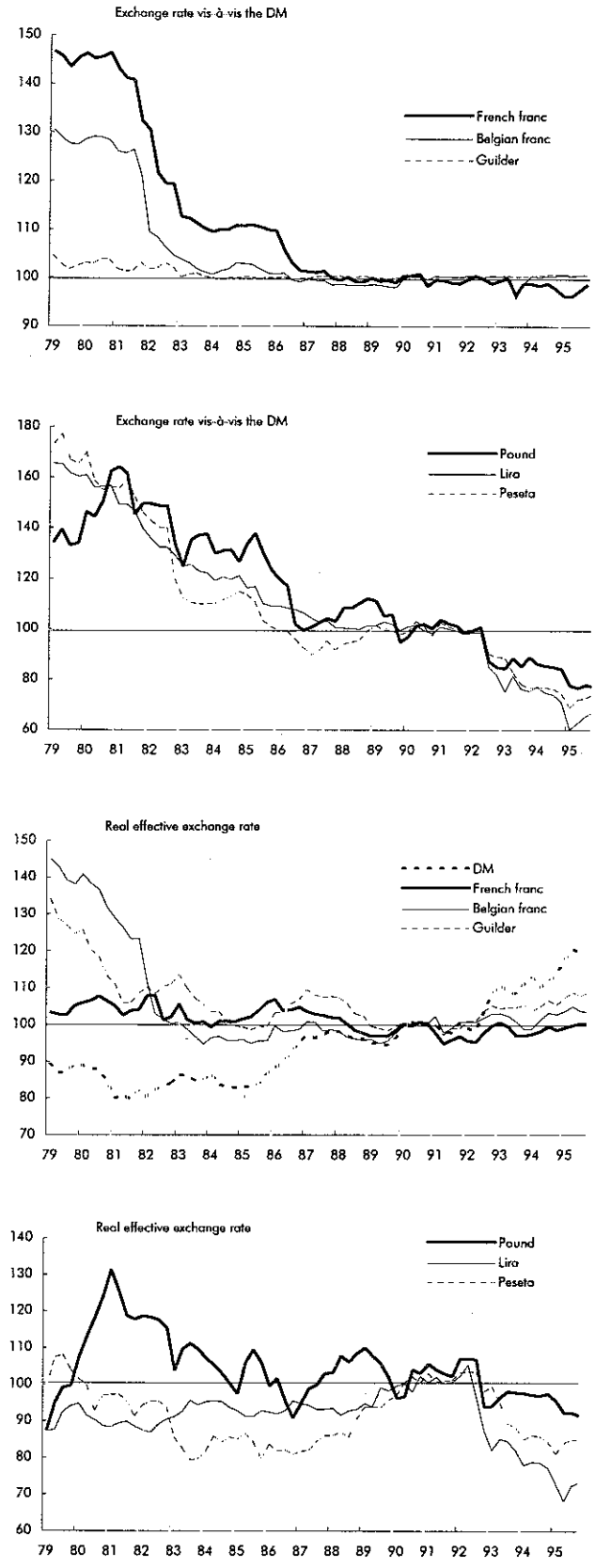
This study attempts to elaborate those characteristics of economic performance in Europe which were directly influenced by the respective exchange rate regime. For this purpose the most important economic indicators were calculated for both, the hard-currency as well as the soft-currency countries

The *hard-currency block* is considered that group of countries whose currencies depreciated less than 1 percent per year vis-à-vis the DM between 1992 and 1995 (Germany, France, the Netherlands, Belgium, Denmark, and Austria). The remaining EU countries form the group of *soft-currency countries*. Since 1992 their currencies have depreciated vis-à-vis the DM by more than 8 percent per year

ECONOMIC PERFORMANCE UNDER THE "ADJUSTABLE PEG" SYSTEM

From 1982 to 1986 the currencies of the soft-currency countries were greatly devaluated through several *realignments*. On average the exchange rates of these countries dropped by approximately 8 percent per year vis-à-vis the DM, but the nominal effective exchange rates declined by less than 5 percent per year, the difference is mainly due to the dollar depreciation between 1985 and 1987[2]

Figure 1: Major exchange rates in Europe
1990 = 100



[1] In the first phase of the ERM between 1979 and 1981 an attempt was made to stabilize the exchange rates of the major currencies. This attempt failed, however, because the inflation differentials between the individual ERM countries, that were already high in 1979 continued to widen after the second oil price shock and the subsequent recession. Since this relatively short period was dominated by various elements of international turbulence at the same time, it is not included in the comparison between exchange rate regimes and economic performance

[2] The mean values for both groups are average values weighted according to population shares in the base year of the respective period

On the one hand, the massive devaluations were a *consequence* of high inflation, especially in relation to the Federal Republic of Germany; on the other hand, they were also a source of continuing *inflation differentials* Thus, as was also the case in the 1970s, a reciprocity between the (relative) rate of inflation and (nominal) devaluations prevailed: therefore real effective exchange rates (based on unit labor costs) sank by only 1½ percent per year (Figure 1, Table 1)

The effective nominal and real exchange rates of those countries which were later to form the *hard-currency block* rose by 1½ percent per year in 1981-1987 In relation to the DM, however, the (bilateral) exchange rates dropped by almost 4 percent – a change primarily due to the strong devaluations of the French and Belgian francs between 1981 and 1987 (Figure 1, Table 1)

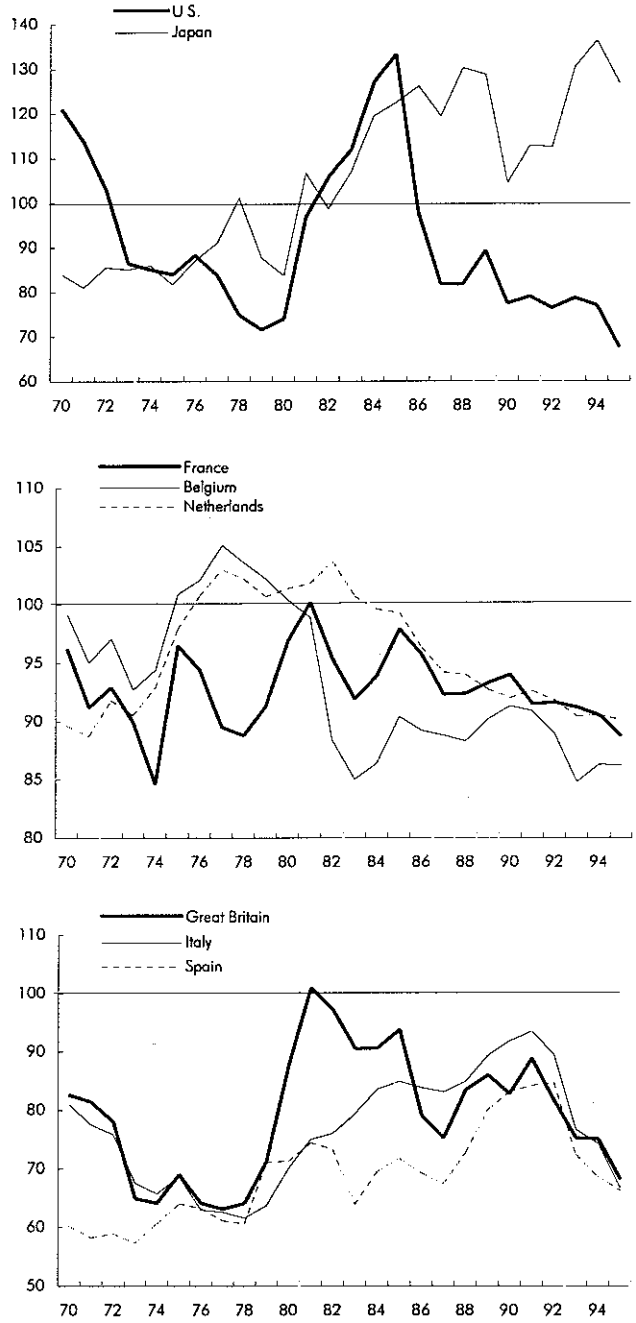
Between 1981 and 1987 the soft-currency countries strongly devaluated their currencies in several realignments. Nominal effective exchange rates dropped by an average 5 percent per year, while the decrease in real terms was a mere 1½ percent, because consumer prices and unit labor costs climbed more rapidly than in the hard-currency block.

The second oil price shock and the dollar appreciation contributed to the relatively high inflation in the soft-currency countries (including France and Belgium) in the early 1980s Until 1986, however, inflation declined more strongly in these countries than in the hard-currency block (Figure 4). This in turn was an essential precondition for the successful stabilization of the major ERM exchange rates in the years 1987 to 1992

Aggregate price levels in the soft-currency countries (in common currency) shifted only slightly in comparison with that of the Federal Republic of Germany, since nominal devaluations vis-à-vis the DM roughly equaled the inflation differential vis-à-vis Germany: in the years 1982–1987 and 1987 the GDP of the soft-currency countries was 18½ percent and 12½ percent *"cheaper"*, respectively, than the GDP of the Federal Republic of Germany (Table 1)

The price level in certain EU countries shifted significantly in relation to Germany: the devaluation of the pound in relation to the DM (–7½ percent p.a.), for example, greatly exceeded the inflation differential (as measured by the GDP deflator), which amounted to 2½ percent p.a. (in Great Britain the GDP deflator rose by 5.2 percent in 1981-1987, in Germany by 2.8 percent p.a.)[3]. Correspondingly, overall prices in Great Britain relative to those in Germany fell by almost 5 percent p.a., with

Figure 2: Price level of GDP in common currency
Germany = 100



the change over the whole period amounting to approximately 25 percent (Figure 2) On the other hand, the price level in Italy relative to Germany rose by about

[3] The relation of a country's price level to that of Germany (in common currency) is given by the ratio of the purchasing power parity of GDP relative to that of Germany to the exchange rate vis-à-vis the DM; it reflects the level of the bilateral real exchange rate and hence the extent of overvaluation or undervaluation (as compared to the purchasing power parity of GDP): accordingly, in 1987, e.g., the pound was undervalued by 25 percent in relation to the DM or the DM overvalued by 33 percent in relation to the pound (Figure 2)

10 percent (the inflation differential exceeded the devaluation of the lira vis-à-vis the DM).

The real devaluation of the currencies of the soft-currency countries by 1½ percent per year and the real revaluation of the currencies of the hard-currency countries by 1½ percent per year (as measured by unit labor costs) were one major reason why between 1981 and 1987 *exports and investments* in the soft-currency countries expanded by approximately 2 percentage points faster than in the hard-currency countries (Table 1). The differential for GDP growth was about 1 percentage point. Differentials of approximately the same size were observed between Germany, the epitome of a hard-currency country, and the individual major devaluation countries (Figures 4 and 5).

THE PHASE OF STABLE EXCHANGE RATES IN EUROPE

Between early 1987 and September 1992 the *exchange rates* between the major European currencies remained almost *stable* (Figure 1). At the same time, inflation differentials within the EU narrowed: in 1981-1987 consumer price inflation in the soft-currency countries had exceeded that in hard-currency countries by 5½ percentage points, during the period 1987-1992 the differential amounted to only 4 percentage points, and only 2½ percentage points in 1992 (Table 1). The annual development of consumer prices in the major EU countries illustrates this *convergence* (Figure 4).

The *inflation differentials* based on GDP deflators or on unit labor costs were lower than those based on consumer prices: on the one hand, consumer prices are influenced directly by import prices (the latter dropped more sharply in hard-currency countries than in the soft-currency countries); on the other hand, labor costs in soft-currency countries were moderated by high unemployment in these countries. As a result, *aggregate price levels* in the EU barely changed (Figure 2). At 2 percent p.a., the real appreciation (based on unit labor costs) of the soft currencies was far lower than the average inflation differential, based on consumer prices[4].

Between 1987 and 1992, *exports*, *investments*, and *total production* in the hard-currency countries expanded more rapidly than in the soft-currency countries (Table 1). The growth differential was 1½ to 2 percentage points. A large part of these differentials result from the *asynchronous development of economic activity* in the early 1990s: while Great Britain and the Scandinavian countries were struggling with a deep recession in 1990 and 1992, the German economy experienced the "reunification boom" in 1990-1991 (Figures 4 and 5).

Between 1981 and 1987, the real exchange rates of the soft-currency countries declined by 3 percent p.a. relative to the hard-currency countries; between 1987 and 1992, however, they rose by a bare 1½ percent p.a. (Table 1). These statistics suggest that the medium-term impact of movements in real exchange rates on economic activity was less pronounced in the second period than in the first period.

The economic performance of the EU as a whole appears, however, to have been improved by the stabilization of exchange rates, i.e., the establishment of monetary conditions favorable to the expansion of trade and investment. While total production in the EU rose by less than 2 percent per year in the 1981–1987 period, it expanded by almost 3 percent in 1987–1992. *Exports and imports*, (i.e., primarily intra-EU trade) and *investment* expenditures were the major components supporting this medium-term acceleration in growth: in the phase of stable exchange rates the growth rate of these aggregates was 2 percent higher than between 1981 and 1987 (Table 1).

The favorable economic development of the EU between 1987 and 1992, in turn, facilitated the maintenance of stable exchange rates (this holds true at least until the onset of the asynchronous development within Europe in 1990).

The economic performance of the EU countries between 1987 and 1992 was considerably boosted by the stabilization of exchange rates.

Cyclical factors were not the main reason why growth in the period 1987-1992 exceeded growth in 1981-1987: the unfavorable development in 1992, the last year of the recession in the early 1980s, reduced the average growth rate over the period 1981-1987 of investment, exports, and aggregate output by less than ½ percentage point. The asynchronous development of economic activity in the early 1990s hardly influenced the medium-term growth rate of the EU as a whole between 1987 and 1992 because the recession in Great Britain and Scandinavia in 1990-1992 roughly compensated the (statistical) effect of the reunification boom in Germany 1990–91 on total EU growth.

Relatively high growth in the phase of stable exchange rates was one of the main reasons why in 1988–1992 in

[4] The most important exception was Spain, whose real effective exchange rate climbed by more than 4 percent annually; by contrast, the real effective exchange rate of the British pound and of the Italian lira rose by only 1 percent. It should be noted, however, that most of the appreciation occurred in the period prior to Spain's entry into the EMS in September 1989 (Figure 1).

the EU as a whole the *unemployment rate* and the *budget deficit* (in percent of GDP) were about 1 percentage point lower than in 1982-1987 (Table 1).

THE DE-FACTO COLLAPSE OF THE EUROPEAN MONETARY SYSTEM 1992–1993

In 1989, the *"Delors Plan"* on the three-stage introduction of a *monetary union* in the EU was presented:

- In stage 1 EU currencies were to fluctuate only within the narrow margin of ±2 25 percent around the central rate against the ECU, although, realignments would remain possible
- In stage 2 real economic convergence should continue to progress, realignments being possible only in "exceptional circumstances"
- In stage 3 exchange rates would be "irrevocably" fixed in a first step and then the Monetary Union was to be completed with the introduction of a common currency[5]

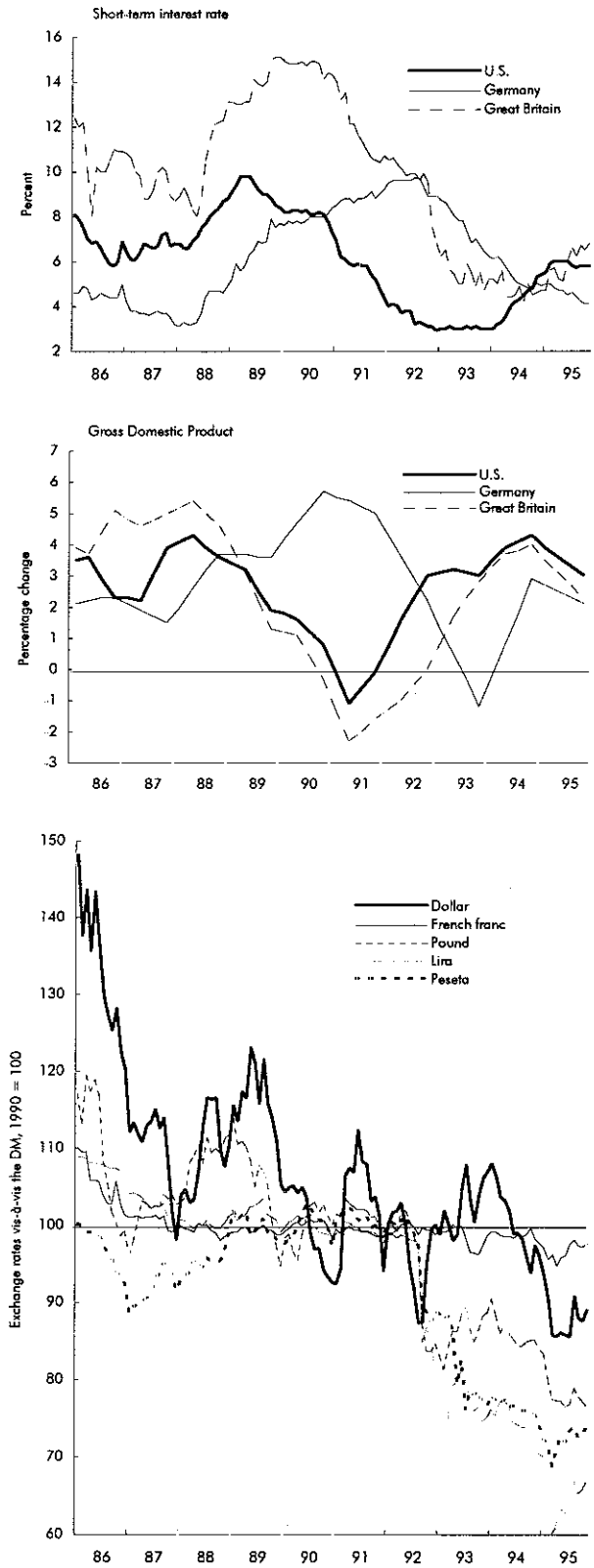
Until 1992 the development went according to plan: Spain, Great Britain, and Portugal joined the ERM. In December 1991 the EU heads of government agreed upon the "Treaty on European Union" that adopted and elaborated the most essential elements of the Delors Plan This treaty was ceremoniously signed in *Maastricht* in February 1992

A few months later the sustained tendency towards increasing monetary and real economic integration was reversed: between September 1992 and August 1993 the ERM de facto collapsed, the pronounced exchange rate shifts splitting Europe into a hard-currency block and the soft-currency countries This monetary disintegration not only exacerbated the recession in 1993, but also caused the hard-currency economies to perform far less favorably than the soft-currency countries ever since

The major reason for the monetary division of Europe was an interplay of different factors:

- asynchronous economic development in the early 1990's,
- differences in the interest rate policies of Germany and the U S resulting thereof,
- neglect of the paneuropean dimension in the interest rate policy of the German Bundesbank,
- orientation of the interest rate policy of the Bundesbank toward the money supply M3,

Figure 3: Dollar, DM, and the collapse of the Exchange Rate Mechanism



[5] See *Bladen-Hovell* (1994) and *Artis* (1994) on the development of the EMS and the history of the Maastricht Treaty

- *"talking the dollar down"* by the Clinton Administration,
- prevalence of *short-term, speculative transactions* in the currency markets, particularly as a result of the increasing use of trading systems based on "technical analysis" (*Schulmeister,* 1988)

In view of the *deterioration of the economic situation,* monetary policy in the U.S and Great Britain were significantly loosened at the end of 1990, while the Bundesbank, fearful of inflationary pressure caused by the reunification further tightened its restrictive policy: in 1991, interest rates in the U S and Great Britain decreased substantially, while further increasing in Germany (Figure 3)

In late 1991, the interest rate differential between the British pound and the DM became so small that monetary policy in Great Britain could not be eased any further, since this would have meant that the value of the pound vis-à-vis the DM could not be maintained any longer Interest rates in the U.S , however, continued to fall while further rising in Germany, thus exerting increasing *pressure on the dollar exchange rate* vis-à-vis the DM. This growing tension was vented a few weeks after the Maastricht Treaty was signed: between March and August 1992, the dollar continued to slip month after month, with a decrease of approximately 15 percent in relation to the other ERM currencies (Figure 3)

This development led to a major deterioration in the economic situation of those European countries that already were in a recession: on the one hand, they could not reduce their interest rates without abandoning the parity to the DM; and on the other hand, their currencies significantly appreciated against the U S dollar (Great Britain and the Scandinavian countries were the countries most strongly affected since their economies are more closely linked to the U S economy than those of the Central European countries)

The ERM crisis in September 1992 was mainly due to the contradiction between the high interest rate policy of the German Bundesbank, which was based on national considerations, and the need for lower interest rates at the European level.

In late June 1992, the *tensions within the ERM* grew further when *a referendum* in Denmark resulted in a "No" to the Maastricht Treaty In view of the possibility that the approaching referendum in France would yield a similar outcome and given the expectation that Italy among all large member states of the EU was the one least able to fulfill the Maastricht criteria, the foreign exchange markets moved against the *lira* and the *franc*

In this situation, the German Bundesbank was expected to set a *symbolic signal for Europe* by decreasing its *key interest rates* (see reports in the Wall Street Journal in the first two weeks of July 1992)

The Bundesbank, however, *increased the discount rate* in mid-July 1992 to the highest level since the end of World War II

The Bundesbank believed that this move was justified by the high increase in the *money supply M3* This increase, however, was partly brought about by the policy of the Bundesbank itself via two channels (see *Board of Governors,* 1995):

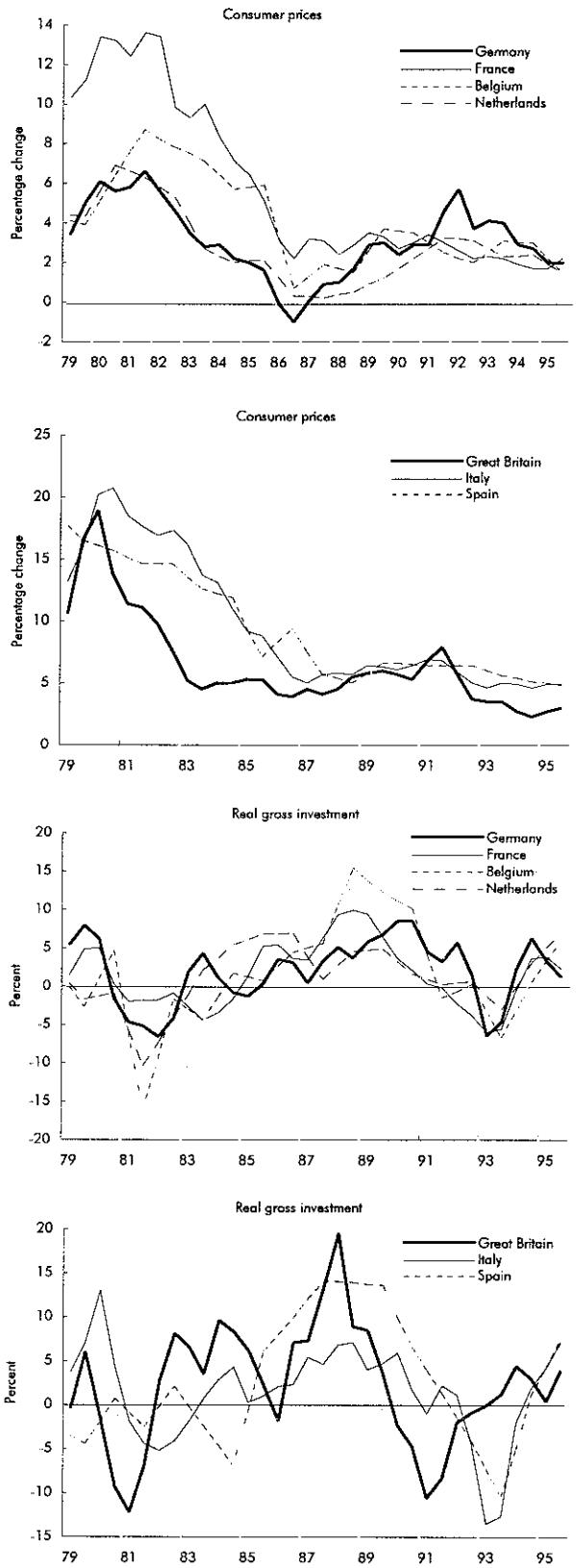
- The high interest rate policy fostered the hope for a DM appreciation and induced *capital flows* which were mainly invested in time deposits (these experienced the highest increase among all M3 components in 1992).
- Since late 1991, as a result of the high interest rate policy, the short-term (money market) rates increasingly exceeded the long-term (bond) interest rates as of late 1991 This "inverse" term-structure of interest rates triggered portfolio shifts from long-term investments to short-term deposits, inducing a further increase in the money supply M3[6]

As a result of the *increase in German key interest rates and growing uncertainty* regarding the further course towards monetary union (especially in view of the referendum in France scheduled for September 20, 1992) the speculative pressure for revaluation of the DM and for devaluation of the British pound, the Italian lira and the French franc mounted rapidly It was not until September 14 that the German Bundesbank slightly lowered the key rates – "in exchange" for a devaluation of the lira At the same time Helmut Schlesinger, the president of the Bundesbank, underscored that there would be no further interest rate reductions in the foreseeable future Furthermore, he did not want to rule out that one or the other currency could come under pressure[7] On the next day, speculation against the British pound and the Italian lira reached such dimensions that both currencies had to withdraw from the ERM.

[6] A third form of "M3-paradox" arises when the main contribution to the growth in M3 comes from savings deposits, as has been the case since mid-1994: if, for example, German households, fearful of becoming unemployed, add to their savings deposits ("precautionary saving") the resulting acceleration of the growth in the quantity of money would prompt the Bundesbank to raise interest rates, thus doing exactly the opposite of what is indicated by a rise in the saving rate, namely an easing of inflationary pressure and a fall in the equilibrium interest rate

[7] This statement was made on September 15 during an interview with the Handelsblatt and the Wall Street Journal According to many commentators outside Germany, its publication on the following day was the main trigger for the partial collapse of the ERM on September 16, 1992 (see Financial Times, dated September 16 and 17, 1992)

Figure 4: Inflation and investment



Thus, the ERM crisis was mainly due to the contradiction between the *high interest rate policy* of the Bundesbank, which was based on *national considerations,* and the *need* for lower interest rates *at the European level* The recession countries suffered primarily from a severe *weakness in investment demand,* which was largely due to the high interest level, and not so much from an unfavorable development of foreign trade. This holds true especially for Great Britain: in 1991, the aggregate *price level* was 15 percent lower than in Germany (Figure 2); the *real effective exchange rate of the British pound* had remained unchanged since 1989 (Figure 1); and there was an upsurge in *exports* during 1992 (Figure 5) The by far most important cause of unabated recession in Great Britain was a plunge in *investment demand* (Figure 4) Boosting investment would have required a sharp cut in interest rates. Given the high interest rate policy of the Bundesbank, such a move became possible only after stable exchange rates had been abandoned (Figure 3).

In the summer of 1993, tensions in the European exchange markets increased again, triggered by a *plunge in the dollar exchange rate:* immediately after president Clinton assumed office, the trade conflict with Japan intensified and the dollar continued its fall – between January and August 1993, its value vis-à-vis the yen dropped by approximately 15 percent (this development was favored by the Clinton administration's policy of *"talking the dollar down"*). In July 1993, the dollar exchange rate began to drop rapidly against the DM as well, the speculative revaluation pressure on the DM within the ERM increasing at the same time. The corresponding devaluation pressure affected not only soft currencies but also and in particular the *French franc* (Figure 3). This development culminated in the abandonment of the narrow bands for exchange fluctuations of the ERM currencies, which were extended from ±2 25 percent to ±15 percent[8].

The sharp dollar devaluation between late 1993 and early 1995 (the dollar fell by more than 20 percent against the DM) deepened the *monetary rift* within the EU: The exchange rates of soft currencies, in particular of the British pound, the Italian lira and the Spanish peseta vis-à-vis the DM dropped to the lowest levels ever (Figure 3).

ECONOMIC PERFORMANCE IN THE EU UNDER FLOATING EXCHANGE RATES

From 1992 onwards, soft currencies became cheaper vis-à-vis the DM by an average of 8½ percent a year While

[8] For further information on the role of the German Bundesbank in the destabilization of the ERM see *Avesani – Gallo – Salmon* (1994) and *Bladen-Hovell* (1994)

their *nominal effective exchange rate* fell by 6½ percent per year, that of the hard-currency block increased by approximately 3 percent p a. (Table 1) As opposed to the period 1973-1986 *consumer prices* in the soft-currency countries rose only 2 percent faster than in the hard-currency block despite the enormous exchange rate changes.

The difference in the development of *unit labor costs* as opposed to earlier phases of unstable exchange rates is even more astonishing: they *did not* increase more rapidly than in the hard-currency block so that the nominal and real effective exchange rates in the various countries developed *at the same pace* (with the exception of Greece) In total, the real-effective exchange rates of the soft-currency countries dropped by 6 percent per year, whereas they increased by 3 percent p.a in the hard-currency block (Table 1)

Moderate wage increases in the soft-currency countries can be attributed to the fact that not only *unemployment* but also *budget deficits* and *public debts* are much higher in soft-currency countries than in the hard-currency block In order to fulfill the Maastricht criteria, soft-currency countries need to pursue a particularly restrictive fiscal policy. The hardships of an increase in unemployment resulting therefrom can be alleviated if the soft-currency countries succeed in improving their price competitiveness through nominal *devaluations* and *moderate wage increases*, thus creating more jobs *at the expense of the hard-currency countries*

Real exchange rate fluctuations within the EU resulted in significant *shifts* in the aggregate price level (Table 1): The GDP of soft-currency countries was "cheaper" than in Germany by 15 percent in 1992 and by 31½ percent in 1995. At the same time, price levels of (other) hard-currency countries declined relative to that of Federal Republic, although only by an overall 3 percent This means that the German price level has increased relative to all major EU partners, mainly due to the strong appreciation of the DM (Figure 2)

The changes in price competitiveness within the EU had a considerable impact on the real economy. Overall exports of the soft-currency countries increased by 9 percent p.a. between 1992 and 1995, while they rose by a mere 3 percent annually in the hard-currency countries. This development contributed to *economic growth* of the soft-currency countries which was by ½ percentage point p a higher than in the hard-currency block (Table 1, Figure 5)

Table 1: Economic performance of hard- and soft-currency countries

	Hard-currency countries	Soft-currency countries	Hard-currency countries	Soft-currency countries	Hard-currency countries	Soft-currency countries
	1981-1987		1987-1992		1992-1995	
	Average percentage change					
Exchange rates						
Vis-à-vis the DM	- 3 8	- 7 8	- 0 2	- 1 4	- 0 5	- 8 6
Nominal effective	+ 1 6	- 4 7	+ 0 8	- 0 7	+ 2 8	- 6 5
Real effective	+ 1 5	- 1 5	+ 0 2	+ 1 9	+ 3 1	- 5 9
Consumer prices	+ 3 9	+ 9 5	+ 2 9	+ 6 8	+ 2 5	+ 4 6
Real exports	+ 2 8	+ 4 8	+ 6 8	+ 4 5	+ 3 2	+ 9 1
Real imports	+ 3 3	+ 5 7	+ 6 3	+ 6 5	+ 2 5	+ 4 3
Real gross investment	+ 1 0	+ 2 8	+ 4 4	+ 2 7	+ 0 3	- 0 4
Real GDP	+ 1 7	+ 2 6	+ 3 4	+ 2 1	+ 1 3	+ 1 9
Real prime rate (%)	5 0	4 3	6 7	5 5	5 9	5 0
Real long-term interest rate (%)	4 7	4 1	5 3	4 8	4 3	6 2
Unemployment rate (%)	8 5	11 6	7 8	10 5	9 9	12 8
Budget deficit (% of GDP)	3 0	6 5	2 5	5 2	4 2	7 5
Gross public debt (% of GDP)	47 1	60 1	51 5	67 1	62 7	84 2
Current Account (% of GDP)	1 0	- 0 5	1 1	- 2 3	0 5	0 1
Price level (FRG = 100)	97 5	81 5	96 6	85 9	95 2	72 2
Without Germany (FRG = 100)	95 4		93 8		91 1	
	Hard-currency countries	Soft-currency countries	Hard-currency countries	Soft-currency countries	Hard-currency countries	Soft-currency countries
	1987		1992		1995	
	Percent					
Real growth of GDP	+ 1 7	+ 4 0	+ 1 8	+ 0 2	+ 2 0	+ 3 0
Rate of inflation (CPI)	+ 1 5	+ 5 5	+ 3 5	+ 6 0	+ 1 9	+ 4 2
Real prime rate	5 6	4 7	7 0	6 8	5 2	5 2
Real long-term interest rate	5 1	4 7	4 5	6 3	4 8	6 8
Unemployment rate	7 5	10 3	8 4	11 5	9 8	12 6
Budget deficit (% of GDP)	2 9	5 1	3 5	6 9	3 9	6 3
Gross public debt (% of GDP)	52 5	68 0	54 8	74 5	66 1	85 8
Current account (% of GDP)	1 3	- 0 8	0 0	- 2 1	0 7	0 4
Price level (FRG = 100)	96 2	78 6	96 2	85 7	94 6	68 4
Without Germany (FRG = 100)	94 1		93 0		90 1	

Real exchange rate fluctuations within the EU resulted in significant shifts in the overall price level. The GDP of soft-currency countries was "cheaper" than in Germany by 15 percent in 1992 and by 31½ percent in 1995. Germany's price level increased relative to all major EU partners.

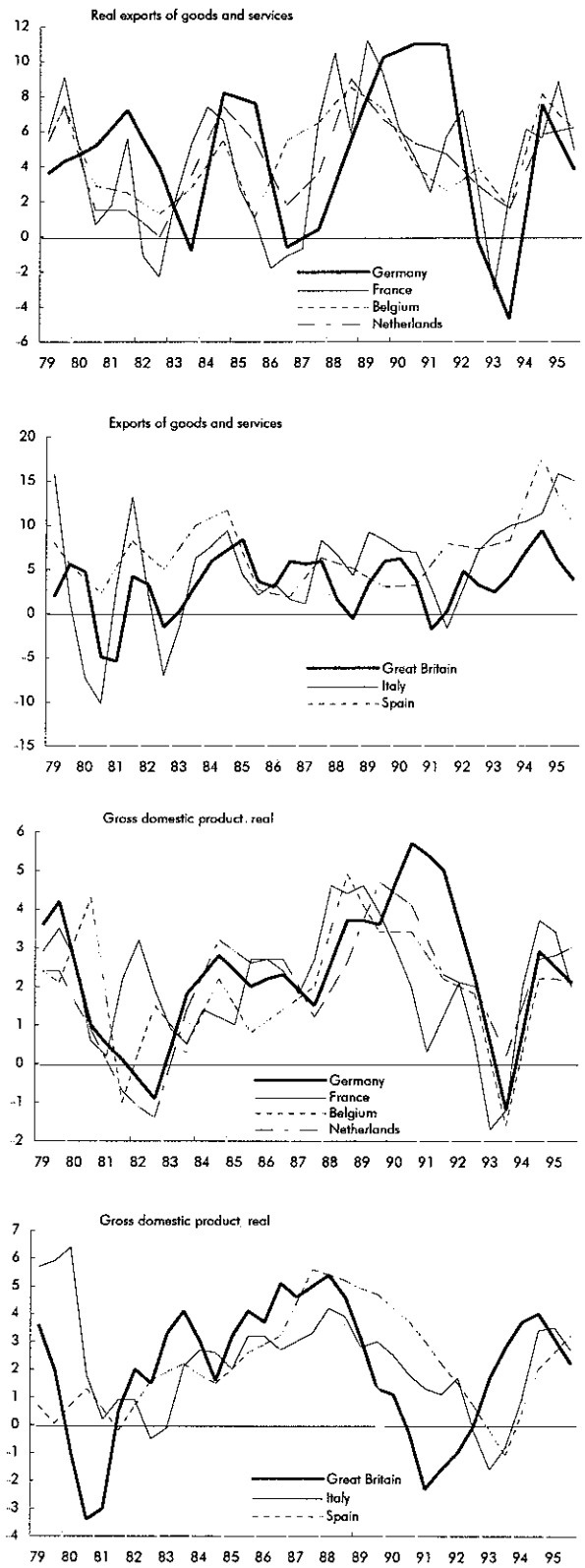
The improvement in the *current account balance* of soft-currency countries by 2½ percentage points of GDP between 1992 and 1995 facilitated budget consolidation. Public deficits in the hard-currency block increased by ½ percentage point of the GDP, whereas in the soft-currency countries it decreased by the same amount (Table 1).

The difference in the *performance* of hard and soft-currency countries between 1992 and 1995 was also the result by cyclical factors: in 1993 Great Britain and the Scandinavian countries experienced a period of economic recovery, while the recession bottomed out in most of the hard-currency countries (Table 5). A comparison between Germany and Italy however – the business cycle in these two countries was similar – shows, that exchange rate fluctuations constituted a major cause of the divergence in economic developments within the EU since 1992.

In Germany, with a real effective *appreciation* of the DM by 5½ percent a year, exports increased by 2 percent annually between 1992 and 1995, the deficit in current account remained unchanged, the unemployment rate rose by almost 2 percentage points and the budget deficit grew by approximately ½ percentage point of GDP. In *Italy*, exports increased by 12 percent annually (the real effective lira depreciation amounted to 10 percent per year), the current account balance improved by 4½ percent, and the budget deficit dropped by 2 percentage points of GDP; the unemployment rate rose by less than 1 percentage point. Since 1993, the economy has recovered at a faster pace than in Germany: in 1995, economic growth in Italy amounted to 3 percent as compared to a mere 2 percent in Germany.

Economic activity in the *EU* was apparently weakened by the destabilization of exchange rates[9]. Economic growth in the years 1992-1995 amounted to 1½ percent per year, half as much as in the period between 1987 and 1992. Although this difference in growth was also brought about by the *cyclical factors*, especially the recession in 1993, it can be argued that monetary destabilization aggravated the recession. Furthermore, the existing forecasts give reason to believe that inter-

Figure 5: Exports and Gross Domestic Product
Percentage changes from previous year



[9] The EU Commission estimates the growth losses caused by exchange rate instability at 0.25 to 0.5 percent for 1995 (*EU Commission*, 1995).

European frictions caused by the destabilization of exchange rates will continue to depress economic growth at least *for the next two years*.

Despite the creation of the Single Market, the expansion rate of *intra-EU trade* from 1992 to 1995 may have considerably *decreased* as compared to the period 1987–1992: exports and imports of EU countries grew at almost the same pace from 1987 to 1992, whereas imports since 1992 have increased at a rate of 2½ percentage points p.a. lower than the rate recorded for exports (+6 percent p.a.). Since the current account balance of almost all EU members improved between 1992 and 1995, it can be assumed that exports to third countries have increased greatly (*EU Commission*, 1995)

The average *unemployment rate* in the EU during the years 1993-1995 was higher by 2 percentage points than in 1988-1992. Higher unemployment contributed to the deterioration of *budget deficit* of EU members; the average EU deficit (as a percentage of GDP) during the years since 1992 exceeded the deficit during the period of stable exchange rates by 2 percentage points (Table 1)

THE FUTURE DEVELOPMENT OF THE MONETARY SYSTEM IN EUROPE

At the moment, the conditions for the future economic development of *Germany* are quite unfavorable. *Economic growth* is diminishing, *unemployment* is on the rise, and *budget consolidation* cannot be carried out as scheduled. This development can be largely attributed to the destabilization of exchange rates since 1992: amongst all EU currencies, the DM experienced the *highest appreciation*. Measured in common currency, the aggregate price level in Germany is by 50 percent higher than in the U.S. and the European soft-currency countries and by some 10 percent than in the other hard-currency countries of the EU (Table 1, Figure 2)

If the European Monetary Union fails, the German economy will probably suffer particularly high losses. Should the current growth deceleration in the EU develop into a full-blown recession, the budget deficit of all major countries would again increase considerably and there would be only a likelihood that the third stage of the transition to a Euro-currency would be carried out before the year 2000. Rising unemployment could lead to a sharp *rise in competition* between EU countries for investment, production, and jobs. As a result, the efforts of soft-currency countries to stabilize their currencies vis-à-vis the DM would diminish, considering that *unemployment* in these countries is especially high.

Under these circumstances, the *exchange rate of the DM* would probably rise, thus aggravating Germany's position as business location. Such a development could *jeopardize* the close cooperation between Germany and France, in particular the stability of the franc's exchange rate vis-à-vis the DM.

Even if this scenario does not reflect the most probable course of events – based on the currently available information –, the chances of it becoming a reality have increased since mid-1995 (*Schulmeister*, 1996). A preventive measure would be to *further reduce German key rates* for the following reasons:

- The prime rate in Germany is currently 6½ percent, that is, 3 percent above the nominal growth rate; as a result of the *"dynamic budget constraint"* – applicable to all debtor sectors –, such a constellation would render companies more reluctant to invest by borrowing additional funds (*Schulmeister*, 1995).
- A marked decrease in lending rates would improve the *profitability* of German business – which came under considerable pressure as a result of the overvaluation of the DM
- Since the DM is Europe's de-facto key currency, driving down Germany's interest rates would lead to a similar *interest rate decrease throughout Europe*
- Lower DM interest rates could also lead to a *correction of the disparities* between hard and soft currencies. In any case, a cut in interest rates would weaken the upward pressure on the DM

Since interest rate payments are *production costs* and a "demand pull inflation" is unlikely to arise in view of free production capacities, interest rate cuts – just as all cost reductions in general – would further suppress inflation; this is all the more true in view of the overvaluation of the DM[10].

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Exchange Rate Regime and Economic Activity in the European Union – Summary

Between 1982 and 1986, the weaker European currencies were devalued substantially in a number of realignments At the same time, consumer prices and unit labor costs in the countries concerned rose above average, making for a decline in the real effective exchange rate by only 1½ percent p.a , while the latter increased by the same amount in the hard-currency countries. Although exports and investment in the countries of weaker currency were stimulated by these devaluations, GDP of the EU as a whole expanded by hardly 2 percent p a over the period 1981–1987

From 1987 to 1992 when exchange rates remained stable inflation differentials between soft- and hard-currency countries abated gradually, while trend GDP growth in the EU accelerated to almost 3 percent p.a Stable framework conditions for intra-EU trade have been largely responsible for this outcome

Between September 1992 and August 1993 the EMS de facto collapsed, mainly due to the fact that the policy of high interest rates pursued by the Bundesbank was oriented towards developments in Germany, while disregarding the need for lower interest rates in EMS partner countries, particularly in the U.K

Unlike in earlier phases of exchange rate instability unit labor costs since 1992 have not advanced by more than in the hard-currency block, resulting in a large shift in price competitiveness: between 1992 and 1995, the real effective exchange rate of the hard-currency area rose by an average 3 percent p.a. while that of the other EU countries fell by 6 percent p.a. Over the same period, total exports of the soft-currency area increased by an annual 9 percent, those of the hard-currency block by only 3 percent.

Growth of real economic activity in the EU as a whole has been dampened by exchange rate instability: between 1992 and 1995, real GDP advanced 1½ percent p.a., only half the amount of the 1987-1992 period. Expansion of intra-EU trade, too, has been slower in the latter period – despite the establishment of the Single Market – than during the period of stable exchange rates

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OPENING UP OF EASTERN EUROPE AND EASTWARD ENLARGEMENT OF THE EU

THE IMPACT ON AUSTRIA

The opening up of Eastern Europe and the trade liberalization initiated at the same time have caused considerable adjustment pressure in some sectors of the Austrian economy. Overall, however, Austria has taken advantage of its additional export chances. Due to the CEECs' low level of development, future enlargement of the EU towards Eastern Europe will burden the EU budget (particularly with respect to the areas of CAP and structural policies). From the Austrian point of view the "optimal enlargement package" would consist of its four neighboring countries, i.e., Czech Republic, Hungary, Slovenia and Slovakia. The cost of their accession would be more than compensated by economic benefits for the Austrian economy in the long run.

Two economic projects will keep the European Union on the move in the near future. One is European monetary union with the introduction of a single currency in Europe, the other is European eastward enlargement.

For the latter, the stage has already been set. In June 1993 in Copenhagen the European Council made the basic decision "that the associated countries in Central and Eastern Europe that so desire shall become members of the European Union". The conditions for membership are the acceptance and implementation of the EU's "acquis communautaire". The following Council meetings reinforced this invitation. At the summit in Essen in December 1994 the European Council offered the Central and East European countries (CEECs) a "structured dialogue". The European Commission presented to them a catalogue of tasks in the "White Paper on the Eastern Enlargement" of May 3, 1995, focusing on legal preparations for becoming full members of the Single Market. At the European Council summit in Cannes, which took place on June 26-27, 1995, the associated states were invited to participate in the discussions for the first time. In December 1995 in Madrid the

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European Council discussed the cost of enlargement in the case of the Common Agricultural Policy (CAP) The Council not only reaffirmed its commitment to enlargement as "both a political necessity and a historic opportunity for Europe", but also took practical decisions, such as the evaluation by the Commission of the effects of enlargement; requesting the Commission to express its opinions about the applications for membership; the possible start of negotiations after the conclusion of the 1996 Intergovernmental Conference (see also *Ludlow – Fenech-Adami – Vassiliou,* 1996).

By the end of 1995, Europe Agreements (EAs) had been concluded with ten CEECs, six of which (Bulgaria, Poland, the Czech Republic, Hungary, Romania, and Slovakia) had already come into force in February 1994 and February 1995, respectively According to Article 238 of the EC Treaty, the EU establishes an association with the CEECs by concluding Europe Agreements They are based on a structure common for all CEECs. The preambles contain an "option of accession" ("... having in mind that the final objective of (name of CEEC) is to become a member of the Community and that this association, in the view of the Parties, will help to achieve this objective, . ") Although all steps had been prepared, the EU neither defined a timetable for accession, nor did it reveal its preferences whether all ten CEECs should become members at the same time, or whether a step-by-step solution should be followed Nearly everybody agrees that the economic cost of immediate admission by ten CEECs at the same time is too high. Nine CEECs – Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia – have already formally applied for EU membership.

On the one hand, the European Union's eastward enlargement involves considerable costs, but on the other hand – like any kind of integration – it offers the opportunities of a larger market with the prospect of more trade, of economic growth and thus of welfare gains for society as a whole This study tries to estimate the possible effects of EU's eastward enlargement on the Austrian economy The impact which the opening up of Eastern Europe had on the Austrian economy after the breakdown of communism in 1989 may be seen as an indicator for the possible future effects of eastward enlargement Thus the first part of this study is an analysis of the effects which the new situation in the East had on the Austrian economy during the years 1989 to 1994 In the second part we try to quantify possible effects in the EU of CEEC membership on the Austrian economy, calculated for the period 2000 to 2008 The simulation of future integration effects is carried out using the WIFO macroeconomic model As baseline scenario we use an updated version of the medium-term forecast by the Austrian Institute of Economic Research (WIFO) (*Schebeck,* 1995), which implicitly assumed association status (via Europe Agreements) for the CEECs

The decision which candidate among the CEECs should be first to enter the EU, or how many countries should be considered to enter at the same time, as well as when this should happen, is highly political. Many think that the first membership of a CEE country is not feasible before 2010 Each EU country has different preferences. Germany, for example, would prefer Poland, the Scandinavians favor the Baltic states The southern EU members are interested in free trade arrangements with the African Mediterranean countries (cf. Euro-Mediterranean Conference in Barcelona, November 27–28, 1995) Most probably, a grand deal will have to be struck between the northern members because of their greater proximity to the East, and the southern EU members. It is more plausible that the EU will favor a step-by-step solution, in order not to overburden its institutions and budget

OPENING UP OF THE EAST: THE AUSTRIAN EXPERIENCE, 1989 TO 1994

REORIENTATION OF EU COMMERCIAL POLICY

The collapse of communism in 1989 and the dissolution of the CMEA in 1991 led to a political vacuum in trade relations between East and West The EU filled this vacuum rather quickly by reorientating its commercial policy toward the CEECs. As early as in 1989-1990 it concluded trade and co-operation agreements with most of the CEECs, followed by Interim Agreements between the EU and certain CEECs in 1992 regulating the asymmetric tariff reductions for industrial goods (see *Breuss,* 1995, Tables 1 and 2; *EC,* 1994; *Breuss – Tesche,* 1994) These Interim Agreements were the forerunners of association agreements ("Europe Agreements"), which came into operation in 1994 and 1995, respectively, for six CEECs Economic relations gained a new quality, as in addition to the intended liberalization of east-west trade, certain elements of the Single Market conception were regulated already (free movement of goods and services, of labor and unrestricted establishment of enterprises, as well as some agricultural aspects) The Europe Agreements may be regarded as preliminary steps to participation in the Single Market, despite the fact that they ignore harmonization of the legal aspects of competition It was sometimes suggested that – as an intermediate step in adjusting to the EU's acquis – a modified European economic area (EEA) could be as helpful for the CEECs as it had been the case of the new EU entrants Austria, Finland and Sweden, but CEEC politicians always wanted to get no less than full EU membership.

As a result of the Interim and Europe Agreements, east-west trade in basic industrial products between the EU and the CEECs has been free of tariffs (about 50 percent of the EU's imports of industrial goods from the CEECs) since January 1993. Trade barriers (tariffs and quotas) for certain sensible products and for steel, coal and textiles, and apparel will be abolished by 1996 and 1997, respectively. Analogous to the EU's efforts, the EFTA states also concluded free trade agreements with the CEECs, whose integration quality, however, is considerably lower compared to the Europe Agreements. As a result of trade liberalization between the East and the EU, bilateral trade increased: from a share of EU exports to the CEECs of 2.9 percent out of total third-country exports in 1990, to 7.4 percent in 1994. The share of EU imports from the CEECs increased from 2.8 percent to 6.3 percent (*Eurostat*, 1995).

AUSTRIA'S RELATIONS WITH THE CEECS

IMPROVED TRADE POSITION

Since January 1, 1995 Austria has been an EU member. Up to 1994 Austria had been a member of EFTA. Thus the liberalization of trade with the CEECs was determined by free trade agreements analogous to those of other EFTA members. As a consequence of trade relations during the Austro-Hungarian monarchy, Austria's trade was strongly linked with its former provinces during the years between the two world wars. In 1937, 53.3 percent of Austria's overall exports went to Western Europe, and 32.9 percent to Eastern Europe (including Yugoslavia). Austria imported roughly the same amount from Western and from Eastern Europe (40.4 percent and 39.7 percent, respectively; see *Breuss*, 1983, pp. 366-367). Shortly after World War II roughly 20 percent of Austria's trade was conducted with Eastern Europe. Then this share declined steadily until the ratification of the State Treaty in 1955. After a gradual increase of trade shares with the East, exports settled at about 15 to 20 percent and imports at 10 percent. At the same time, due to progressing European integration, Austria's trade with Western Europe increased constantly to three quarters of total trade. On the export side, Austria's trade with the East (COMECON) reached its peak in 1975 with a share of 20 percent; in the same year imports from the COMECON amounted only to 10.3 percent of overall imports. In the following period, balance-of-payments restrictions due to increasing debt forced the Eastern countries to reduce their imports. This policy was reflected in a steady decrease of Austrian exports to the East (see Table 1) to a share of 9.6 percent in the year 1988. Imports decreased to 6.9 percent in 1988 (Table 1).

Austria's exporters have taken advantage of the new situation presented by the opening up of the eastern borders. In 1994 Austrian exports to the former East European countries reached a peak with a share of 13.6 percent. As import penetration did not increase at the same pace (share of imports from the East 8.5 percent in 1994), Austria achieved a high surplus in its balance of trade with Eastern Europe (ATS 16.5 billion in 1994), after years of balanced trade before the historic changes in the East (see Table 1).

Table 1: Austria's trade relations with eastern Europe

	1937[1]	1970	1980	1988	1994
			Percent of total exports		
Austria's exports to eastern Europe					
Former ČSFR	7.10	2.16	1.35	1.22	
Czech Republic					2.62
Slovakia					0.88
Poland	4.30	1.56	2.68	0.97	1.17
Hungary	9.10	2.81	2.18	1.78	3.91
Bulgaria	0.80	0.93	0.67	0.63	0.26
Romania	5.60	1.64	1.13	0.13	0.29
6 CEECs	26.90	9.10	8.01	4.73	9.13
Former Yugoslavia	5.40	4.64	3.26	2.03	2.61
Slovenia					1.56
Estonia					0.02
Latvia					0.02
Lithuania					0.02
10 CEECs					10.75
Former USSR	0.60	2.87	2.73	2.88	1.84
Eastern Europe	32.90	16.61	14.00	9.64	13.58
			Percent of total imports		
Austria's imports from eastern Europe					
Former ČSFR	11.00	1.90	1.85	1.34	
Czech Republic					1.80
Slovakia					0.66
Poland	4.60	1.63	0.98	0.94	0.82
Hungary	9.00	1.68	1.38	1.41	2.04
Bulgaria	0.90	0.31	0.19	0.08	0.11
Romania	6.00	0.81	0.43	0.19	0.21
6 CEECs	31.50	6.33	4.83	3.96	5.64
Former Yugoslavia	7.90	1.40	0.81	1.04	0.92
Slovenia					0.65
Estonia					0.00
Latvia					0.00
Lithuania					0.00
10 CEECs					6.31
Former USSR	0.30	2.24	4.20	1.91	1.91
Eastern Europe	39.70	9.97	9.84	6.91	8.47
			Million ATS		
Trade balance with eastern Europe					
Former ČSFR	– 73.0	– 147.5	– 2 785.4	–1 359.2	
Czech Republic					2 136.4
Slovakia					366.7
Poland	– 14.0	– 345.4	2 948.8	– 515.6	855.5
Hungary	– 20.0	540.8	572.6	457.0	7 219.2
Bulgaria	– 4.0	404.9	930.3	2 067.5	627.9
Romania	– 19.0	469.7	1.176.2	– 331.0	198.8
6 CEECs	–130.0	922.5	2.842.5	318.7	11 404.5
Former Yugoslavia	– 49.0	2 147.4	4 802.7	3 105.8	7 628.6
Slovenia					3 940.9
Estonia					39.5
Latvia					75.9
Lithuania					42.3
10 CEECs					15 503.1
Former USSR	+ 2.0	66.3	– 7 085.1	2 389.1	– 2 525.4
Eastern Europe	–177.0	3 136.2	560.1	5.813.6	16 507.7

6 CEECs: Former ČSFR, Poland, Hungary, Bulgaria, Romania. 10 CEECs: 6 CEECs + Slovenia, Estonia, Latvia, Lithuania. – [1] *Breuss* (1983) p. 367 p. 370

Overall, Austria has been a winner in trade with the East since 1989. A look at different economic sectors reveals problems in those industries where the CEECs were able to exploit their comparative advantages. Particularly concerned were products like cement, steel, textiles and clothes, as well as agricultural machines (see *Aiginger, 1995, Dietz – Havlik, 1995*). Quota regulations and anti-dumping measures by Austria were an attempt to gain time and to adapt these branches to the new circumstances. The liberalization of east-west trade has revealed a clear pattern of comparative advantages: Austria's comparative advantage lies in exporting products intensive in capital, human capital or high technology, whereas the eastern countries offer more favorable conditions for products intensive in labor, energy and raw materials. The complementary character of east-west trade has sharply declined since 1989. Austria increasingly imports manufactures from the CEECs, while at the same time reducing its imports of raw materials and fuels from these countries. There are already some signs of increased intra-industry trade between the CEECs and the EU (see *Breuss, 1995, p. 6, Eurostat, 1995*).

FOREIGN DIRECT INVESTMENT: ENHANCING OR REPLACING TRADE?

Not only has Austria intensified its trade relations with the East since 1989, it also has increasingly engaged in direct investment in the CEECs (see *Stankovsky, 1995*). Whereas Austria is a marginal investor country in an international context (the share of its FDI in that of all industrial countries amounted to 1 percent in 1991–1993), its share of total western FDI in the CEECs amounted to 10 percent. However, the question whether FDI in Eastern Europe will substitute exports of the West or stimulate additional western exports is undecided both theoretically (*Neary, 1995*) and empirically (*Pfaffermayr, 1995, Stankovsky, 1996*; for a similar line of argument see *Baldwin, 1994, Sheehy, 1994*). Therefore the ex-post analysis of eastern transformation is based on the hypothesis that Austria's increasing foreign direct investments in the CEECs have had a neutral effect on foreign trade.

THE OVERALL ECONOMIC IMPACT

First, the opening up of Eastern Europe primarily had a *"trade creation effect"*. Assuming that Austria's exports to and imports from Eastern Europe had stabilized at their pre-1989 shares (9.5 percent on the export side, 7 percent on the import side), the difference to the actual development is considered as the "direct trade creation effect". Therefore, until 1994, real GDP increased by 1.3 percent and – implying a productivity increase by 0.6 percent – the number of newly created jobs amounted to 20,000 (+0.7 percent). The current account improved by 0.2 percent of GDP until 1994.

Second, the historical and political changes in Eastern Europe after its opening-up also made German reunification possible. In order to quantify the total economic impact of political and economic change in Eastern Europe since 1989, we therefore add to the "direct trade creation effects" on Austria two further effects: those of *German unification* and of increased *immigration*. The growth impulses from German unification are incorporated by assuming that it caused additional growth of real GDP in Germany of 2 percent in the years 1990 and 1991, respectively; we also assumed a spill-over to Europe leading to real GDP being 0.5 percent higher in 1990 and 1991, and 0.2 percent higher in 1992. The breakdown of communism and opening-up of the East also induced a flow of immigration. For the period 1989 to 1994 we assumed an additional influx of about 100,000 immigrants, but of this only a small part can be directly attributed to the opening-up process.

According to our ex-post model simulations, trade creation, German unification and immigration had the following overall economic effects in Austria (Table 2): Cumulative, from 1989 to 1994, the transformation processes in the East contributed to an increase of real GDP by 2.4 percent[1]. The additional net export impulse stimulated production and income and caused an increase in domestic demand by 1.9 percent. The number of employees increased by 1.9 percent[2], i.e., 56,000 persons[3]. The "trade creation effect" alone increased Austria's real GDP by 1.3 percent and created 20,800 (+0.7 percent) new jobs.

Because of an even stronger 3.9 percent increase of the labor force due to migration, the unemployment rate increased by a considerable 1.8 percentage points. Excess labor supply (due to migration) exerted pressure on wage dynamics and restrained the upturn of prices to 0.9 percent, measured by the CPI. The current balance clearly improved due to the positive effects of transformation in the East (by 0.2 percent of GDP until 1994). With the gradual deceleration of unemployment after 1992, transfer expenditures for social purposes could be reduced, which slightly eased the burden on the budget. Up to the year 1994, net lending improved by 0.5 percent of GDP.

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[1] In spite of somewhat different assumptions *Schebesch – Wörgötter* (1995) in their IHS macromodel simulations reach similar results (in 1990-1995 +2.2 percent additional real GDP).

[2] *Schebesch – Wörgötter* (1995) calculate an increase of 1.7 percent or 50,000 persons.

[3] In an earlier study WIFO estimated the net employment effect of Eastern Europe's opening-up to be +15 000 persons (*Kramer – Peneder – Stankovsky, 1993, p. 17*).

Table 2: Opening up of eastern Europe

Direct trade effects, impact of German unification and of immigration

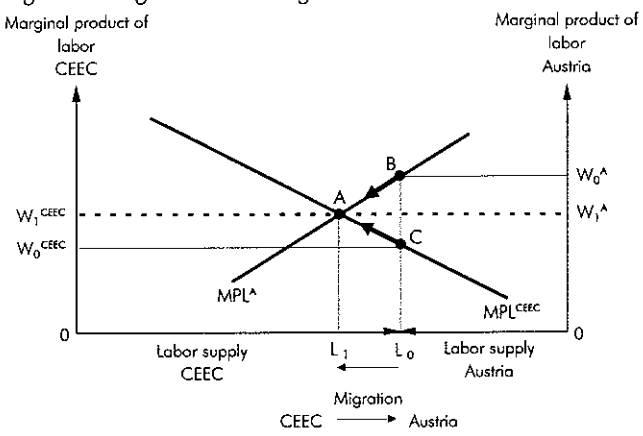
	1989	1990	1991	1992	1993	1994
	Deviations from baseline scenario					
Real private consumption	+ 0 0	+ 0 3	+ 0 6	+ 0 8	+ 1 0	+ 1 3
Real government consumption	+ 0 0	+ 0 1	+ 0 2	+ 0 3	+ 0 4	+ 0 4
Real gross fixed investment	– 0 0	+ 0 7	+ 1 4	+ 2 3	+ 3 6	+ 4 5
Real exports of goods and services	+ 0 0	+ 1 7	+ 3 0	+ 3 7	+ 4 4	+ 5 0
Goods	+ 0 0	+ 2 2	+ 3 6	+ 4 4	+ 5 4	+ 6 1
Real imports of goods and services	+ 0 0	+ 1 3	+ 2 2	+ 2 6	+ 3 2	+ 3 8
Goods	– 0 0	+ 1 5	+ 2 5	+ 3 1	+ 3 8	+ 4 5
Real gross domestic product (GDP)	+ 0 0	+ 0 5	+ 1 1	+ 1 6	+ 2 1	+ 2 4
Current balance (percent of GDP)	– 0 0	+ 0 1	+ 0 2	+ 0 2	+ 0 3	+ 0 2
Private consumption deflator	± 0 0	– 0 2	– 0 5	– 0 8	– 0 9	– 0 9
GDP deflator	± 0 0	– 0 3	– 0 8	– 1 2	– 1 3	– 1 3
Terms of trade: goods	+ 0 0	– 0 1	– 0 2	– 0 3	– 0 3	– 0 3
Real disposable income	+ 0 0	+ 0 6	+ 1 1	+ 1 4	+ 1 6	+ 1 9
Compensation of employees (percent of national income)	– 0 0	– 0 4	– 0 9	– 1 1	– 1 1	– 1 1
Dependent employment	+ 0 0	+ 0 2	+ 0 6	+ 1 0	+ 1 5	+ 1 9
In 1.000	+ 0 1	+ 6 4	+17 0	+30 3	+44 2	+56 3
Unemployment rate	+ 0 3	+ 1 4	+ 2 3	+ 2 3	+ 2 0	+ 1 8
Labor productivity	+ 0 0	+ 0 3	+ 0 5	+ 0 6	+ 0 6	+ 0 6
Net lending						
Percent of GDP	– 0 0	– 0 1	– 0 1	+ 0 1	+ 0 4	+ 0 5
Billion ATS	– 0 7	– 1 3	– 1 4	+ 2 0	+ 7 0	+11 0

The figures for GDP, deflators, disposable income of households, dependent employment and labor productivity indicate the cumulative deviations of simulation scenarios from the baseline scenario in the n-th year in percent, whereas the figures for current balances, terms of trade, compensation of employees, the unemployment rate and net lending are shown as percentage point deviations

IMMIGRATION

Shortly after the breakdown of communism in 1989 a new wave of "push-migration" (*Zimmermann,* 1995) swept from east to west. It only ebbed down when most European countries constrained the influx (*Breuss – Tesche,* 1996). In 1989 Austria's overall labor supply increased by 1.4 percent, in 1990 and 1991 by 2.8 percent, in 1992 by 2.1 percent, and it slowed down to 0.9 percent in 1993 and 0.3 percent in 1994. The model simulations are based on the assumption that, as a consequence of immigration, the labor supply expanded by approximately 100,000 persons in the period 1989 to 1992, the majority coming from former Yugoslavia and Turkey and only a small part from the CEECs (see also *Biffl,* 1992, 1995).

Figure 1: Migration and wage level



In an ideal two-country model allowing only the factor of labor to be internationally mobile, open borders will induce migration if there is a considerable wage gap between the two countries. Due to the huge wage gap between Eastern w_0^{CEEC} and Western Europe (in our case Austria: $w_0^{\wedge}$) of around 1:10 this assumption is plausible. The influx of labor from East to West (in the figure the move from B and C to A) reduces the excess supply of labor in the East and increases that of the West. The consequence is a tendency to equilibrate the wage level – in the ideal case the result is a complete equalization of the factor price of labor $w_1^{CEEC} = w_1^{\wedge}$.

The effects of migration can be analysed by two different approaches: by microeconomic or general equilibrium analysis and by macroeconomic analysis. The present study uses the latter approach. The target country is faced with an increasing excess labor supply, which generally leads to a reduction of the price of labor. The country of origin is confronted with the inverse situation (see Figure 1). However, the actual effect on unemployment and wages is contingent upon the respective wage regime (rigid or flexible) and upon the parallel development of factor capital in the target country (expansion of production capacity). There are also differences between short-term, medium-term and long-term effects. When wages and employment are fixed in the short term, immigration will lead to an increase in the labor supply and thus to higher unemployment. In the medium and the long run flexible wages may reduce unemployment (see *Weyerbrock,* 1995, and *Breuss – Tesche,* 1994 and 1996, for the case of Austria and Hungary).

The individual effects of an immigration of 100,000 persons during the period 1989 to 1994 can be summarized as follows (Table 3): Austria's wage flexibility increased considerably. The strong influx of labor during

Table 3: Economic impact of immigration after the opening up of eastern Europe

	1989	1990	1991	1992	1993	1994
	Deviations from baseline scenario					
Real private consumption	+ 0 0	+ 0 1	+ 0 2	+ 0 1	+ 0 1	+ 0 0
Real government consumption	+ 0 0	+ 0 0	+ 0 1	+ 0 2	+ 0 2	+ 0 2
Real gross fixed investment	– 0 0	– 0 2	– 0 4	– 0 3	+ 0 1	+ 0 3
Real exports of good and services	+ 0 0	+ 0 1	+ 0 2	+ 0 3	+ 0 3	+ 0 2
Goods	+ 0 0	+ 0 0	+ 0 1	+ 0 2	+ 0 2	+ 0 1
Real imports of goods and services	+ 0 0	+ 0 0	– 0 0	– 0 0	+ 0 0	+ 0 1
Goods	– 0 0	– 0 0	– 0 0	+ 0 0	+ 0 2	+ 0 2
Real gross domestic product (GDP)	+ 0 0	+ 0 0	+ 0 1	+ 0 2	+ 0 2	+ 0 2
Current balance (percent of GDP)	– 0 0	– 0 0	+ 0 8	+ 0 0	– 0 0	– 0 0
Private consumption deflator	± 0 0	– 0 1	– 0 4	– 0 5	– 0 6	– 0 6
GDP deflator	± 0 0	– 0 2	– 0 6	– 0 8	– 0 9	– 0 9
Terms of trade: goods	– 0 0	– 0 1	– 0 2	– 0 2	– 0 2	– 0 2
Real disposable income	+ 0 0	+ 0 2	+ 0 3	+ 0 3	+ 0 2	+ 0 1
Compensation of employees (percent of national income)	– 0 0	– 0 2	– 0 5	– 0 7	– 0 6	– 0 6
Dependent employment	+ 0 0	+ 0 0	+ 0 1	+ 0 3	+ 0 5	+ 0 6
In 1 000	+ 0 1	+ 1 0	+ 3 9	+ 9 0	+14 2	+18 0
Unemployment rate	+ 0 3	+ 1 5	+ 2 6	+ 2 6	+ 2 4	+ 2 3
Labor productivity	± 0 0	± 0 0	± 0 0	– 0 1	– 0 3	– 0 4
Net lending						
Percent of GDP	– 0 0	– 0 2	– 0 3	– 0 3	– 0 3	– 0 2
Billion ATS	– 0 7	– 3 7	– 6 6	– 6 3	– 4 9	– 4 1

The figures for GDP, deflators, disposable income of households, dependent employment and labor productivity indicate the cumulative deviations of simulation scenarios from the baseline scenario in the n-th year in percent, whereas the figures for current balances, terms of trade, compensation of employees, the unemployment rate and net lending are shown as percentage point deviations.

the years 1989 to 1992 soon led to a clear reduction of wages Compared to the baseline scenario, between 1989 and 1992 wages/salaries per employee dropped by 2¼ percent. As a consequence, the excess supply of labor could be partly absorbed The downward pressure on wages/salaries per employee cushioned the upward trend in prices, which led to a slight increase in total real demand Until 1994, real GDP rose by 0.2 percent. The sharp increase in unemployment burdened the budget by rising unemployment benefits However, with restrictions of access to the Austrian labor market some alleviation set in

EU EAST EUROPEAN ENLARGEMENT: ITS IMPACT ON THE AUSTRIAN ECONOMY, 2000 TO 2008

HOW TO DEAL WITH INTEGRATION EFFECTS IN TRANSITION ECONOMIES?

Economic literature provides a variety of approaches to dealing empirically with trade effects caused by integration. The gravitation model, representing one of these approaches, explains bilateral trade flows by five determinants as follows:

1 GDP per capita in both countries should approximately measure the fact that the more similar countries are in their economic development, the more intensive the exchange between them will be (Linder hypothesis) In a special case this variable may also explain the proportion of intra-industrial trade.

2 The two countries' GDPs are measuring incomes.

3 Population,

4 Distance,

5 Degree of liberalization.

This model predicts that countries which had close trade relations with eastern countries before World War II, will revert to the former trade intensity when trade barriers are removed (liberalization according to the Europe Agreements or EU membership); *Hamilton – Winters* (1992) forecast a fourfold increase in the bilateral trade potential between the EU and the CEECs (see also *Gasiorek – Smith – Venables,* 1994) However, it is not made clear how long it would take to realize these predictions In our model simulations for Austria we try to numerically predict the consequences of the CEECs' entry into the EU until the year 2008 The starting point (and main input) of our calculations are estimates of integration effects on CEEC foreign trade by *Landesmann – Pöschl* (1995). Using a balance-of-payments restricted growth model developed by *Thirlwall* (1979) they designed two scenarios (association and EU membership) for five CEECs Taking the trade flows estimated for these scenarios (Table 4) we calculated Austrian exports to and imports from these countries

Instead of relying on a specific integration theory in deriving the growth effects for the CEECs in the case of EU membership, *Landesmann – Pöschl* (1995, pp. 319-320) estimate the growth potential of these countries by applying a modified Thirlwall model Accordingly, EU membership relaxes the balance-of-payments constraints and allows for higher GDP growth. The relaxation is working through the following channels:

- Accelerated catching-up in productivity and product quality;
- Faster wage adjustment;
- More rapid modernization of the goods structure in foreign trade with an increased share of intra-industrial trade;
- Expansion of the trade in services;

Table 4: Growth and trade scenarios for CEECs

		EU membership									Europe Agreement (association)							
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2000	2001	2002	2003	2004	2005	2006	2007	2008
		Percentage changes from previous year																	
Czech Republic	GDP	+ 7 8	+ 7 7	+ 7 7	+ 6 7	+ 7 8	+ 6 8	+ 5 9	+ 4 8	+ 4 6	+ 5 8	+ 5 5	+ 5 2	+ 4 9	+ 4 7	+ 4 5	+ 4 3	+ 4 1	+ 3 9
	Exports	+ 2 5	+ 2 7	+ 2 6	+ 2 5	+ 2 4	+ 2 4	+ 2 3	+ 2 3	+ 2 2	+ 2 2	+ 2 1	+ 2 0	+ 1 9	+ 1 8	+ 1 8	+ 1 7	+ 1 7	+ 1 6
	Imports	+ 9 9	+10 1	+10 2	+ 9 1	+10 6	+ 9 5	+ 8 6	+ 7 4	+ 7 3	+ 7 6	+ 7 4	+ 7 2	+ 7 0	+ 6 9	+ 6 8	+ 6 6	+ 6 5	+ 6 4
Slovakia	GDP	+ 7 7	+ 7 5	+ 7 6	+ 6 8	+ 7 8	+ 7 0	+ 6 5	+ 5 8	+ 5 9	+ 5 0	+ 5 0	+ 5 0	+ 5 0	+ 5 1	+ 5 2	+ 5 2	+ 5 2	+ 5 3
	Exports	+ 5 9	+ 6 1	+ 6 2	+ 6 4	+ 6 6	+ 6 9	+ 7 1	+ 7 4	+ 7 7	+ 3 9	+ 4 3	+ 4 6	+ 5 0	+ 5 4	+ 5 8	+ 6 1	+ 6 5	+ 7 0
	Imports	+14 9	+14 4	+14 3	+12 5	+14 1	+12 4	+11 0	+ 9 4	+ 9 2	+10 6	+10 2	+ 9 9	+ 9 6	+ 9 3	+ 9 0	+ 8 7	+ 8 3	+ 7 9
Hungary	GDP	+ 6 0	+ 6 0	+ 6 9	+ 7 2	+ 8 2	+ 8 0	+ 7 6	+ 6 5	+ 6 2	+ 5 2	+ 5 4	+ 5 3	+ 5 2	+ 5 1	+ 5 0	+ 4 9	+ 4 9	+ 4 8
	Exports	+ 6 6	+ 6 3	+ 6 3	+ 6 2	+ 6 2	+ 5 9	+ 5 7	+ 5 6	+ 5 5	+ 6 1	+ 6 0	+ 5 8	+ 5 7	+ 5 6	+ 5 5	+ 5 5	+ 5 4	+ 5 4
	Imports	+ 4 5	+ 4 6	+ 5 7	+ 6 1	+ 7 4	+ 7 4	+ 7 2	+ 6 1	+ 5 8	+ 3 1	+ 3 7	+ 3 7	+ 3 6	+ 3 6	+ 3 6	+ 3 5	+ 3 6	+ 3 6
Slovenia	GDP	+ 7 2	+ 7 1	+ 7 1	+ 6 5	+ 7 2	+ 6 7	+ 6 3	+ 5 8	+ 5 8	+ 5 0	+ 4 9	+ 4 9	+ 4 9	+ 4 9	+ 4 9	+ 4 9	+ 4 9	+ 5 3
	Exports	+ 9 3	+ 9 0	+ 8 8	+ 8 5	+ 8 3	+ 8 1	+ 7 9	+ 7 8	+ 7 6	+ 7 8	+ 7 6	+ 7 5	+ 7 3	+ 7 2	+ 7 1	+ 6 9	+ 6 8	+ 6 7
	Imports	+11 1	+10 8	+10 8	+ 9 8	+11 0	+10 0	+ 9 2	+ 8 3	+ 8 2	+ 7 2	+ 7 1	+ 7 0	+ 6 9	+ 6 8	+ 6 8	+ 6 7	+ 6 6	+ 6 7
Poland	GDP	+ 6 7	+ 6 7	+ 6 6	+ 6 5	+ 6 1	+ 5 7	+ 5 3	+ 5 1	+ 4 8	+ 5 1	+ 5 0	+ 4 9	+ 4 9	+ 4 9	+ 4 9	+ 4 8	+ 4 7	+ 4 6
	Exports	+ 7 5	+ 7 5	+ 7 3	+ 7 1	+ 6 9	+ 6 7	+ 6 5	+ 6 4	+ 6 3	+ 6 2	+ 6 1	+ 6 1	+ 6 0	+ 5 9	+ 5 9	+ 5 8	+ 5 8	+ 5 7
	Imports	+ 4 5	+ 4 7	+ 4 9	+ 5 0	+ 4 8	+ 4 5	+ 4 2	+ 4 1	+ 3 9	+ 3 3	+ 3 4	+ 3 3	+ 3 5	+ 3 6	+ 3 6	+ 3 7	+ 3 7	+ 3 6

Source: *Landesmann – Pöschl* (1995)

- Increased FDI in the CEECs and easier access to international capital markets;
- Reduced importance of exchange rate changes as a policy instrument;
- Access to the EU market improving export possibilities.

EFFECT OF CEEC MEMBERSHIP IN THE EU ON THE AUSTRIAN ECONOMY

ASSUMPTIONS FOR MODEL SIMULATIONS

In order to evaluate the macroeconomic effect of CEEC membership in the EU on the Austrian economy, simulations are made with the WIFO macro model. This model was used several times to deal with similar problems, such as estimating the consequences of Austria's EU membership (*Breuss – Kratena – Schebeck,* 1994). Unfortunately, the WIFO macro model does not provide regional specification and disaggregation of foreign trade, because series on foreign trade prices for regions are not available in Austria.

To arrive at the total effects of CEEC membership in the EU a number of impulses must be taken into consideration:

1 Direct trade effects (trade creation): the input is Austria's additional export caused by EU entry of the CEECs; it is derived from the scenarios by *Landesmann – Pöschl* (1995) mentioned above.

2 Indirect trade effects: trade creation takes place not only in Austria but also in the rest of the EU, thus additional demand spills over to Austria.

3 Cost of the CEECs' EU membership: CEEC participation in the EU's internal market will considerably increase transfers (for the CAP and structural funds) within the EU. This means a markedly greater burden on the old members.

4 The transfer problem: the inflow of (additional) transfers from structural funds and payments within the CAP to the CEECs additionally relieves restrictions imposed by the current account, thus enabling more economic growth and the creation of additional trade.

In order to grasp *direct trade effects* the following technical assumptions were made:

- Foreign trade flows at current prices between Austria and the CEECs in 1994 are taken as starting values.
- Using deflators for total exports and imports, trade flows are transformed in terms of constant 1983 prices.
- Applying the growth rates for exports and imports of each CEEC estimated by *Landesmann – Pöschl* (1995, Appendix, Tables 6.2.1 to 6.2.5), time series for real trade flows between those countries and Austria are calculated. This procedure implies that these trade flows grow at the same rate as the CEECs' total exports and imports, and that Austria keeps constant shares in CEEC markets.

The following model inputs result from these assumptions: if four CEECs (Czech Republic, Hungary, Slovakia, Slovenia) enter the EU by the year 2000, Austria's exports and imports of goods will be 2 percent and 0.3 percent, respectively, higher in 2008. If Poland is included, the effect will hardly become stronger (2.1 and 0.4 percent). Any influence of the remaining CEECs (Bulgaria, Romania and the Baltic states) can be neglected owing to their small relevance for Austria's foreign trade (Table 1).

To estimate the *indirect trade effect,* it is assumed that trade creation in the EU caused by its eastward enlargement will affect economic growth only half as much as was estimated for Austria. This assumption is roughly confirmed by simulations with the OEF world model (*Breuss,* 1995, p. 5).

To estimate the cost of enlargement arising for Austria if the CEECs join the EU, we rely on calculations made by Breuss (1995, Table 5). For this it is assumed that the CEECs enter the EU (and join the CAP) under slightly modified conditions[4]. Probably, by the time the CEECs become EU members, the CAP will have been reformed and the conditions under which structural funds are appropriated will have changed. Therefore, estimates by Breuss may be considered to represent an upper limit. However, estimates by other authors are even higher (*Baldwin,* 1994). In the year 2000 10 CEECs would receive net transfers amounting to ECU 30 billion or 0.4 percent of the EU's GDP (15 members), which corresponds to 3.1 percent of the Union's budget. We simply assume that this additional burden is distributed equally among the 15 EU members. We assume further that in the course of improving economic development accompanied by additional reforms of the common agricultural and structural policies, the burden on the old members could be halved. Hence, we anticipate that the needed reforms in these fields will take place.

In the year 2000, the net transfer requirements for four CEECs would be ECU 9.1 billion, for Poland 8.5 billion and for the remaining CEECs (Bulgaria, Romania and the three Baltic states) 12.7 billion (Table 5).

[4] In December 1995, at the European Council meeting in Madrid, the European Commissioner, Franz Fischler, presented a strategic paper on the impact of enlargement on the CAP. In case of integrating CEEC agriculture in an unchanged CAP the budgetary impact is estimated at ECU 9 billion in 2000 and at 12 billion per year after a transition period until 2010 (*Agra-Europe,* 1995). According to estimations by *Breuss* (1995), the CAP cost would amount to ECU 12.2 billion per year, starting in 2000.

Table 5: The cost of EU enlargement by the CEECs in 2000

	EU budgetary expenditures					EU budgetary receipts		Net payments	
	CAP	Structural policy	Others	Total		Total			
	Million ECU	Million ECU	Million ECU	Million ECU	Percent of GDP	Million ECU	Percent of GDP	Million ECU	Percent of GDP
Belgium	1 075	510	2 838	4 423	1 90	3 676	1 58	747	0 32
Denmark	1 720	170	367	2 257	1 48	1 834	1 20	423	0 28
Germany	6 019	3 401	4 997	14 417	0 67	27 184	1 27	–12 767	- 0 60
Greece	4 300	3 740	144	8 183	11 50	1 281	1 80	6 902	9 70
Spain	4 730	6 120	1 083	11 933	2 23	6 435	1 20	5 498	1 03
France	9 460	2 379	2 839	14 678	1 10	17 130	1 28	- 2 452	- 0 18
Ireland	1 720	3 204	121	5 045	8 41	1 139	1 90	3 906	6 51
Italy	3 053	4 726	2 175	9 953	0 96	11 880	1 15	- 1 927	- 0 19
Luxembourg	22	34	955	1 011	7 15	212	1 50	799	5 65
Netherlands	2 580	170	768	3 518	1 05	5 539	1 65	- 2 021	- 0 60
Portugal	1 290	5 780	194	7 264	7 59	1 483	1 55	5 781	6 04
Great Britain	4 456	2 720	2 282	9 459	0 91	12 488	1 20	- 3 029	- 0 29
Austria	1 004	401	401	1 806	0 90	2 569	1 28	- 763	- 0 38
Finland	1 003	358	236	1 597	1 36	1 508	1 28	89	0 08
Sweden	566	287	378	1 230	0 65	2 417	1 28	- 1 187	- 0 63
EU 15	*42 997*	*34 000*	*19,778*	*96 775*	*1 28*	*96 775*	*1 28*	*0*	*0 00*
Percentage shares	*44 4*	*35 1*	*20 5*	*100 0*					
	Estimates of the cost of the CEEC's EU membership (including structural change CAP reform Uruguay round)								
Bulgaria	417	835	33	1 285	10 23	161	1 28	1 124	8 95
Czech Republic	904	1 625	136	2 664	5 10	669	1 28	1 996	3 82
Hungary	2 166	2 848	150	5 165	8 94	739	1 28	4 425	7 66
Poland	3 290	6 480	327	10 097	8 04	1 608	1 28	8 490	6 76
Romania	3 957	6 163	104	10 223	25 68	510	1 28	9 714	24 40
Slovakia	396	1 705	46	2 147	12 21	225	1 28	1 921	10 93
6 CEECs	11 130	19 656	794	31 581	10 34	3 911	1 28	27 670	9 06
Slovenia	313	648	50	1 011	5 23	248	1 28	764	3 95
Estonia	198	351	17	566	8 44	86	1 28	480	7 16
Latvia	260	423	20	703	9 21	98	1 28	605	7 93
Lithuania	299	541	20	859	11 36	97	1 28	762	10 08
10 CEECs	12 200	21 618	902	34 720	10 01	4 439	1 28	30 281	8 73
Net receipt in percent of EU's GDP (EU budget)									
6 CEECs								0 37	(28 59)
10 CEECs								0 40	(31 29)

Source: *Breuss* (1995)

With the enlargement of the EU a *"transfer problem"* will arise. The funds flowing to the new member states according to the rules of the CAP and of structural funds are earmarked. As is well known from the classical debate between Keynes and Ohlin on transfers after World War I, the problem is how much of the transfers flows back as payment for imports from the donor countries (see *Krugman – Obstfeld*, 1994, pp 98-100). It is assumed that the CEECs will use roughly half of the net transfers received for imports. Thus, the restrictions imposed by the current account can be smaller than the values estimated by *Landesmann – Pöschl* (1995). Therefore, given the market shares in the new member states, additional demand for Austrian exports will arise.

Integration effects on tourism, direct investment and migration are not taken into consideration. Practically no net effects on tourism are expected from the CEECs' EU membership. As far as direct investment is concerned, it is not clear whether direct investment substitutes or induces exports. If EU social policy is going to be highly harmonized (nearly equal labor market conditions; Council directive concerning the posting of workers in the framework of the provision, COM/93/225 FINAL-SYN 346) the incentives to migrate from the CEECs to old EU countries will diminish. Moreover, regulated migration during a transition period is possible. Therefore, we decided to neglect the migration problem in our simulations.

Given the assumptions described so far, simulations are run for three alternative packages of countries entering the EU simultaneously at the beginning of the year 2000:

1. *4 CEECs package*: Czech Republic, Hungary, Slovakia and Slovenia join the EU.
2. *5 CEECs package*: The above group is supplemented by Poland.
3. *10 CEECs package*: Bulgaria, Romania and the Baltic states join in addition to the other CEEC members.

SIMULATION RESULTS

The results of the simulations are summarized in Table 6. Here we present only the cumulative results at the end of the simulation period. In *Breuss – Schebeck* (1995A, 1995B) one can find also the effects for each year for the period 2000 to 2008.

After nine years, i e , in 2008, the simulation summing up all effects of an EU access of *four CEECs* results in a

cumulative increase of real GDP by 1.5 percent. This increase is composed of a direct trade effect of +0.8 percent, an indirect trade effect of +0.4 percent and demand effects induced by transfers of +0.3 percent. Exports of goods improve by 3.5 percent and stimulate domestic demand via multiplier effects (+1.5 percent). This increase is distributed differently on the components of demand. While gross fixed capital formation exceeds the respective level in the baseline scenario by 3 percent, real expenditures of private households are only 1 percent higher. Increased domestic and foreign demand induce additional imports (+3 percent). Therefore, the current account of the balance of payments could only improve slightly (by 0.1 percentage points of GDP in 2008). Increased total production is also reflected in the labor market: dependent employment steps up by 1 percent, i.e., 30,000 employees, and the rate of unemployment decreases somewhat provided that CEEC integration does not give rise to a push in productivity.

In general, there is some concern that the burden of the costs which new EU members impose on the old members' government budgets cannot be compensated by additional tax receipts emanating from stimulated economic activity. As the simulation for the case of entry by 4 CEECs shows, the general government deficit would increase only slightly in the beginning, but in the course of time improvement would set in leading to a lower deficit (0.5 percentage points of GDP) than in the baseline solution. Until the year 2008 this favorable result depends on the assumption of diminishing transfers to the new member countries and on the fact that no inflation-curbing effects are expected from eastward enlargement. With prices increasing at a slower pace, tax receipts would be lower. Normally, it is assumed that more integration means more competition and, therefore, reduced inflation (see the case of Austria's EU entry; *Breuss – Kratena – Schebeck,* 1994).

For Austria, the economic effects of a CEE entry into the EU depend on two initial conditions: the higher Austria's market share in a country is, the bigger are the respective trade and growth effects; the lower a country's degree of development, the larger are transfers in the framework of CAP and structural funds, and, therefore, the larger the burden on the Austrian government budget. While in the case of an EU membership of *four CEECs* trade creation dominates adverse budget effects, the contrary is true if other CEECs enter the EU. This is strikingly seen in the case of *Poland*. The trade-creating impulse amounting only to ¼ percent of Austrian exports cannot induce any effects on economic growth or employment. However, the burden on the general government budget would be significant. Beginning with ATS 2 billion in the first year, the rise in annual deficits is reduced to ATS 1 billion until the year 2008. Nevertheless, at the end of the simulation period 14 billion of additional government debt will have accumulated.

Table 6. EU membership of CEECs
Economic impact on Austria in 2008

	4 CEECs[1]		Poland	5 CEECs[2]	10 CEECs
	Direct effects[3]	Total effects[4]		Total effects[4]	
	Cumulative deviations from the baseline scenario				
Real private consumption	+ 0.6	+ 1.1	+ 0.1	+ 0.1	+ 1.4
Real government consumption	+ 0.0	+ 0.1	– 0.0	– 0.0	+ 0.1
Real gross fixed investment	+ 1.5	+ 2.9	+ 0.2	+ 0.1	+ 3.2
Real exports of goods and services	+ 1.7	+ 2.9	+ 0.2	+ 0.1	+ 3.2
Goods	+ 2.0	+ 3.5	+ 0.2	+ 0.1	+ 3.8
Real imports of goods and services	+ 1.7	+ 2.9	+ 0.2	+ 0.2	+ 3.3
Goods	+ 1.9	+ 3.2	+ 0.3	+ 0.2	+ 3.6
Real gross domestic product (GDP)	+ 0.8	+ 1.5	+ 0.1	+ 0.1	+ 1.7
Current balance (percent of GDP)	+ 0.1	+ 0.1	– 0.0	– 0.1	– 0.1
Private consumption deflator	– 0.1	– 0.1	± 0.0	± 0.0	– 0.1
GDP deflator	± 0.0	± 0.0	+ 0.0	± 0.0	+ 0.1
Terms of trade: goods	– 0.0	± 0.0	± 0.0	± 0.0	± 0.0
Real disposable income	+ 0.8	+ 1.4	+ 0.1	+ 0.1	+ 1.7
Compensation of employees (percent of national income)	– 0.3	– 0.4	– 0.0	– 0.0	– 0.5
Dependent employment	+ 0.5	+ 0.9	+ 0.1	+ 0.1	+ 1.1
In 1.000	+155	+302	+ 22	+ 19	+343
Unemployment rate	– 0.2	– 0.4	– 0.0	– 0.0	– 0.4
Labor productivity	+ 0.3	+ 0.6	± 0.0	± 0.0	+ 0.6
Net lending					
Percent of GDP	+ 0.3	+ 0.5	– 0.0	– 0.1	+ 0.4
Billion ATS	+12.1	+19.4	– 1.1	– 3.9	+14.4

The figures for GDP, deflators, disposable income of households, dependent employment and labor productivity indicate the cumulative deviations of simulation scenarios from the baseline scenario in the n-th year in percent whereas the figures for current balances, terms of trade, compensation of employees, the unemployment rate and net lending are shown as percentage point deviations.

Source: *Breuss – Schebeck* (1995B). – [1] Slovenia, Slovakia, Czech Republic, Hungary. – [2] Bulgaria, Romania, Estonia, Latvia, Lithuania. – [3] Trade creation. – [4] Direct and indirect trade effects and effects of transfers to the CEECs.

If Poland is also included in the group of new EU members, Austria's real GDP could be 1.6 percent higher in 2008.

Owing to poor trade relations between Austria and the *remaining CEECs* (Bulgaria, Romania and the Baltic states) expected trade-creating effects of their EU entry are insignificant. Only the transfers to these countries could slightly stimulate foreign trade (0.1 percent more exports from Austria).

According to the simulations, the five CEECs considered here produce similar integration effects as Poland. Real GDP and the number of employees could each be only 0.1 percent higher. However, increase in the government's household deficit would be twice as high as in the case of Poland's EU membership.

Full integration of all CEECs into the EU would positively affect the Austrian economy. In 2008 real GDP would be 1.7 percent higher. The initial growth impulse in 2000 would be 0.5 percent followed by 0.2 percentage points of additional average annual increases of GDP in the years thereafter. As a consequence of the net transfers to all ten CEECs, Austria's general government deficit would increase for four years, but afterwards positive effects would prevail. Still, it should be kept in mind that these

positive effects are solely due to the integration of the four neighboring countries

CONCLUSIONS

With these simulations a first attempt was made to evaluate the possible effects which the EU's eastward enlargement could have on the Austrian economy As it is rather unlikely that ten CEECs will become EU members at the same time, eastward enlargement was simulated in three steps. Negotiations with the CEECs are expected to start just after the 1996 Intergovernmental Conference The first step analyses the economic consequences for Austria if the neighboring countries (Hungary, the Czech Republic, Slovenia and Slovakia) enter the EU These are the most developed CEECs and the countries maintaining the most intensive trade relations with Austria

Therefore, Austria would experience considerable positive integration effects, even if unavoidable costs (CAP, structural funds) are taken into consideration. Trade creation would induce economic growth leading to higher tax receipts which would more than compensate additional budgetary expenditures.

If Poland and other CEECs were to join the EU, Austria would have to provide considerable funds for transfers in its government budget and would only profit from a minor trade-creating effect

These conclusions are valid for Austria only Other EU members maintaining different trade relations with the CEECs would prefer a different sequence of entry into the EU Finland's foreign trade with the Baltic states is very intensive and Germany's exchange with Poland exceeds that of Austria by far.

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Opening up of Eastern Europe and Eastward Enlargement of the EU: The Impact on Austria – Summary

Liberalization of East-West trade since the breakdown of communism in 1989 has made Austria a net gainer. Its net exports to the East increased considerably, resulting in a trade surplus of ATS 16.5 billion in 1994, after years of balanced trade before 1989. Although in some sectors the comparative advantages of suppliers from Central and East European countries (CEECs) drove domestic firms out of the market, the Austrian economy as a whole benefited from the opening up of Eastern Europe. According to model simulations, taking into account not only trade creation effects of the opening up of Eastern Europe but also indirect effects via German unification as well as immigration effects, Austria's real GDP has risen by 2.4 percent in the five years since 1989. The export-induced additional output led to the creation of 56,000 new jobs in the whole economy. However, the immigration flows accompanying the liberalization process have pushed up labor supply and hence unemployment.

Besides the completion of the European Monetary Union, the next big challenge for the EU is eastward enlargement by possibly ten associated CEECs. The most likely approach will be step-by-step membership of the CEECs, starting with the most advanced countries. Although there is no exact timetable for negotiations with the CEECs, one may expect the first talks to begin after conclusion of the 1996 Intergovernmental Conference. From the Austrian perspective, the four neighboring countries Czech Republic, Hungary, Slovakia and Slovenia would form an economically "optimal package" of new members. Taking into account not only the possible integration effects of a larger market, but also the additional cost of EU membership of CEE countries arising from their participation in the CAP and in structural policy, the article concludes that full EU membership of these four CEECs would lead to an increase of real GDP in Austria by 1.5 percent after nine years, starting in the year 2000. The initial budgetary costs of membership would in the long run be more than offset by additional tax revenues due to higher growth.

From the perspective of the Austrian economy, any further enlargement would be a net burden, with the costs of membership outweighing the benefits. The reasons for this are manifold: First, Austria is only a marginal trading partner of the other CEECs. Second, the other CEECs (Bulgaria, Poland, Romania and the Baltic states) are less developed than the four neighbors and therefore would claim more resources from structural funds. Simulation of EU membership for all ten CEECs still shows a positive net effect for the Austrian economy. Austria's real GDP would rise by 1.7 percent after nine years, with the integration effect offsetting the high cost of CEEC membership.

JAN STANKOVSKY

THE ROLE OF FOREIGN DIRECT INVESTMENT IN EASTERN EUROPE

Private foreign direct investment (FDI) is one of the major instruments to support successful transformation to a market economy in Eastern Europe and to reduce the gap in living standards vis-à-vis the West. The total end-of-1995 stock of FDI in Eastern Europe is estimated at US$ 38 billion. Companies operating with foreign capital frequently attain higher levels of productivity than domestic ones. The pattern of growth in Eastern Europe exhibits no straightforward correlation between growth dynamics and the size of FDI. There are actually cases where such capital flows may have negative side-effects.

Cross border direct investment by multinational corporations has become a vital and particularly dynamic element of the modern global economy. *UNCTAD* (1995) estimates that (outward) new foreign investments reached US$ 222 billion in 1993, bringing up the total stock of foreign investments to US$ 2,135 billion. Some 40,000 parent companies operate altogether 250,000 foreign affiliates, which rang up sales of US$ 5.2 trillion in 1993. Of the US$ 4.76 trillion in estimated global exports of goods and commercial services, US$ 1.59 trillion (33.3 percent) came from intra-company trade (i.e., between parent and affiliates), US$ 1.56 trillion (32.6 percent) from exports by parents and affiliates to non-affiliated companies, and just US$ 1.62 trillion (34.1 percent) from exports by "other" companies.

THE ROLE OF CROSS BORDER DIRECT INVESTMENT IN A MODERN GLOBAL ECONOMY

Multinationals view FDI primarily as a tool to help them improve their competitiveness. With increasing globalization of the economy, businesses are faced with ever more brisk competition not just for their share of exports but also domestically. In order to survive, even small and medium-size enterprises need to go global. Apart from exports, their strategy must be cross border co-operation, especially by direct investment.

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Strengthening the multinationals' competitive position may, in a macroeconomic view, enhance the general performance of the countries involved Key parameters in this respect are capital transfer, capacity to innovate and absorb new technologies and skills, and improvements in the organizational structure and management performance (*UNCTAD,* 1995) Obviously, however, the investor country's view will not always match that of the host country

No clear results can be obtained from studies of the macroeconomic impact of cross border direct investment as seen from the investor countries, although most conclude that this type of investment promotes economic growth Direct foreign investment accelerates the pressure for innovation and often contributes to restructurization The earnings achieved and transferred by the affiliates have a positive impact on the general wealth (*UNCTAD,* 1995). *Baldwin* (1994) summarizes an overview of several studies as follows: "The view of most economists seems to be that no firm conclusion is warranted about the net employment effects of direct foreign investment Broad generalizations are difficult because of the very different employment effects one obtains from various plausible alternative assumptions about what will happen in the absence of foreign investment and what the magnitude of increased imports by the host country from the investing country will be "

Several studies found no straightforward link between outward direct investments and exports According to Messerlin (quoted in *Baldwin,* 1994), French foreign direct investment is concentrated in industries where jobs were created through foreign trade. *Döhrn* (1994) concludes that foreign investments made by German companies "continue to be sales-oriented and are therefore complementary rather than substitutional to German foreign trade, although cost, in the course of the 1980s, appears to have increased its importance as a determinant for direct investment" *Pfaffermayr* (1995) finds a similar complementary link between Austrian FDI and exports. Direct investment delivers more momentum to export than export does to FDI Negative effects of active direct investments are described in a report by Senator Arthuis from France: He finds a connection between unemployment and relocation of operations. His suspicion, fiercely disputed under the heading of "delocalization", has so far failed to be confirmed (cf *UNCTAD,* 1994, specifically p. 188)

THE HOST COUNTRY PERSPECTIVE

Foreign direct investment increases the economic capacity of a host country. It usually leads to the transfer of resources in the form of capital, technology, research, management, etc In doing so, it raises production capacities and improves product quality in the host country. Positive effects stem from easier market access enjoyed by the parent company and from restructurization (*UNCTAD,* 1995)

Host countries expect foreign direct investment to contribute to their economic growth This link was studied by, i a., *Borensztein – De-Gregorio – Lee* (1995) on the basis of data relating to direct investments by industrialized states in 69 developing countries over 20 years According to this study, FDI is an outstanding instrument of technology transfer and makes a marked contribution to economic growth

FDI's contribution to growth may be the result of two effects: "First, FDI could add to capital accumulation, and thus to economic growth. And second, FDI could contribute to economic growth if it is more productive, or efficient, than domestic investment" (p. 14) *Borensztein – De-Gregorio – Lee* (1995) summarize their findings as follows: "Our results suggest that FDI is in fact an important vehicle for the transfer of technology, contributing to growth in larger measure than domestic investment Moreover, we find that there is a strong complementary effect between FDI and human capital, that is, the contribution of FDI to economic growth is enhanced by its interaction with the level of human capital in the host country However, our empirical results imply that FDI is more productive than domestic investment only when the host country has a minimum threshold stock of human capital . The value of the point estimates places the total increase in investment at between 1 5 and 2 3 times the increase in the flow of FDI. Thus, in addition to its effect on technological progress, it appears that FDI contributes to economic growth by increasing total capital accumulation in the host economy "

DIRECT INVESTMENT IN EASTERN EUROPE: EXPECTATIONS AND GENERAL OBJECTIVES

NEED FOR SUBSTANTIAL CAPITAL IN THE EAST

FDI is one of the crucial vehicles to secure successful transition of the emerging market economies in the East Estimates of their capital needs originally were very high, assuming, on the one hand, that the economy would catch up rapidly and therefore require very high investment rates and, on the other, that the available capital stock from the socialist era would be largely worthless. Another assumption was that macroeconomic saving would plummet in all sectors (public and private sector, private households) during the transition phase and would fall severely short of financing the necessary investments Yet, the *EBRD* (1995) noted that the high original estimates were based on high ICORs (incremental capital

output ratios)[1]. However, there is reason to assume that productivity in Eastern Europe can increase even without capital investments. In this connection, reference is made to the "institutional capital" (responsible enterprises and entrepreneurs, legal framework, legal institutions, authorities regulating competition).

The prospective funding needs of Eastern Europe were estimated using a number of approaches, among them the target growth approach, the labor productivity approach and an approach based on the Marshall plan after World War II. Estimates came up with up to US$ 16 trillion for ten years (US$ 1,600 billion per year); most of which to be absorbed by the former Soviet Union. An amount of this magnitude would correspond to some 5 to 7 percent of the global GDP[2] or almost one third of the global investment estimated at US$ 5,351 billion in 1993 (*UNCTAD,* 1995). But even the much more cautious projections assume an annual capital need of Eastern Europe (excluding the former Soviet Union) of between US$ 70 billion (*Handler – Kramer – Stankovsky,* 1992) and US$ 100 billion (*Steinherr,* 1993) for several years[3]. Most of this money will have to come from abroad[4].

These gigantic numbers gave rise to the concern that capital flows to the transition economies would supplant those to the developing countries and could result in the long-term increase of the real rate of interest. Such concerns were certainly influenced by the experience gained from the enormous capital transfer from Western to Eastern Germany. Nevertheless, the model envisaged for the "other" countries in Eastern Europe provided for a short period of (humanitarian and technical) financial aid to be followed by stabilization and growth of the economy through capital inflows from international organizations, thereby creating a favorable climate for private capital flows to the region. The financial needs of the East were then to be covered primarily by foreign private capital. The role played by FDI is, moreover, emulated by other types of capital flows such as portfolio investments and long-term loans.

Eastern European countries were considered to exert great attraction on Western investors, in view of their cheap and essentially highly trained labor force. It was assumed that Western investors would be drawn by the absorptive capacity of Eastern markets and their proximity to Western centers of industry and consumption. Russia's attraction for Western investors was seen in its deposits of raw materials and fuels.

THE ROLE OF FOREIGN CAPITAL FOR TRANSITION IN EASTERN EUROPE

During the transition phase, foreign capital can substitute for domestic savings at a *macro-level.* Revenues from privatization in particular are used to finance budget and current account deficits. FDI can replace domestic investment in case of market failures or credit rationing restrictions. At least equally important is its *microeconomic* function as an instrument to facilitate transfer of management, marketing and other know-how to Eastern Europe. In addition, foreign direct investors also play a key role in privatization.

The greatest impact, nevertheless, will probably be achieved by the "demonstration effect": at a macroeconomic level, the inflow of private investment capital is perceived a crucial indicator of the progress of reform in Eastern Europe. Companies there with foreign capital usually are given a better rating by the stock exchange and have easier access to cheaper foreign financing. Once accepted into a multinational corporate group, they can make use of its global sales channels. It is also safe to say that corporate headquarters are effective lobbies against Western protectionism when market access of products from their own Eastern affiliates is under threat. Another point not to be neglected is the – psychological and real – security aspect: the more capital invested abroad, the greater at least the hope that the investor's country is interested in protecting the host country against external threats. The assessment of external security of the countries in Eastern Europe, in turn, is a principal parameter for long-term investment decisions (*Stankovsky,* 1995C).

FOREIGN DIRECT INVESTMENT IN EASTERN EUROPE

During the 1980s, most Eastern European countries were trying hard, and generally failing, to reform their economic system. One of their reform measures was limited admission of foreign capital ("joint ventures"). Nevertheless, the scope of FDI remained small and was usually restricted to projects designed to test the waters. It was only after the political upheaval in 1989 that the proper prerequisites for FDI were established in the East.

SCOPE AND DEVELOPMENT

The flow of FDI into Eastern Europe jumped abruptly from near zero in 1989 to US$ 7.2 billion in 1993. Stag-

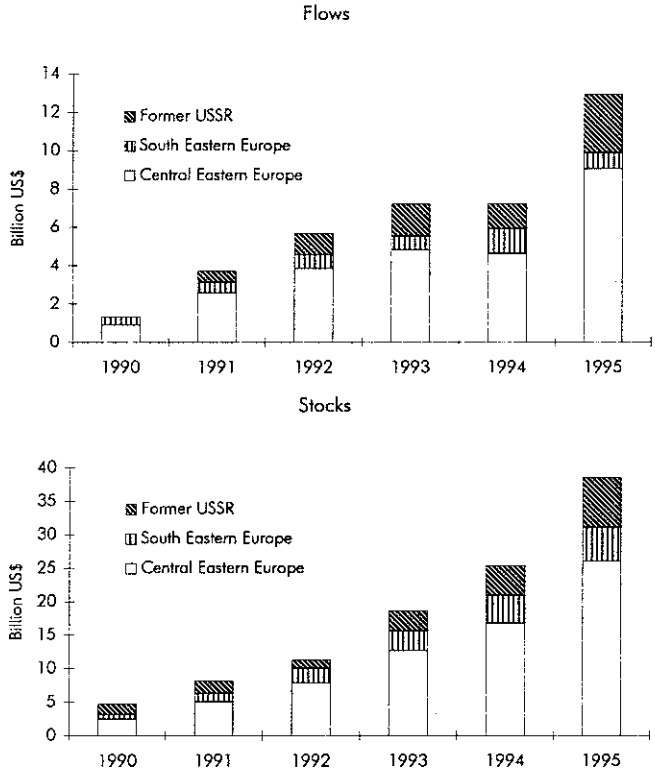
[1] Investments in relation to absolute increase of output (GDP). The lower the ICOR, the more efficient (productive) the investments.

[2] *UNCTAD* (1995) estimated the global GDP at US$ 23 276 billion (at factor cost) for 1993; *Maddison* (1995) set it at US$ 28,000 billion for 1992 (at 1990 prices).

[3] For an in-depth overview of estimates cf. *Handler – Kramer-Stankovsky* (1992) and *Handler – Steinherr* (1992).

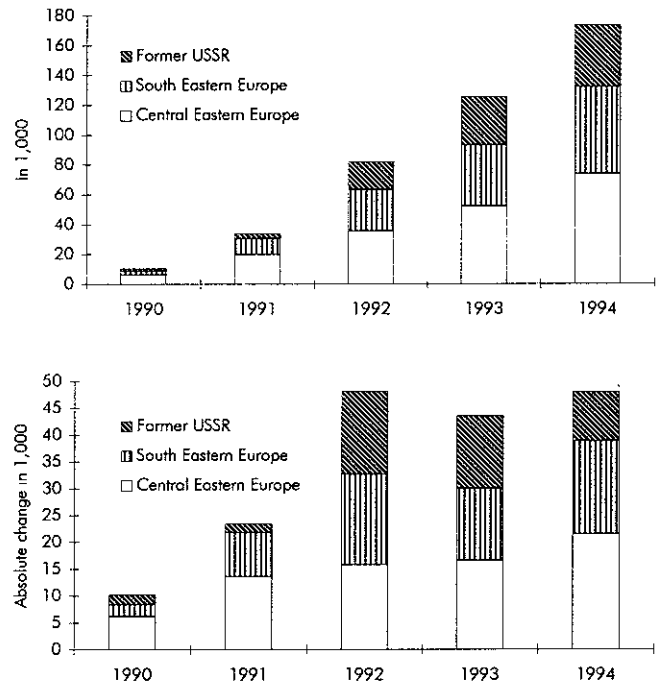
[4] Capital flows of this magnitude would be "mirrored" in large current account deficits accumulated by the Eastern countries (cf., i.a., *Holzmann – Thimann – Petz,* 1994).

Figure 1: Foreign direct investment in Eastern countries



Source: WIFO 1995: partly estimated

Figure 2: Number of foreign direct investments in Eastern countries



Source: WIFO

nating in 1994, it increased to almost US$ 13 billion in 1995 (preliminary data). This explosive growth was, at least partly, due to some major privatization projects (specifically in the telecoms sector). For 1996, experts expect the flow of direct investment to Eastern Europe to stagnate or at least abate. The figures given above include contributions in kind. Balance of payments statistics arrive at slightly lower values (US$ 5.4 billion in 1993, US$ 4.5 billion in 1994)[5]. In Central Eastern Europe (CEE), foreign direct investment declined from US$ 4.8 billion in 1993 to 4.6 billion in 1994, but doubled to 9 billion in 1995. FDI figures for Russia are less dependable; they may include projects that have been registered but not yet implemented, and vary depending on their source.

The stock of FDI in the Eastern European countries is estimated at US$ 25.5 billion for the end of 1994, and US$ 38.5 billion for the end of 1995. Of these sums, two thirds went to CEE countries. By the end of 1994, some 173,000 companies in Eastern Europe appear to have had access to foreign capital investment.

Hungary has so far attracted the largest chunk of FDI funds (a stock of US$ 12.7 billion by the end of 1995), ranking above Poland (US$ 6.8 billion) and the Czech Republic (US$ 5.8 billion). Per-capita investment stocks as of 1994 reached their highest value in Estonia, followed by Hungary, the Czech Republic and Romania (Table 1).

The inflow of FDI into Eastern Europe has lagged far behind original projections. There have been only a few countries that actually received significant amounts. The principal cause for this is to be found in the inadequate "framework conditions" offered by host countries: lack of political and financial stability, inadequate legal institutions, the rule of law not assured, in some cases the disappointing speed of transition to a market economy. The advantage offered by cheap labor is usually offset by low productivity. In some cases, the absorptive capacity of Eastern Europe appears to be limited.

From the Eastern point of view, an important aspect is *net capital transfers*, which results from the gross flows (including loans) reduced by return flows (especially repayments and interest payments). According to *ECE* (1995) calculations, the net transfer of resources (a broad delimitation criterion for capital flows) has so far

[5] According to *EBRD* (1995) figures, US$ 5.5 billion and 5.7 billion, respectively; *UNCTAD* (1995) arrives at US$ 6.3 billion and 6.5 billion, respectively. The differences between "real" and balance of payments statistics may be considerable, as is the case in Poland. For a discussion of statistics on direct investment in Eastern Europe cf., i.a., *Brewer* (1994), *Stankovsky* (1995A), *Meyer* (1995).

Table 1: Foreign direct investment in Eastern countries

Indicators	Stocks			Flows			Stocks	Flows	Number of foreign direct investments
	1993	1994	1995	1993	1994	1995	1994	1994	1994
	US$ per capita						Percent of GDP		Per million inhabitants
Czech Republic	209 0	309 8	563 1	55 1	83 7	233 0	8 9	2 4	2 233 5
Slovak Republic	69 1	104 2	132 1	25 5	35 1	26 4	4 4	1 5	1 359 8
Hungary	697 7	844 7	1 233 0	240 9	223 3	388 3	20 9	5 5	2 281 6
Poland	77 9	111 9	176 2	42 3	33 2	64 8	4 9	1 4	518 1
Central Eastern Europe	197 3	259 9	403 1	74 8	71 8	140 2	9 4	2 6	1 142 8
Albania	22 6	38 2	57 4	17 1	15 6	19 1	7 4	3 0	61 2
Bulgaria	27 1	55 6	71 4	9 4	28 2	15 5	4 7	2 4	367 5
Romania	33 4	54 8	70 5	5 7	28 6	15 7	4 3	2 2	1 894 4
Slovenia	556 5	671 0	750 0	69 5	42 0	75 0	9 6	0 6	1 828 5
Croatia	145 0	200 8	221 7	60 0	55 8	20 8	6 6	1 8	1 425 0
Macedonia	13 6	29 5	50 5	7 7	5 3	21 1	3 3	0 6	762 1
South Eastern Europe	49 7	72 1	86 7	12 2	22 3	14 4	5 9	1 8	999 0
Eastern Europe	127 0	170 7	252 9	45 0	48 3	80 5	8 4	2 4	1 074 6
Former USSR	10 4	15 0	25 4	5 8	4 5	10 4	1 0	0 3	141 7
Baltic states	60 2	120 6	259 3	39 9	60 4	138 6	8 1	4 1	2 405 7
Estonia	138 1	275 6	576 3	101 9	137 5	300 6	11 2	5 6	5 995 0
Latvia	27 8	108 9	325 2	15 6	81 1	216 3	10 6	7 9	2 007 0
Lithuania	50 5	63 7	78 9	31 1	13 2	15 3	4 5	0 9	1 177 6
CIS	9 0	12 0	18 8	4 8	2 9	6 7	0 8	0 2	77 3
Russia	12 8	16 5	26 6	7 4	3 7	10 1	0 9	0 2	89 7
Ukraine	5 8	6 7	10 6	1 0	1 7	3 8	1 0	0 3	67 2
Belarus	1 6	2 2	4 1	1 0	0 6	1 9	0 0	0 0	199 0
Others	4 6	8 1	10 8	2 8	2 4	2 7	0 9	0 3	42 4
Eastern countries	44 9	61 0	92 7	17 4	17 4	31 1	3 8	1 1	417 4

Source: WIFO 1995: partly estimated

had no decisive impact on the economy in Eastern Europe On the expenditure basis[6], the balance of flows to Eastern Europe in 1990 to 1994 was slightly on the negative side, except for 1993, which showed a net inflow of almost US$ 5 billion. On financial basis, the balance was mostly rather on the positive side, with the exception of 1990 (a minus of US$ 5 billion) and 1993 (a plus of US$ 11 billion)

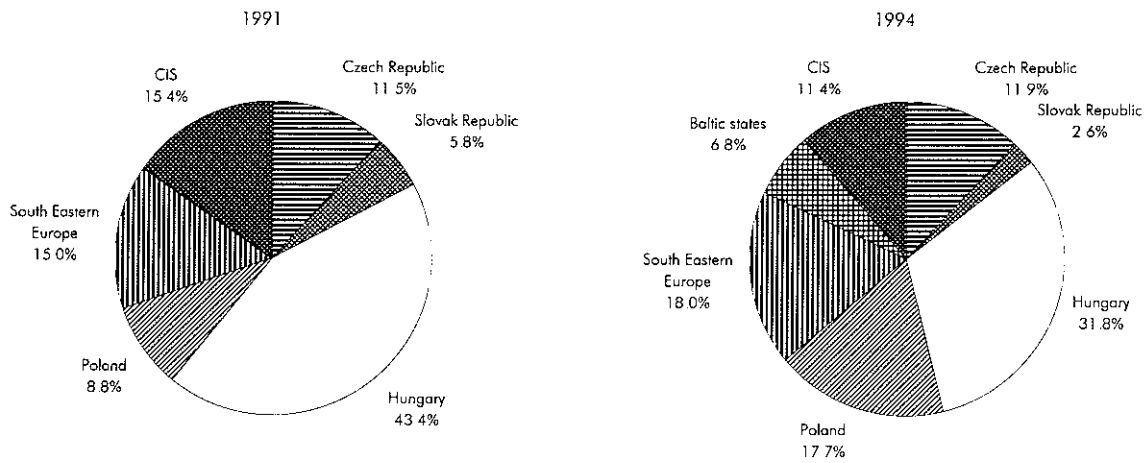
As a prospective location for FDI, Eastern European countries need to compete head-on with developing countries as well as industrialized countries Global investment flows dwindled from US$ 211 billion in 1990 to 170 billion in 1992, only to swell to 226 billion in 1994 In the developing countries, however, FDI continued to expand forcefully in the 1990s: their share of global investment flows rose from 16 percent in 1990 to 37 percent in 1994 China has established itself as a major destination Eastern Europe on the other hand is a newcomer in the market of cross border direct investment. In 1990, the region received just 0 2 percent of global direct investment flows, a figure which had risen to 2 9 percent by 1994 (3 2 percent according to WIFO calculations) Of the worldwide stocks of cross border direct investment (estimated at US$ 2,319 billion in 1994), Eastern Europe holds a mere 1 percent

EFFECTS ON ECONOMIC GROWTH AND EXPORTS

The transformation of their economic system, loss of markets and the need for far reaching structural adjustments resulted in a decline of economic performance in all Eastern European countries in 1990 (in some cases already in 1989). The situation deteriorated over 1991, but stabilized in 1992 Poland achieved a growth of its real GDP already in 1992, Slovenia and Romania followed in 1993 In 1994, Eastern Europe enjoyed an upswing that accelerated for most countries in 1995 and is expected to be sustained through 1996. Poland and Slovenia were the most dynamic of the emerging market economies; success also came to the Slovak and Czech Republics in 1995 Hungary alone found its growth stagnating again at 2 percent in 1995, but successful implementation of its "austerity package" in the spring of

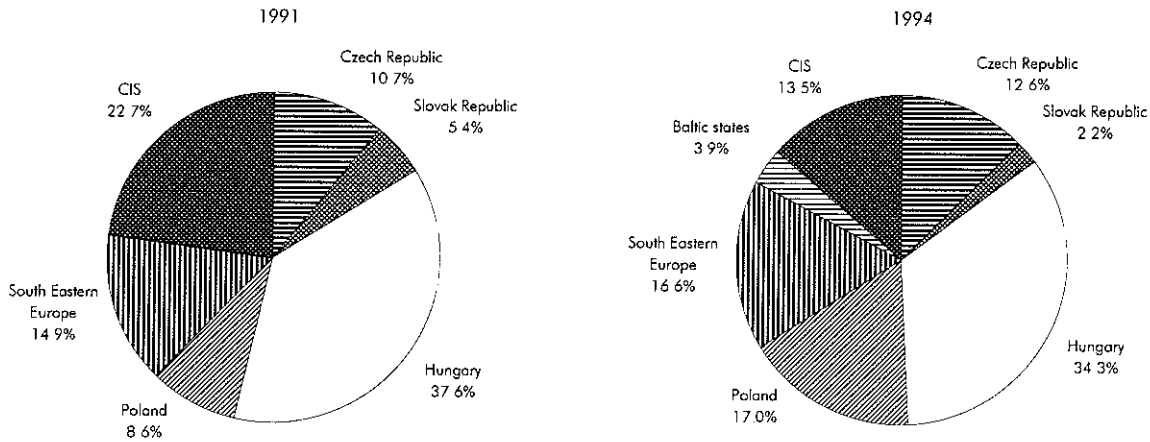
[6] *Expenditure basis*: trade balance plus non-capital services and private transfers – i.e , the current account excluding (net) investment income payments and official transfers – which measures the combined change in domestic absorption (i e . consumption and investment) and foreign reserves; *financial basis* capital account flows less (net) income payments, which reflects external resources available for increasing domestic absorption, assuming that foreign reserves and/or external debt remain unchanged

Figure 3: Regional structure of foreign direct investment flows in Eastern countries



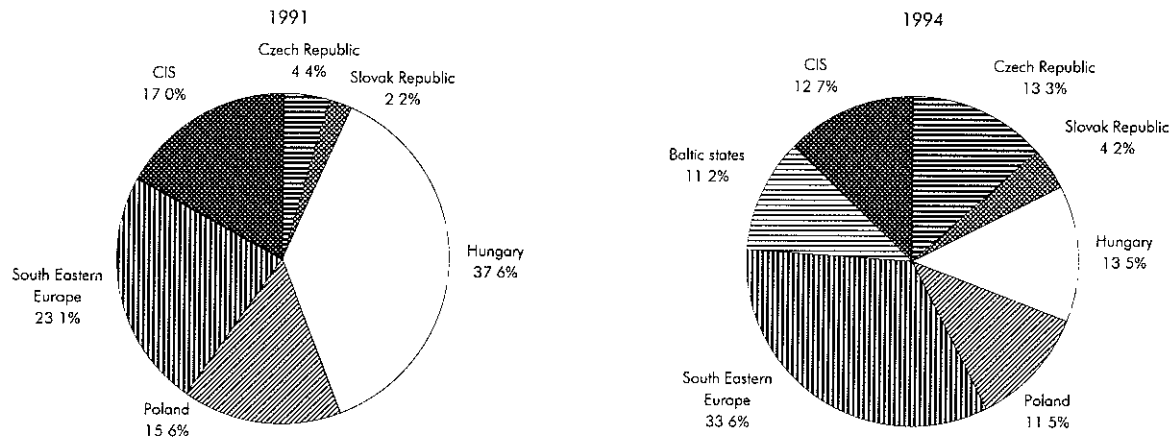
Source: WIFO

Figure 4: Regional structure of the foreign direct investment stocks in Eastern countries



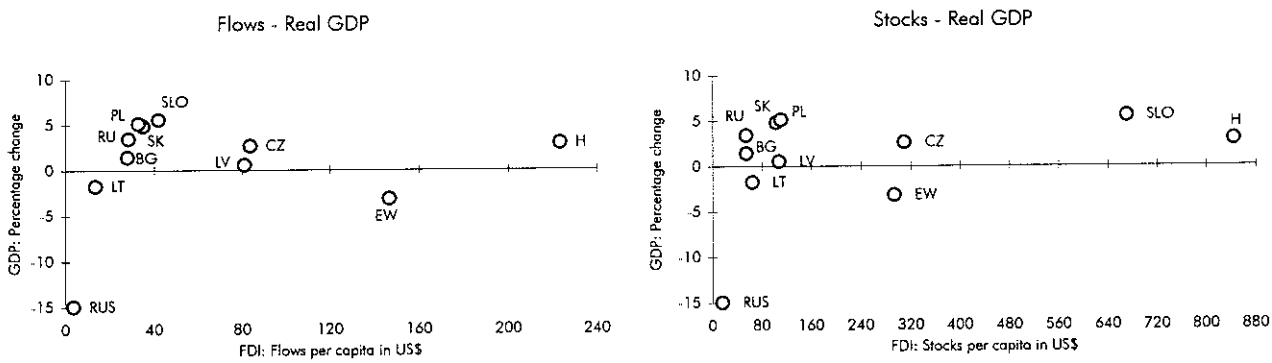
Source: WIFO

Figure 5: Regional structure of the number of foreign direct investments in Eastern countries



Source: WIFO

Figure 6: Foreign direct investment and economic growth in Eastern countries in 1994



1995 provided the prerequisites for an economic upswing. In the successor states to the Soviet Union (with the exception of the Baltic states), the crisis continued until 1995. In Russia itself, signs of stabilization appeared by mid-1995.

While the economic benchmark conditions vary between transformation countries, we can still arrive at some general conclusions: The growth in Eastern Europe was initiated in the "classical" manner – by exports ("export-driven growth"). The upswing in Western Europe in 1994 certainly made a contribution, but internal (supply) factors were similarly vital for a successful export drive. Private consumption played an increasingly important role, fuelled primarily by the rise in real wages. In most countries, the upswing was accompanied by a steep increase in private investment, which provided the foundation for sustained growth.

CONTRIBUTION OF FDI TO ECONOMIC GROWTH AND PRODUCTIVITY

Looking at the regional pattern of the economic upswing in Eastern Europe, we cannot discern any direct link between dynamic growth and the scope of FDI: countries with a high rate of FDI (Hungary, Czech Republic) have so far been left with a relatively low growth rate, while dynamically growing countries (Poland, Slovakia) received a relatively small share of foreign capital. The thesis is supported by correlative computations. At present, more or less a "reverse" causality appears to be of importance: high growth rates improve a country's attractiveness for foreign investors[7].

[7] The *EBRD* (1995), in comparing 25 transition countries, finds a positive link between FDI (per-capita number of projects) and the progress of transition ("EBRD indicator") and a negative link between FDI and inflation.

Such considerations are not meant to question the fundamental importance of foreign capital in assisting Eastern Europe in its economic development process. Nevertheless, the contribution of FDI to the host's economic growth appears to be subject to a considerable time lag and to consist primarily in increasing productivity in the host country. However, the study periods so far available are too short to allow effective verification of possible links.

Still there are several studies that point towards a marked influence of FDI on the performance capacity of enterprises. Foreign enterprises in Eastern Europe generally show higher productivity and more dynamic sales than their domestic counterparts. In Hungary in 1993, foreign companies achieved double the productivity rate of domestic companies, and their sales growth rates were 47 percent and 3 5 percent respectively. Of the 250 top-ranking enterprises in the Czech Republic, the foreign companies increased their sales by 20 percent in 1993, compared to 10 7 percent for domestic ones. In Estonia, foreign enterprises accelerated their output by 105 percent, while the respective rate for domestic companies was 28 percent (*UNCTAD*, 1995).

EFFECTS ON EXPORTS

The original assumption that large flows of capital would be directed to Eastern Europe was based on the expectation that cheap labor would motivate investors to relocate large portions of their production capacity, which in turn would fuel exports. So far, this assumption has not been realized. Almost throughout, the key motive for direct investment in Eastern Europe was to gain market access; labor costs were of secondary importance only. According to a survey commissioned by the *OECD* (1994), 44 percent of investors wished to gain access to the domestic market, and just 9 percent were motivated by the prospect of cutting costs (Table 2). A survey by the Austrian National Bank (*OeNB*, 1995) found that for

Austrian investors abroad, market access was the main motivation for 86 percent (by capital) of investors in Hungary and the Czech Republic, but for just 55 percent of investors in EU countries (Table 3)

Table 2: Main reasons for the attraction of Eastern countries as a location for direct investment

	All investors	Austrian investors
	Percentage shares in total answers (multiple answers possible)	
Market oriented motives		
Access to large domestic market	43 8	30 3
Market share	25 9	26 5
Market potential	11 1	5 9
Resource oriented motives		
Low production costs	9 3	5 9
Source of cheap raw materials	6 8	5 9
Other motives		
Geographic location	5 6	20 6
Following customer	4 3	2 9

Source: *OECD* (1994)

Table 3: Motives of Austrian enterprises to invest abroad in 1993

	Hungary	Czech Republic	EU	Total
	Percentage shares in total answers			
According to the number of affiliates	100 0	100 0	100 0	100 0
Market access (safeguarding sales)	77 5	80 9	80 0	79 3
Labor costs	6 4	5 2	0 5	2 6
Safeguarding supplies	2 4	0 9	1 8	2 4
Tax considerations	0 7	0 0	3 3	2 2
Other	13 0	13 0	14 4	13 6
According to the nominal capital	100 0	100 0	100 0	100 0
Market access (safeguarding sales)	86 0	87 4	54 7	66 5
Labor costs	3 9	1 1	0 1	1 4
Safeguarding supplies	1 7	1 2	4 3	3 6
Tax considerations	0 1	0 0	10 0	5 7
Other	8 4	10 3	30 9	22 7

Source: OeNB

From surveys of factors influencing foreign direct investment in Eastern Europe, the *EBRD* (1994, p 132) concludes: "Most striking perhaps is the predominance of market access among factors of importance to investor decision . Factor cost advantages are clearly rated as less important than market access in all the surveys . Most studies explicitly play down the role of cheap labor."

For (domestic) market oriented direct investment, cheap labor certainly is a major consideration. Multinationally operating corporations, on the other hand, appear to think that low labor costs in the East are not yet a sufficient reason to relocate facilities that produce for the world market.

Foreign companies provide a positive contribution to the export development in Hungary (*OECD,* 1995, *UNCTAD,* 1995, *Hunya,* 1996) In 1993 they generated 50 percent of export revenues, or 38 1 percent of exports according to the customs statistics. The increase in exports from Hungary in 1993 was solely due to international companies which boosted their exports by 32 percent, while exports by domestic companies shrank by 13 percent In the same year, foreign companies absorbed 38 8 percent of imports and shared 40.3 percent of the trade deficit (55.6 percent in 1994; *Hunya,* 1996) In Poland, exports by foreign enterprises increased from 6.2 percent of total exports in 1991 to 16 4 percent in 1993, although their export quota showed a slight decline (from 13 8 percent to 13 percent of their total sales). Foreign companies also absorbed a considerable share of imports (16 percent in 1993; 21 percent in 1994; *Quaisser,* 1995). According to a survey by the Austrian National Bank on Austrian direct investment, the value of Austrian exports between Austrian parents and their affiliates in Eastern Europe is about triple that of imports (ATS 4 3 billion and 1 6 billion, respectively, in 1993)

MACROECONOMIC IMPORTANCE OF FDI IN EASTERN EUROPE

For an assessment of the macroeconomic importance of foreign direct investment in Eastern Europe, it should be viewed in its relation to the GDP and gross fixed capital formation. Accordingly it is only in Hungary and, to a certain extent, in Estonia that FDI (including other capital flows) plays a major role in financing the current account deficit and the state budget (income from privatization). Similar findings were obtained by *Sheeby* (1994): in Hungary, the end-of-1993 FDI stock was 10 4 percent of the GDP (at purchasing power parities); the figures for the ČSFR were 5 7 percent, for Poland and Romania approximately 2 percent each and for Bulgaria close to 1 percent. According to *Quaisser* (1995), new foreign investment in Poland was 1 8 percent (1993) and 1 4 percent (1994) of the GDP

A key measure of the importance of FDI is its relation to gross fixed capital formation, especially private corporate investment[8]. According to *Hunya* (1995), its share (excluding revenues from privatization) of private sector investments in Hungary dwindled from 29 percent in 1991 to 17 percent in 1994. A simple calculation (including revenues from privatization) finds, for 1992 and 1993, foreign shares of 10 percent for the Czech Republic, Poland and Slovenia, and 4 percent for Slovakia (*Stankovsky,* 1995B). *Nesvera* (1995, p 22), in an in-depth analysis of investment financing in the Czech Republic, comes to the following conclusion: "The

[8] The relationship is slightly flawed inasmuch as direct investment under the balance of payments is defined differently from gross fixed capital formation in the system of national accounts (the former also includes asset transfers)

contribution of foreign capital to the real creation of new investment property did not exceed 10 percent in 1993–1994 " *Quaisser* (1995) found that FDI in Poland was 11.4 percent of the gross capital formation in 1993 and appears to have dropped below 10 percent in 1994.

Foreign capital had but little effect on the lively corporate investment climate in the countries in transition during the present economic upswing. Investments were mostly financed by the enterprises themselves from their improved profitability: "The recovery of fixed investment in Eastern Europe ... has been largely financed by the resources of the enterprises themselves, not by the intermediation of domestic savings or by foreign investors. The growth of enterprises' own resources was in turn a function of large productivity gains, a moderate growth of wages, and increases, also moderate in general, of producer prices. Thus increased profit margins were an important source of funds for enterprises wishing to invest" (*ECE*, 1995, p. 3). In a recently published EU study, foreign capital is envisaged to play a major role in the transformation process in Eastern Europe, but experience accumulated by other countries indicates that future rises in investments compared to the GDP will be financed chiefly by more domestic savings, especially by the enterprises themselves.

DOES FDI HAVE NEGATIVE SIDE EFFECTS ON EASTERN EUROPE?

Great expectations that foreign direct investment would be able to provide a direct solution for the problems of Eastern Europe have since been replaced by a more realistic assessment of the situation. Increasingly the discussion touches also on the possibility of undesirable side-effects of these capital flows. Reservations against FDI frequently point to the restrictions it imposes on national economic policies. Nevertheless, this argument is open to two-way interpretation: undesirable reduction of alternative options, or useful disciplining.

Manifest problems also arise from the strengthening of the power of multinational enterprises (MNEs) in an increasingly global world economy. A remarkable view of this issue is presented by *Dunning* (1995) in one of his most recent publications: "As this century draws to a close, it is clear that MNE activity – which comprises a composite of FDI, collaborative agreements and trade – can be divided into two categories. The first is traditional value added activity designed to exploit the existing resources and capabilities of firms. ... The second kind of MNE activity ... main impetus is to protect the existing market shares of the investing firms by cost reducing and innovation, and also to gain access to new markets. We have called such MNE activity strategic assets seeking. ... The key issue is whether such activity promotes static and dynamic efficiency ... or, whether it reduces competition by increasing the concentration of economic power and inhibiting a country's dynamic comparative advantage "

It was especially in the years immediately after the political change in Eastern Europe that major investors, thanks to their power at the negotiating table, succeeded in obtaining remarkable trade concessions to protect their markets (e.g., investments by the automotive industry in the CSFR, Poland and Hungary, or by the tobacco industry in the Czech Republic).

It was especially in the years immediately after the transformation in Eastern Europe that major investors, thanks to their power at the negotiating table, succeeded in obtaining remarkable trade concessions to protect their markets, a fact illustrated by a number of concrete cases (e.g., investments by the automotive industry in the CSFR, Poland and Hungary, or by the tobacco industry in the Czech Republic). The *EBRD* (1994) comments on the link between import barriers (tariff protection, non-tariff barriers to trade) and the level of FDI in Hungary and Poland (Table 4) as follows: "Some of the largest investments have been at least partly enticed by selective, 'tailor-made' protection from imports."

Table 4: Foreign direct investment and import protection in Hungary and Poland

	All sectors	FDI intensive sectors	Examples			
			FDI non intensive sectors		FDI intensive sectors	
			Photographic instruments	Chemicals	Transport equipment	Beverages
			In percent			
Hungary						
Average tariff[1]	15.0	24.9	9.4	9.9	17.4	48.5
Maximum tariff[1]	35.8	62.5	25.0	40.0	50.0	150.0
Non-tariff barriers[2]	13.4	21.1	2.0	7.0	20.0	17.0
Poland						
Average tariff[1]	19.8	37.6	15.0	14.3	45.0	45.8
Maximum tariff[1]	21.3	49.4	15.0	20.1	35.0	145.0

Source: *EBRD* (1994). – [1] Average. – [2] Number of non-tariff barriers observed at 2-digit level.

The *ECE* (1995, p. 14) similarly studies the issue of exploiting market power in Eastern Europe: "It is in countries where economic and social institutions are relatively weak, where the structures of the state are weak – that this more predatory behavior by the enterprise is both more apparent and least restrained. The transition economies are, by definition, characterized by still imperfectly functioning markets, embryonic institutions. ... Where markets are not competitive or the state lacks effective regulatory powers, there can be no presumption that the activities of foreign companies will automatically contribute to a more efficient use of resources "

Table 5: Foreign direct investment in Eastern countries from 1991 to 1995

	Flows					Stocks			Number of foreign direct investments
	1991	1992	1993	1994	1995	1991	1994	1995	1994
	Million US$								
Czech Republic	429	1 003	568	862	2 400	876	3 191	5 800	23 005
Slovak Republic	215	151	135	186	140	438	552	700	7 207
Hungary	1 614	1 641	2 481	2 300	4 000	3 064	8 700	12 700	23 500
Poland	328	1.054	1 630	1 280	2 500	700	4 321	6.800	20 000
Central Eastern Europe	2 586	3 849	4.814	4 628	9.040	5 078	16 764	26.000	73 712
Albania	.	18	58	53	65	.	130	195	208
Bulgaria	50	50	80	237	130	100	467	600	3 087
Romania	156	77	130	650	356	264	1 244	1 600	43 004
Former Yugoslavia	352	575	444	362	290	854	2 362	2 660	11 945
Slovenia	340	165	139	84	150	827	1 342	1 500	3 657
Croatia	.	408	288	268	100	.	964	1 064	6 840
Macedonia	12	2	17	10	40	27	56	96	1 448
South Eastern Europe	558	720	712	1 302	841	1.218	4 203	5 055	58.244
Eastern Europe	3 144	4.569	5 526	5 930	9 881	6 296	20 967	31 055	131 956
Former USSR	572	1.122	1 683	1 311	3 043	1 854	4 399	7.442	41 486
Baltic states		165	323	489	1 123		977	2 100	19 486
Estonia		58	163	220	481		441	922	9 592
Latvia		33	42	219	584		294	878	5 419
Lithuania		74	118	50	58		242	300	4 475
CIS	572	957	1 360	822	1 920	1 854	3 422	5 342	22 000
Russia	300	800	1 100	549	1 500	1 854	2 449	3 949	13.300
Ukraine			50	90	200		350	550	3 500
Belarus	.	7	10	6	20		23	43	2 070
Other	272	150	200	177	200		600	800	3 130
Eastern countries	3 716	5 691	7 209	7 241	12 924	8 150	25 366	38 497	173 442

Source. WIFO 1995: partly estimated

Viewed against this background, the original lack of enthusiasm evinced by the CSFR and the Czech Republic vis-à-vis foreign capital participating in the privatization process appears to be a well-considered measure designed to prevent foreign investors from taking over companies at (for the host country) unfavorable terms.

Compared to the years immediately following the political change, companies in Eastern Europe have revised their view of FDI. At the start, foreign capital appeared to the mostly inexperienced managers of the (state) enterprises to be the only tangible help that promised survival and that was accordingly accepted at (almost) any terms. After a five-year learning process, the pros and cons of foreign capital investment are now viewed with more discernment[9]

ABSORPTIVE CAPACITY OF EASTERN EUROPE FOR FDI

Original estimates of Eastern Europe's capital requirements were based on the assumption that the economy would show a hefty growth rate. Experience from the Far East has indicated that sustained growth rates of 8 percent or even 10 percent p a. are feasible. As an added advantage, Eastern Europe can offer higher-quality human resources than Asia

The high-growth models, however, failed to take sufficient account of the labor mobility factor While in the Far East, the labor required by new enterprises is recruited mostly from the agricultural sector, recruitment in Eastern Europe is limited to the overdimensioned and, in earlier times, multiprivileged industrial sectors Rapid economic growth would require drastic structural changes. After 40 years of "politics of entitlement" (J. Sachs), workers in Eastern Europe need to be weaned gradually from their privileges. This means that any sustained growth of more than 5 to 6 percent p.a. is possible only under highly favorable conditions.

CONCLUSIONS

Foreign private capital (particularly in the form of direct investment) plays a major role in the transformation of Eastern Europe both directly and indirectly, yet its immediate contribution to economic growth and to financing gross fixed capital formation has so far been relatively small – with the exception of Hungary Eastern European enterprises that draw on foreign capital achieve (much) higher productivity than domestic operations. Macroeconomic effects, however, will not be measurable for at least some years to come.

[9] Cf. Papp, B., "Equal Footing" Business Central Europe. 1995 (September)

There are indications of negative effects caused by FDI. Especially in the initial stages of transformation, foreign investors in Eastern Europe, through their market power, were in many instances able to enforce competitive restrictions that are found to be detrimental to the host countries. It would be a rewarding albeit difficult task to examine the effect on competition of the (various) privatization concepts developed by the Eastern European countries, i.e., whether they weaken or strengthen the former monopolies and oligopolies.

In the future, foreign private capital will have a significant positive impact on economic growth only in those countries that have coped with the challenge of transformation on their own and have embarked on the road to growth. The danger of abuse through the market power created by foreign direct investment could be kept at bay by economic and political stabilization as much as by including the Eastern European countries into the competition regulations of the European Union.

This conclusion is satisfactory from an economic point of view, but not when considering security aspects. The risk of political destabilization in those Eastern European countries that cannot handle their economic transformation is considerable and could ultimately threaten Western Europe as well. Private capital flows will not contribute to mitigating that risk. It will therefore be in the political interest of the West to ensure efficient public capital transfers to the less successful countries of the region. This would, however, call for two actions: influencing the economic policy of the receiver countries and Western taxpayers' readiness to make "sacrifices". Neither premise is realistic. Accordingly, the only path open is to ensure progress of the successful transformation countries by including them in Western security alliances (Table 5).

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The Role of Foreign Direct Investment in Eastern Europe – Summary

The inflow of foreign direct investment in the Eastern European countries increased from US$ 7½ billion in 1994 to 12½ billion in 1995; its total stock is estimated at US$ 38 billion East European companies with participation of foreign capital often exhibit above-average productivity.

The flow of foreign direct investment (FDI) into Eastern Europe jumped from almost zero in 1989 to US$ 7 billion in 1993 After a stagnation in 1994, preliminary data for 1995 show an increase to a total of $ 12½ billion This strong advance is partly due to a number of large privatization projects (e g , in telecommunication)

Foreign investment is mainly directed towards the transformation countries in East-Central Europe; the inflow into this region has nearly doubled, from US$ 4 6 billion in 1994 to 8½ billion in 1995.

Data on direct investment in the CIS (US$ 1.9 billion, of which 1 billion in Russia) are less reliable than those for East-Central Europe, they may also include projects not yet carried out The total stock of FDI in the East is estimated at US$ 25 billion for end-1994 and 38 billion for end-1995, the number of companies with foreign participation at 173,000 (1994). Hungary has so far attracted the largest amount of direct investment (US$ 12.7 billion at end-1995), ahead of Poland (US$ 6.5 billion) and the Czech Republic (US$ 5 7 billion). FDI stocks per capita are also highest in Hungary, followed by Slovenia, the Czech Republic and Estonia

In an international comparison, FDI in the Eastern countries are still rather low, accounting for some 3 percent of worldwide cross-border investment estimated at a total US$ 226 billion (developing countries claim a 37 percent share, of which China 15 percent) Out of global FDI stocks estimated at US$ 2,319 billion, the share of Eastern countries is roughly 1 percent This share has, however, risen markedly in 1995.

Private FDI are one of the major instruments to support successful transformation to a market economy in Eastern Europe and to reduce the gap in living standards vis-à-vis the West International studies show that foreign companies in the eastern countries attain substantially higher levels of productivity and growth rates of sales than domestic ones (thus, in Hungary the productivity differential was 2 : 1 and growth of sales in 1993 was 47 percent against 3½ percent)

The regional pattern of growth in Eastern Europe exhibits no straightforward correlation between growth dynamics and the size of FDI Countries with high FDI (Hungary, Czech Republic) have so far shown below-average growth performance, whereas high-growth countries like Poland have received comparatively small amounts of foreign capital. This prima-facie conclusion is confirmed by more sophisticated statistical analysis. With the exception of Hungary, FDI has so far played a relatively minor role in the financing of investment. In all, foreign private capital, while playing an important direct and indirect role in the transformation process of Eastern Europe, makes a relatively small immediate contribution to GDP growth and the financing of gross fixed investment.

The future contribution of foreign private capital to economic growth is likely to be significant only in those countries, which by relying on their own strength have successfully met the challenges of transformation and have moved to a path of solid growth The danger of abuse of market power created by FDI may be reduced by economic and political stabilization, but also by integration of the Eastern European countries into the EU competition framework.

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AUSTRIA AS A LOCATION FOR REGIONAL HEAD OFFICES FOR THE EAST

The changes in Eastern Europe have led to the West's economical and political interest in this region By the same token Austria's position as a "gateway" to the East has considerably improved and opened the chance to gain ground as a location for regional headquarters of international companies functioning as control centers for activities in the East As to this role of Austria the study provides mixed evidence.

Among the positive aspects are that Vienna has become the central base of support for operations in the Eastern countries for a number of multinationals. In addition, the already established centers for the East expect a further upgrading of their position and role within the corporate group as the Eastern economies catch-up with the West

At present, Vienna's position is being rivaled by Western European cities rather than locations in the East On the other hand the data indicate that after the initial interest in the years immediately following 1989 Vienna's attractiveness as a location for regional headquarters has been diminishing. Another aspect is that the rather positive evaluation of Vienna as a central base for operations in the East currently still rests on advantages which are transitory in that they will be lost with the Eastern countries catching-up to Western standards.

- *Economic Benefits of Centers for the East for Austria*

  Significance of Multinational Companies for a Modern Economy • Significance of Direct Investment for Austria • Austria as a Location of "Regional Headquarters" of Multinational Companies • Economic Relevance of Centers for the East for Austria

- *WIFO Survey: Centers for the East of Multinational Companies in Austria*

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