1991/1992

OECD ECONOMIC SURVEYS

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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Table of Contents

Introduction 9

I. Recent trends and prospects 11

The end of a long upswing 11
Shrinking employment 17
Stubborn core inflation 24
Hesitant wage moderation 28
A narrowing trade deficit 30
The outlook to 1993 36

II. Economic policy 40

Temporary relaxation of monetary policy 40
Widening government deficits 54
Federal tax reform: the need for action 63
Other structural policies 65

III. Competition and competition policy 68

Restrictions on competition in the domestic market 69
An assessment of the intensity of competition in Swiss domestic markets 82
The role of competition policy 95
Steps towards more competitive domestic markets 98

IV. Conclusions 103

Notes and references 111

Annex: Calendar of main economic events 120

Statistical and structural annex 123

Tables

Text

1. Supply and use of resources 13
2. The labour market 18
3. Indicators of the "natural rate" of unemployment 23
4. Trend of prices 26
5. Exports and competitiveness 32
6. Exports by area 33
7. Foreign trade by commodity group 34
8. Balance of payments 36
9. Short-term projections 39
10. Nominal and real interest rates in selected OECD countries 47
11. Monetary aggregates and income velocity of money 48
12. Inflation, interest and exchange rates in selected OECD countries: levels and volatility 53
13. Government accounts 55
14. Change in actual and structural budget balances 56
15. Central government budget 58
16. Financial outlook of the Confederation to 1993-95 62
17. Distribution of employment in manufacturing by size of firm: an international comparison 70
18. Import penetration in the Swiss domestic market, 1970-85 74
19. The structure of the economy 75
20. Rules governing the acquisition of real estate by corporations under Lex Friedrich 78
21. Impact of non-competitive pricing on Swiss CPI 83
22. Measures of persistence in Swiss domestic inflation 88
23. Entry and exit rates in manufacturing: an international comparison 91
24. Excess profitability: an interbranch comparison, 1980-89 92

25. General equilibrium evaluation of gains due to the removal of obstacles to competition 94

Statistical and structural annex

Selected background statistics 125
A. Gross national product, current prices 126
B. Gross national product, 1980 prices 127
C. Wholesale prices 128
D. Money supply 129
E. Interest rates and capital markets 130
F. Foreign trade by area 131
G. Foreign trade by commidity group 132
H. Balance of payments 133
I. Gross value added by main area of activity 134
J. Labour market: structural and institutional characterisitcs 135
K. The public sector 136
L. Interest rate margins in banking 137

Diagrams

Text

1. Key aspects of economic activity 12
2. Contribution to real GDP growth 14
3. Tobin's q and business investment 16
4. Foreign workers by status 19
5. Unemployment by profession 21
6. The Beveridge curve 22
7. International comparison of consumer prices 25
8. Underlying inflation 27
9. Labour cost and productivity 29
10. Relative costs and prices 31
11. Indicators of activity 37
12. The adjusted monetary base 41
13. Interest and exchange rates 44
14. The reaction lags of monetary policy 50

15. Investment share and total factor productivity 52
16. Revenues from stamp duty 65
17. Relative implicit import prices 76
18. Relative price levels in 1990 between Switzerland and the EC 85
19. Indicators of performance in the distribution system 87
20. Changes in commercial margins in wholesale and retail trade, 1972-91 90
21. Restrictions to retail trade practices in European countries 99

BASIC STATISTICS OF SWITZERLAND

THE LAND

Area (1 000 sq.km)	41.3
Cultivated land, grassland and pastures (1 000 sq.km), 1979/85	15.8
Forest (1 000 sq.km), 1979/85	12.5

Major cities, 1990 estimates (1 000 inhabitants):

Zurich	345.2
Basle	171.9
Geneva	169.5
Bern	135.5

THE PEOPLE

Population, 1990 average, estimates (1 000)	6 751
Number of persons per sq.km	165
Net annual rate of population increase (per 1 000 inhabitants, average 1987-90)	9
Civilian employment, 1991 (1 000)	3 602
Percentage distribution:	
Agriculture	5.5
Industry and construction	34.4
Other activities	60.4

Number of foreign workers (1 000), end of August 1991	989.5
Annual average increase in the number of foreign workers census, end of August (1 000):	
1962-72	16.8
1973-91	4.7

PRODUCTION

Gross national product in 1991 (billion Swiss francs)	346.4
Growth of real GNP, 1988-91 average (annual rate, per cent)	1.6
Gross fixed investment in 1991 (in per cent of GNP)	24.5
Growth of real investment, 1988-91 average (annual rate, per cent)	1.9

Value added by origin in 1985 (in per cent of GDP at factor cost):	
Agriculture	3.6
Industry	27.9
Construction	7.6
Services	60.9

THE GOVERNMENT[1]

Public consumption in 1991 (in per cent of GNP)	12.4
Revenue in 1991 (in per cent of GNP)	25.3
Debt of the Confederation in 1991 (per cent of Confederation current receipts)	113.3

Composition of Parliament (in per cent):

	National Council	State Council
Radical Democrats	22.0	39.1
Christian Democrats	18.5	34.8
Socialists	21.5	6.5
Central Democratic Union	12.5	8.7
Other	25.5	10.9

Last elections: 1991
Next elections: 1995

FOREIGN TRADE

Exports of goods and services as a percentage of GNP (average 1988-91)	34.9
Commodity exports (fob, million Swiss francs, 1991)	87 947
Percentage distribution:	
By area in 1991	
To OECD countries	80.2
To EEC countries	58.8
To OPEC countries	3.4
By categories in 1991	
Raw materials and semi-finished goods	33.8
Capital goods	34.7
Consumer goods	31.6

Imports of goods and services as a percentage of GNP (average 1988-91)	34.4
Commodity imports (cif, million Swiss francs, 1991)	95 032
Percentage distribution:	
By area in 1991	
From OECD countries	89.6
From EEC countries	70.2
From OPEC countries	1.4
By categories in 1991	
Raw materials and semi-finished goods	33.9
Energy	4.6
Capital goods	25.2
Consumer goods	36.3

THE CURRENCY

Monetary unit: Swiss franc

Currency unit per US $, average of daily figures:	
Year 1991	1.4336
August 1992	1.2984

1 Confederation, cantons and communes.
Note: An international comparison of certain statistics is given in an annex table.

This Survey is based on the Secretariat's study prepared for the annual review of Switzerland by the Economic and Development Review Committee on 10th September 1992.

•

After revisions in the light of discussions during the review, final approval of the Survey for publication was given by the Committee on 30th September 1992.

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The previous Survey of Switzerland was issued in September 1991.

Introduction

Stubborn inflation and a soft economy have afflicted Switzerland for more than two years. Swiss inflation started to accelerate in 1989, after an expansionary monetary policy stance adopted in 1987 and 1988. Monetary easing was partly in reaction to the stock market crash in October 1987, but also partly unintended as financial innovation rendered the monetary base targeted by the National Bank an unreliable indicator of monetary conditions. Monetary policy changed course in the second half of 1988, which subsequently led to sharply rising interest rates and to exchange-rate appreciation. There were signs of a levelling off of inflation in the first half of 1990, but the Gulf crisis rekindled inflationary pressures in the second half of 1990. This induced the National Bank to maintain a restrictive policy stance. As a consequence, investment fell and export performance deteriorated. The Swiss economy entered recession in late 1990, after eight years of uninterrupted expansion. Real GDP stagnated in 1991 and fell in the first half of 1992. Although the loss in output was smaller than in earlier recessions, unemployment rose unexpectedly sharply in 1991 and 1992. Consumer price inflation reached a peak in the middle of 1991 and has been on a declining trend since then. Inflation was still unacceptably high in the autumn of 1992, leaving the National Bank little margin for monetary ease to stimulate sluggish economic activity.

The stance of fiscal policy was very expansionary in 1991. However, this did not reflect deliberate government action to stimulate demand, but was rather a late policy response to past improvements in public finances at all levels of government. Indeed, the Swiss institutional framework makes discretionary changes in public revenues and expenditures very cumbersome and time consuming. Projections of widening government budget deficits have prompted the federal government to put a brake on current expenditures and to seek for new sources of revenue.

Policy makers are further challenged by the need to safeguard the legal basis for the Confederation's direct tax and turnover tax – as laid down in the federal constitution – which expires at the end of 1994. A main feature of the present turnover tax, which calls for remedy, is its taxation of investment and intermediate inputs, which distorts the cost structure of Swiss producers. These reform projects are particularly pressing in the context of the government's plans to step up Switzerland's participation in the process of European integration. The European Economic Area (EEA) agreement was signed on 2 May 1992 and the government has recently decided to apply for EC membership. To come into effect, the EEA requires the adoption of a large number of EC regulations, which implies the adjustment of many Swiss laws, among them regulations concerning competition in goods and factor markets. For a wide variety of economic activities, legislation will have to adopt the principle of the prohibition of cartels, dissuasive sanctions on the abuse of dominant positions and merger control.

Part I of the Survey looks at the forces which have pushed the Swiss economy into recession and which led to a marked deterioration in the labour market. Prospects for a pick-up in economic activity in the near term are then reviewed. Part II analyses the conduct of monetary policy, which is confronted with inflation that is still high, sluggish economic activity as well as perceptions that the current period of disinflation is exceptionally long. The issue of alternatives to a base money target as the focus of monetary policy is also briefly addressed. In addition, Part II examines recent trends and medium-term projections in government finances as well as the latest measures suggested by the government to contain budget deficits and to progress towards tax reform. Part III offers an assessment of the intensity of competition in the Swiss domestic market and discusses the problems arising from the current legal framework for competition in goods and factor markets and options for reform. Finally, the main findings of the analysis are summarised and conclusions for economic policy are drawn in Part IV.

I. Recent trends and prospects

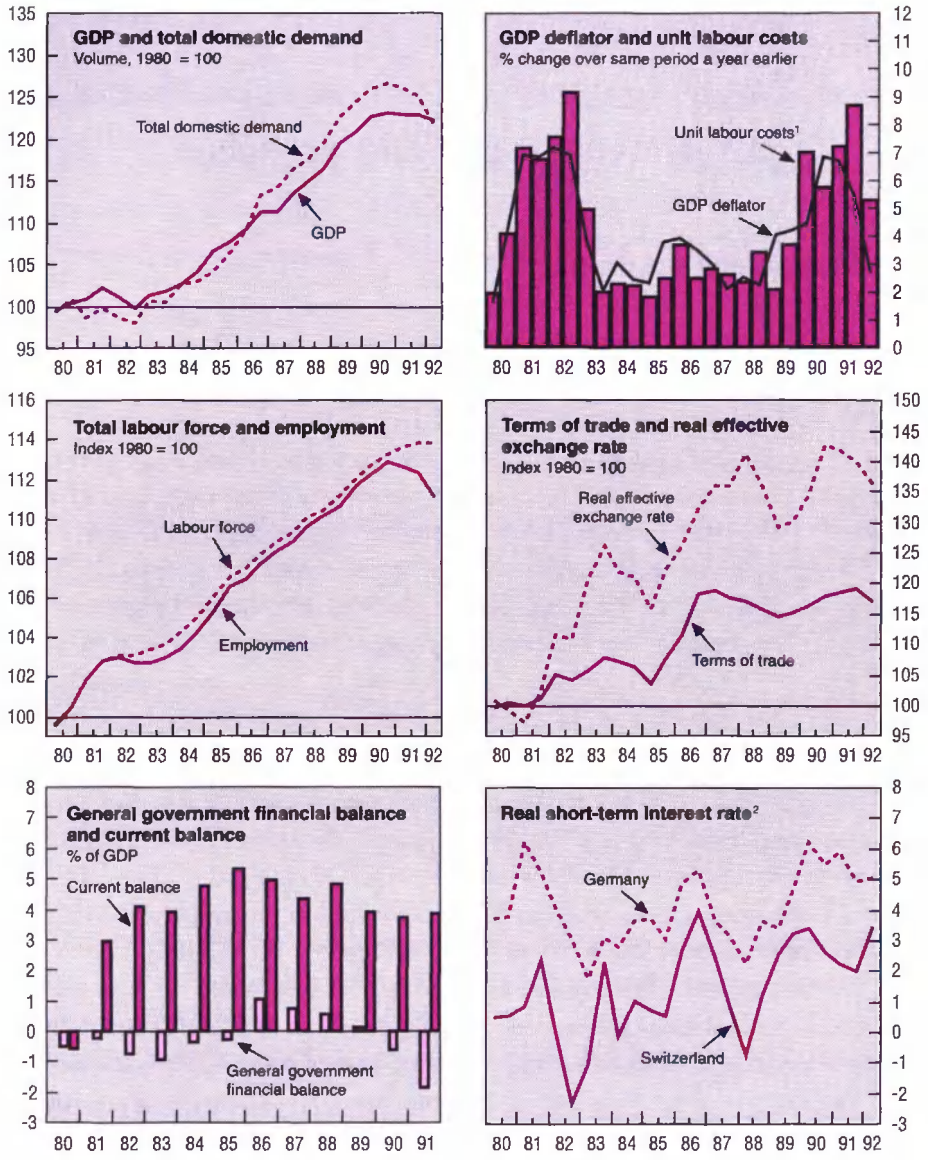
The end of a long upswing

The economic upswing, which had begun at the start of 1983, came to a halt at the end of 1990. With a duration of 32 quarters, the expansion lasted longer than the previous cyclical upturn – from 1976 to 1981 – and fell just short of becoming the longest post-war expansion. Average annual output growth during the upswing of the 1980s – at 2.6 per cent – was nearly 1 percentage point higher than in the 1976-1981 episode (1.7 per cent) but below that of the total OECD area (3.4 per cent) as well as the group of smaller Member countries (3.1 per cent). As was the case for the two previous cycles, a deteriorating price and wage performance set the stage for the end of the recent upswing (Diagram 1). Monetary restriction hit interest-sensitive demand components and also induced a marked effective appreciation of the Swiss franc in 1990, depressing exports in 1991, in spite of robust growth of export markets.

Real GDP fell at a seasonally adjusted annual rate (s.a.a.r., hereafter) of about 1 per cent in the first half of 1991, primarily as a result of an adjustment of business inventories to high interest rates and deteriorating orders. Output growth resumed in the third quarter when household consumption strengthened temporarily but dropped again in the fourth quarter. Altogether, real GDP fell on average by 0.1 per cent in 1991, thereby less than the 0.9 per cent contraction in the 1982 recession. Industrial production grew slightly in 1991 (Table 1), but industrial capacity utilisation continued to fall, reaching 82 per cent in the first quarter of 1992, the lowest since 1984. In 1991, the number of insolvencies rose by 16½ per cent, the largest increase since the 1982 recession.

Final domestic demand remained flat in 1991 as rising public and private consumption compensated for falling gross fixed investment (Diagram 2). Public consumption was the fastest growing major demand component, reflecting

Diagram 1. **KEY ASPECTS OF ECONOMIC ACTIVITY**



1. Total economy.
2. 90 days Euro-Swiss franc rate and German three-month interbank rate, deflated by the private consumption deflator.

Source: OECD, *National Accounts, Main Economic Indicators* and estimates.

Table 1. **Supply and use of resources**

	1990 at current prices		Percentage volume[1] change from previous period, annual rates, s.a.						
	SF million	Percentage share of GNP	Average 1987-89	1990	1991	1990	1991		1992
						II	I	II	I
Private consumption	177 650	54.2	2.2	1.5	1.5	1.6	1.0	2.2	0.2
Public consumption	42 850	13.1	4.2	4.7	2.8	4.1	2.0	3.2	0.2
Gross fixed capital formation	84 545	25.8	6.4	2.6	–2.5	0.5	–3.9	–2.5	–8.5
Construction	55 990	17.1	6.6	1.9	–3.2	–0.8	–5.1	–1.5	–6.5
Machinery and equipment	28 555	8.7	5.9	3.7	–1.2	2.7	–1.7	–4.1	–11.9
Final domestic demand	305 045	93.1	3.6	2.2	–0.5	1.6	–0.3	1.0	–2.2
Change in stocks[2,3]	7 310	2.2	–0.1	0.1	–1.2	–0.7	–0.9	–2.3	–3.6
Exports of goods and services	115 050	35.1	5.4	3.0	–0.7	0.1	–2.0	1.6	7.9
Imports of goods and services	113 415	34.6	5.3	2.9	–1.7	0.4	–2.7	–1.6	–3.8
Change in foreign balance[2]	1 635	0.5	–0.3	–0.1	0.5	–0.1	0.5	1.4	5.1
Gross domestic product	313 990	95.8	3.4	2.3	–0.1	0.8	–0.7	0.2	–1.0
Gross national product	327 686	100.0	3.1	2.5	–0.3				
GDP deflator			3.3	5.7	6.1	6.4	7.1	3.9	1.6
Private consumption deflator			2.9	5.3	5.7	6.0	4.9	6.1	3.2
Index of industrial production[4]			4.0	2.7	0.5	–5.6	4.0	0.2	1.0

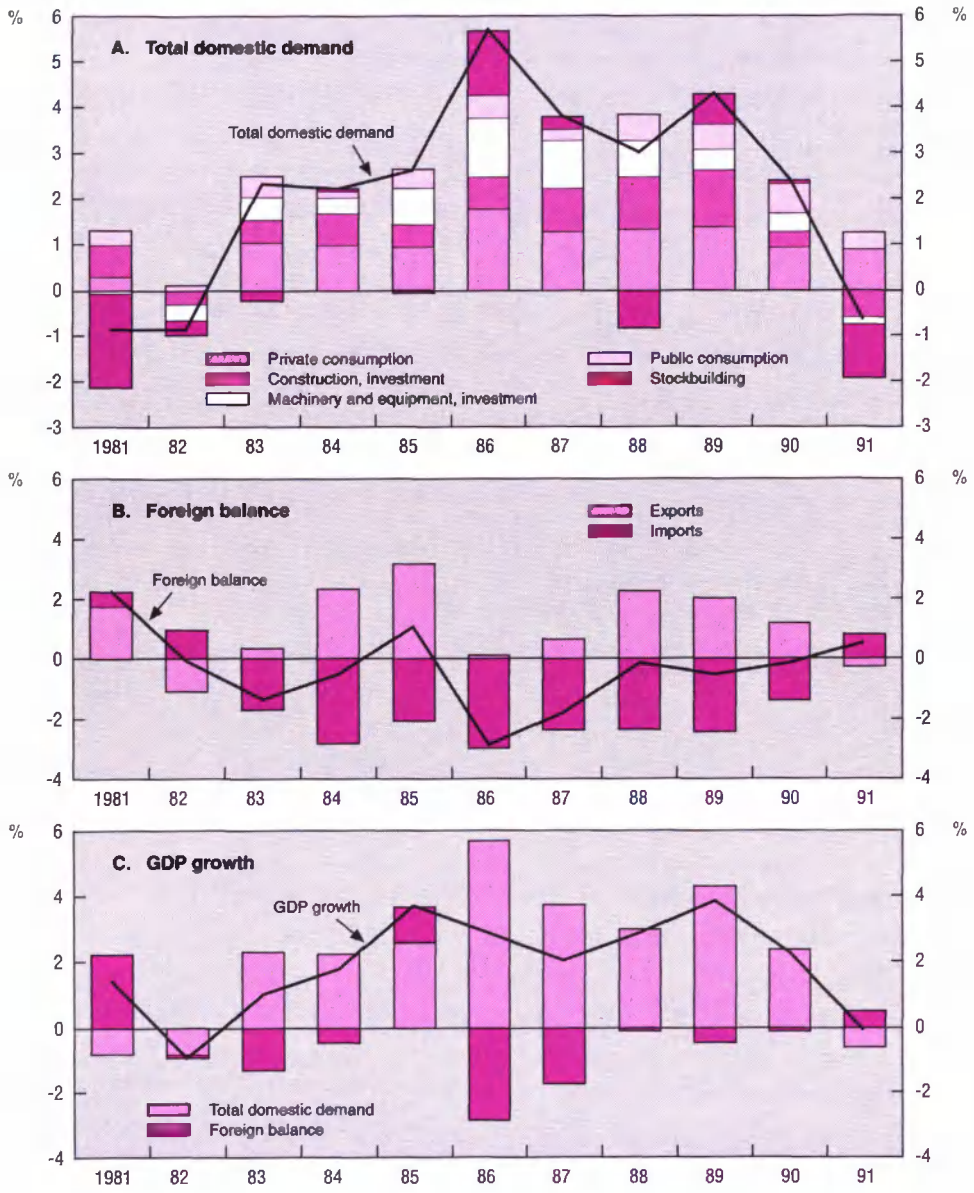
1. At 1980 prices.
2. As a percentage of GDP of the previous period.
3. This item is partly a residual value; it also contains statistical errors.
4. Excluding hydroelectric power and electric and gas utilities.

Source: Département fédéral de l'économie publique, *La vie économique;* KOF/ETH, *Konjunktur;* OECD.

marked growth of real personnel expenditures – in particular at the cantonal level – and of goods purchases by central government. Household consumption supported activity by as much as in 1990. It held up surprisingly well against the background of a trend rise in the household saving ratio – 12 per cent in 1991 was double its level of 1985 – and a steep fall in the consumer sentiment index since the first half of 1989. The main reason for this relatively resilient consumer behaviour in 1991 was the continuing advance in real incomes. While factor incomes decelerated owing to weakening employment and deteriorating profitability, household incomes were boosted by accelerating net transfers from government (in particular weaker growth of income taxes as is usual in odd years of the tax cycle) and from the social security system (special adjustment of old-age pensions to inflation and extra payments). Altogether, disposable income may

Diagram 2. **CONTRIBUTION TO REAL GDP GROWTH**

As a percentage of GDP in the previous year



Source: OECD, *National Accounts.*

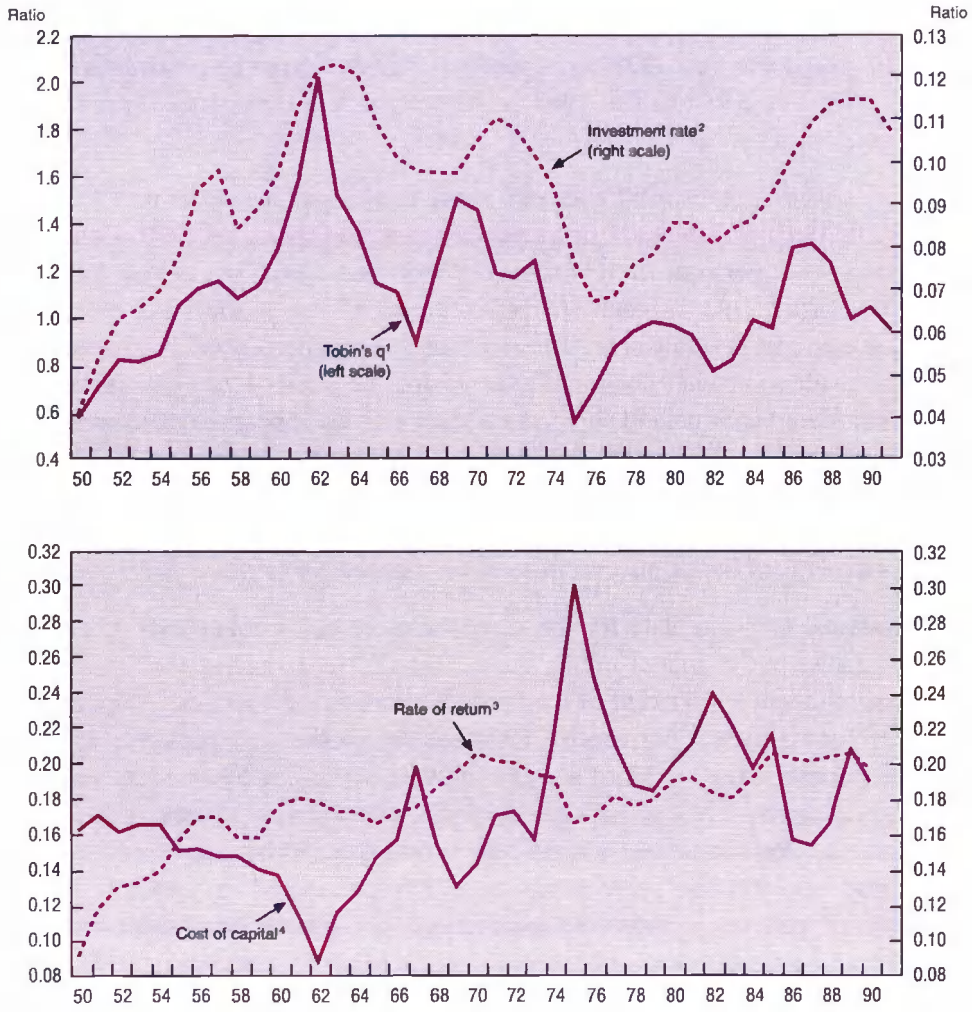
have risen by around 7½ per cent in 1991, the same rate as in 1990, though the consumer purchasing power was eroded by rising inflation. In the second half of 1991, however, the consumer sentiment index dropped to a level never recorded since its introduction in 1972 as respondents reported growing pessimism about job security. In the first half of 1992, private consumption rose by 0.2 per cent in real terms (s.a.a.r.)

Construction investment exerted a substantial negative impact on economic activity in 1991, continuing a downturn begun in the spring of 1990. Construction was off 3.2 per cent (in real terms) in 1991 and by 6.5 per cent (s.a.a.r.) in the first half of 1992, a much sharper contraction than in the 1982 recession, when it was only 1.6 per cent. The share of construction in GDP nevertheless remained still somewhat above its average for the 1980s (16½ per cent). The most important factor behind sluggish building activity appears to have been high mortgage interest rates, which raised the average cost of financing in 1991 to more than 50 per cent above the average of 1988; but high land prices and construction costs, high levels of unused building capacity and more stringent lending criteria of banks also seem to have contributed.

National accounts data for the components of construction investment are not available, but estimates of the KOF/ETH (Zürich) suggest that residential investment (about 40 per cent of total construction) was hit hardest: it appears to have decreased by 4¾ per cent in 1990 and by another 6¾ per cent in 1991. Business construction remained buoyant in 1990, but fell by 5¾ per cent in 1991. Some restrictions were also imposed on public construction projects in line with government efforts to contain budget deficits (in particular by municipalities), but long-term infrastructure programmes were left unchanged in 1990/91. Public construction volumes – currently accounting for one-quarter of total construction investment – are estimated to have grown by around 2¼ per cent in 1991, after 3¾ per cent in 1990.

Machinery and equipment investment began to weaken already in the second quarter of 1990, but displayed positive growth for the year on average because of a very strong first quarter. At the beginning of 1991, another upsurge was registered as Swissair took delivery of a number of aircraft. In the remainder of the year, machinery and equipment investment fell again, resulting in a relatively mild decline for 1991 (excluding airplane purchases, it was off some

Diagram 3. **TOBIN'S Q AND BUSINESS INVESTMENT**



1. Market value of shares and bonds (beginning of period) divided by the capital stock (beginning of period) composed of equipment (private and public) and non-residential construction (private).
2. Real investment in equipment (private and public) and non-residential construction divided by the corresponding real capital stock (beginning of period).
3. Profit (dividends + retained earnings + interest + depreciation + direct taxes) divided by the capital stock.
4. Profit divided by the market value shares and bonds.

Source: Milad Zarin-Nejadan, "L'évaluation financière et l'investissement physique privé en Suisse 1946-86", *Revue suisse d'Economie politique et de Statistiques,* December 1989. Updates were provided by the author.

4 per cent). In the first half of 1992, a further steep fall of 12 per cent (s.a.a.r.) was recorded.

Changes in business investment may be analysed and its prospects assessed by relating it to Tobin's q, that is the ratio of the rate of return on capital to the cost of capital. The comparison over time of such a constructed series for Switzerland with the business investment rate (investment divided by the capital stock) suggests that the variations in the "q" lead changes in the investment rate by about one year (see the footnote to Diagram 3 for technical detail). A decomposition of Tobin's q into the rate of return and the cost of capital shows that in the past its changes were primarily driven by cost of capital, which seems to have been subject to much stronger fluctuations than the rate of return over the past forty years (Diagram 3). The measure of "q" decreased in 1988 and 1989, which appears to have heralded the stagnation in the investment rate in 1990 and its decline in 1991; this decline in "q" was nearly exclusively the result of rising cost of capital. After some short-lived improvement in 1990, the "q" dropped further in 1991, probably due to deteriorating profitability, while capital cost seems to have stopped rising, in accordance with decreasing real long-term interest rates. With the "q" falling in 1991, the outlook for business investment in 1992 appears rather gloomy.

Shrinking employment

Employment responded quickly when economic activity weakened: on a seasonally adjusted basis, it receded already in early 1991. The decline in total employment continued through the first quarter of 1992, when a loss of some 60 000 jobs was recorded compared with twelve months earlier. This trend continued in the second quarter of 1992. The suppression of jobs was most pronounced in the construction industry, mirroring the severity of slump in this sector. Employment in manufacturing had displayed signs of weakness already in late 1990, when economic activity appears to have stagnated; it fell markedly during 1991 and in the first two quarters of 1992 (Table 2). By contrast, employment in the services sector (accounting for nearly two-thirds of the total) grew in 1991, albeit at a lower rate than in preceding years. It too shrank in the first half of 1992, however.

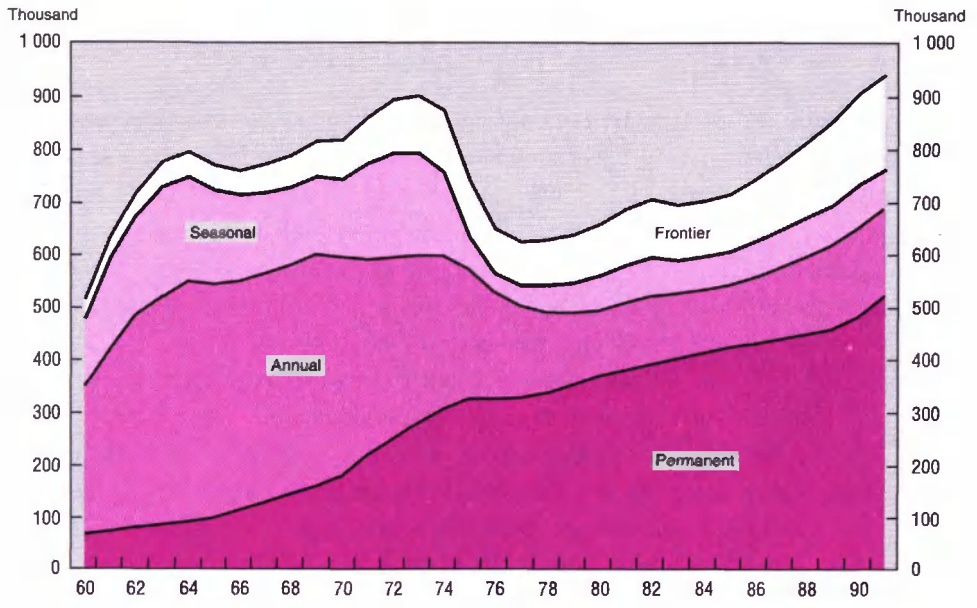
Table 2. **The labour market**

	1987	1988	1989	1990	1991	1990				1991				1992	
						Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2
	Thousand	Percentage change from previous year													
Total employment[1]	3 238	1.2	1.2	1.4	–0.3	1.7	1.3	1.2	1.2	0.4	0.0	–0.6	–0.9	–1.8	–2.1
of which:															
Industry	867	0.0	1.0	1.4	–1.7	1.8	1.8	1.4	0.8	–0.1	–1.0	–2.3	–3.3	–4.1	–4.4
Building and civil engineering	349	1.4	1.5	0.7	–2.3	1.7	0.2	0.3	1.0	–2.9	–2.3	–2.6	–1.4	–4.5	–4.8
Services	2 022	1.8	1.2	1.5	0.7	1.6	1.5	1.4	1.4	1.2	0.8	0.6	0.3	–0.3	–0.6
	Thousand														
Labour market[2]															
Wholly unemployed	21.9	19.5	15.1	16.0	35.1	15.9	14.0	14.4	19.5	27.5	30.9	35.2	46.6	64.7	73.3
of which:															
Foreigners (%)	39.0	41.0	41.1	42.7	44.0	41.3	42.6	42.8	43.9	44.7	45.2	44.1	42.8	42.7	42.1
Unemployment rate (%)	0.8	0.7	0.6	0.6	1.3	0.6	0.5	0.5	0.7	1.0	1.1	1.3	1.7	2.4	2.7
Vacancies	13.2	14.4	17.6	17.3	10.5	18.6	18.5	17.3	14.7	12.0	10.9	10.3	9.0	8.7	8.9
Workers on short time															
Workers affected	4.1	3.9	0.6	0.7	20.3	0.6	0.5	0.3	1.5	9.1	21.9	19.2	30.8	41.1	35.8
Number of hours not worked	214.0	196.0	35.1	49.4	853.3	50.8	33.4	16.3	97.1	429.3	905.3	757.2	1 321.5	1 902.3	1 585.1

1. Employed labour force, excluding agriculture. Annual figures are averages of four quarters.
2. Averages-of-end of month figures.
Source: Département fédéral de l'économie publique, *La vie économique;* KOF/ETH, *Konjunktur.*

Although decelerating sharply with the contraction of employment, labour force growth continued in 1991 as foreign participation in the labour market rose (Diagram 4). The foreign labour force increased by some 24 000 (+3½ per cent) in 1991, after about 51 000 (+5½ per cent) in 1990. The rise in foreign workers appears to have stalled in the spring of 1992. Indefinite work permits for ''settled'' workers have provided the most important contribution to the increase in foreign labour supply during 1991, rising by 6¾ per cent and still some 5 per cent (year-on-year) in the first four months of 1992. By contrast, employment of foreign workers with annual work permits stagnated in 1990 and 1991, picking up only moderately in early 1992. Numbers of seasonal workers and frontier workers *(''frontaliers'')* were more affected by the recession, decreasing both in 1991 and in the first four months of 1992.

Diagram 4. **FOREIGN WORKERS BY STATUS**



Source: Département fédéral de l'économie publique, *La vie économique.*

To a greater extent than in the past, the downturn of employment is mirrored most markedly in the rapid rise in unemployment, given the continued expansion of the labour force. When economic activity began to weaken towards the end of 1990 and then receded in 1991 and in 1992, the number of dismissed workers rose steadily to about 95 000 in August 1992. The unemployment rate rose from 0.5 per cent in the summer of 1990 to 3.1 per cent in August 1992, the highest level in more than fifty years. More than 40 per cent of the wholly unemployed were foreigners, in contrast to their current share of about 19 per cent in the active population. Youth unemployment remained low by international comparison, with the share of unemployed younger than 20 years being at around 3 per cent in July 1992. The total of short-time workers, which was close to zero in the summer of 1990, picked up rapidly in the course of 1991 and reached some 40 000 in the spring of 1992. This number fell to below 36 000 in the second quarter of 1992.

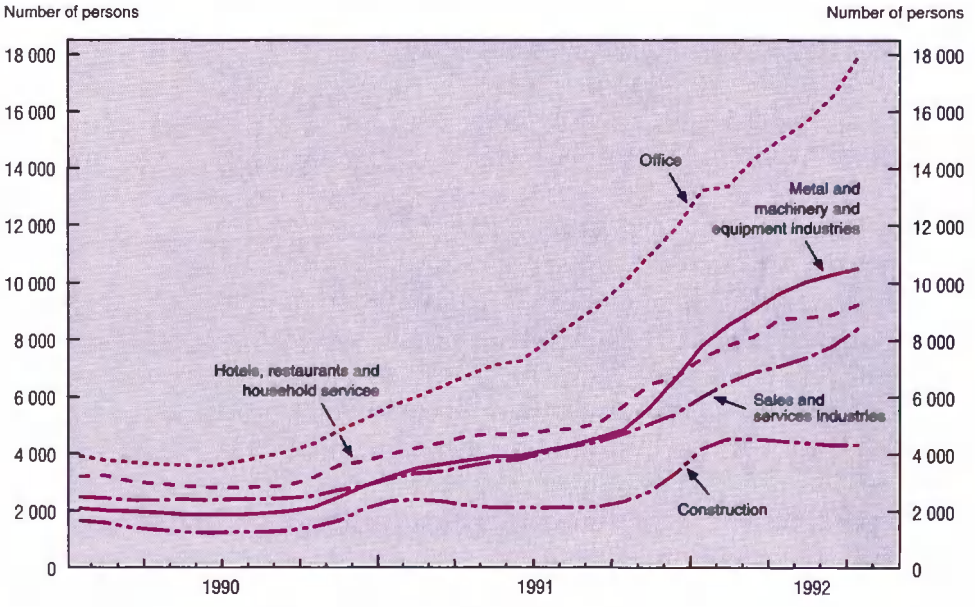
During the same period, reported vacancies – which had exceeded the level of unemployed in 1989 and for the better part of 1990 – declined to little more than 8 000 in August 1992, half their level of the summer of 1990. The proportion of firms reporting shortages of (skilled) workers, which had reached a maximum of about 56 per cent in the second quarter of 1990, decreased steeply from then on, to only 24 per cent in the second quarter of 1992.

Although the recent recession was milder than the previous one, the response of unemployment was much sharper this time. In 1982, the unemployment rate increased to only 0.4 per cent, from 0.2 per cent in 1981. In January 1983, an extended definition of unemployment was introduced to include part-time unemployment, so that the rise to 0.9 per cent in 1983 was largely due to changes in definition. Two factors stand out which aggravated the increase in unemployment in the current episode: *first,* the government policy of promoting labour hoarding by subsidising short-time work seems to have been less successful in the most recent recession than in the previous one. Thus from 1981 to 1982, the number of short-time workers jumped by nearly 31 000, while the increase was only some 19 500 between 1990 and 1991. This may be because this time entrepreneurs are less optimistic about the future productive use of parts of their labour force. It is also conceivable that increased unemployment benefits for certain categories of the workforce and for certain regions may have diminished the entrepreneurs' reluctance to lay off personnel. *Second,* the net inflow of

foreign workers slowed less in the recent recession, to around 35 000 in 1991 from nearly 51 000 in 1990 (all categories, end of August) than in 1982 when it declined to some 11 000 from 32 000 in 1981.

The strong increase in unemployment affected virtually all professions (Diagram 5). It was particularly pronounced in the manufacturing of metals and machines and in office administration. The effect on unemployment of the slump in the construction business was cushioned to a sizeable extent by the reduced participation of foreign seasonal workers and ''frontaliers''. The regional dispersion of unemployment has widened substantially since 1990, when average cantonal unemployment rates were in most cases below one, with top rates of 1.9 and 1.4 in only two out of 26 cantons. In the spring of 1992, unemployment rates remained as low as 0.7 per cent in three cantons, but rose to above 4 per cent in

Diagram 5. **UNEMPLOYMENT BY PROFESSION**
End of month

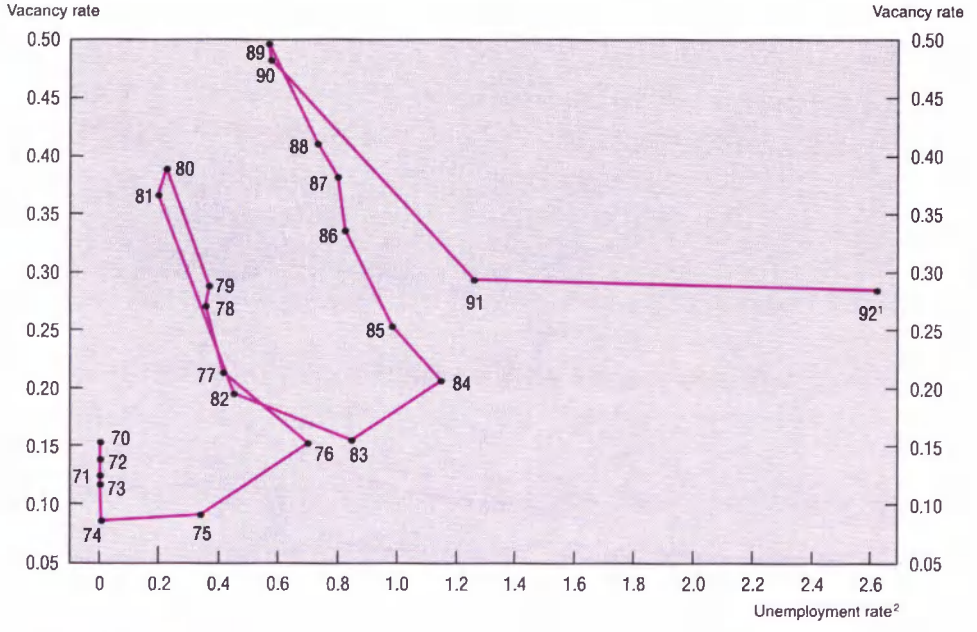


Source: Département fédéral de l'économie publique, *La vie économique.*

regions located in the west and in the south of Switzerland; in the canton of Geneva the unemployment rate reached a record of 5.1 per cent in May 1992.

An examination of the Beveridge curve, which plots vacancy rates and unemployment rates, suggests that the recent sharp rise in unemployment may contain some structural element, on top of the labour market's usual reaction to flagging aggregate demand (Diagram 6). The curve shows that so far in 1992, the unemployment rate increased markedly without a substantial further decline in the vacancy rate. The Diagram shows two earlier outward shifts – after 1975 and after 1983. The earlier shift mirrors to a considerable extent major improvements of the statistical measurement of unemployment and vacancies. The shift of the Beveridge curve between 1983 and 1984 has often been linked to the increase in the maximum length of the period during which unemployment compensation is

Diagram 6. **THE BEVERIDGE CURVE**



1. First eight months of 1992.
2. As from 1983, includes partially unemployed.

Source: Département fédéral de l'économie publique, *La vie économique.*

to be paid, but it is probably partly due also to the above mentioned change in the definition of unemployment.[1] It is, however, striking that these earlier shifts occurred after unemployment benefit schemes had been extended during or shortly after recessions.

The current outward jump of the Beveridge curve coincides with some further legal changes affecting the labour market: at the beginning of 1992, a law came into effect which extends unemployment benefits for certain groups of workers who participate in training for new jobs. As from April 1992, the maximum period of payment of unemployment insurance benefits to elderly and disabled workers has been prolonged from 250 to 300 days. In addition, a general extension of the payment period of unemployment compensation has been conceded in seven cantons which are particularly hard hit by labour market slack. These measures may have contributed to the apparent upward shift of the Beveridge curve.

The shifts in the Beveridge curve point to an upward drift of the non-accelerating wage rate of unemployment (NAWRU), which was earlier estimated by the Secretariat to be about 0.7 per cent (estimates were presented in the 1988/89 OECD *Economic Survey of Switzerland*). Analysis based on the Hodrick-Prescott filter technique[2] also suggests an increase in the natural rate of unemployment from the mid-1980s onwards (Table 3). Hence, the actual rate of

Table 3. **Indicators of the "natural rate" of unemployment**

Per cent of total labour force

	1960-90	1960-69	1970-79	1980-85	1986	1987	1988	1989	1990	1991	1992
NAWRU[1]	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Hodrick-Prescott filter	0.5	0.0	0.2	0.7	1.0	1.1	1.3	1.4	1.6	1.7	1.9
Beveridge curve shift[2]	0.1	0.0	0.0	0.4	0.8	0.9	0.9	0.9	0.8	1.1	
Actual unemployment rate	0.3	0.0	0.2	0.6	0.8	0.8	0.7	0.6	0.6	1.3	2.8

1. Non-accelerating wage rate of unemployment derived from an expectations-augmented Phillips curve.
2. Calculated as exp(ln UNR + ln VAC), where UNR is the actual unemployment rate and VAC is the ratio of vacancies to the total labour force. VAC has been normalised (divided by its average value) so that ln VAC is equal to zero on average over the sample period. It is assumed that the unemployment rate varies negatively with the job vacancy rate around the natural rate (UNR*) according to the following model: ln UNR = ln UNR* – ln VAC. Hence, the exponential of the sum of ln UNR and ln VAC provides an estimate of the natural rate. This estimate is also equal to the exponential of the sum of the constant term (a) and the residuals ε from a Beveridge curve equation as follows: ln UNR = a + ln VAC + ε.

Source: OECD estimates.

unemployment at or slightly below the NAWRU and markedly below the Hodrick-Prescott and Beveridge curve approximations of the natural rate between 1988 and 1990, coincides with the sharp acceleration in inflation during these years, after expansionary monetary impulses in 1987/88. In view of the likely recent upward drift in the NAWRU, the degree of existing labour market slack seems to be much smaller than the present level of unemployment rate suggests, and unless structural conditions in the labour market are improved, substantially lower unemployment will be unachievable on a lasting basis.

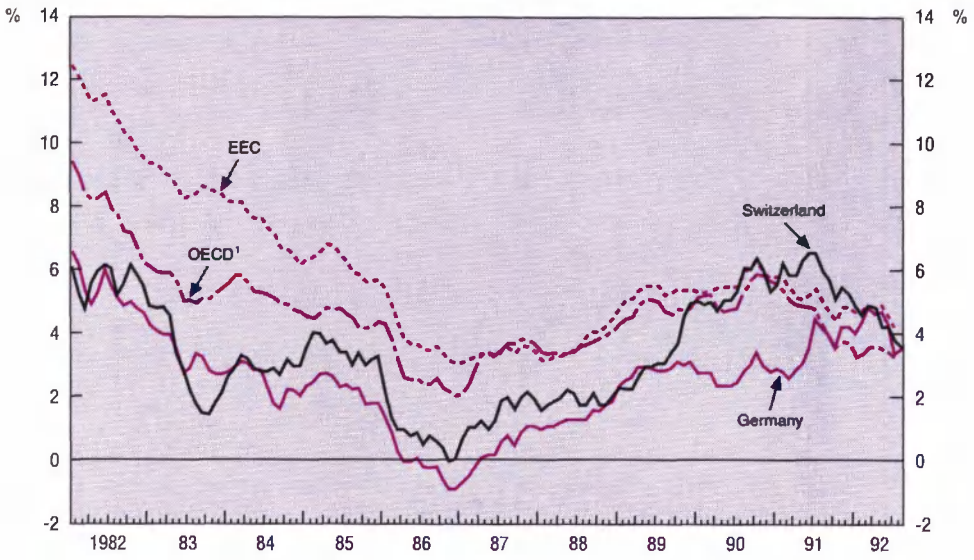
Stubborn core inflation

Inflation peaked in June and July of 1991, when the consumer price index (CPI) grew at a twelve monthly rate of 6.6 per cent. Since then, consumer price inflation seems to have been on a declining trend, slowing to a year-on-year rate of 3.6 per cent in August 1992. For 1991 on average, however, the CPI rose by 5.9 per cent, the highest rate recorded since 1981 and substantially above the OECD average as well as that of European OECD countries (Diagram 7).

The decline in the consumer price inflation rate cannot be attributed to the effects of slowing economic activity alone. Much of the progress registered on the inflation front was due to decelerating prices of imported consumer goods, which account for about 30 per cent of the CPI (Table 4). Prices of imported consumer goods decelerated markedly in 1991 and in the first half of 1992, in spite of the effective depreciation of the Swiss franc during the same period. The price-damping effect from abroad, due largely to the weakening of world energy prices and disinflation in trading partner countries, was particularly visible at the wholesale level, where prices of imported goods fell by an average of 2.1 per cent in 1991 and were broadly stable in the first half of 1992. The stabilising effect from import prices both at the consumer and wholesale level was further accentuated in July and August 1992, when the Swiss franc appreciated in effective terms.

When taking food and energy out of the CPI – to approximate ''core'' or underlying inflation – the remaining index suggests that upward pressures on inflation peaked in the third quarter of 1991, but that since then underlying inflation has receded relatively little (Diagram 8). The stubbornness of core inflation becomes also manifest in the total domestic demand deflator, which rose

Diagram 7. **INTERNATIONAL COMPARISON OF CONSUMER PRICES**
Percentage change over corresponding period of previous year



1. Excluding Turkey.
Source: OECD, *Main Economic Indicators.*

by 5 per cent in 1991 and showed no clear downward trend in the first quarter of 1992; a deceleration by 1 percentage point was, however, registered in the second quarter of 1992. The main reason for the slow process of disinflation lies in the behaviour of domestic prices.

''Home-made'' consumer price inflation, i.e. the domestic component of the CPI, reached its peak of 7.1 per cent only in the third quarter of 1991 and was at a rate of 6.8 per cent for the year on average. It declined to 4½ per cent in the summer of 1992. Domestic consumer prices were held high mainly by strong services price rises, which accelerated from an average of 6.2 per cent in 1990 to 8.0 per cent in 1991. Service price increases slowed somewhat, but remained at a high twelve-monthly rate of 6 per cent in the summer of 1992. The dominating influence of services on domestic inflation can also be inferred from the develop-

Table 4. **Trend of prices**

Percentage change from previous year

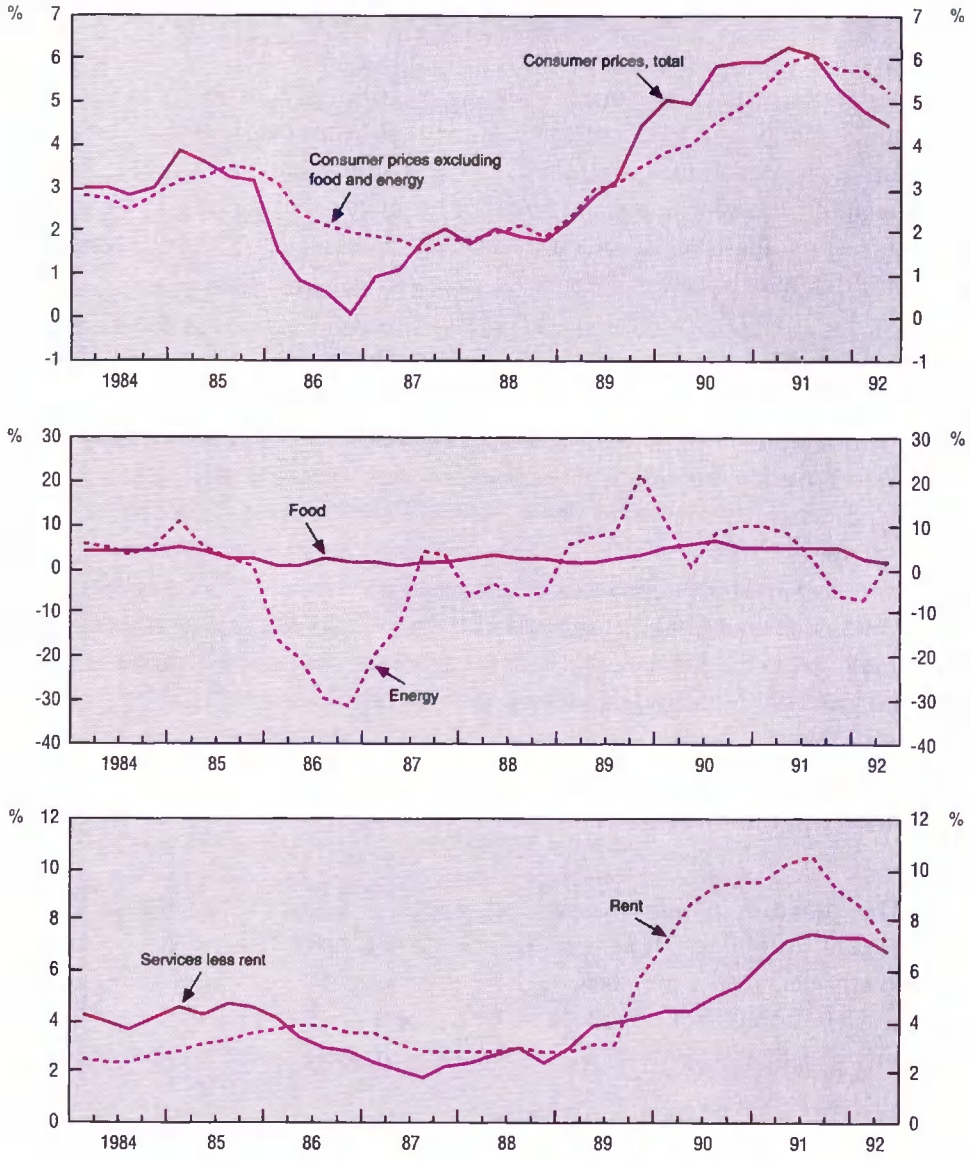
	Weight in per cent	1987	1988	1989	1990	1991	1990				1991				1992	
							Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2
Wholesale price index (1963 weights)	100.0	–2.0	2.3	4.3	1.5	0.4	2.2	1.2	1.7	0.7	0.5	0.2	0.3	0.7	0.3	0.5
Raw materials and semi-manufactured products	61.4	–3.1	3.8	5.4	0.0	–0.7	1.2	0.5	–0.4	–1.4	–1.2	–1.0	–0.6	0.0	–0.3	–0.6
Energy and related products	9.0	–3.8	–2.4	6.0	3.3	1.4	4.0	–1.0	6.4	3.7	4.4	4.3	–1.1	–1.6	–2.1	1.6
Consumer goods	29.6	0.5	1.2	1.7	3.5	2.1	3.4	3.5	3.9	3.4	2.2	1.0	2.2	2.9	2.2	1.9
Home produced goods	70.6	–0.7	2.1	3.2	2.3	1.3	2.6	2.5	2.5	1.8	1.5	1.0	1.2	1.5	0.9	0.9
Imported goods	29.4	–5.4	2.6	7.5	–0.9	–2.1	1.1	–2.1	–0.3	–2.2	–2.3	–2.1	–2.5	–1.4	–1.3	–0.7
Consumer price index[1]	100.0	1.4	1.9	3.2	5.4	5.9	5.0	4.9	5.8	5.9	5.9	6.2	6.1	5.3	4.8	4.4
Goods	50.8	0.4	0.9	2.5	4.5	3.5	4.5	3.8	5.1	4.8	4.1	4.1	3.3	2.3	1.5	1.6
Non-durables	42.6	0.2	0.9	2.7	4.9	3.7	5.0	3.9	5.5	5.3	4.5	4.5	3.5	2.5	1.3	1.4
of which:																
Food	21.0	1.1	2.5	1.7	5.4	4.5	5.2	5.5	6.1	5.0	4.8	4.5	4.4	4.5	2.2	1.2
Heating and lighting	5.0	–7.7	–5.4	10.7	7.5	3.1	10.9	0.8	8.2	10.0	9.5	8.4	2.2	–6.0	–7.2	2.0
Services	49.2	2.5	2.7	3.7	6.2	8.0	5.3	5.9	6.5	6.9	7.4	8.2	8.4	7.8	7.6	6.7
of which:																
Rents	18.0	3.0	2.8	3.7	8.6	9.9	7.0	8.6	9.4	9.5	9.5	10.3	10.6	9.2	8.5	7.0
Home produced goods and services	70.4	2.2	2.5	3.0	5.8	6.8	4.9	5.7	6.2	6.3	6.6	6.9	7.1	6.7	6.0	5.2
Imported goods and services	29.6	–0.6	0.0	3.7	4.4	3.2	5.0	2.8	5.0	4.9	4.0	4.3	3.0	1.4	1.3	1.9
Export prices[2]		–0.1	2.3	7.4	1.1	2.1	4.9	1.1	–0.6	–0.4	–0.3	1.0	3.7	4.2	2.9	1.8
Import prices[2]		–3.0	4.0	9.0	–0.8	0.6	5.9	–2.1	–4.1	–2.2	–3.0	0.0	3.9	1.4	2.9	3.8

1. December 1982 = 100.
2. Change in the price deflator of goods and services, national accounts basis; break in series in 1988.

Source: Département fédéral de l'économie publique, *La vie économique.*

Diagram 8. **UNDERLYING INFLATION**

Percentage change from same quarter of previous period



Source: OECD, *Main Economic Indicators.*

ment of the index of *domestic* wholesale prices, which includes only goods and which was broadly stable in 1991 and so far in 1992.

Rent increases of about 10 per cent in 1991 on average and some 6¼ per cent in the summer of 1992 had a strong impact on high service prices. Housing rents account for 18 per cent of the CPI. Since they are *de-facto* linked to mortgage rates, which have been driven up by restrictive monetary policy, they continue to hamper the effect of stabilisation policies in the short run.[3]But prices of other services continued to rise fast, too, among them prices of public services such as public transport fares and prices of health care. In contrast to the overall trend of prices, the latter accelerated in the second half of 1991 and in the first half of 1992, mainly driven by surging prices for hospital care.

Recently, administered price increases have been blamed in the media for the slow process of disinflation in Switzerland. This seems to be based on the observation of delayed adjustment of several publicly controlled prices to higher costs, which tends to mean that public-sector charges are still accelerating when private-sector price inflation is already on a downward trend. But for the total of (fully and partly) administered prices, which are reckoned to account for about one-fifth of the CPI and which cover primarily agricultural products, public transport, post and telephone services, medical care and other public services, this observation does not hold: for the period from 1977 to 1991 on average, as well as in 1991 and in the first half of 1992, the aggregate index of this group of goods and services rose by slightly less than the general CPI.

Hesitant wage moderation

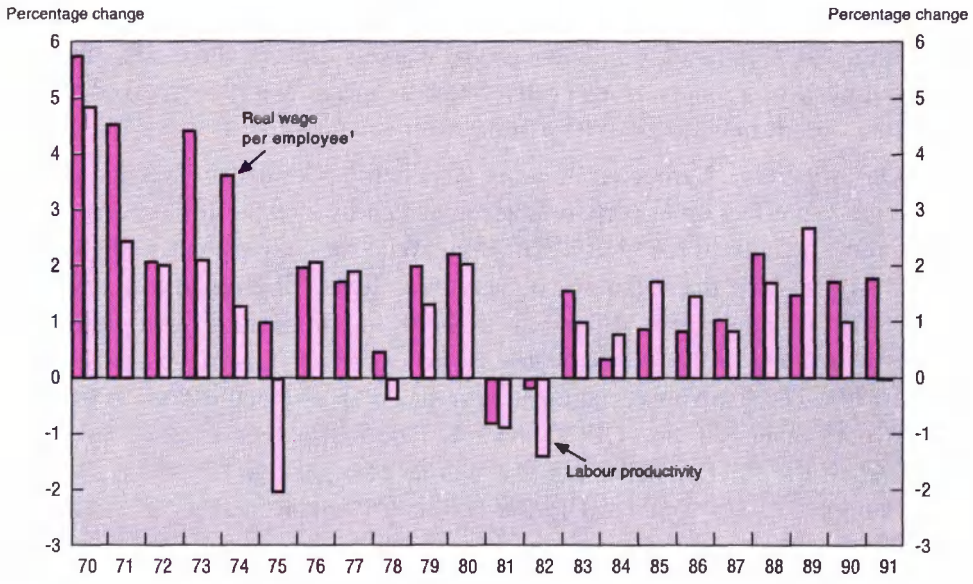
The growth in nominal wages and salaries is estimated to have risen from 5.1 per cent in 1990 to 6.9 per cent in 1991. The construction business conceded particularly generous wage rises, of 7.8 per cent in 1991 despite a slump in this sector. After a small real wage loss of 0.3 per cent in 1990, real wages in the total economy rose by 0.9 per cent in 1991, which is in line with the average real wage gain of the preceding five year period, but contrasts to the decline in labour productivity of ¼ per cent in 1991. The relatively high nominal wage increase in 1991 is a consequence of the practice of adjusting wages to the twelve-monthly price increase in the preceding third quarter; in terms of labour cost in 1991, this

was unfortunate as in the third quarter of 1990 the increase in the CPI was accelerating.

Preliminary estimates of compensation of employees are for an increase by 7.9 per cent in 1991, after 8.9 per cent in 1990. This suggests a marked acceleration of unit labour costs for the total economy from about 6½ per cent in 1990 to 8½ per cent in 1991. A comparison of unit labour cost changes with the GDP deflator implies a decrease in the share of non-wage incomes (''profits'') in 1990 and an even more substantial fall in 1991 to a level lower than in any year in the 1980s (Diagram 9).

In the autumn of 1991, the wage round – which is highly decentralised – is estimated by the OFIAMT[4] to have resulted in an increase of nominal wages in 1992 by 4.9 per cent. This is clearly below the registered inflation rate of 6.1 per

Diagram 9. **LABOUR COST AND PRODUCTIVITY**



1. Deflated by the GDP deflator.
Source: OECD Secretariat estimates.

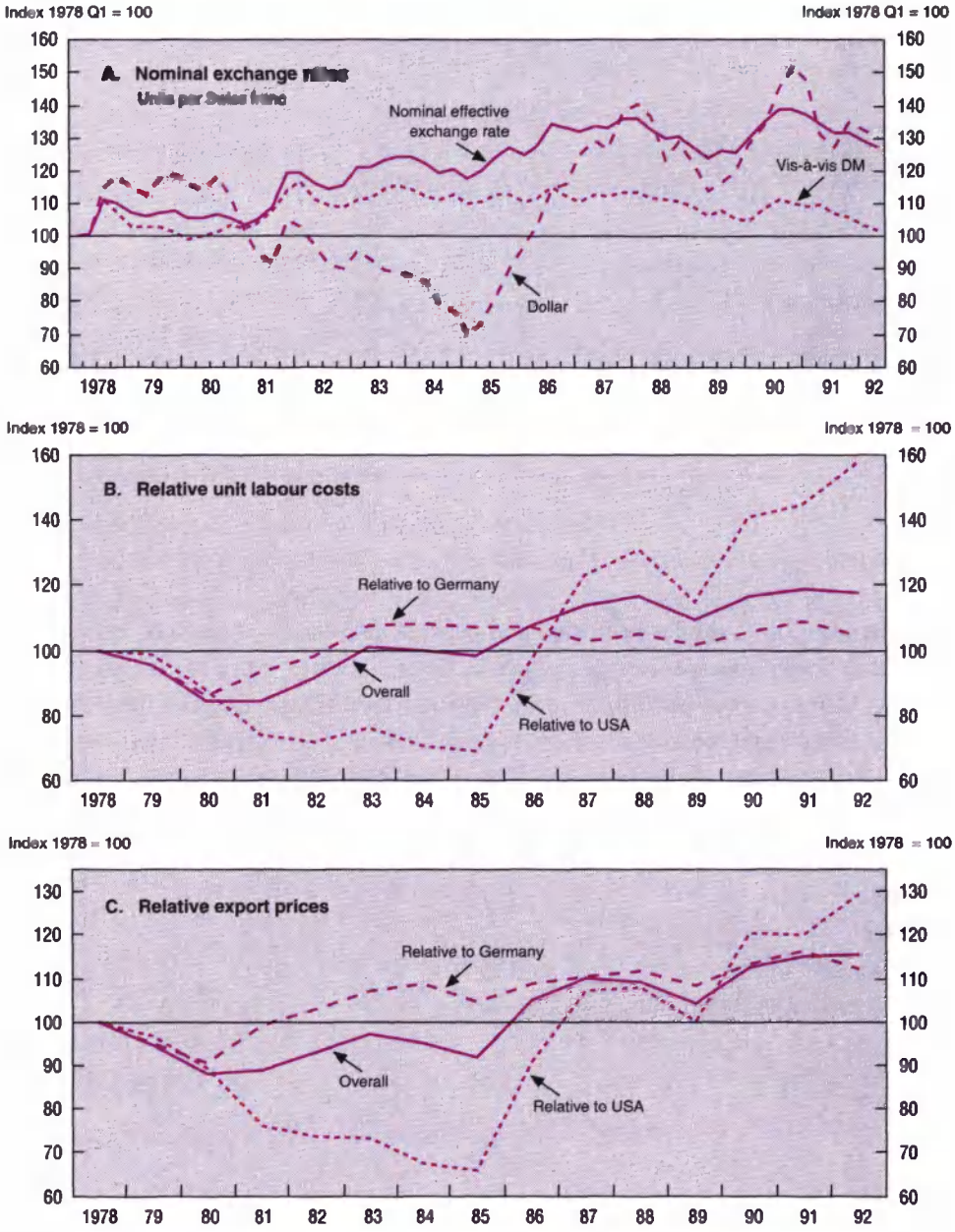
cent over the year to the third quarter of 1991. Hence, it seems that the substantial deterioration in the labour market in the course of 1991 had a damping impact on wage settlements. With inflation likely to fall further this year, this will entail a further rise in real wages, which may be in accordance with the expected productivity gain. Because of the nominal wage deceleration and the expected improvement in labour productivity, the growth of unit labour costs has probably decelerated substantially in 1992.

A narrowing trade deficit

For the first time since 1982, merchandise export volumes fell in 1991, by 1.2 per cent, after relatively strong growth from 1988 to 1990. The weakness of exports was remarkable as Swiss export markets are estimated by the OECD Secretariat to have expanded by 5½ per cent in 1991, after 7¼ per cent in 1990. The implied substantial loss in market shares may be related partly to the lagged effect of the nominal effective appreciation of the Swiss franc by about 6 per cent in 1990, which led to a rise in the *real* effective exchange rate – based on relative unit labour costs and relative export prices – by broadly the same magnitude (Diagram 10). Competition in international markets did not allow adjustment of export prices to strongly risen costs, which suggests a further marked fall in exporters' profit margins in 1991 (Table 5).

On important European markets (excluding Germany) the dampening exchange rate effect on exports was accompanied by slowing import demand in 1991, most notably in the United Kingdom. With the Swiss franc strengthening vigorously *vis-à-vis* the dollar, the bilateral *real* Swiss franc-dollar exchange rate appreciated by more than 20 per cent in 1990. In combination with weakening domestic demand in the United States, Swiss exports to this market were fairly flat in 1991. The sharp appreciation against the dollar also contributed to the poor export performance in non-OECD markets. The real appreciation of the Swiss franc relative to the Deutschemark of the order of 4 per cent in 1990 is likely to have hampered sales somewhat to the booming German markets in 1991: notwithstanding the recorded rather impressive sales figures, Swiss exporters suffered market share losses there. Shipments to Japan fell steeply in 1991, probably in response to the extraordinary real appreciation of the Swiss franc against the yen – by more than 25 per cent – in 1990 (Table 6).

Diagram 10. **RELATIVE COSTS AND PRICES**



Source: OECD Secretariat estimates.

Table 5. **Exports and competitiveness**

Percentage changes

	1988	1989	1990	1991	1992 S1[3]
Volumes					
Merchandise exports	7.0	5.7	4.3	–1.2	9.2
Export markets	9.9	9.0	7.3	5.6	6.2
Relative export performance[1]	–2.6	–3.0	–2.8	–6.4	2.8
Prices					
Export prices	1.5	6.0	1.1	2.6	–0.4
Unit labour costs	3.0	2.8	6.6	8.5	4.0[4]
Profit margins[2]	–1.5	3.1	–5.2	–5.4	–3.5[4]

1. Differential between export growth and export market growth.
2. Differential between export price growth and unit labour cost growth.
3. Seasonally-adjusted annual rate from previous period.
4. OECD Secretariat estimates.

Source: KOF/ETH, *Konjunktur;* OECD.

In addition to the loss of price competitiveness, the high share of investment goods in Swiss exports (about 38 per cent) is likely to account in part for the disappointing export performance in 1991. In the OECD area private non-residential investment volumes fell by 1.8 per cent in 1991, clearly contributing to the 4 per cent decrease in Swiss real investment goods exports (Table 7). Cyclical weakening in important trading partner countries also caused real exports of raw materials and semi-finished goods (about one-third of merchandise exports) to decline in 1991, which was broadly offset by a minor increase in consumer goods exports.

Starting in the fourth quarter of 1990, the Swiss franc depreciated in nominal effective terms throughout 1991 and during the first four months of 1992. This, however, only compensated for the higher price and cost inflation in Switzerland than in trading partner countries, so that for 1991 on average, the real effective exchange rate came close to a standstill,[5]albeit at a high level. But since early 1992, Swiss exports seem to be on the road to recovery, supported by accelerating growth of markets, estimated at a s.a.a.r. of 6¼ per cent in the first half of 1992. Export volumes increased by a twelve monthly rate of 5.3 per cent in the first seven months of 1992, which was mainly because of vigorous foreign

Table 6. **Exports by area**[1]

	1989 values		Percentage change from previous year, value Swiss francs											
	SF million	Percentage share	1990	1991	1990				1991				1992	
					Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2
OECD	66 610	79.1	5.8	–0.2	14.0	3.1	4.2	2.5	–3.8	0.7	1.1	1.2	8.5	5.2
EEC	47 667	56.6	7.0	0.9	15.2	4.6	5.2	3.9	–1.6	1.7	2.1	1.7	9.2	5.0
Germany[2]	17 134	20.3	12.7	7.2	17.1	8.6	13.2	12.2	7.5	9.5	8.8	3.3	7.2	1.7
France	8 258	9.8	5.9	–3.2	15.4	0.7	7.7	1.2	7.9	–0.3	–0.7	–3.2	9.3	4.0
Italy	7 159	8.5	9.7	–2.7	18.8	7.5	10.0	3.7	–6.9	–2.1	–1.5	–0.5	15.6	10.8
United Kingdom	6 908	8.2	–4.9	–11.6	16.1	0.7	–19.5	14.0	–15.5	–18.6	–8.6	–1.3	–4.0	4.1
EFTA	5 560	6.6	4.7	–3.4	10.4	1.6	7.1	0.7	–3.3	–3.0	–5.2	–2.2	3.8	0.7
United States	7 439	8.8	–6.2	2.5	0.3	–9.3	6.7	–8.5	–10.2	0.1	7.6	12.7	13.0	16.5
Japan	3 521	4.2	19.5	–10.4	26.0	10.6	21.1	19.7	–17.4	–1.1	–11.2	–10.7	0.0	–1.4
Non-OECD	17 658	21.0	0.8	–0.8	16.6	2.7	–1.6	–11.8	–16.1	–3.5	4.3	12.9	14.6	8.6
OPEC	2 604	3.1	5.6	8.4	12.5	28.0	–0.7	–16.4	–16.5	–9.0	15.2	55.4	53.9	2.0
Non-oil developing countries	11 175	13.3	4.0	–0.4	22.2	0.0	2.3	–5.1	–15.0	–2.1	3.5	12.1	14.8	13.7
Central and Eastern European countries[3]	3 362	4.0	–14.0	–11.1	3.1	–8.5	–17.1	–29.6	–20.4	–1.6	–3.6	–16.3	–21.7	–12.0
Total	84 268	100.0	4.7	–0.4	14.5	2.8	3.2	–0.5	–6.3	–0.2	1.7	3.4	9.6	5.9

1. Index I.
2. Eastern Germany included as of October 1990.
3. Until 1991, this group included also Asian centrally-planned economies.

Source: Département fédéral de l'économie publique, *La vie économique.*

Table 7. **Foreign trade by commodity group**[1]

		1989 values		Percentage change from same period in previous year										
		SF million	Percentage share	1990	1991	1990				1991				1992	
						Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2
Imports, cif, total	Volume	88 160	100.0	2.7	–1.4	7.2	2.1	4.9	–3.1	–4.4	–0.4	–1.7	1.0	–0.2	–5.0
	Price			–0.7	0.1	4.4	–2.2	–3.1	–1.7	–3.1	–0.3	3.1	1.1	4.1	4.2
Raw materials and semi-finished goods	Volume	29 322	33.3	1.8	–5.2	5.3	1.1	1.7	–0.5	–4.9	–3.8	–6.1	–6.6	–1.6	–3.5
	Price			–3.6	–1.3	1.3	–5.5	–4.7	–5.7	–4.8	–2.1	1.3	1.2	1.7	3.1
Fuels	Volume	3 675	4.2	7.4	2.4	9.0	15.6	16.7	–10.2	–0.9	–7.8	0.4	19.1	16.2	4.7
	Price			9.3	–1.3	20.7	–12.5	9.2	26.0	8.6	11.9	–0.8	–19.8	–15.7	–4.0
Investment goods	Volume	23 648	26.8	3.0	–2.9	11.9	2.1	7.2	–7.3	–6.0	–0.2	–5.4	0.1	–6.2	–8.0
	Price			–0.5	2.0	4.8	–1.9	–3.1	–1.4	–3.9	2.7	5.4	3.4	8.4	5.6
Consumer goods	Volume	31 516	35.7	2.7	2.7	5.6	1.6	4.5	–1.3	–3.3	3.4	4.6	6.1	3.4	–5.3
	Price			0.6	0.1	5.3	2.0	–3.2	–1.5	–2.5	–2.3	3.6	2.3	5.8	5.2
Exports, fob, total	Volume	76 658	100.0	4.5	–1.4	10.2	2.4	5.5	0.8	–4.0	0.0	–1.2	–0.1	6.7	3.7
	Price			1.0	2.8	2.6	1.3	0.1	–0.2	1.2	1.5	4.0	4.4	2.8	1.5
Raw materials and semi-finished goods	Volume	24 753	32.3	1.9	–1.2	6.7	–2.5	4.4	–0.5	–2.8	1.8	–3.0	–1.0	3.2	1.3
	Price			–0.7	0.3	3.9	0.7	–4.3	–3.2	–2.8	–0.4	3.8	1.4	3.1	1.2
Investment goods	Volume	28 772	37.5	5.1	–4.0	10.4	3.9	6.7	1.1	–5.3	–3.4	–3.9	–3.5	2.4	1.0
	Price			0.9	4.0	0.9	1.3	1.3	–0.1	3.0	4.0	3.6	5.3	3.9	0.5
Consumer goods	Volume	23 104	30.1	6.3	1.4	14.1	6.0	5.0	1.3	–3.6	1.7	3.4	4.5	15.2	0.1
	Price			2.8	3.9	3.4	1.9	3.3	2.6	3.3	0.6	4.6	6.3	1.2	3.1

1. Index II: excluding precious metals, precious stones, works of art and antiques.
Source: Banque nationale suisse, *Bulletin mensuel;* KOF/ETH, *Konjunktur.*

demand for Swiss consumer goods; there were, however, also encouraging signs from exports of investment goods, raw materials and semi-finished goods. Export demand was particularly strong from Italy, Spain, Belgium and Luxemburg, while deliveries to Germany continued to grow at a distinctly slower pace. Strong growth was also recorded for exports to the United States, to OPEC and non-oil developing countries.

Damped by receding domestic demand, merchandise import volumes decreased by 1.4 per cent in 1991. The fall in the volume of imports of raw materials and semi-processed products mirrored slowing production and the run-down of inventories. Reflecting the depressed domestic investment activity, imports of investment goods fell in spite of the boost from airplane purchases. Real consumer goods imports remained on an upward trend in 1991, helped by stable import prices. In the first seven months of 1992, raw material as well as consumer goods import volumes declined somewhat, while imports of investment goods fell sharply. With real merchandise trade flows shrinking broadly in parallel, the combination of unchanged import prices and rising export prices caused a reduction of the trade deficit for two years in a row, to SF 8.1 billion in 1991. Consequent on the weakening exchange rate, import prices surged and export prices decelerated in the first seven months of 1992. But the terms of trade deterioration was more than offset by strongly improving real net exports so that the (s.a.) trade deficit contracted substantially.

Net income from tourism declined in 1991, following the rather abrupt abstention from visits mainly by many American tourists (their overnight stays fell by 37 per cent in 1991), as a result of the recession in the United States and probably also of the Gulf war. Other services, such as bank commissions and bank revenues from fiduciary accounts were more buoyant, so that the services surplus remained about constant at some SF 11 billion in 1991. A further increase in net investment income was offset by a higher deficit in labour incomes so that there was hardly any change in the surplus from factor incomes in 1991 (SF 13.6 billion). Net transfer payments continued their trend increase, limiting the increase in the current external surplus from SF 12.0 billion in 1990 to SF 12.8 billion in 1991, some 4 per cent of GDP (Table 8). With the trade deficit narrowing further, the services surplus widening because of recovering tourism and rising net capital income, a strong increase in the current external surplus was recorded in the first half of 1992.

Table 8. **Balance of payments**

$ billion

	1989	1990	1991	1990		1991	
				I	II	I	II
Seasonally adjusted[1]							
Exports (fob)	53.2	65.6	63.6	31.3	34.3	32.3	31.3
Imports (fob)	57.3	68.8	65.8	33.3	35.6	33.9	31.9
Trade balance	–4.1	–3.2	–2.2	–2.0	–1.2	–1.6	–0.6
Services	12.8	14.2	13.8	6.6	7.6	7.1	6.8
Private transfers, net	–1.7	–2.2	–2.4	–1.0	–1.2	–1.2	–1.1
Official transfers, net	0.0	–0.2	–0.2	–0.1	–0.1	–0.1	–0.1
Current balance	7.0	8.6	9.1	3.6	5.0	4.2	4.9
Not seasonally adjusted							
Current balance	7.0	8.6	9.1	4.3	4.3	5.0	4.1
Non-monetary capital	–23.9	–17.8	14.2				
Balance on non-monetary transactions	–16.9	–9.2	–4.1				
Short-term monetary capital	18.4	10.4	5.1				
Balance on official settlements	1.5	1.2	1.0				
Memorandum items (SF billion)							
Tourism	2.0	2.1	2.9				
Capital movements	–9.1	–10.3	–13.1				
Non-monetary capital	–39.1	–24.7	–20.3				
Bank capital	30.1	14.4	7.2				
Balance on official settlements	2.4	1.7	1.4				
Trade balance[2]	–11.7	–9.5	–8.0				
Current balance	11.5	12.0	14.5				

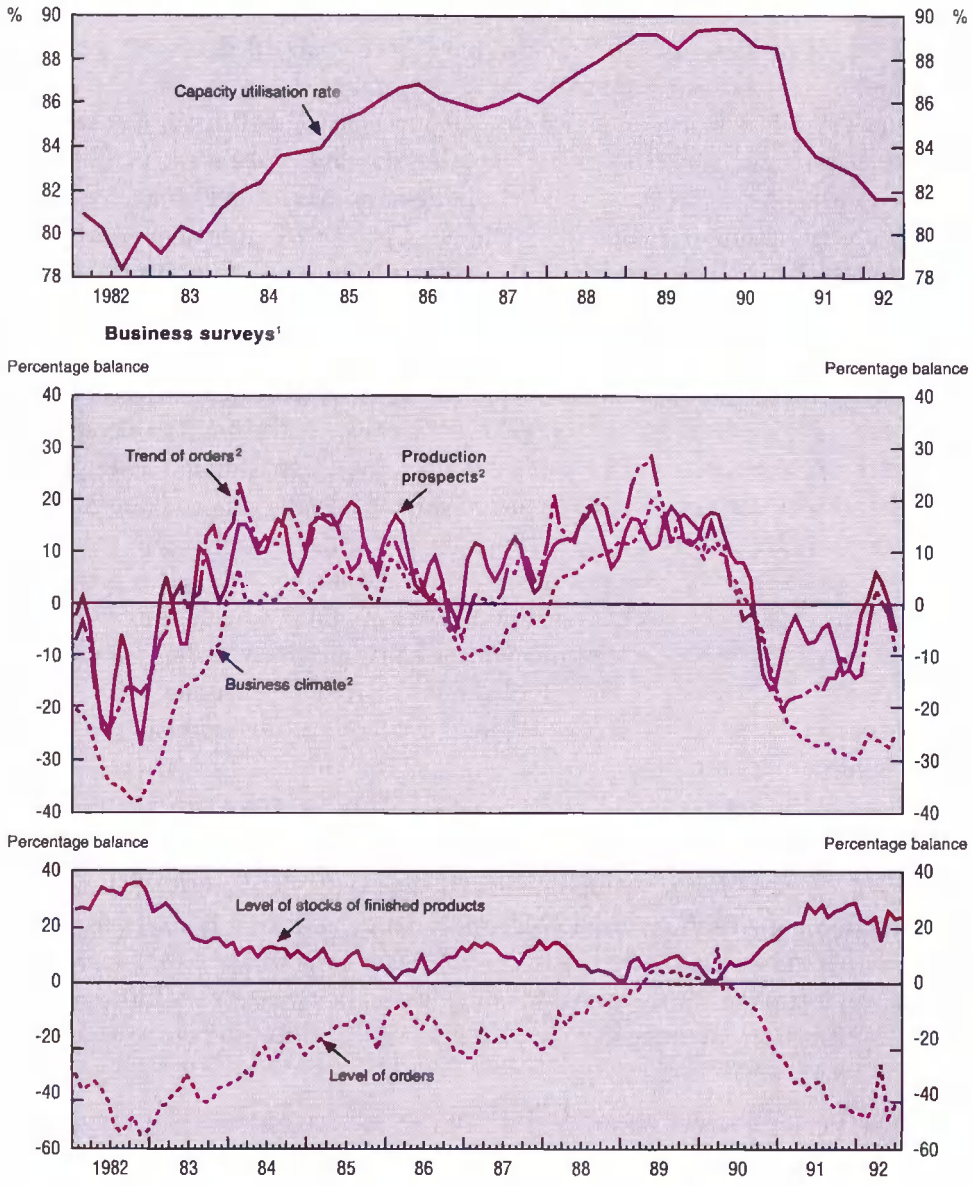
1. Seasonal adjustment by the OECD. 1991 figures are still preliminary.
2. Exports (fob) minus imports (cif).

Source: Banque nationale suisse, *Bulletin mensuel;* OECD.

The outlook to 1993

At the time of writing few signs of a cyclical turnaround were coming into view: in the Spring of 1992, incoming industrial orders were on a rising trend, but appear to have again weakened afterwards. The assessment of the stock of orders also improved only temporarily (Diagram 11). Entrepreneurs in manufacturing seem to expect a continuation of export buoyancy, but they remain pessimistic about domestic orders. More optimistic expectations appear to prevail in the retail sales and tourism businesses, while a continuation of slump is antici-

Diagram 11. **INDICATORS OF ACTIVITY**



1. Balance of positive and negative orders.
2. 3-month moving average.

Source: OECD, *Main Economic Indicators.*

pated in the construction sector. The overall business climate indicator of the KOF/ETH improved somewhat, but stayed in the zone labelled "unfavourable".

The projections discussed below have been elaborated on the technical assumption of nominal exchange rates remaining stable at their levels of Autumn 1992. It is indeed assumed that the monetary authorities aim at stabilising the Swiss franc's external value, implying stability of the short-term interest differential vis-à-vis the Deutschemark. Long-term interest rates may decline in line with an improving inflation outlook. Unchanged exchange rates from Autumn 1992 imply an effective depreciation of the Swiss franc from 1991 to 1992, but an appreciation in 1993. The fiscal policy stance is gauged to be slightly expansionary this year, but broadly neutral next.

Given the contraction in the first half of 1992, only a mild recovery of economic activity is projected for 1992 on average, with some acceleration in 1993 (Table 9). Exports should pick up, helped by strengthening market growth and the recent real exchange-rate depreciation. Private consumption will be supported by the customary adjustment of contractual wages to the preceding autumn's price inflation, which tends to boost real labour incomes in periods of diminishing inflationary pressures. However, the rise in private consumption may be relatively small since further employment losses are likely to damp disposable incomes in 1992. Moreover, the recorded rapid increase in unemployment, which is reflected in the depressed consumer sentiment indicator, will probably keep the household saving ratio high.

Business fixed investment may contract again in 1992 and recover only moderately in the course of 1993, after business expectations have further improved, in response to rising exports. In line with the registered decline in construction authorisations for 1992, residential construction is likely to shrink this year. A turnaround may occur in 1993, as a response to lower real-estate prices and financing costs. Notwithstanding budget consolidation efforts, government construction investment is projected to lend further support to economic activity.

The unemployment rate may rise further, to an average of 3¼ per cent in 1993. This would mean some on-going slack in the economy, and hence inflation should come down to about 4¼ per cent in 1992 and further to 3½ per cent in 1993, even allowing for the planned increase in the customs duty on petrol by SF 0.20 per litre. This is reckoned to raise the consumer price index by ½ per

Table 9. **Short-term projections**

	Current prices SF billion 1989	Share in GDP %	Percentage changes			
			1990	1991	1992[1]	1993[1]
Demand and output (volume)[2]						
Private consumption	166.2	57.2	1.5	1.5	0.5	1.0
Public consumption	38.5	13.3	4.7	2.8	1.5	1.8
Gross fixed capital formation	79.9	27.5	2.6	–2.5	–6.1	0.0
Construction	52.3	18.0	1.9	–3.2	–5.0	0.5
Machinery and equipment	27.5	9.5	3.7	–1.2	–8.0	–1.0
Final domestic demand	284.5	98.0	2.2	0.5	–1.2	0.8
Change in stocks[3,4]	6.4	2.2	0.1	–1.2	–0.8	0.1
Total domestic demand	290.9	100.2	2.3	–0.6	–2.0	0.9
Exports of goods and services	110.5	38.1	3.0	–0.7	3.0	2.3
Imports of goods and services	111.1	38.3	2.9	–1.7	–2.0	1.8
Change in foreign balance[3]	–0.6	–0.2	–0.1	0.5	2.2	0.2
Gross domestic product	290.4	100.0	2.3	–0.1	0.2	1.1
Industrial production			2.7	–0.5	0.2	1.8
Prices						
GDP deflator			5.7	6.1	4.0	3.5
Private consumption deflator			5.3	5.7	4.2	3.5
Current balance ($ billion)	7.0		8.6	9.1	12.9	15.8
Per cent of GDP	4.0		3.8	3.9	5.1	5.7

1. OECD Secretariat forecast.
2. At 1980 prices.
3. As a percentage of previous year's GDP.
4. Including statistical adjustments.

Source: Swiss national accounts; OECD.

cent in 1993. Imports of goods and services are likely to resume growth in line with domestic demand in 1993. With the terms of trade expected to remain broadly unchanged this year and to improve thereafter, the current external surplus may exceed 5 per cent of GDP in 1992 and 1993.

II. Economic policy

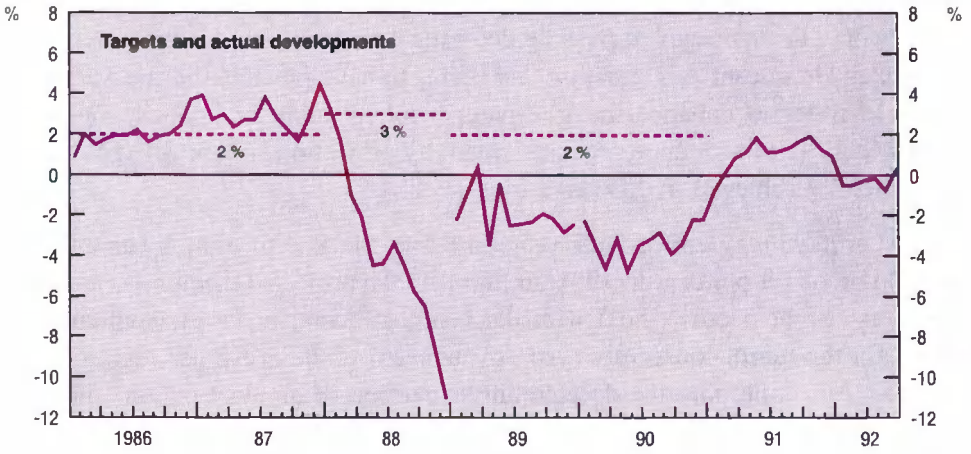
Temporary relaxation of monetary policy

Monetary targets and actual developments

The Swiss National Bank's (SNB) target for the seasonally adjusted monetary base[6] (SAMB) was undershot in 1990 by a substantial margin for the third consecutive year (Diagram 12), as the result of the commercial banks' continuing adjustment of their liquidity demand to regulatory and technological innovation in 1988. Given this experience and the prevailing uncertainty about the base money's relevance as a short-run indicator in present circumstances, the SNB abstained from formulating annual monetary targets for 1991 and 1992. A growth target for the SAMB of 1 per cent *per annum* over the next three to five years was set instead, which is deemed to be sufficient for real growth to keep up with potential output and to be in line with the objective of attaining "an inflation-free development of the Swiss economy".[7] The downward revision of the projected expansion rate of base money from 2 per cent in 1989 and 1990 to 1 per cent during the following years is based on the observation of continuing technical progress in payments transactions, which tends to contain the demand for banknotes, together with the increased share of notes in circulation in the monetary base from about three-quarters in 1987 to around nine-tenths in 1991.

The National Bank appears to aim at annual consumer price increases between zero and one per cent,[8] but does not provide an explicit estimate for potential output. But if one assumes a rate of potential output growth of 2 per cent – implicit in past statements of the SNB – and an elasticity of note demand with respect to nominal GDP of about 0.37, which was the average during the 1980s, an expansion of banknotes in circulation of slightly above 1 per cent would be consistent with a target inflation rate of 1 per cent. For a transitory period of still unknown length, a dampening effect on the demand for base money may be

Diagram 12. **THE ADJUSTED MONETARY BASE**
Percentage changes[1]



1. Until 1988 and from 1990, the growth rates refer to the corresponding period of the previous year. In 1989, the changes refer to seasonally-adjusted annualised growth rates over the fourth quarter of the preceding year.
Source: Banque nationale suisse, *Bulletin mensuel.*

exerted by the ongoing downward adjustment of the commercial banks' liquidity holdings to the new Swiss Interbank Clearing system (SIC) and the introduction of revised prudential liquidity regulations in 1988. But with a weight now of below one-tenth, the impact on the monetary base of banks' declining sight deposits held with the SNB is currently rather small. This may change once the banks' liquidity holdings have settled down to a new equilibrium *vis-à-vis* the new regulatory framework: from then on, banks' sight deposits with the SNB are likely to grow somewhat faster than nominal GDP, as was observed before 1988. This would then call for a reassessment of the SNB's monetary target.

For the short term, the National Bank stresses the exchange-rate-oriented nature of its current monetary policy approach more than in earlier years, but refrains from defining exchange-rate targets or target zones. The SNB merely announced the possibility of deviating temporarily from its medium-term target growth path for SAMB under certain conditions, in order to generate more

pronounced interest rate movements than those induced by the combination of cyclical changes of activity and steady money supply. In particular, it has been pointed out that a deliberate undershooting of the SAMB's medium-term growth target would be envisaged to push up domestic interest rates were the Swiss franc to weaken significantly, a situation that seems to have prevailed in the Spring of 1992. In order to enhance the transparency of its monetary policy, the SNB started in 1991 to announce regularly quarterly projections of the SAMB, which were broadly achieved in 1991 and in 1992 so far.

After having fallen for three years in a row, the SAMB grew by an average annual rate of 1.1 per cent in 1991, in line with the projected medium-term target trajectory. Sight deposits held with the National Bank, however, continued to shrink for the fourth consecutive year, by an average rate of 6.2 per cent in 1991, probably reflecting both the decelerating expansion of nominal national income and the ongoing adjustment of the banks' liquidity management to the changed regulatory environment. But this was more than offset by the expansionary impact on base money of the 2.2 per cent growth of notes in circulation in 1991. The pick-up in currency in 1991 was in some contrast to the slowing growth of nominal transactions and rising interest rates on savings deposits, identified in the past as important determinants of currency demand; but the recovery in note demand may have been caused by decreasing time-deposit interest rates. It may thus reflect a correction in portfolios after the unusual fall of note holdings by some 2 per cent in 1990, which was probably caused by the increased attractiveness of yields on time deposits and which more than offset the impact of the strong expansion of nominal GDP on note demand.

During 1991, the development of base money was somewhat unsteady: it accelerated markedly at the beginning of the year, driven by a substantial increase in bank note circulation, which was partly triggered by the rapid fall in time deposit interest rates; the Gulf crisis may also have boosted the demand for banknotes. Hence, in the first quarter of 1991, the SAMB grew at a s.a.a.r. of 6.3 per cent above its level of the last quarter of 1990. After this relatively strong increase, the National Bank decided to restrain its money supply, exercised as usual through currency swap operations, whereby the National Bank sells or buys foreign exchange for a predetermined period of time from commercial banks. For the remainder of 1991, the level of the SAMB remained broadly unchanged, which not only reflects restrained supply, but also subdued bank demand reflect-

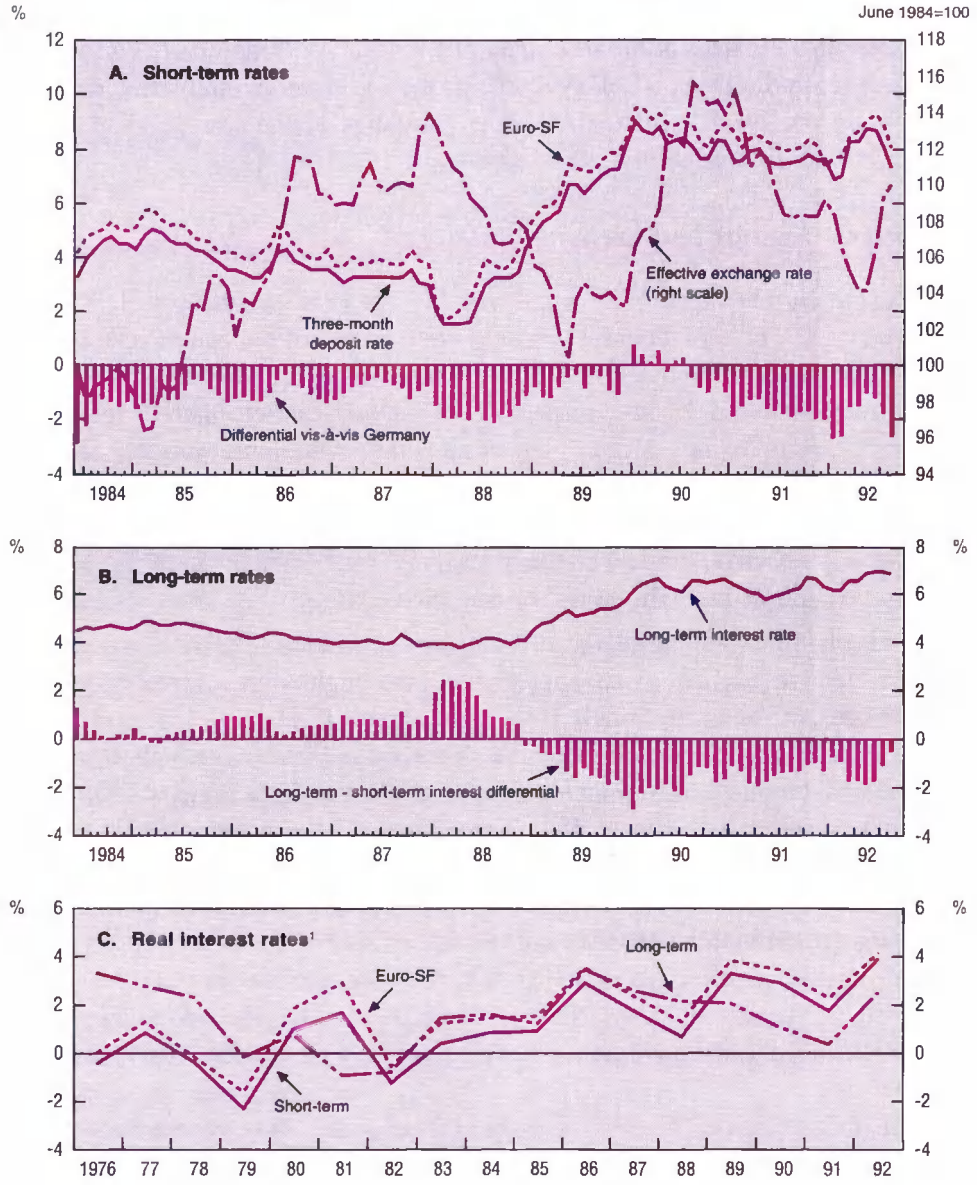
ing the cyclical slump and the changed regulatory environment. This stagnation of base money continued in the first seven months of 1992, in spite of declining short-term interest rates at the beginning of the year. With nominal GDP falling significantly in the first half of 1992, the growth of notes in circulation decelerated, while the banks held their liquidity holdings at the low level of about SF 2.5 billion during the first seven months of 1992.

Short-term interest and exchange rates

At the current juncture, it is not possible yet to distinguish cyclical influences on the fall of bank liquidity from the contribution of the commercial banks' response to financial innovation. Therefore, monitoring the monetary base needs to be complemented by the inspection of money-market interest rates and exchange rates to obtain a clearer view of monetary conditions. Although the two sets of indicators sometimes provide different impressions of the National Bank's policy stance, for 1991 on average, money-market interest rates as well as the Swiss franc effective (trade-weighted) exchange rate unequivocally pointed to some relaxation of the tight monetary conditions.

Starting from a high degree of monetary restriction – as revealed by the strong effective exchange-rate appreciation, the high level of money-market interest rates, the unusual strongly positive short-term interest rate differential *vis-à-vis* Germany and the steeply negative slope of the yield curve – the National Bank allowed money-market interest rates to decline as from January 1990. This was brought about by the declining liquidity demand of commercial banks, which was not offset by commensurate reductions of money supply through the SNB. Hence, the short-term interest differential with Germany diminished in the course of the first seven months of 1990, but this did not prevent a further appreciation of the Swiss franc effective exchange rate until the late summer of 1990 (Diagram 13). In August 1990, the National Bank decided to relax its policy stance further. With Deutschemark money-market rates on a rising trend, the short-term interest differential *vis-à-vis* Germany turned negative again and widened through the remainder of 1990 and throughout 1991. This contributed to the effective depreciation of the Swiss franc during the same period. There were only short-lived interruptions of the decline in short-term interest rates and the effective exchange rate, the most notable one being the Gulf-crisis-related upsurge in interest rates in late 1990, which was followed by a brief exchange rate apprecia-

Diagram 13. **INTEREST AND EXCHANGE RATES**



1. Nominal rates less the change in the consumer price index from the previous year.
Source: OECD, *Main Economic Indicators* and Secretariat estimates.

tion in early 1991. In August 1991, the SNB raised its discount rate by 1 percentage point to 7 per cent, in a concerted action with other European central banks, which had only a very limited effect on Swiss money-market interest rates.

Short-term interest rates bottomed out in early 1992. In January, the Zürich three-month deposit rate fell to below 7 per cent and the Euro-franc rate reached a low of 7.4 per cent in February. With Deutschemark money-market interest rates continuing to drift upward, a trend which was supported by the increase in German official lending rates by ½ percentage point in December 1991, the negative short-term interest rate differential *vis-à-vis* Germany widened to more than 2 percentage points in January and February 1992, the largest since the summer of 1984. The Swiss franc exchange rate, which had depreciated by an average rate of 2.5 per cent in effective terms in 1991, weakened rapidly, entailing the risk of fuelling domestic inflation *via* higher import prices. Therefore, the SNB intervened in the foreign exchange market and curbed slightly the banks' liquidity through restrictive currency swap operations, and short-term interest rates picked up vigorously: the three-months Euro-franc rate rose from about 7.7 per cent in January to over 9 per cent in June 1992, while the flexible lombard rate even exceeded 11½ per cent, the highest level in two years. But although this narrowed the negative short-term Swiss franc-Deutschemark interest differential to below 1 percentage point, the franc's external value continued to fall until May 1992. The Swiss franc started to appreciate in effective terms in June 1992, responding to the further rise in Swiss money-market interest rates. The strength of the Swiss franc in foreign exchange markets allowed the SNB to slightly ease its monetary policy stance in July and August, which is mirrored in declining money market interest rates. In September 1992, the National Bank lowered its discount rate from 7 to 6½ per cent, in line with cuts in official lending rates in Germany and other European countries.

Capital market interest rates

After many years of exceptional stability, the Confederation bond rate rose from around 4 per cent in early 1989 to a peak of about 6¾ per cent in the Spring of 1990, the highest rate since early 1975. This increase reflected mainly an opening inflation differential *vis-à-vis* Germany and to some lesser extent rising domestic money-market interest rates and climbing Deutschemark bond rates.[9]

From then on, the bond rate displayed more pronounced fluctuations than experienced during the earlier part of the current business cycle: after some decline in the Summer of 1990, which seemed to mirror the perception of a halt in the rise in inflation rates just before the outbreak of the Gulf crisis, the Swiss bond rate rose again, broadly in parallel with developments in European capital markets; it again reached the 6¾ per cent mark at the end of 1990. Bond rates decreased in the wake of the Gulf war but picked up once again in the second half of 1991. This increase at the time of declining international capital market interest rates is surprising and has been related by some observers both to the insolvency of a regional bank and to the agreement on the EEA, which many think will result in narrowing interest differentials between Switzerland and European capital markets. In the first two months of 1992, declining inflation rates and monetary relaxation seem to have induced another decrease in bond rates. In the spring of 1992, when the National Bank tightened its policy stance to counter the effective exchange-rate depreciation, long-term interest rates rebounded; they reached a new peak of 7.0 per cent in the summer of 1992. Mortgage rates followed the upward trend of bond rates since 1989 and climbed to nearly 8 per cent (for new loans) in early 1991. A small decline towards the 7.8 per cent mark was recorded in the second quarter of 1991; new mortgages remained close to this rate until July 1992, but edged up somewhat in August.

As in the past, nominal long-term interest rates remained very low compared with most other OECD Member countries. However, the differential narrowed somewhat in recent years (Table 10). For example, Swiss bond rates were some 4 percentage points lower than those in Germany in the late 1970s and early 1980s, while the differential varied between 1¾ and 2½ percentage points in the period from 1985 to 1991. With inflation rising strongly since 1989 and exceeding the OECD average in recent periods, conventionally measured real long-term interest rates – i.e. deflated by twelve-monthly changes in consumer prices – were extraordinarily low compared with other OECD countries. Because of high inflation, the so-defined real bond rate declined to just above zero; it was even temporarily negative in the course of 1991. But with inflation receding since the autumn of 1991 and nominal interest rates remaining high, real rates rose somewhat, while remaining much below those registered in other countries. Hence, in real terms, Switzerland maintained its character as an "interest island" *("îlot des taux d'interêt").*

Table 10. **Nominal and real interest rates in selected OECD countries**

	1989	1990	1991	1990				1991				1992	
				Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2
	Short-term rates[1]												
Nominal rates													
Switzerland	6.4	8.3	7.6	8.7	8.4	8.0	8.1	7.7	7.6	7.5	7.6	7.4	8.6
United States	8.8	7.9	5.9	8.1	8.2	7.6	7.7	6.6	6.1	5.8	4.9	4.2	4.0
Germany	7.1	8.5	9.2	8.4	8.3	8.4	8.9	9.2	9.1	9.2	9.5	9.6	9.8
Japan	5.4	7.7	7.2	7.2	7.5	8.0	8.3	7.9	7.7	7.1	6.1	5.1	4.6
United Kingdom	13.9	14.8	11.5	15.2	15.1	15.0	13.8	13.2	11.6	10.6	10.6	10.5	10.2
France	9.4	10.3	9.6	11.0	10.0	10.2	10.1	9.8	9.4	9.5	9.7	10.1	10.0
	Long-term rates[2]												
Switzerland	5.2	6.4	6.2	6.4	6.4	6.4	6.6	6.3	5.9	6.1	6.6	6.3	6.8
United States	9.3	9.3	8.8	9.2	9.4	9.4	9.3	8.9	8.9	8.8	8.4	8.3	8.3
Germany	6.9	8.7	8.6	8.2	8.8	8.7	9.0	8.7	8.4	8.7	8.5	8.1	8.1
Japan	5.3	7.4	6.7	6.7	7.2	7.9	7.6	6.9	7.1	6.8	6.1	5.7	5.8
United Kingdom	10.2	11.8	10.1	11.5	12.3	12.0	11.3	10.3	10.4	10.0	9.7	9.5	9.2
France	9.2	10.4	9.5	10.4	10.1	10.6	10.6	9.8	9.4	9.5	9.3	9.0	9.1
	Short-term												
Inflation-adjusted rates[3]													
Switzerland	3.3	2.9	1.8	3.8	3.5	2.2	2.2	1.8	1.4	1.4	2.4	2.6	4.2
United States	4.0	2.5	1.6	2.8	3.6	2.0	1.5	1.3	1.2	2.0	1.9	1.3	0.9
Germany	4.3	5.8	5.8	5.7	6.0	5.7	5.9	6.5	6.0	5.1	5.5	5.3	5.3
Japan	3.2	4.6	3.9	3.5	4.9	5.4	4.6	4.1	4.3	3.9	3.3	3.3	2.4
United Kingdom	6.1	5.3	5.6	7.4	5.4	4.5	3.8	4.5	5.6	5.8	6.4	6.4	6.1
France	5.9	6.9	6.5	7.6	6.9	6.8	6.5	6.4	6.2	6.5	6.8	7.0	6.9
	Long-term												
Switzerland	2.0	1.0	0.4	1.4	1.5	0.6	0.7	0.4	–0.3	0.1	1.3	1.5	2.4
United States	4.4	3.9	4.5	4.0	4.8	3.9	3.1	3.6	4.1	4.9	5.5	5.4	5.2
Germany	4.2	6.0	5.1	5.5	6.5	6.0	5.9	6.0	5.3	4.5	4.6	3.8	3.6
Japan	3.0	4.2	3.4	3.1	4.6	5.3	3.9	3.1	3.7	3.7	3.3	3.8	3.6
United Kingdom	2.4	2.3	4.3	3.8	2.7	1.6	1.3	1.6	4.4	5.2	5.6	5.4	5.0
France	5.7	7.0	6.4	7.0	7.0	7.2	7.0	6.4	6.2	6.5	6.4	5.9	6.0

1. Domestic rates, three-monthly generally.
2. Government bond rates, in general.
3. Nominal rates less the annual change in consumer prices.

Source: OECD, *Monthly Financial Statistics* and *Main Economic Indicators.*

Broader monetary aggregates

The monetary aggregate M1,[10] which had been used by the National Bank as intermediate target from 1975 to 1978, appears to provide a fairly consistent measure of monetary policy stance in recent years, in accordance with other indicators, such as money-market interest rates. M1 accelerated markedly in 1987 and in 1988, suggesting an expansionary monetary policy stance. Monitoring of M2 and M3 leads to the same conclusions. In 1989 and 1990, portfolio holders shifted funds out of cash holdings and sight deposits into high yielding time deposit accounts so that M1 fell and M2 grew rapidly in both years (Table 11). Hence, the notion of monetary restriction provided by high money-market interest rates is corroborated by the contraction of M1 and the sharp rise in its income velocity in 1989 and 1990. Although M1 picked up somewhat in 1991, its

Table 11. **Monetary aggregates and income velocity of money**

Annual averages

	1984	1985	1986	1987	1988	1989	1990	1991	1992 Q 1	1992 Q 2
	Percentage change from previous year									
Notes in circulation	2.1	1.6	1.4	3.5	4.2	2.4	–2.1	2.2	0.5	0.8
Sight deposits held with SNB	3.7	3.4	2.6	4.2	–34.5	–38.5	–13.5	–6.2	–17.0	–13.1
Adjusted monetary base (AMB)[1]	2.7	1.8	1.8	3.5	–5.6	–5.1	–3.3	1.1	–0.4	–0.1
Sight deposits	2.7	–0.5	7.0	10.0	18.6	–8.7	–5.3	1.2	1.4	–1.2
M1	2.6	0.1	5.0	7.5	14.2	–5.5	–4.2	1.7	1.3	–0.5
Time deposits	10.0	17.2	6.9	12.3	0.7	50.9	26.0	4.0	–1.3	3.4
M2	5.5	7.3	5.9	9.8	7.6	20.1	13.0	3.1	–0.4	2.0
Savings deposits	8.1	3.0	7.5	9.2	11.6	–5.1	–8.5	3.7	7.3	6.0
M3	6.2	4.8	6.8	9.5	9.8	6.2	2.4	3.4	3.0	3.8
Domestic credit expansion	7.4	9.7	9.8	9.9	11.3	14.5	11.8	6.7	6.0	5.1
Nominal GDP	4.6	6.9	6.8	4.7	5.4	8.2	7.6	4.7	3.9	2.2
	Percentage change in income velocity									
GDP/AMB[1]	2.0	4.8	5.0	1.0	11.9	13.8	11.4	3.3	4.3	2.3
GDP/M1	2.0	6.8	1.7	–2.7	–7.7	14.4	12.3	3.0	2.6	2.7
GDP/M2	–0.9	–0.4	0.8	–4.7	–2.1	–9.9	–4.8	1.5	4.3	0.2
GDP/M3	–1.5	2.0	0.0	–4.4	–4.0	1.9	5.1	1.3	0.9	–1.5

1. Change in definition in 1989.
Source: Banque nationale suisse, *Bulletin mensuel;* OECD.

increase was markedly smaller than that of nominal GDP, so that M1 continues to indicate a tight monetary policy stance. But the deceleration of the velocity of M1 in 1991 and in the first half of 1992 suggests some reduction of the degree of monetary restriction.

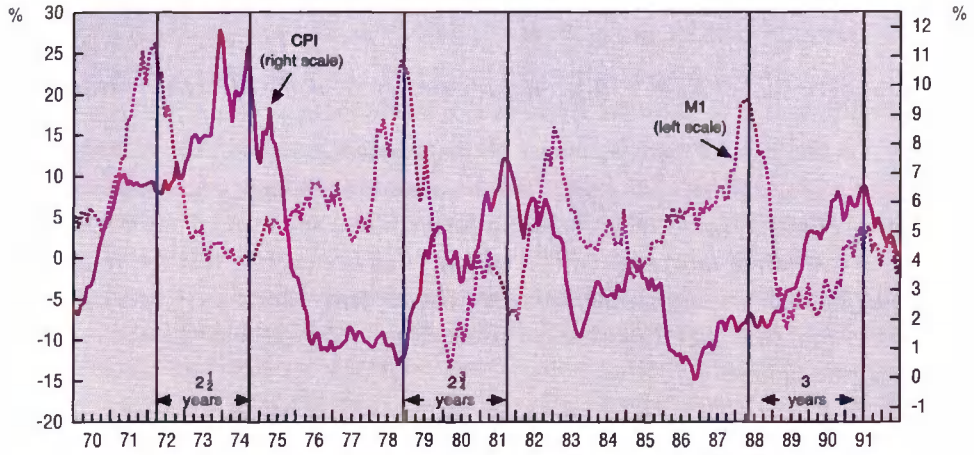
The lag between changes in monetary policy and its effect on inflation

When the painful consequences of the present anti-inflationary monetary policy were progressively felt by the public, a common belief seems to have built up that this time it would take unusually long time to see any inflation-damping effects of restrictive monetary policy. In part, this impression may be related to the high, though not unprecedented, level of current inflation. It may also be related to the fact that inflation in Switzerland rose above that in several neighbouring countries.

On the basis of past experience, the National Bank reckons that in Switzerland monetary policy affects the rate of price inflation after an average lag of two to three years. This is long by international comparison and reflects the high degree of indexation in the economy, the de-facto link between mortgage rates and rents, which complicates monetary policy in periods of restriction, as well as the widespread operation of cartel agreements, which are likely to contribute to the stickiness of prices (see also chapter III below). There is, of course, a variety of possibilities to measure the reaction lag of monetary policy. If, for example, the change in the monetary policy stance is identified as the turning point of the (twelve-monthly) rate of change in M1 and if the inflation response is measured by the month following the peak in consumer price inflation, then anti-inflationary monetary policies from early 1972 until late 1974 and from late 1978 to early 1980, indeed required two-and-a-half to three years to show reductions of inflation (Diagram 14). If increases in short-term interest rates are taken as signalling monetary tightening in past episodes, the reaction lag spreads from 2 to 3 years. And if the focus is on changes in the slope of the yield curve, then the lags tend to be closer to two years. Applying M1 as a yardstick to the current episode of stabilisation policy, the monetary policy stance appears to have switched to restriction in June 1988, when the twelve-monthly growth of M1 began to decelerate. Since consumer price inflation appears to have peaked in June and July of 1991, this points to a reaction lag of monetary policy of three years, which is not out of line with past experience. Moreover, there were signs

Diagram 14. **THE REACTION LAGS OF MONETARY POLICY**

Percentage change over same period of preceding year



Source: Banque nationale suisse, *Bulletin mensuel.*

of a levelling off of inflation already during the first half of 1990, but rising energy prices led to renewed inflationary pressures as from August 1990.

But dating the change in the course of monetary policy at the middle of 1988 may be contested. Given the exceptionally high measure of monetary expansion in late 1987 and in the first half of 1988, evidenced by extraordinarily low short-term interest rates and two-digit growth rates of M1, part of the change in monetary conditions in the second half of 1988 may be judged as a normalisation of monetary conditions after an exceptional situation – the October 1987 stock market crash – rather than monetary tightening. For example, the Zürich three-month deposit interest rate picked up from a trough of 1.5 per cent in April 1988 and exceeded its rather low average level of 1986 only towards the end of 1988; and only in December 1988 did the slope of the yield curve swing from positive to negative.

Moreover, the effective exchange rate, probably the most powerful and immediate transmitter of monetary policy to inflation, continued its steep fall

from its peak in December 1987 until May 1989 (by 12.3 per cent) and attained its – relatively low – average level of 1986 only at the beginning of 1990.[11] Taking all these indicators into account leads to the conclusion that in the current episode of stabilisation, the reaction lag of prices to monetary tightening is by no means unusually long. It follows, however, as a corollary, that the change to tight monetary conditions occurred rather belatedly.

What are the alternatives to base money targeting?

For the period up to 1987, it was possible to identify a stable and relatively simple quantitative relationship between the adjusted monetary base and key macroeconomic aggregates,[12] which made base money a useful and reliable intermediate monetary target. This helped the National Bank to meet its monetary targets with great accuracy from 1982 to 1987. However, the regulatory and technological innovations of 1988 have changed previously established relationships and it is still unclear whether and when a similarly stable link between base money and nominal GDP will be re-established. This raises the question as to the alternative intermediate targets of monetary policy.

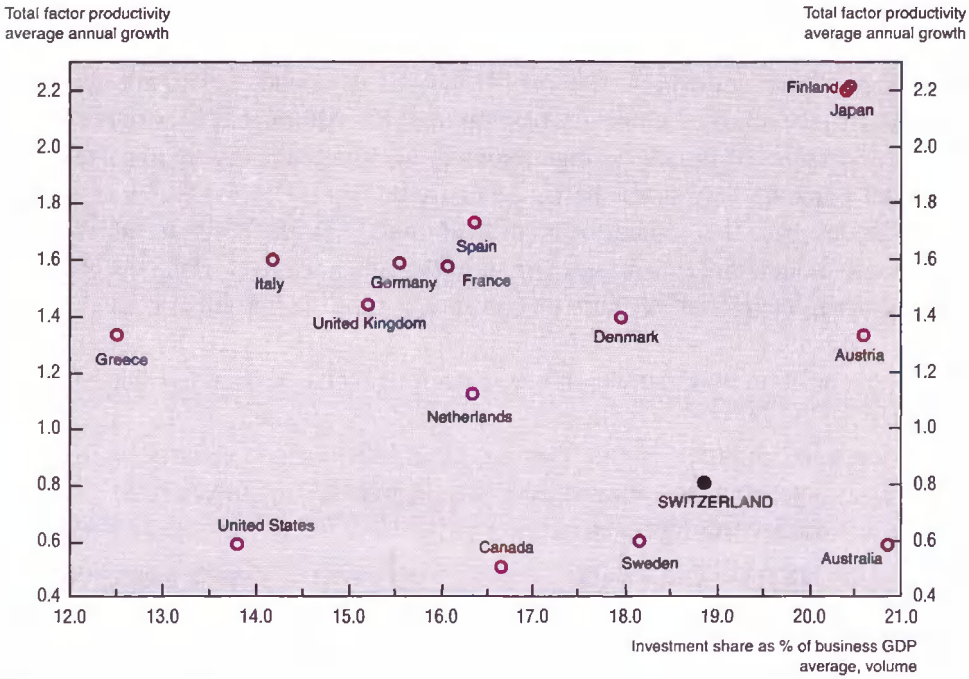
A possible candidate would be M1, which developed relatively synchronously with the adjusted monetary base up to 1987. Although somewhat affected by the revision of liquidity regulations,[13] M1 undoubtedly represented the National Bank's policy stance better than base money in 1988. Of course, unlike the monetary base, M1 cannot be controlled directly by the SNB. In the absence of a stable money multiplier, targeting of M1 would need to be done via changes in short-term interest rates. There is, however, a statistical problem related to the salary accounts *(''comptes salaires'')*, which are not recorded by commercial banks in a uniform way and which were therefore excluded from M1 and M2, but included in M3 by the revision of Swiss monetary statistics in 1985. But since these accounts are highly liquid, they are close substitutes to sight deposits; thus their exclusion from M1 may distort this aggregate's quality as indicator of money for transaction purposes.[14]

So far, efforts to find a stable correlation between the broader aggregates M2 and M3 and output, inflation and interest rates have not been successful.[15] However, recent empirical research carried out by the National Bank suggests that Divisia-M2 outperforms alternative aggregates as a leading indicator of inflation.[16] Although potentially useful for ex-post analysis, targeting of a Divisia

aggregate is complicated by the role of interest rates as weights. There seems, however, evidence of a stable money multiplier between the monetary base and Divisia-M2.

Another approach to monetary policy, which is currently under lively public discussion in Switzerland and which is applied in other European OECD countries, would be pegging the Swiss franc[17] to the currency of a low inflation economy (the ''anchor currency''), for example the Deutschemark. Although the SNB's ''exchange-rate oriented''[18] approach points towards such policy, it rejects pegging the franc to another currency as this would imply the complete loss of monetary autonomy, which the National Bank deems too high a cost. Indeed, the system of flexible exchange rates, in force in Switzerland since 1973, allowed

Diagram 15. **INVESTMENT SHARE AND TOTAL FACTOR PRODUCTIVITY**
Business sector, 1982-91



Source: OECD Secretariat estimates.

Table 12. **Inflation, interest and exchange rates in selected OECD countries: levels and volatility**

	Switzerland			Germany			France			Netherlands			Austria		
	1982-91	1982-86	1987-91	1982-91	1982-86	1987-91	1982-91	1982-86	1987-91	1982-91	1982-86	1987-91	1982-91	1982-86	1987-91
Consumer price inflation															
Average	3.08	2.51	4.06	2.02	1.93	2.55	5.33	7.46	3.18	1.75	2.09	2.04	2.93	3.46	2.77
Standard deviation	1.82	1.73	1.89	1.59	1.84	1.26	3.24	3.51	0.36	1.94	1.98	1.63	1.44	1.58	0.86
3-month Euromarket interest rates[1]															
Average	5.39	4.58	6.19	6.26	5.94	6.58	10.20	11.29	9.14	6.73	6.42	7.05	7.92	8.46	7.38
Standard deviation	2.01	0.99	2.42	1.91	1.50	2.21	2.69	2.61	0.90	1.60	1.25	1.84	1.22	1.01	1.18
Effective exchange rates[2]															
Average	109.35	105.20	113.50	116.61	107.07	126.14	96.08	95.02	97.13	111.60	103.77	119.43	108.94	104.38	113.51
Standard deviation	5.86	4.51	3.73	10.93	6.45	3.79	3.25	3.90	1.95	9.03	4.93	3.92	5.64	3.98	2.44

1. For Austria: Three-month Treasury bills.
2. Index 1982 = 100.
Source: OECD, *Main Economic Indicators* and *Monthly Financial Statistics.*

Swiss interest rates to deviate persistently downward from foreign interest rates. This negative interest differential would be likely to diminish if the Swiss franc were pegged, for example, to the Deutschemark or the ECU. It is not clear, however, either from theory or from empirical work,[19] whether interest rates lower than elsewhere imply a comparative advantage for the Swiss economy: although low interest rates coincide with relatively high business investment, this has not boosted aggregate productivity above levels realised in most other OECD countries (Diagram 15). And most importantly, especially in the longer run, but particularly clear in recent years, the benefits of monetary autonomy are not evident in an inflation performance superior to that of Germany or of several other OECD countries which kept a stable exchange rate with the Deutschemark. Moreover, a consequence of monetary autonomy has been the higher volatility in Swiss short-term interest rates (Table 12).

Widening government deficits

Overview

The deficit in government finances (excluding social security) in 1991 was much higher than budgeted originally (Table 13). From 1990 to 1991 it more than doubled, to an estimated SF 8.0 billion (2.5 per cent of GDP). The deterioration occurred at all levels of government, but it was most pronounced at the Confederation level: a deficit of about SF 3.6 billion was recorded (1.1 per cent of GDP) in 1991, compared with a projected SF 1.3 billion.[20] As a result, the Confederation's negotiable debt stock rose from SF 24.3 billion (7.8 per cent of GDP) in 1990 to SF 27.2 billion (8.3 per cent of GDP) in 1991. Estimates for the cantons' finances also suggest a stronger than expected worsening in 1991 while the communes' accounts may have closed broadly in line with their planned deficit of SF 1 billion. Preliminary statistics point to another sizeable financial surplus of the social security system[21] – of the order of SF 2.9 billion in 1991 – but this was insufficient to prevent the consolidated account of government and social security from swinging from a small surplus in 1990 to a deficit of 1.6 per cent of GDP in 1991.

Table 13. **Government accounts**

SF million and percentage changes

	1988	Outturns			Budgets[1]	
	SF million	1989	1990	1991	1991	1992
Confederation						
Expenditure	27 496	3.7	10.9	12.3	8.9	9.7
Revenue	27 881	1.6	10.0	2.3	7.4	5.7
Balance	+385	–173	–459	–3 618	–1 337	–2 772
Cantons						
Expenditure	34 828	8.0	10.1	11.2	10.1	8.5
Revenue	35 274	6.1	5.7	6.3	8.3	7.2
Balance	+446	–183	–1 852	–3 411	–2 900	–3 700
Communes						
Expenditure	26 031	7.0	9.5		8.0	7.7
Revenue	25 958	6.4	7.7		6.7	7.1
Balance	–73	–248	–750	–1 000	–1 000	–1 250
General government[2]						
Expenditure	74 130	6.7	9.3		8.1	8.9
Revenue	74 888	4.8	6.3		4.3	6.6
Balance	+758	–604	–3 061	–8 029	–5 237	–7 722
Social security						
Expenditure	23 734	2.6	8.2	11.3		
Revenue	25 815	6.6	7.9	8.7		
Balance	+2 081	+3 154	+3 329	+2 934		
Consolidated account of general government and social security						
Expenditure	90 924	5.9	9.0			
Revenue	93 763	5.4	6.5			
Balance	+2 839	+2 550	+268	–5 095		

1. Initial budget on initial budget.
2. Not including social security

Source: Administration fédérale des finances.

Cyclically-adjusted budget balances

The deteriorating financial accounts of government and the social security system resulted partly from the cyclical downturn of the economy: payments of unemployment insurance benefits and compensation for short-time work rose in line with the deteriorating labour market situation, while revenues from turnover

tax virtually stagnated, mainly due to the weakness of investment in 1991. Estimates of the *Office fédéral des questions conjoncturelles*[22] on the basis of data in the definition of the federal accounting system suggest that the combined effect of the cyclical response of public revenues and the peculiarities of the fiscal system amounts to about one-sixth of the deterioration in general government finances in 1991. The automatic stabilisation effect can be attributed exclusively to the Confederation. According to these estimates, the structural (cyclically-adjusted) general government budget deficit was of the order of 1¼ per cent of GDP in 1991, after zero in 1990.

The discretionary support given to domestic demand by the general government in 1991 was distinctly stronger than in 1982, the year of the previous cyclical trough (Table 14). The contribution of central government to this expansionary impulse was about ½ per cent of GDP. The Confederation's fiscal stance

Table 14. **Change in actual and structural budget balances**

Per cent of GDP

	General government[1]		Federal government		Cantons		Communes	
	Actual	Structural	Actual	Structural	Actual	Structural	Actual	Structural
1975	0.1	0.5	–0.2	0.5	–0.0	–0.2	0.3	0.2
1976	–0.1	–0.2	–0.2	–0.7	–0.2	0.0	0.3	0.4
1977	0.8	1.5	0.1	0.6	0.4	0.5	0.3	0.4
1978	0.7	0.8	0.5	0.4	0.1	0.2	0.1	0.2
1979	–0.6	–0.2	–0.6	–0.4	0.1	0.2	–0.0	0.0
1980	0.3	–0.0	0.4	0.0	–0.0	–0.0	–0.0	–0.0
1981	0.2	–0.0	0.5	0.6	–0.1	–0.3	–0.2	–0.3
1982	–0.5	–0.4	–0.1	–0.2	–0.1	–0.0	–0.3	–0.2
1983	–0.2	0.4	–0.2	0.2	–0.0	0.0	0.0	0.1
1984	0.6	0.6	0.2	0.0	0.2	0.4	0.2	0.3
1985	0.2	0.5	–0.1	0.1	0.2	0.3	0.0	0.1
1986	1.2	0.6	1.1	0.6	0.1	–0.0	0.1	0.0
1987	–0.2	0.3	–0.4	0.2	0.0	0.0	0.1	0.1
1988	–0.2	–0.8	0.1	–0.5	–0.0	–0.0	–0.2	–0.2
1989	–0.4	–0.2	–0.1	0.2	–0.2	–0.3	–0.1	–0.2
1990	–0.6	–0.9	0.1	–0.3	–0.5	–0.5	–0.2	–0.1
1991	–1.5	–1.2	–0.9	–0.5	–0.5	–0.5	–0.1	–0.2
1992[2]	–0.3	–0.2	0.1	–0.3	–0.1	0.0	–0.1	0.0

1. Excluding social security.
2. Estimate based on budget projections.

Source: Office fédéral des questions conjoncturelles.

was, however, already expansionary in 1990, when the economy grew broadly in line with potential output, while inflationary pressures were mounting. This is in accordance with earlier observations that the long lags between the accrual of private sector incomes and direct tax collection as well as the small share in discretionary public spending leave little room for counter-cyclical budgetary policies in Switzerland. Hence, fiscal support from central government in 1991 – although welcome with regard to stabilising economic activity – was to a large measure accidental rather than by design. The municipalities, whose combined fiscal stance was broadly neutral in 1990, are gauged to have imparted a discretionary stimulus to demand in 1991, of the order of ⅕ per cent of GDP. The cantons, which recorded a structural budget deficit of around ½ per cent of GDP in 1990, lent less support to economic activity in 1991, reflecting their fiscal consolidation efforts.

Budget developments in 1991

Most of the swing in the Confederation's financial account (in the federal accounting framework) from a surplus of SF 1 billion in 1990 to a deficit of SF 2 billion in 1991 is attributable to accelerating (and faster than budgeted) expenditure growth (Table 15). The growth rate of federal expenditures of 12.3 per cent is unusually high for an odd year and is in striking contrast to the expansion rate of nominal GDP of 4.7 per cent in 1991; it also exceeds the growth of the Confederation's revenues of only 2.5 per cent by a large margin. As a ratio to GDP, federal expenditures rose by ¾ percentage point to 10.8 per cent in 1991, thereby exceeding the medium-term ceiling set at 10 per cent. Once again, it appears that buoyant revenue growth during eight years of economic upswing inspired the Parliament's readiness to assign additional expenditures to existing tasks and to embark on new activities through supplementary credits.[23]

Transfers, which now account for nearly two-thirds of federal expenditures, grew by 14.5 per cent in 1991. Among them, the most dynamic component was transfers to public enterprises (+21.2 per cent), which reflect to a large measure contributions to the federal railways' (CFF) infrastructure programme. As a result, the CFF's investments rose by 14.7 per cent in 1991. The vigorous increase in transfers to the private sector mirrors growing federal contributions to the health insurance system and an exceptional adjustment of old-age and disability pensions to high inflation in 1990. As a normal feature of the Swiss tax

Table 15. **Central government budget**

SF million

	1988		1989		1990		1991		1992	Percentage changes[1]		
	Outturns	Breakdown Per cent	Initial budget	Outturns	Initial budget	Outturns	Initial budget	Outturns	Initial budget	1990	1991	1992
Total expenditure	27 496	100.0	28 608	28 504	31 075	31 616	33 829	35 501	37 117	8.6	8.9	9.7
Economic classification												
Compensation of employees	3 306	12.0	3 509	3 498	3 954	4 056	4 163	4 393	4 546	12.7	5.3	9.2
Consumption	4 540	16.5	5 039	5 168	5 338	5 363	5 573	5 582	5 689	5.9	4.4	2.0
Investment	480	1.8	535	501	557	582	713	719	854	4.1	28.0	19.8
Interest, loans and acquisition of holdings	2 509	9.1	1 916	1 932	2 288	2 242	2 420	2 634	2 784	19.4	5.8	15.0
Transfers	16 661	60.6	17 609	17 405	18 938	19 373	20 960	22 173	23 244	7.5	10.7	10.9
Total revenue	28 744	100.0	29 084	29 389	31 732	32 673	33 902	33 490	35 788	9.1	6.8	5.6
Tax revenue	25 831	89.9	25 863	26 147	28 096	28 815	29 854	29 169	31 886	8.6	6.3	6.8
Direct taxes	11 417	39.7	10 950	11 033	12 350	12 846	12 900	12 888	14 750	12.8	4.5	14.3
Indirect taxes	14 414	50.2	14 913	15 114	15 746	15 969	16 954	16 281	17 136	5.6	7.7	1.1
Other revenue	2 913	10.1	3 221	3 242	3 636	3 858	4 048	4 321	3 902	12.9	11.3	–3.6
Balance	+1 248		+476	+885	+657	+1 057	+73	–2 011	–1 329			
As a percentage of GDP	+0.5		+0.2	+0.3	+0.2	+0.3	+0.0	–0.6	–0.4			

1. Initital budget on initial budget.

Source: Budget of the Swiss Confederation.

system in an odd year, transfers of the cantons' shares in the federal direct tax and the withholding tax on capital income rose by only 2.1 per cent in 1991. Investment expenditures (12.3 per cent of total expenditures), defined as federal investment plus transfers for investment purposes (excluding the CFF), increased by 25.2 per cent; about two-thirds of them were devoted to road construction. The acceleration of personnel expenditures to a growth rate of 8.3 per cent largely reflects the adjustment of wages to inflation, but also real wage gains and higher employment. Other public consumption items expanded at broadly the same rate, while spending for defence offered scope for budgetary relief, decreasing by 0.5 per cent in 1991. Due to high capital market interest rates and the growing debt stock, debt interest payments increased by 11.9 per cent in 1991.

In accordance with the usual two-yearly sawtooth-like pattern of the growth of the Confederation's direct tax revenues,[24] which is for buoyant revenues in even years, followed by a weakening tax intake in odd years,[25] a deceleration of the growth of revenues was budgeted for 1991. In the event, the increase in revenues by 2.5 per cent in 1991 fell short of the initial budget estimate by 4.3 per cent. Most of the discrepancy was due to weaker revenues from turnover tax (+1.4 per cent in 1991), which reflected the slump in fixed investment.[26] A fall of revenues from stamp duty by 7.5 per cent in 1991 was considerably steeper than expected. This seems to reflect not only weakening economic activity, which depressed the number of securities issued and the turnover on the stock market, but also the country's ongoing loss of financial transactions to places where stamp duty does not exist or where taxation is lower. These revenue losses were only partly compensated by higher-than-estimated receipts from the direct federal income tax (20 per cent of total revenues) and withholding tax revenue on capital income *(impôt anticipé),* both of which had been expected to decrease in 1991. Income from the direct federal tax was projected to shrink because of tax relief measures for families under the *''programme urgent''* and the compensation for fiscal drag following the cumulated inflation of 8.3 per cent from 1984 to 1987. Although only small (+1.5 per cent), the increase in withholding tax revenue in 1991 is remarkable after the record growth by nearly 52 per cent in 1990, which was induced by the high level of interest rates and of distributed corporate profits.[27] Evidently, in 1991 both dividend payments and interest rates again turned out higher than assumed originally. The remaining revenue categories were broadly in line with budget projections in 1991.

The 1992 government budgets

The budget projections for 1992 of Confederation, cantons and communes are for further strong expenditure growth, in excess of that of revenues as well as nominal GDP. Compared to the initial budgets of 1991, this is projected to lead to a widening of the combined government deficit by some SF 2½ billion to SF 7¾ billion in 1992, which is smaller than the 1991 outturn. Estimates of cyclically-adjusted budget balances suggest a broadly neutral fiscal policy stance of cantons and communes and a mildly stimulating demand effect coming from the Confederation's budget in 1992.

The Confederation's initial budget proposal for 1992, as presented to Parliament in September 1991, projected a financial deficit for the first time in seven years, of about SF 2 billion. Following the parliamentary debate, expenditure cuts across a great variety of budget positions were decided, which lowered the planned growth of total spending – relative to the initial budget for 1991 – by 2 percentage points to 9.7 per cent in 1992. With the projected growth of revenues remaining unchanged at 5.6 per cent, this reduced the estimated financial deficit to SF 1329 million[28] (0.4 per cent of GDP) in 1992, thus below the deficit recorded in 1991.

As in 1991, transfers are estimated to grow somewhat faster than total expenditures, due mainly to further strongly increasing payments to other levels of government (especially cantons), to the federal railroads and the social security system. Transfers to the private sector are elevated by payments to the health insurance system and the regular (two-yearly) adjustment of old age pensions to inflation, but also by an increasing weight of direct income payments to farmers relative to agricultural price support. Still high inflation and the rising debt stock are expected to boost interest payments on government debt. Wages and salaries are projected to grow rapidly due to compensation for past price inflation, but also because of improvements in the structure of salaries and rising government employment (mainly needed to cope with the rising number of asylum seekers). Decelerating transfers for investment purposes and a small decrease in defence spending are planned to act as a brake on expenditure growth.

Tax revenues are estimated to grow by 9.3 per cent in 1992 relative to the 1991 outcomes (but by 5.6 per cent only if compared to the initial 1991 budget). Revenues from the direct federal tax are budgeted to grow even by 19 per cent,

based on incomes accrued in 1989 and 1990, when overall economic activity was strong. However, this estimate exceeds the result in the cyclically comparable year 1990, when direct federal tax revenues rose by 12 per cent. It appears somewhat optimistic as tax law requires a further adjustment of tax brackets for fiscal drag and as incomes of the corporate sector (about one-third of the tax base) weakened in 1990. Although the discount rate on advance tax payments has been raised to 5 per cent, this may not be sufficiently attractive to foster extra early payment of tax liabilities, given current high short-term interest rates.

Based on the earlier official assumption of a recovery of fixed investment, receipts from turnover tax are expected to pick up by 7.4 per cent in 1992. With the outlook for investment now being considerably less sanguine, the budget estimate may be hard to achieve. Net revenues from withholding tax (+13 per cent) are expected to be buoyed mainly by high interest rates on time deposits, but this effect may be more than offset by boosted repayments ensuing from the unusual buoyancy of gross withholding tax revenues in 1990/91. Stamp duty receipts are budgeted to stagnate in 1991 as the damping factors of 1991 are likely to remain at work this year. In response to feeble economic activity, but also because they are levied on the basis of weight, volume and number, revenues from specific taxes and customs duties are projected to grow by only 1.8 per cent; non-tax revenues are even projected to fall by 8.0 per cent in 1992. Altogether, the assessment that the budget projections for tax revenues in 1992 contains a downward risk seems to be confirmed by the fall in tax intake in the first half-year. Hence, a federal deficit greater than projected is likely in 1992.

The medium-term financial plan of the Confederation

In line with practice in preceding years, the Federal Council prepared a medium-term financial plan in early 1992, which seeks to identify possible future financial constraints in the period from 1993 to 1995. The current plan is based on an average real output growth of 2 per cent and overall inflation of 3 per cent during the projection period. It is assumed that long-term interest rates will decline only marginally and thus remain at a level significantly higher than in the 1980s. Short-term interest rates are expected to decrease somewhat more so that the slope of the yield curve may turn positive. These assumptions imply that deficit financing will remain comparatively expensive and that revenues from withholding tax may weaken over the projection period.[29] Starting from the 1992

Table 16. **Financial outlook of the Confederation to 1993-95**

SF million and percentages

	Budget 1992	Outlook			Growth rate, annual average 1991-95	Structure	
		1993	1994	1995		1992	1995
Total expenditure	37 117	39 988	42 666	44 571	7.1	100.0	100.0
Current expenditure	32 784	34 883	37 307	38 940	7.2	88.3	87.4
Total investment[1]	4 333	5 105	5 359	5 631	6.9	11.7	12.6
Direct expenditure	13 367	14 275	15 296	15 755	6.4	36.0	35.3
Transfers	23 750	25 713	27 370	28 816	7.6	64.0	64.7
Total revenues	35 788	35 323	38 897	39 618	4.0	100.0	100.0
Tax revenues	31 886	31 226	34 526	34 876	4.0	89.1	88.0
Direct taxes	14 750	13 320	15 475	15 040	3.9	41.2	38.0
Indirect taxes	17 136	17 906	19 051	19 836	4.0	47.9	50.0
Non-tax revenues	3 902	4 097	4 371	4 742	4.0	10.9	12.0
Balance	–1 329	–4 665	–3 769	–4 953			

1. Direct expenditure and contribution to investments.
Source: Financial outlook of the Confederation.

budget as adopted by the Parliament, the medium-term financial plan arrives at an average annual growth of about 7 per cent for future expenditures, which is markedly below actual expenditure increases in 1990 and 1991. It thus represents some correction of current expenditure trends, in addition to the effect of lower inflation. Nevertheless, the ratio of federal expenditures to GDP increases further, from 10.8 per cent in 1991 to 11.1 per cent in 1995, a ratio that was last attained in 1976. The projected revenue growth of only 4 per cent reflects the inflation-induced erosion of revenues from specific taxes and customs duties, in addition to numerous cuts in import duties.[30] This estimate is somewhat below the average revenue growth achieved in past years and thus appears rather pessimistic. The financial deficits resulting from these projections – mainly of a structural nature – are of the order of SF 4-5 billion a year, which is deemed unacceptably high by the Swiss authorities (Table 16).

The federal government accordingly submitted to Parliament a fiscal consolidation package, which aims at both reducing expenditures and raising revenues as from 1993 so that for the 1993-95 period the average financial deficit would be about SF 1.2 billion. On the expenditure side, selective spending cuts were suggested for a variety of categories (culture, science, public transport, agricul-

ture and other subsidies). In addition, it is proposed to reduce a large number of transfers by 10 per cent. For transfers to educational institutions and to the old-age pension system, a reduction of 5 per cent has been proposed. Few categories would be unaffected by this exercise, among them transfers to the health-insurance system, direct income-support payments to farmers and transfers to cantons for road construction. Such a linear cut in transfers is acknowledged to be a crude and undifferentiated measure; it is therefore planned to apply it for three years only and then to replace it by a more refined expenditure saving programme. The proposed measures would lower the annual average growth of expenditures to about 6¼ per cent, still above nominal GDP growth.

On the revenues side, an increase in gasoline duties by SF 0.20/litre stands out. It would bring Swiss prices closer to the higher levels prevailing in neighbouring countries and could raise an additional SF 1.6 billion per year. In addition, it is planned to lift the tobacco tax (providing some extra SF 350 million by 1995) and to enhance the federal government's share in the National Bank's profits (supplying an additional SF 200 million in 1993).[31] Revenue losses of the cantons due to the cut in federal transfers are projected to be more than offset by a higher share of the cantons in the National Bank's profits (SF 400 million in 1993) and by the fact that half of the extra receipts from the gasoline tax are earmarked for road construction, which would reduce the cantons' burden. Moreover, the government is suggesting an amendment to the Constitution to the effect that parliamentary decisions to raise expenditures above government proposals require an absolute majority of the members of Parliament (*''frein aux dépenses''*). Altogether, the first-round contractionary effect of the proposed package on demand may amount to around 1 per cent of GDP.

Federal tax reform: the need for action

The direct federal tax and turnover tax

In 1991, the Swiss government embarked on a federal tax reform[32] project, which aimed at the modernisation of the turnover tax,[33] the restructuring of stamp duty on a great variety of financial transactions, an amendment of corporate taxation and the change to an indefinite duration of the Constitutional basis of the Confederation's direct tax and turnover tax. After its approval by the Parliament,

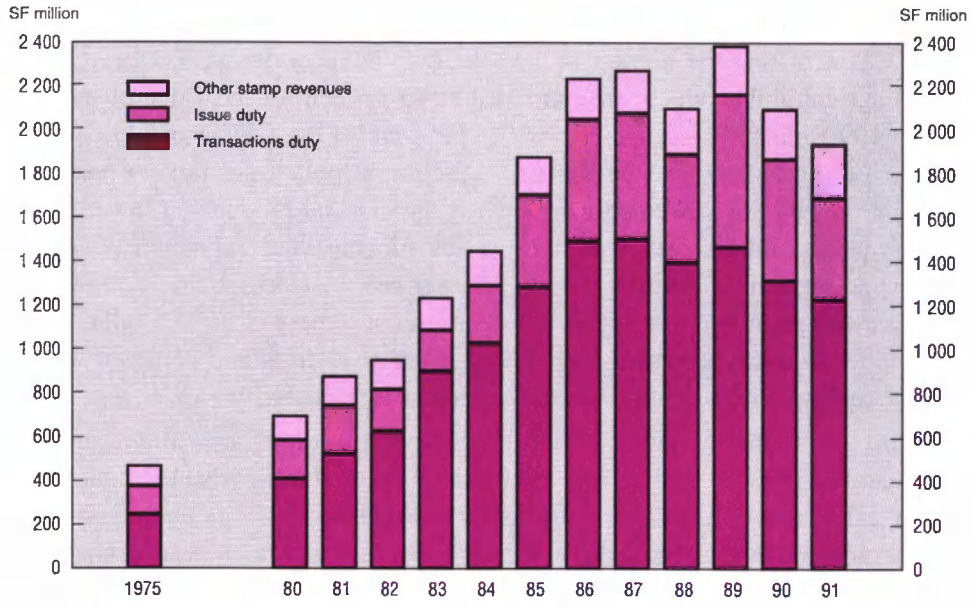
the reform proposal was subjected to a compulsory referendum and was rejected on 2 June 1991. Since the constitutional basis for the Confederation's direct tax and turnover tax expires at the end of 1994 and as Swiss legislative procedures are complex and time-consuming, the Federal Council submitted an alternative proposal for federal tax reform to Parliament in December 1991.

Given that the replacement of the turnover tax on goods by a general value-added tax (VAT) was rejected by the people and the cantons for the third time in fifteen years and that there is an urgent need for securing federal tax revenues after 1994, the government decided to postpone the modernisation of turnover tax. It is instead proposed to institute in the Constitution the Confederation's indefinite competence to levy the federal direct tax and the turnover tax. No further changes are foreseen with regard to the federal direct tax. In an attempt to enhance the likelihood of approval by the people in a referendum, the government suggests retaining the determination of maximum rates of both taxes in the Constitution, although it is considered as a defective feature of the current system. To facilitate future plans for turnover-tax reform,[34] it is proposed that the object of taxation would no longer be determined in the Constitution. This would widen the scope for later introduction of a modern consumption tax on goods *and* services in a common legislative procedure, which would be subject to *optional* referendum, instead of the *compulsory* referendum necessary in the case of a constitutional amendment. Moreover, and in accordance with commitments made to the EEC and the United States, it is planned to lay the constitutional basis for the conversion of existing customs duties on selected goods which are not produced in Switzerland into specific taxes (which are applied both to domestic and imported goods). The new reform proposal is designed to be revenue-neutral and is likely to be submitted to referendum in 1992.

Stamp duty

In view of the competitive disadvantage which the current design of stamp duty puts on Switzerland as a financial centre, and which appears to have contributed to the recent fall in revenues from this source (Diagram 16), the Parliament approved a separate proposal of stamp duty reform in the autumn of 1991. The new proposal is largely based on elements of the reform package rejected by the people in June 1991. It thus suggests the abolition of stamp duty on transactions between foreigners and on Euromarket issues. It also provides for

Diagram 16. **REVENUES FROM STAMP DUTY**



Source: Administration fédérale des finances.

the exemption from stamp duty of own transactions by professional market makers, the issue of securities by Swiss investment trusts and by companies that have merged or have been taken over, and companies moving their domicile to Switzerland. Earlier plans to claw back some lost revenues by a levy on life insurance premiums and on certain property insurances were not adopted by the Parliament. The Parliament's stamp duty reform project has been approved in a popular referendum on 27th September 1992. The reform is estimated to entail annual revenue losses of some SF 400 million.

Other structural policies

Agricultural income support policy

Swiss agricultural production continues to enjoy a high level of assistance, which is based mainly on support for producer prices, together with import

restrictions and – to a lesser extent – export subsidies. So far, there has been only limited use of direct payments to supplement farm incomes, mainly in mountain regions. The high level of protection is mirrored in producer subsidy equivalents (PSEs), which were the highest in the OECD in the past two years: Swiss PSEs for all agricultural products are estimated at 80 per cent of the value of production in 1990 and 1991, compared with 45 per cent for the OECD and 49 per cent for the EC on average.[35] The costs of agricultural policy are largely borne by consumers, who are prevented from buying agricultural products at lower world market prices. OECD Secretariat estimates of consumer subsidy equivalents suggest an implicit consumption tax of 55 per cent in 1991, about 1½ times the OECD average and equivalent to a burden on consumers of SF 5.5 billion. For main farm product categories such as pig-meat, beef, milk and common wheat, Swiss producer prices are 1½ to three times as high as EC prices.[36]

In view of the mounting criticism of the high level of agricultural product prices and in order to align Swiss farm policy more closely with EC policy and GATT rules, the Federal Council presented proposals to Parliament in January 1992 which aim at redefining the direction of Swiss agricultural policy. The main element of the new approach is the partial dismantling of price support and its replacement by a – rather complex – system of direct income payments to farmers. Two types of direct payments are envisaged: one, which is not linked to production and which provides payments meant to compensate for external economies of farming, such as the maintenance of the landscape and safeguarding food supply in case of an international crisis. The second type of direct payments is designed to encourage – on the basis of voluntary contracts – production methods which are deemed favourable for the environment. Although not lowering the absolute level of agricultural protection, the new system will reduce the distortion of agricultural prices relative to those of other sectors of the economy and may exert a dampening effect on food prices. On the other hand, however, it will impose a considerable extra burden on the Federal budget.

Corporation law

Significant changes to corporate law have been adopted by Parliament, which have been in force since July 1992. The new law restricts traditional practices by Swiss corporations, which reduced the transparency of their financial situation and hampered the functioning of the market for corporate control. The

accountability of Swiss corporations has been improved by stricter rules on the accumulation and the dissolution of hidden reserves as well as the obligation for holdings to provide consolidated accounts. However, Swiss accounting requirements are still lagging behind EC rules; within the EEA agreement, Swiss law would have to comply with EC rules by the end of a transition period of three years. The existing protection to established management in Swiss companies has been only partially dismantled: restrictions on the transfer of certain registered shares are made unlawful, unless justified by transparent provisions, such as quantitative ceilings on ownership included in the company charter; the amount of non-voting shares (bons de participations) is limited to twice the value of capital. On the other hand, corporations are now allowed to purchase their own shares, up to a ceiling of 20 per cent, when they are subjected to a take-over bid. Hence, Swiss-based companies will continue to be better protected against hostile take-overs than companies in many other OECD countries.

Security market reform

Extensive discussions of the reform of the existing legislation on stock exchange and trade in securities have taken place and a draft of a federal law will be submitted to Parliament in 1992. The principal aim of the reform is the protection of investors and the financial system. The law is also expected to strengthen the liquidity and the competitiveness of the Swiss financial markets. An important feature of the reform project is the establishment of a comprehensive federal stock exchange law to replace existing provisions, according to which several areas of nation-wide interest are not regulated federally but either by cantons or privately. Hence, the new law will submit to federal rules both intermediaries' activities and securities' listing and trading. The reform also aims at promoting transparency in stipulating an obligation to make public large participations in listed Swiss companies. It is envisaged that take-over offerings would be regulated in order to protect minority shareholders. It is planned to submit the functioning of the security markets to the monitoring of a supervisory authority, empowered with adequate investigation rights.

III. Competition and competition policy

Enhancing competition and promoting efficiency and growth through structural change has become a primary objective of economic policy in Switzerland. This contrasts sharply with the traditional Swiss attitude to the competitive process, embedded in legal provisions which are still probably among the most permissive of collusive behaviour and restrictive practices. This policy reorientation reflects growing concerns about the consequences of insufficient competition in domestic markets due to widespread cartellisation: high price levels compared with other OECD countries are viewed by the Swiss authorities as a potential threat to competitiveness and to the maintenance of standards of living in the future; also, collusive behaviour is seen as being a factor behind the slow speed of disinflation in response to monetary tightening during the current demand weakness.

In parallel, the prospects for European integration through the adoption of the EEA agreement and the application for EC membership make for a growing awareness that Swiss legal and institutional market regulations need to adapt to European standards. This would imply not only a marked sharpening of the competition law but also the dismantling of protective regulations and practices in various fields, including migration policies, public procurement, share trading and real estate acquisition, etc.

The present chapter first describes the restrictions on competition in Swiss domestic markets, originating mainly from widespread horizontal and vertical collusive behaviour; other sources of restriction, such as norms and technical provisions and public procurement practices, are also discussed. The intensity of competition in Swiss domestic market is then assessed. Finally, the present legal framework and the opportunity for radical change in competition policy are examined.

Restrictions on competition in the domestic market

Switzerland is the home country of an array of giant multinational firms, some of which – in food processing, chemicals, building materials, equipment goods, banking and insurance – are world-renowned.[37] These, as well as smaller Swiss-based specialised equipment-goods-exporting firms, have built strong positions in world markets, in highly competitive environments. Also, many domestic market oriented firms, in various branches of activity, operate under the pressure of the rivalry of Swiss or foreign competitors. Nevertheless, in a number of Swiss domestic markets, both in tradeables and non-tradeables, obstacles to competition stem from pervasive horizontal and vertical collusive practices at the production and the distribution level, favoured by market structures and aggravated by discrimination in the market for corporate control; public regulation or interventions also have adverse effects on effective or potential competition in a number of activities.

Size and structure of domestic markets

Swiss domestic markets are small – 1 to 3 per cent of OECD output in manufactured goods, for example. Moreover, in some branches, the national market may be segmented, by geographical, linguistic and sociological differences. The size of markets may have strong implications for the intensity of competition in a country. First, due to economies of scale, countries with small markets tend to have a comparatively small number of viable firms within a given activity.[38] Hence, the concentration of domestic producers is likely to be higher, even if firms are small compared with those in larger countries. As a result, connivance among domestic firms is more likely than in bigger countries. Second, the competitive pressure from foreign suppliers may, in some occasions, be reduced, even if the economy is open to imports. This is likely to happen where size and segmentation of the markets result in higher selling and transactions costs, so that foreign firms are tempted to co-operate rather than to compete with domestic producers or traders.

Indeed, domestically-based Swiss firms are predominantly small to medium-sized. In manufacturing, the share of employment in large firms (with more than 500 employees) is much lower than in Germany, for example, although the share of employment in small firms (with fewer than 100 employees) is smaller than in

Italy or Japan (Table 17). In services, the distribution of employment is still more skewed towards small firms: 58 per cent of employees in the tertiary sector belong to firms with fewer than 50 persons. In addition, the degree of incorporation has remained low in Swiss business: as of 1985, the share of self-employed is more than two-thirds of firms for the whole economy and more than 50 per cent in industry.

Nevertheless, the weight of large firms has been trending upwards in most branches of industry and services. In industry, the weighted average share of the five largest firms in employment grew from 41 per cent in 1965 to 52 per cent in

Table 17. **Distribution of employment in manufacturing by size of firm: an international comparison**

Percentage share

		Size (number of employees)		
		1-99	100-499	Over 500
Switzerland	1965	42.9	26.5	30.6
	1975	44.7	24.5	30.2
	1985	41.2	28.2	30.6
Italy	1961	56.8	23.2	21.6
	1971	53.2	23.2	23.6
	1981	59.2	21.2	19.6
United States	1963	26.2	73.8	
	1972	24.8	75.2	
	1977	25.3	74.7	
Japan	1960	53.7	21.1	25.2
	1972	58.3	21.5	20.2
	1981	66.5	18.3	15.2
Germany	1961	20.4	29.6	50.0
	1971	18.7	28.6	52.7
	1977	19.2	29.9	50.9
	1981	18.6	29.1	52.3
France	1962	62.9		37.1
	1972	60.2		39.8
	1982	68.1		31.9
United Kingdom	1963	20.2	30.7	49.1
	1972	18.2	26.1	55.7
	1982	19.1	34.4	46.5

Source: Ministry of Industry, *Rapporto della Commissione per le problematiche delle piccole e medie imprese*, mimeo, Rome, June 1988, manufacturing sector except for Japan and France (total industry); Office fédéral de la statistique, *Recensement fédéral des entreprises.*

1985. Banking, insurance, and tourist industries also have witnessed a substantial growth of the share of large companies in employment, while in wholesale, transportation and health care the share of both large and small firms has expanded. Rising concentration reflects, in part, merger activity. Switzerland, like many other countries, has experienced an acceleration in merger activity over the last decade. According to unofficial statistics,[39] there were more than 200 mergers a year between 1980 and 1988 (compared to some 100 between 1973 and 1980). A majority of mergers have involved only one domestic firm. The bulk of mergers resulted in horizontal concentration. One third took place in trade, financial services and transportation. However, recent years also witnessed an important merger activity by industrial firms, both abroad and on the domestic market.

Hence, despite the fact that domestically-based Swiss enterprises are largely small to medium-sized, usual measures reveal significant concentration in manufacturing as well as in commerce and services. In most industrial branches, the share in employment among the first 10 producers is 60 per cent or more, the main exception being in wood (except furniture), mechanical engineering and printing. Oligopolistic structures have been established in several industries, like tobacco, leather and footwear, chemicals, electric and electronic equipment – the Herfindahl index is over 1800[40] – and less markedly, in food processing, textile, paper, machines and vehicles – with a Herfindahl index between 1000 and 1800. Concentration is rather high in several segments of wholesale trade like dairy products, beer, shoes, furniture, household appliances, and detergents. It is high in retail sales: the market share of the 5 largest retail traders is nearly 80 per cent, more than in any other European country. Concentration measures also point to oligopolistic structures in banking and insurance.[41]

Widespread horizontal and vertical cartellization

Collusive behaviour through explicit cartel agreements has been commonplace for decades in Swiss domestic markets.[42] Favoured by market structures and, for a long time, by tolerant legal provisions, as documented below, firms in a number of industrial and service branches had organised themselves, through business associations *(Verbände),* into comprehensive and tight horizontal cartels, which also frequently involved vertical agreements.

Evidence on cartels

Census data for 1985 report the existence of more than 500 such business associations.[43] These suggest that cartels may be indeed an important feature of the Swiss business scene. A comprehensive assessment of the impact of cartels on the Swiss domestic markets is not possible due to the lack of registration obligations. However, a large body of evidence has been made available through various channels: official inquiries or reports by the Cartel commission, academic research, press articles, business communications, etc.

According to a comprehensive survey of scattered evidence over the last 50 years,[44] agreements have been found in 90 per cent of 72 industrial activities; cartel-free industrial activities consist mainly of small, highly specialised and export-oriented firms in equipment goods branches. Persistent cartels are fairly common in many production and distribution activities concentrating on national and particularly local markets. Strong cartels have also existed in banking and insurance up to the late 1980s. In addition to explicit cartel agreements, tacit collusion has been reported: a typical case is the gasoline market, where the Cartel commission recently documented a system of reference price and price changes. Manifestations of price leadership have also been documented in the paper and cement industries.

Common features of Swiss cartels

Documented cartels are generally strong and exert substantial control over domestic markets: up to 97 per cent in housing insurance, 90 per cent in the cement industry and in brewing (until 1989), 80 per cent in bathroom appliances, 60 to 70 per cent in paper processing, furniture, detergents, breakfast drinks, and optics, and 50 per cent among electricians. Swiss cartel agreements include some or all of the following features:

i) price-fixing agreements, providing in many cases compulsory price lists as well as compelling rebates and payment conditions; they are present in almost every case;

ii) sanctions agreements in case of deviation from cartel discipline; they are almost as frequent;

iii) market-sharing agreements, sometimes providing room for regional cartel agreements, or production-sharing agreements including quotas;

they are less frequent and reported mainly in the cement and metal industries;

iv) pooling of sales *(comptoir de vente)* and proceeds; they are reported in metal industries;

v) agreements on bidding in public procurement; they have been reported in wood and metal products.

The enforcement of cartel discipline is one of the functions of the business associations, in addition to others like employers-labour relations, education or lobbying. Cartel discipline is usually enforced through the application of contractual fines, legal actions and sometimes through boycott actions.[45]

Vertical links are common and likely to improve the cohesion of cartels as they facilitate the detection of deviation from cartel discipline. The membership of many business associations includes producers, importers, wholesale and retail traders, and craftsmen. Most horizontal cartels are connected with users' associations in non-competition agreements and exclusive – and sometimes compulsory – delivery networks. Wholesalers often play a key role in the functioning of markets and the practical enforcement of cartel discipline.[46] A textbook case is the bundling of agreements covering production, imports, wholesale and installation of bathroom appliances, resulting in uniform delivery networks and conditions.[47] Until recently, the breweries also provided a case where the producers' cartel had delivery agreements with the retailers, both in shops and in cafés-restaurants. Other examples of market control through vertical delivery agreements can be found in food processing industries, mineral water, tobacco, clothing, shoes, furniture, paper, pharmaceuticals, detergents, cement, electrical products, and optics.

The intensity of competition in distribution and in related activity is strongly influenced by the presence of Migros and COOP. These two retailers were created as emanations of consumer co-operative movements and they presently hold substantial market shares in many distribution (and production) activities. Their activity has substantially reduced the market share of cartels and force them to concentrate their *modus operandi* on other means than price setting, such as common purchases or wholesale trade. Today, cartels often have to function as "third channel" in distribution, usually at the high end of markets where the two large retailers hold substantial shares. However, the weight of Migros and COOP

has, since long, raised concerns on possible abuses of market power, particularly against suppliers *(puissance d'achat).*

Cartels and exposure to international trade

The strength and persistence of collusive practices in Swiss domestic markets may seem paradoxical given the openness of the country.[48] Trade tariffs on industrial products are low – under 3 per cent on average in *ad valorem* equivalent. Unlike many OECD countries, Switzerland has only marginally aggravated the impact of non-tariff barriers over the last decade.[49] In manufacturing, the share of imported goods in the domestic market rose from a comparatively high 27 per cent in 1970 to 42 per cent in 1985, the last year for which comparable data are available, well above OECD average. Import penetration rose markedly in the watch, textile and clothing industries; it rose less in mineral products (including cement) and remained stable in food products (Table 18).

Table 18. **Import penetration in the Swiss domestic market, 1970-85**

Per cent

ISIC code		OECD		Switzerland	
		1970	1985	1970	1985
300	Manufacturing industry	12.40	19.52	26.95	41.57
310	Food, beverages, tobacco	8.95	10.70	19.82	20.02
321	Textiles	12.67	20.58	33.27	61.47
322+323	Clothing and footwear	13.12	37.60	32.37	68.20
330	Wood and wood products	10.01	15.60	14.06	29.07
341	Paper and paper products	12.09	14.94	17.38	40.11
342	Printing	2.79	3.55	6.75	11.15
355+356	Rubber and plastic products	7.73	12.09	38.89	58.59
350	Chemicals (except 355-356)	13.30	19.98	41.57	56.24
360	Non-metallic mineral products	6.93	10.62	10.91	22.71
370+381	Basic metal industries and metal products	12.44	16.07	24.64	39.07
382+384	Machinery (except electrical and vehicles)	16.98	28.09	37.87	60.16
383	Electrical machinery	11.75	22.23	39.60	41.62
385	Watches, optic and other equipment goods	22.37	33.64	13.16	70.68

Source: The OECD compatible trade and production data base, 1970-1985, OECD Working Paper No. 60, 1988.

Table 19. **The structure of the economy**

Percentage share of GDP

	Germany [1]	Austria [1]	Switzerland [2]
Agriculture	1.8	3.3	3.5
Mining	0.5	0.3	
Manufacturing	32.1	27.2	25.0
Electricity, gas, water	2.7	2.9	2.1
Construction	5.3	7.1	7.4
Trade, hotels, restaurants	10.0	17.0	18.8
Transport and communication	5.8	6.5	6.3
Finance, insurance and business services	12.8	17.1	15.8
Other services	17.9	4.9	10.1
Government services	11.1	13.8	11.1
Total	100.0	100.0	100.0

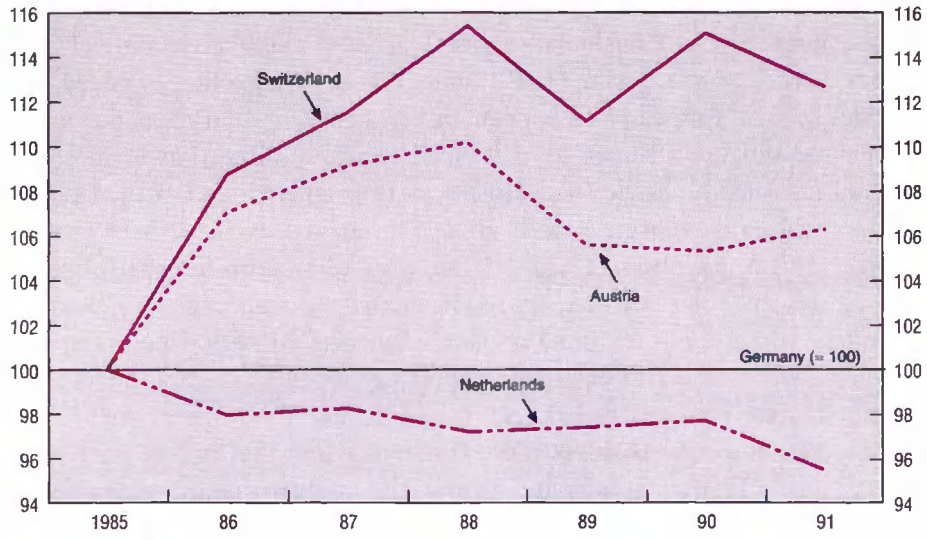
1. 1989.
2. 1985.

Source: OECD, *National accounts.*

However, several factors may have dampened the exposure of the domestic market to pressures of international competition. First, non-tradeable services represent a predominant share in the Swiss economy: private services (excluding finances, insurance and business services) account for a comparatively high 39,5 per cent of private-sector GDP (Table 19). If construction is added, non-tradeables account for nearly 48 per cent of private-sector GDP. Second, agricultural income support schemes have resulted in heavy protection of most food items and insulated domestic foodstuff prices from international ones. Domestic breweries still enjoy moderate tariff protection against imported beer from EC and other EFTA members. Third, 85 per cent of imports are performed by wholesale traders[50] and are frequently channelled through exclusive networks, thus putting severe limits on direct or parallel imports. Most notable examples of consumer goods subject to exclusive import agreements are cars, optics, bathroom appliances, toys and games, etc. In radios and TVs, import channels are more flexible; however, business representatives admit that middle-men charge high margins.[51] Fourth, as already mentioned, in many cases, importers and affiliates of foreign suppliers participate in the business associations. In these fields it is highly likely that not only intra-brand but also inter-brand competition is restricted.

The role of imports as a means of enforcing competitive discipline on domestic markets is likely to be seriously undermined in many branches. Imports act as a competitive discipline if they reduce the market share, hence the market power, of cartel members in the domestic market. This, however rests on the assumption *i)* that importers do not participate in the cartel; and *ii)* that foreign suppliers have no market power.[52] Neither assumption is likely to be valid in every case. First, through vertical agreements and delivery networks controlled by wholesale traders, Swiss producers' or traders' cartels are in many cases in a position to protect themselves from the potential threat to domestic market organisation, price setting rules and incumbents' market share from ''undisciplined'' imports. Second, foreign suppliers are, in many cases and particularly in consumers' durables, likely to be in a position to pursue price differentiation between the Swiss and other export markets. The impact of price discrimination

Diagram 17. **RELATIVE IMPLICIT IMPORT PRICES**[1]
Adjusted for exchange rate



1. The diagram shows Swiss, Austrian and Dutch import deflators relative to the German import deflator.
Source: OECD Secretariat.

is illustrated by the evolution of Swiss, Austrian and Dutch import prices at constant exchange rates since 1986 (Diagram 17).

Discrimination in the market for corporate control

The threat of hostile take-overs can reasonably be contemplated as a welfare and efficiency enhancing device complementary to competition on goods markets. Among other things, potential take-overs induce managers to act so as to maximise the market value of the firm. Swiss corporations have traditionally used "tied" registered shares *(Vinkulierung)* and the associated restrictions on ownership transfers as a mean of protecting established corporate management from hostile take-overs, particularly by foreigners.[53] The reform of the commercial law, still in progress, will only limit these practices, but not eliminate them. Moreover, there are many other ways of restricting ownership, such as the introduction of ceilings on ownership of registered shares or on voting rights, as was done in recent years by several major Swiss-owned firms, anticipating the new corporate law.[54] This, in addition to qualified majority rules, cross-participation and interlocking directorates among large banks and non-financial companies,[55] will continue to provide Swiss firms with iron-clad protection against hostile take-overs.

Moreover, if a third or more of a company's assets consists of real estate, then the application of another piece of Swiss legislation (Lex Friedrich) puts a ban on the acquisition of a majority of shares by foreigners in agriculture, real estate, banking and insurance, and requires an authorisation in other industrial and trade branches (Table 20). These provisions may well boil down to yet another form of restriction on entry, which is likely to be potentially harmful in branches of the domestic market like commerce, where the start-up of completely new businesses is limited by various local regulations as well as a shortage of suitable locations.

Restrictions on competition through regulation and public procurement practices

Private and public norms or technical provisions, legal or public monopolies and entry or operational regulations as well as public procurement practices have also contributed to raising barriers for potential domestic or foreign entrants to domestic markets.

Table 20. **Rules governing the acquisition of real estate by corporations under Lex Friedrich**

	Real estate acquisition							
	Direct acquisitions		Indirect acquisitions					
					Real estate >⅓ assets			
	Establishment in industry and trade[1]	Real estate, agriculture, hotels	Real estate trading	Real estate <⅓ assets	Minority holding	Majority holding	Mortgages	Mutual funds
Foreign-based or Swiss-based corporations with foreign majority holding								
Nature of corporation								
Industry and trade	+	–	–	0	0	+		0
Real estate, hotels	+	–	–	0	0	–		0
Banking	+	+[2]	– +[2]	0	0	–	–	0
Insurance	+	+[2] +[3]	+[2] +	0	0	–	–	0
Mutual funds	+	+	+	0	0			0
Finance	+	–	–	0	0	–		0
Agriculture		–	–	0	0	–		0
Foreign minority holding	0	0	0	0	0	0		0

Key: 0 = no authorisation needed; + = authorisation needed; – = acquisition not allowed.
1. Effective management.
2. In case of enforceable execution, purchased assets must be re-sold.
3. Technical reserves.
Source: Swiss authorities.

Norms and technical provisions

A large majority of norms and technical prescriptions adopted in Switzerland conform to international norms. However, in some cases, specific or more severe Swiss norms or technical prescriptions, often related to the protection of the environment or consumers, have acted as a defence of domestic producers and importers who are already in the market. Investigations by the Cartel commission have revealed the role of norms, mainly enacted by private bodies, in hindering foreign competition for a wide range of household appliances (from cooking items to washing machines) or for bathroom appliances. Potentially protective and cost increasing differences in public norms and technical prescriptions also exist for smaller household appliances (shavers, hair driers), and for motor cars. In the same way, numerous Swiss-specific public norms in telecommunications have resulted in high official approval costs for equipment[56] and seem to have favoured collusive behaviour by telephone installers. The potentially harmful effects of specific technical prescriptions and homologation procedures on competition are probably greater where cantons have the competence for their definition and implementation, as is the case for pharmaceuticals and medical equipment, or for building materials.

Legal monopolies and public enterprises

Most legal monopolies in Switzerland are run by private bodies and are often related to agricultural income policies. Legal monopolies run by public enterprises cover only a few activities, mainly railway transportation and post and telecommunications services. A newly passed law on telecommunications has given rise to some deregulation: the State monopoly in telecommunications will bear only on the telephone services, all other services being open to competition; also, a regulatory agency has been created, the PTT being left only with operational responsibilities. Real-estate insurance is also a State monopoly in a majority of cantons. Cantons or municipalities own most of electricity plants.

Business regulations

Agricultural income-support policies have resulted in comprehensive public regulations and interventions in the production and the distribution of many agricultural products: warranted producer or selling prices, exclusive distribution networks, public or semi-public monopolies, in addition to import protection

through quotas or price supplements. Most industrial sectors are exempt from any regulations. However, agricultural income-support policies have been a source of market power and collusive behaviour by regulatory agents on dairy-product markets. In contrast to industry, transportation, trade and services are subject to more or less constraining regulations. Personal transportation has been freed from operating and pricing rules since 1987, but entry rules have been kept through a licensing system which depends on the assessment of need and the potential effect of entry on competition with the existing public network. In principle, medium and long-distance freight and passenger transportation by rail are favoured by public subsidies, reflecting concerns for environmental protection embodied in transport policy.[57]

Entry and operational regulations in trade and services have potentially harmful consequences on competition in a number of activities. This is most notable in retail trade, where entry and activity are restricted by strict rules on building and on opening hours. Entry in the restaurant business is also severely restricted as an authorisation based on the assessment of needs is required in most Cantons. The protection thus provided to incumbent establishments involved in vertical delivery agreement with the beer cartel is probably one of the reasons why the latter cartel was able to resist external competition for so many years. Restrictive entry rules in optics, enforced in several cantons, are also likely to favour the extensive horizontal and vertical collusive behaviour reported in this business. Cantonal, and sometimes communal, rules provide numerous examples of entry barriers (through qualification, age or residence requirements) and of performance regulations for various businesses, from lawyers to hair cutting, real-estate administration, motion-picture performance, mountain guides, etc, some of which are obviously in public interest.

Public procurement

In 1988, total public procurement in Switzerland amounted to 10 per cent of GDP. In principle, public procurement by the Confederation is subject to the GATT code and the EFTA convention and should not allow discrimination against foreign firms. However, according to existing provisions, it may be used to promote innovation or export through a preference for domestic firms which are judged to be efficient. This has been reported in rare cases, such as railway and electrical equipment purchases. International comparisons are difficult; nev-

ertheless, the proportion of government contracts awarded to foreign companies in Switzerland may be considered as low, compared to other countries. Public procurement by cantons and municipalities – more than 60 per cent of the total – is not subject to international regulations and is prone to be used as a protective tool for local business and employment. According to the Cartel commission, in 12 of the 23 cantons, local public procurement rules put strong limits on contracting with non-local firms, through practices such as restricted bidding admittance, local product content requirements or preferential price margins in favour of local firms. Local preferences benefit mainly construction, wood industries and crafts.[58] The protection of local business through public procurement practices is likely to aggravate the segmentation of the Swiss domestic market in these activities and in related industries such as cement.

Other forms of public intervention having an impact on competition

Public subsidies as a share of GDP – 1.5 per cent in 1989 – are close to the OECD average but are low compared with other EC or EFTA Members. Except in agriculture, they are unlikely to hinder exit from certain activities or to induce significant distortions in the use of resources. The Federal budgetary cost of agricultural income-support schemes amounted to SF 2 to 3 billions in 1988 (1.0 per cent of GDP). Direct payments to industries amounted to only 0.1 per cent of industrial value added in 1989. Support to research and development is the most important item, accounting for 43 per cent of the total. Other main items are related to export promotion and regional development.

Immigration policy is also a hindrance to both competitiveness and competition.[59] Global, regional and sectoral quotas for new immigrant workers are set on a yearly basis by the Confederation, with a distinction between seasonal and permanent workers and renewable or non-renewable permits. In addition, cantons are responsible for permits to cross-border workers. Immigration quotas have been used by the Confederation as a tool for regional and sectoral preservation policy. The level of quota is likely to hinder competitiveness of Swiss firms.[60] Moreover, the split of quotas between regions and activities may well have adverse effects on inter-branch as well as inter-region competition. Rules on employment of foreigners also result in *de facto* discrimination against foreign firms in public contracting or purchases.

An assessment of the intensity of competition in Swiss domestic markets

Widespread horizontal and vertical collusive arrangements may have contributed to higher and more rigid prices than in comparable European countries; they may also have helped in maintaining a lower degree of contestability of market positions and have probably inflicted sizeable welfare and efficiency losses on the Swiss economy.

An "island" of high prices

The scope for non-competitive pricing on Swiss domestic markets

Given the extensiveness of private and public restrictions on competition, non-competitive pricing is likely to prevail in a majority of branches, both in consumer and investment goods or services. Figures in Table 21 indicate that prices of goods and services accounting for nearly 45 per cent of CPI weights, mainly food, public utilities and health care, are administered or more or less strongly regulated at at least one stage of the way to the consumer, regulations on producer prices in agriculture and on imports of food being of particular importance; in more than one third of the remaining 55 per cent, pricing behaviour is subject to cartel agreements or is submitted to technical norms or entry or operational regulations which hinder competition. Moreover, other consumption items, such as financial and insurance services, which are not included in the CPI, are, or have been until recently, subject to markedly non-competitive behaviour. In addition, household investment expenditures are distorted by collusive behaviour in markets for building materials, bathroom appliances and in construction. Public consumption and investment expenditures are also widely affected by non-competitive pricing in these branches.

Price levels

High domestic price levels in Switzerland may point out the scope of non-competitive pricing behaviour in the economy. The fact that Switzerland is a high price country by international standards has already been documented and is, at least to some extent, consistent with per capita income comparisons.[61]

Table 21. **Impact of non-competitive pricing on Swiss CPI**

Items	Weights
Total consumer price index	100.000
Administered prices	11.468
Sugar	0.116
Electricity, gas, coal	1.671
Public transport and communications	3.075
Car insurance	1.253
Tax on cars	0.715
Health care (except dentists)	4.019
TV and radio fee	0.473
Theatre, concert	0.146
Strongly regulated prices	4.777
Milk and dairy products	3.924
Eggs	0.361
Oil	0.269
Potatoes	0.223
Weakly regulated prices	28.281
Meat and meat products	4.317
Cereal products	2.491
Fruits and vegetables (50 per cent)	1.380
Alcoholic beverages (except beer)	1.531
Flowers	0.562
Housing rent	18.000
Documented cartels and/or restrictive technical, entry or operating norms or regulations	20.328
Tobacco	0.500
New cars	2.494
Beer, non-alcoholic beverages	0.885
Drinks in cafés and restaurants	2.084
Books	1.168
Sport articles, toys	1.115
Cinemas	0.340
Chocolate	0.594
Private car operation and maintenance	5.148
Housing equipment and maintenance	6.000
Free or relatively free pricing	35.146
Fish	0.306
Fruits and vegetables (50 per cent)	1.380
Canned fruit and vegetables	0.404
Foodstuff (miscellaneous)	0.983
Coffee, tea	0.483
Meals in restaurants	3.771
Clothing	7.000
Fuel (heating)	3.329
Used cars	0.831

Table 21. **Impact of non-competitive pricing on Swiss CPI** *(cont'd)*

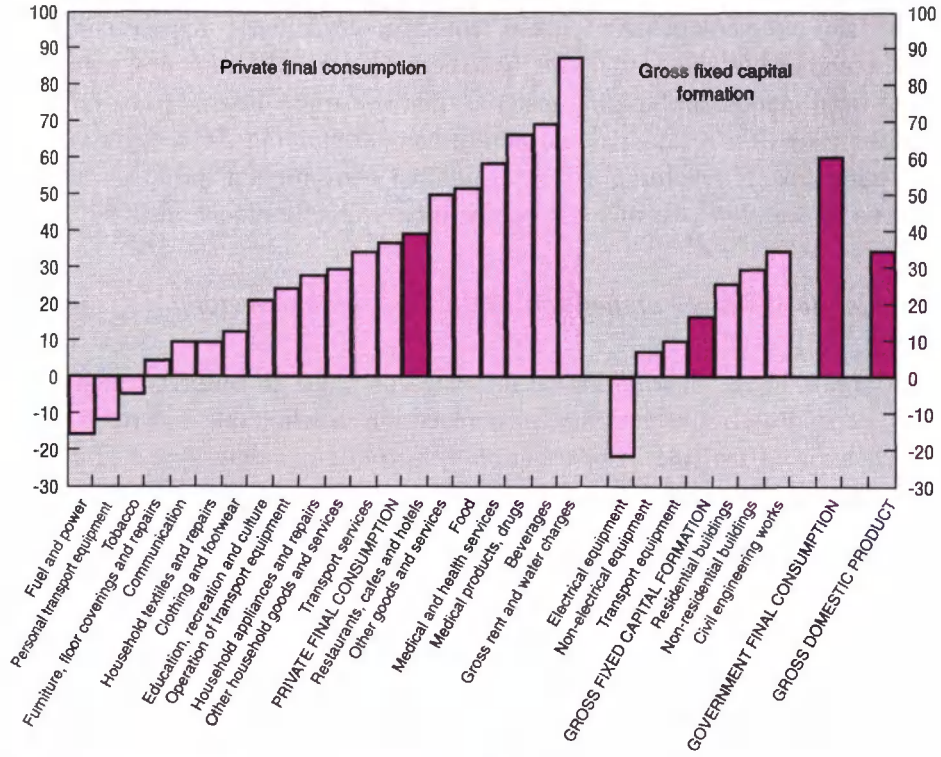
Items	Weights
Cycles, motor-cycles	0.484
Cosmetics	2.133
Dentists	1.848
Newspapers and magazines	0.918
Writing stuff	0.324
Calculators and typewriters	0.074
Photos and films	0.756
Radio and TV	1.501
Pets care	0.449
Sport lessons, access fees	1.929
Holidays	6.245

Source: OECD estimates.

According to purchasing power parity (PPP) calculations performed by the OECD, the overall domestic price level in Switzerland is 40 per cent higher than the average for the whole OECD area for private consumption and 30 per cent higher for capital investment. The discrepancy *vis-à-vis* EC countries is almost as large: almost all items of private consumption are notably more expensive in Switzerland. Price level differences are pronounced not only in food and in services, but also in most tradeable goods, reflecting together the impact of higher wage costs and rents, agricultural policies and indirect taxation as well as cartellisation at production and/or distribution levels (Diagram 18). This is notable in household appliances and repairs and in pharmaceuticals.[62] By contrast, in textile and clothing, which are widely open to imports, prices are in line with the EC average. Only fuel and electricity, personal transport equipment and tobacco would be cheaper in Switzerland than in the EC.

For non-durables, a less sophisticated direct retail price comparison between neighbouring regions – north-west Switzerland, Alsace and south Baden – delivers a similar message: retail prices of selected baskets of goods bought by border-crossing Swiss consumers are 10 to 25 per cent cheaper in Germany, the difference being slightly less with France.[63] In the case of transport equipment, however, PPP price comparisons seem at odds with anecdotal evidence, as reported in press articles,[64] as well as with the potential effects on price of Swiss norms and

Diagram 18. **RELATIVE PRICE LEVELS IN 1990 BETWEEN SUITZERLAND AND THE EC**



Source: OECD, *Purchasing power parities and real expenditures.*

exclusive import practices, which are unlikely to be offset by lower indirect taxes.

It should also be noted that other components of domestic demand are more costly in Switzerland than in the EC. This is the case for financial services: according to an EFTA study, the average price of selected financial services could drop by nearly 30 per cent from their 1987 level following EEA integra-

tion.[65] Indeed, the dismantling of the house insurance and banking cartels, following investigations by the Cartel commission (see below) are likely to have fostered competitive pricing. Potential price decreases, reflecting both economies of scale and more competitive markets, could be substantial as regards consumer credit, commercial loans and house insurance. Also, cartellisation and segmentation of local markets in building materials and construction seem to be reflected in higher prices for residential and non-residential building. This, together with price comparisons regarding government final consumption, provides indirect evidence of the high cost of weak competition in public procurement.[66]

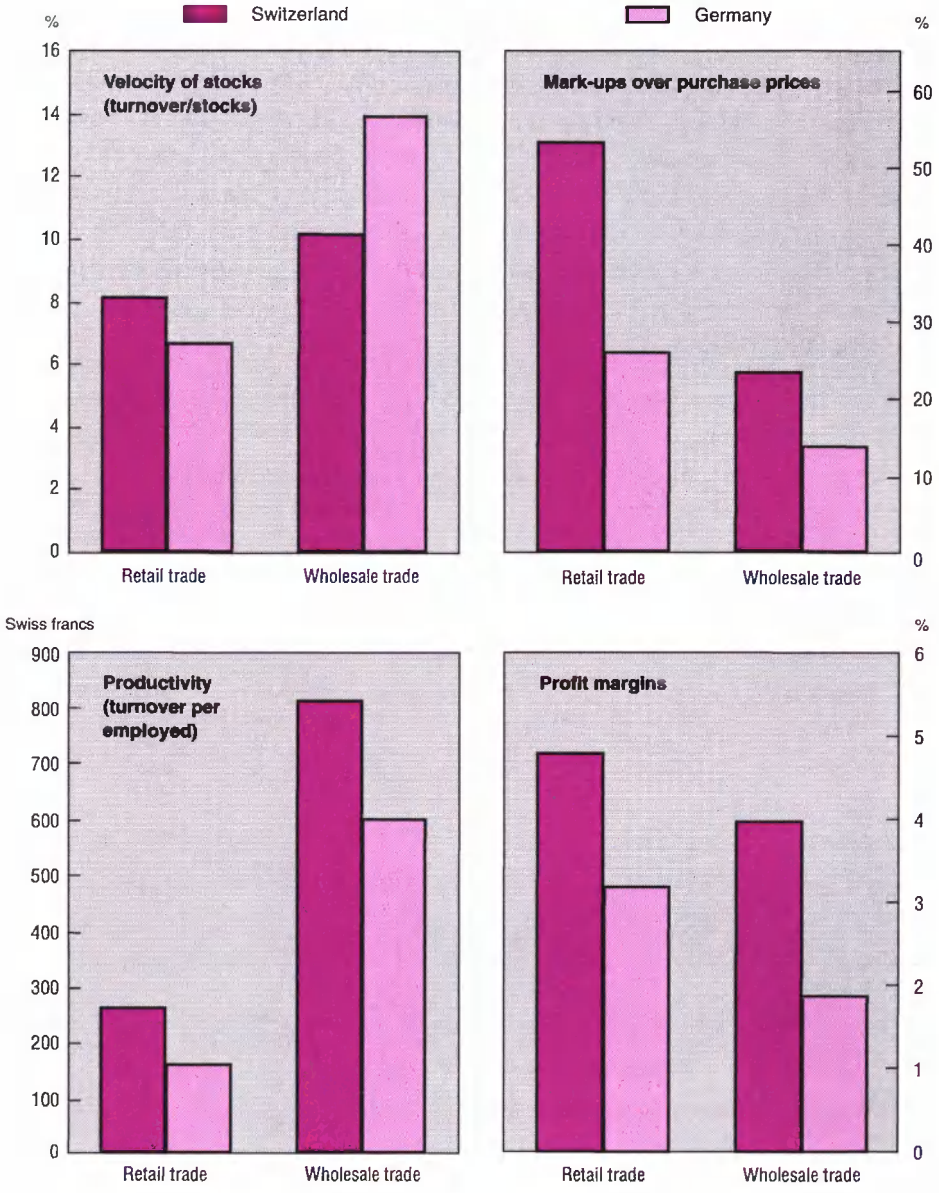
Price levels and competition in the distribution sector

Margins in the distribution sector may contribute to observed high price levels, depending on the intensity of competition in wholesale and retail trade. An indication of the role of distribution system in generating higher prices for consumer goods may be provided by the comparison of Swiss and German commerce (Diagram 19). The evidence is mixed. Efficiency (proxied by per capita turnover) of Swiss wholesale and retail trade surpasses that of German firms. The velocity of stocks is higher than in Germany in retailing, but is lower in wholesale trade.[67] Mark-ups on purchase prices are higher than in Germany, reflecting in part higher wage and rent costs. Thus, the cost of consumer goods seems to be inflated by trade mark-ups, which are unlikely to be fully justified by an unusual product variety or quality of services to customers.

An "interest-rate island"?

Financial prices are also affected by collusive behaviour in the domestic market. A frequent assertion is that Switzerland is a country where interest rates are relatively low and imperfectly linked to developments in world financial markets. The integration of Swiss financial markets with international markets has been rapidly growing over the past decade. However, persistent – though declining – wedges between returns on Euro-market deposits and on deposits in local banks suggest that collusion in Swiss retail banking has led, for a long time, to a market segment in which smaller domestic customers have been treated unfavourably.[68]

Diagram 19. **INDICATORS OF PERFORMANCE IN THE DISTRIBUTION SYTEM**



Source: Office fédéral de la statistique, *Les résultats comptables des entreprises suisses 1989/1990*, Berne, 1991; OECD Secretariat.

Rigid prices and the persistence of inflation

The price level is not the only concern of public opinion with respect to the consequences of collusive behaviour in domestic markets. Another concern is inflation. Theoretically, there is no reason why the rate of change of prices would be influenced in the long term by market structure. However, market structures are likely to influence the time patterns of price changes, if less competitive market structures mean more power to ensure market positions and allow firms to place a greater emphasis on long-term returns; this leads to more rigid prices.[69] In this case, Swiss cartels could be a factor making for the persistence of inflationary pressure over rather a long period as colluding firms and oligopolists pursue price smoothing policies.

Table 22. **Measures of persistence in Swiss domestic inflation**[1]

	1967-91	1967-80
Total	0.26	0.27
Food	0.18	0.22
Beverages, tobacco	0.31	0.31
Clothing	0.59	0.72
Housing appliances	0.19	0.19
Transportation	0.19	0.20
Health care	0.18	0.19
Leisure	0.14	0.19
Goods	0.25	0.31
of which:		
Non-durables	0.24	0.29
Durables	0.15	0.17
Domestically produced	0.31	n.a.
Imported	0.21	n.a.
Services	0.25	0.23
of which:		
Private services	0.26	n.a.

Notes: The higher the value of the indicator, the higher the persistence of transitory shocks to inflation.

1. The indicator is a non-parametric estimate of the infinite sum of the moving average coefficients of the Wold decomposition of the changes of prices. It is calculated as in Campbell and Mankiw (1987):

$A_i(1) = [V_i^k/(1 - \rho_{i1})]^{1/2}$, where

$A_i(1)$ is the indicator of persistence for branch i,

$$V_i^k = 1 + 2 \sum_{j=1}^{k} \left(1 - \frac{j}{k+1}\right)\rho_{ij}$$

ρ_{ij} is the j-th autocorrelation of the second difference of the price series i; k is the maximum lag length (5 years in the present case).

Source: OECD estimates.

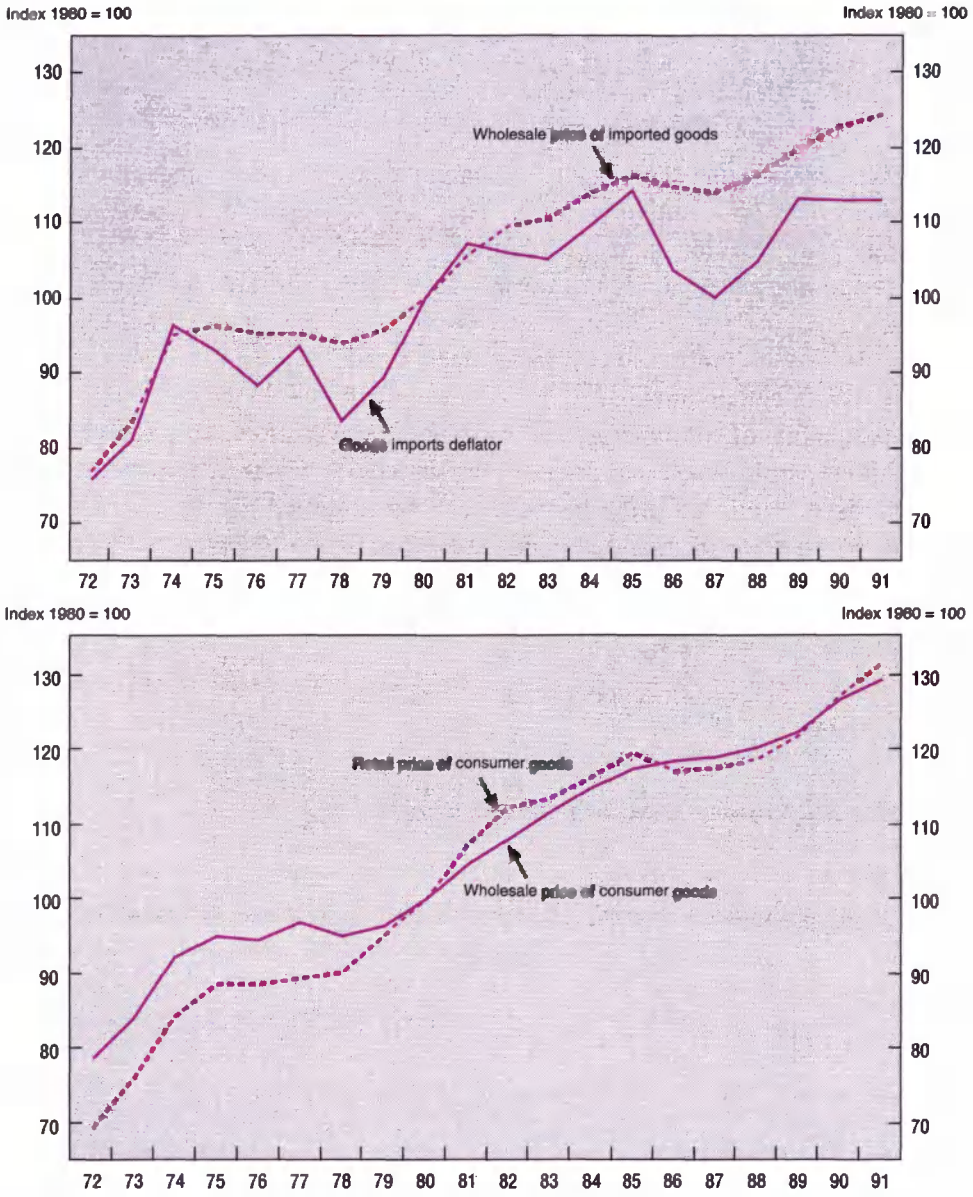
Statistical evidence is not in contradiction with this hypothesis.[70] Where data are available, international comparison also suggests that Swiss domestic prices tend to be more rigid than in other countries. This can be shown for selected manufacturing industries: Swiss prices exhibit more rigidity than their German counterparts in domestic-market-oriented industries; by contrast, price rigidity is similar in export-oriented industries.

The figures reported in Table 22 suggest that inflationary shocks in Swiss consumer prices peter out very slowly. They also suggest that the persistence in consumer price inflation stems mainly from domestically produced items: prices of imported consumer goods are notably less rigid than those of domestically produced ones; also, prices of durables, most of which are imported, are less rigid than those of non-durables or private services. *Ceteris paribus,* this suggests that the intensity of competition has remained generally higher in the distribution than in the production of consumer goods. Also, pricing seems to be more competitive in retailing than in wholesale trade. In the wholesale prices of imported goods, indications of profit-led price increases can be observed. Comparisons of the indexes of the price of imported goods at the border and the wholesale price of imported goods on the domestic market point to increasing wholesalers' margins over the 1980s and a very partial pass-through of falling import prices following the counter oil shock of 1986. By contrast, over the same period, wholesale and retail prices for consumer goods have paralleled each other rather closely (Diagram 20).

Contestability of domestic market positions

Only an *ex post* assessment of the contestability of the positions of Swiss firms in their domestic markets is possible, as there is no information about potential entry. Furthermore, regarding effective turnover, only indirect and probably biaised evidence, due to the use of data bearing on a single recovery year (1985), is available. Although it seems that entry and exit rates are low in most branches, in manufacturing they are much below those registered in other OECD countries (Table 23). Overall entry and exit rates as of 1985, excluding agriculture, are slightly higher than in manufacturing: 7.5 per cent for entry, 1.8 per cent for exit, reflecting stronger flexibility in trade and services, except hotels and restaurants. In many cases, differences in turnover rates seem consistent with market structures: they are much below the average in cartellised or oligopolistic

Diagram 20. **CHANGES IN COMMERCIAL MARGINS IN WHOLESALE AND RETAIL TRADE, 1972-91**



Source: Banque nationale suisse and OECD Secretariat.

Table 23. **Entry and exit rates in manufacturing: an international comparison**

Annual average percentage changes in the population of firms

	Period	Entry rate	Exit rate
Switzerland[1]	1985	5.9	1.3
Italy[2]	1984-89	9.8	7.8
United States	1978-84	11.1	10.0
Germany	1980-87	10.0	9.6
France	1980-82	5.0	4.7
United Kingdom	1979-83	11.9	9.7
Canada	1980-83	7.0	4.7
Denmark	1976-77	5.9	6.1

1. Corporations only.
2. Excluding "Enti della Pùbblica Administrazione".

Source: Armington, C., *Entry and exit of firms: An international comparison,* 1986, mimeo, Brookings Institution; Institut für Arbeitsmarkt- und Berufsforschung der Bundesanstalt für Arbeit; OECD, *1990-1991 Economic Survey of Italy,* Table 15; Office fédéral de la statistique, *Annuaire statistique de la Suisse,* and OECD estimates.

industries, such as tobacco, beer, paper, minerals and watches. They are higher in retail sales. High entry rates in banking and insurance, where strong cartels exist, are related to foreign investments.

Dominant Swiss firms tend to enjoy long-lived market positions. One third of the firms ranked among the largest 100 in 1929 still belong to the same group in 1983. Textile and clothing industries account for more than a third of exits while machinery accounts for 55 per cent of entries, suggesting a greater impact of overall changes in industrial structure than of factors specific to individual firms. Furthermore, the rate of entry into the group of top 100 Swiss enterprises has declined from 1.6 per cent per year between 1929 and 1965 to 1.2 per cent between 1965 and 1983.[71]

Low turn-over and maintenance of market positions should be reflected in the persistence of supra-normal profits in the long run. Available data, based on a non compulsory and non representative enquiry, only allow a rough estimation of branch excess profitability – i.e. the excess of net return on assets over the expected risk-free long-term real interest rate – over the last decade, reported in Table 24.[72] This gives rise to the following observations: branches where the obstacles to competition are reported to be high exhibit persistent and sometimes strong excess profitability; this is the case for beverages, wood and furniture,

paper, printing, minerals, construction. Excess profitability in wholesale trade is likely to reflect both the restrictions to competition in several segments of the domestic market and the efficiency of some swiss-based firms involved in international trading. By contrast, textile and clothing and machinery, which are branches facing a more competitive environment, either domestically or internationally, have a relatively low degree of excess profitability. High excess profitability, which is recorded in chemicals and, at least over the late 1980s, in the watch industry, is more likely to reflect innovations and high efficiency than blunt abuse of market power. Excess profitability seems to be on a declining trend in retail sales and beverages. The latter is a case of special interest as the erosion of excess profitability may well be related to the collapse of the beer cartel, documented below.

Table 24. **Excess profitability: an interbranch comparison, 1980-89**

Per cent

	1980	1985	1988	1989
Manufacturing industry	2.2	4.8	3.6	3.5
Food processing	0.7	10.9	10.2	4.1
Beverages	4.3	3.9	2.6	2.0
Tobacco	5.9	6.1	11.0	10.9
Textile	0.2	0.5	0.5	1.2
Clothing	0.0	1.5	1.5	1.8
Wood and furniture	3.6	1.5	1.8	2.1
Paper and paper products	2.3	4.1	3.8	3.3
Printing	3.6	8.7	5.4	4.2
Leather and shoes	5.8	(–4.5)	(–4.7)	(–1.2)
Chemicals	4.2	7.4	5.7	6.1
Plastics		5.4	5.1	6.2
Minerals	4.4	5.9	5.2	6.1
Metals	0.3	2.4	0.5	2.1
Machines	0.5	1.3	0.2	0.1
Electrical machinery		(–0.3)	(–0.2)	0.0
Watches	3.9	14.9	11.2	11.3
Miscellaneous	2.1	2.4	1.2	(–2.4)
Construction (primary)	3.4	5.4	1.6	1.9
Construction (finishing)		10.6	2.9	4.6
Wholesale trade	3.6	6.4	4.3	6.1
Retail trade	8.5	3.3	3.4	3.8

1. Excess profitability = $\frac{\text{net operating profit}}{\text{book value of net assets}}$ – return on risk free LT bonds (= 2.5 per cent).

Source: Office fédéral de la statistique, *Les résultats comptables des entreprises suisses;* OECD estimates.

The costs of collusive behaviour

The high level of Swiss relative PPP prices by itself is suggestive of high economy-wide static welfare losses. In addition, the lack or the insufficient level of competition in a number of Swiss domestic markets is likely to give rise to significant dynamic efficiency losses.

The assessment of welfare losses is always highly tentative because it is necessarily model-dependent. However, both partial- and general-equilibrium calculations may give some ideas about the costs inflicted on the Swiss economy. According to the Secretariat's partial equilibrium estimates, static consumer surplus losses due to divergence from competitive pricing in manufacturing, construction and wholesale and retail trade (that is 46 per cent of total value added) could amount to 0.2-0.3 per cent of 1989 GDP.[73] As regards financial services, the gains in consumer surplus associated with the consequences of EEA integration, estimated before the dismantling of predominant cartels in these fields, were still more substantial and amount to 2.8 per cent of 1986 GDP.[74] Restrictions on competition for the control of Swiss corporations may also have sizeable negative effects on shareholder wealth.[75]

Academic research provides an applied general-equilibrium illustration of static welfare losses due to several obstacles to competition: non-tariff barriers (such as restrictive norms and public procurement practices), immigration policy rules and cartels.[76] Table 25 reports the results of simulations, respectively, of the removal of non-tariff barriers, the removal of immigration restrictions and the dismantling of cartels in three industries (beer, tobacco and cement, which together account for 3 per cent of total value added). In the medium term, GDP would be increased by 0.3 per cent and consumption by 0.4 to 1.3 per cent. The results in the last simulation rest mainly on the disappearance of the cement cartel which strongly favours activity in construction. As this simulation bears only on a few branches, the results suggest that overall welfare losses due to cartel agreements could be quite high.

Dynamic efficiency losses caused by obstacles to competition are associated with output restrictions (e.g. quotas) or with the maintenance of outdated industrial structures, hindering the realisation of economies of scale or scope by firms.[77] Partial but converging evidence suggest that in a number of branches, Swiss domestic enterprises have remained too many and too small. In two

Table 25. **General equilibrium evaluation of gains due to the removal of obstacles to competition**

Changes compared to *status quo* in per cent

	Removal of NTB to imports	Removal of NTB to imports and exports and removal of barriers to immigration	Dismantling of cartel in beer, tobacco, non-metallic minerals
Real GDP	0.25	0.50	0.27
Real household income	1.51	1.79	0.58
Real household consumption	1.04	1.30	0.40
Real investment	2.97	3.20	0.80
Real exports	1.59	1.95	–0.57
Real imports	5.56	6.08	–0.46
Real exchange rate	–0.50	–0.34	+0.35

Source: Antille, G., *et al., op. cit.*

strongly cartellised industrial branches – breweries and watch making – the challenge to domestic producers has accelerated the dismantling of existing cartels and has resulted in increased pressure to concentration. In brewing, the process is still in progress. In the watch industry, a major part of the branch merged into a single conglomerate – SMH – and had success in regaining market share through rationalisation and technical and marketing improvements, as profitability figures reported in Table 24 suggest. As regards banking, the Cartel commission recently expressed the view that the nation-wide interbank agreement provided an obstacle to the structural adjustment process in this sector.[78]

Recent studies have suggested that the global dynamic effects of the completion of the EEA could raise the rate of growth by 0.5 to 0.7 per cent a year during the period to the end of the century, of which a gain of 0.3 to 0.5 per cent might come from the removal of obstacles to competition.[79] However, the potential for larger dynamic efficiency gains should not be overlooked. The most dynamic sectors in Swiss manufacturing – chemicals, investment goods – are least subject to cartels and already perform well in term of exports or R&D activities. However, an even more liberalised and open domestic market could speed down the delocalisation of productive and research activity in these branches too.

The role of competition policy

Restrictions of competition by private agreements have for long been favoured by a tolerant institutional framework and competition policy, rooted in the tradition of extreme liberalism about the individual's choice. Recent years have witnessed a strengthening in the design and the enforcement of the legislation. However, Swiss competition legislation still remains far from rules that are common in OECD, and notably EC countries, with which Switzerland is pursuing closer integration.

Idiosyncrasies in the Swiss approach to competition

The Swiss approach to the competition process and the role of competition policy has strong idiosyncratic features. The specific constitutional background leads to an emphasis on the liberty of economic agents, and as its corollary, the liberty to contract, rather than on competition in itself. However, in principle, ''efficient'' competition must ultimately be protected. The virtues of ''efficient'' competition are not only economic: it warrants not only ''an optimal allocation'' of resources and a constant ''adaptation to technical progress'' by enterprises but also a ''neutralisation of positions of economic forces''.[80] In brief, the Swiss approach admits that private interests may exert an influence on third party through the concerted acquisition of economic power. But as long as there is no ''abuse'' in the exercise of such economic power, a ''private market order'' is as good as a free market process; it may even be preferred if it yields a more desirable outcome, from a social – as well as economic – point of view.

This approach has shaped the legal framework. The Federal Constitution makes the Confederation responsible for enacting provisions only ''to counteract the harmful economic or social effects of cartels and similar groups''. The first law on Cartel and ''cartel-like groups'' (i.e. on dominant positions or monopolies), passed in 1962, laid down principles still valid under the later 1985 law. These may be summarised as follows: *i)* cartels are not prohibited: private agreements that create obstacles to competition are legal provided that they are rooted in preponderant legitimate private interests which are not in conflict with public interests;[81] *ii)* the law represses only ''harmful'' social or economic effects of cartels; *iii)* the effects of cartels are assessed by an independent authority, the Cartel commission; *iv)* the public action is initiated *proprio motu* or on the basis

of complaints by third parties;[82] it takes the form of ''investigations'' that include the hearing of the concerned parties and may result in ''recommendations'' to withdraw or to modify partly or in totality the agreements in question; *v)* the Cartel commission then seeks a settlement of the case or at least the voluntary adoption by the concerned parties of its recommendations. Minor cases can be settled through shorter and more informal ''preliminary enquiries''.

Recent strengthening of competition policy

The changes in legislation over the last decade have not deviated from previous principles; however, they brought about a significant fortifying in competition policy. First, according to the present cartel law, the preservation of effective competition is clearly posited as a minimum requirement to be overcome only by exception: cartels are said to be ''harmful'' if they eliminate ''effective competition'' (unless this is justified by the existence of preponderant public interest concerns) or, when effective competition is not eliminated, if their negative consequences exceed their positive consequences (balance theory); in the latter case, obstacles to competition must be given a preponderant weight in the assessment of the balance of consequences of cartels. Second, on request by the Cartel commission, its recommendations can ultimately be enforced by an ordinance by the Federal public economy department; this ordinance can be submitted to the Federal Court. Moderate fines can be imposed in case of failure to comply with accepted recommendations or ordinances. Third, the Cartel commission is allowed to undertake investigations on public enterprises as well as public-procurement-markets. Fourth, the new act empowers the Commission to initiate merger enquiry; however, the Commission has no power to enforce the dismantling of a merger. Fifth, the present law requests that the Commission should be consulted on any new bill bearing an influence on competition. Sixth, in addition to the Cartel commission, a ''Price supervisor'' was established in 1986, following a popular vote of 1982, whose task is to survey price changes and to prevent pricing abuses through conciliatory settlement.

More importantly, perhaps, a marked strengthening in the enforcement of the law has followed the changes in legislation. Under the previous legislation, the balance methodology and extensive general interest concerns allowed much tolerance of competition restrictions by cartels.[83] What is worse, in one recorded case, a recommendation made by the previous Cartel commission had a perverse

effect, as it was used by cartel members as a basis to exclude outsiders from deliveries.[84] By contrast, the new Cartel commission has clearly put a ban on agreements which eliminate efficient competition (property insurance market and bathroom appliances). The investigation on the nation-wide agreements in banking has exemplified a growing concern for economic efficiency in that these agreements, though not eliminating competition, had restrictive effects on it and provided obstacles to the structural adjustment process in this sector.

Action by the Price supervisor has also supported the strengthening of competition policy. He successfully advocated the abolition of explicit or tacit collusive behaviour in banking, beer retailing, books, petrol, etc. It also achieved the postponement or the removal of scheduled price hikes by beer retailers, physicians and cigarette makers. Investigations are currently underway into drug and telecommunication prices, and mortgage credits.

Although it has been given a more binding legal framework and a stronger orientation, competition policy still exhibits many weaknesses. Regarding the scope for action of the competition authorities, the legal framework focuses on cartels and does not provide an efficient basis for any control of mergers. Regarding procedural aspects, the most obvious weakness is information. The burden of proving the "harmfulness" of cartels rests with the Cartel commission, but it has only weak legal access to private information, the investigated parties being "obliged" to report under the threat of mild fines. Moreover, the Cartel commission is clearly under-staffed.[85] These shortcomings result in unduly long investigations – a typical example being the investigation of the cement market, which began in May 1985 and is not yet finished. They also result in an inadequate follow up of past actions, as manifested by the periodic reappraisal of investigations in such cases as beer, bathroom appliances and newspapers. Finally, the sanctions remain light and no link is established between the lump sum fines – a maximum of SF 100 000[86] – and the gains from illegal actions.

Swiss competition legislation and the international context

Swiss competition rules remain in stark contrast with common practices in most other OECD countries and particularly in the EC. Differences stem from the very design of Swiss rules: almost every kind of business action which is banned or combated elsewhere is permitted under the proviso that it does not result in "abuses". Otherwise, firms are allowed to make horizontal agreements on prices,

output, market segmentation, or to merge freely. Also most of vertical agreements considered as potentially harmful to competition by most OECD countries' legislation[87] are admitted in Switzerland: resale price maintenance, exclusive dealings, tied selling and geographic market restrictions. Only predatory actions by firms or cartels, that aim at impeding outside competition – such as discriminatory refusal to supply or to purchase goods, price discrimination or price undercutting against a particular competitor – are illegal in principle, and even these may be tolerated if economically justified and not against the general interest.

Rules more severe than in other OECD or EC countries limit certain forms of price competition. Under the 1986 law, repeated offers through advertising at prices below cost are considered unfair competition, if they provide a deceptive picture of the seller's competitive position. Also, advertisement and sales promotion practices, notably through price abatements, are more severely restricted than in other European countries[88] (Diagram 21).

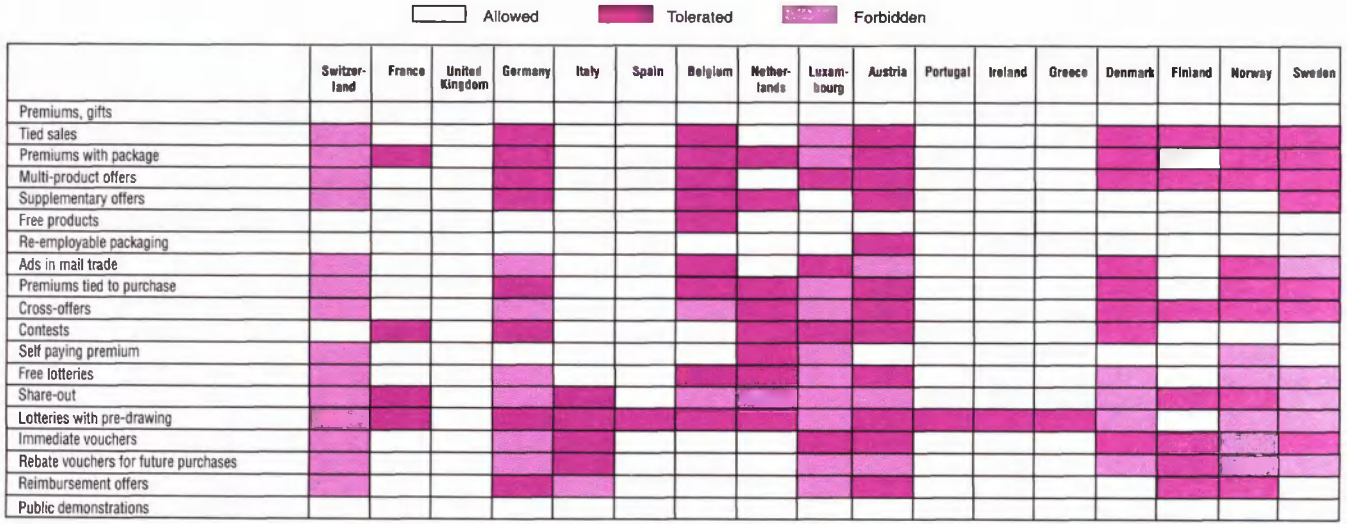
Steps towards more competitive domestic markets

Recent evidence seems to provide some signs of growing cartel fragility. Whether this is confirmed or not, it reinforces the opportunity for radical reform of the existing legal framework in order to bring it into line with EC competition rules.

Towards a Kartelldämmerung?

It is a widely shared idea in Swiss opinion that traditional cartels, at least in tradeable goods, are doomed to spontaneous collapse because of the growing challenge from imports in increasingly open domestic markets. Often quoted and much commented upon is the actual collapse of the once strong beer cartel.[89] The cartel of cigarette sellers was also voluntarily distmantled in September 1992. Optics provide still another example of a market order threatened by outside suppliers as did the dismantling of the watch cartel in the seventies. Another force sapping the strength of cartels could be a rising concentration within branches, which would weaken the interest of maintaining cartel discipline for the largest firms.

Diagram 21. **RESTRICTIONS TO RETAIL TRADE PRACTICES IN EUROPEAN COUNTRIES**



Source: Marketing Mix, No. 43, June 1990.

Nevertheless, evidence of cartel fragility should be considered carefully. First, other pieces of evidence suggest that traditional explicit agreements are being replaced by tacit agreements or informal arrangements within oligopolies.[90] This, of course, does not rule out the formation of new cartel agreements, as seems to have been the case in milk distribution following the dismantling of existing public price regulation. Second, as far as the impact of cartels is linked to price rigidity, a weakening of cartels should have resulted in less rigid prices over the recent years. Statistical evidence for the 1980s, reported in Table 22, does only, in most branches, give weak support for this.

Furthermore, the collapse of cartels does not necessarily lead to more competitive markets. Indeed, increased concentration is an often observed outcome. As already documented, this was the case in the watch industry; similar changes seem to be occurring in brewing. Given that domestic markets are small in Switzerland, the higher concentration that could follow the collapse of cartels may lead to strong oligopolistic positions. This would not necessarily work against the consumer interest, if it permitted, for example, a better exploitation of scale economies. However, it points to a stronger need for a more comprehensive competition policy and the creation of larger markets by the integration policy.

Opportunity for deep reforms in competition policy

Indeed, the likelihood of an autonomous rise of intensity in competition in the Swiss domestic markets seems rather small. Recent developments clearly show that the strengthening of the competition law and its enforcement have been the most important factor promoting competition. This is in line with historical experiences in many other OECD countries.[91] Put another way, free trade and competition law enforcement are more complementary than substitute policies.

Swiss competition policy is obviously on the eve of radical changes. The main driving force comes from the perspectives of European unification: if it becomes effective, the EEA agreement will remove many restrictions to trans-border, intra-area competition, stemming both from private business behaviour and from public regulations and interventions. But the necessity of promoting competition and structural changes in the Swiss economy have also become a major concern for the government, with growing support from business circles and the general public.

Domestic impact of European integration

If it passes the popular vote, the EEA agreement would immediately bring fundamental changes in competition rules faced by most Swiss firms: the EFTA countries have committed themselves to giving supremacy to EC rules. Hence, EC competition rules would become a piece of Swiss legislation. This means: *i)* the prohibition of cartels (with some exceptions); *ii)* the prohibition of abuse of dominant positions; and *iii)* the control of mergers. In principle, these rules apply only to restrictions of intra-area trade. However, an unspecified number of Swiss domestic cartel agreements will be affected as soon as they have consequences for the segmentation of markets or if they restrict imports from other EEA countries. Such agreements should be adapted to EC rules, or notified within the six months following EEA application, if their members seek an exemption.

Other pieces of Swiss legislation with anti-competitive effects will also be directly affected by European integration. This is the case for public procurement (above a ceiling), norms and technical requirements, and migration policy (after a transitional period). This is also the case for provisions governing corporate accounting: some changes are embodied in the newly passed corporate law. However, EC-like provisions will have to be included in Swiss commercial law within a period of three years after the agreement is enforced. Improving the disclosure of the profitability of Swiss enterprises should encourage entry and foster competitive behaviour in markets where it has been restricted. As regards other fields of Swiss legislation, such as telecommunications and the discrimination against foreigners in real estate acquisition, new domestic Swiss provisions will have to be adopted.

Planned reforms to competition policy

In addition to changes induced by the EEA agreement, the Swiss government has recently committed itself to a marked strengthening of the competition rules, both in order to comply with European community law and to promote rivalry in purely domestic activities, such as construction or the professions. According to the newly presented programme set for the present legislature, the principle of the prohibition of cartels should be translated into the legislation. Also, the problems raised by dominant firms and by merger control should be reassessed.[92] These projects seem to meet the concerns of industrial, commercial and financial circles and to receive the support of public opinion that is necessary

to fulfil constitutional exigencies. Hence, they may help to accelerate the dismantling of cartels and promote structural changes in domestic activities.

However, in order to promote both efficiency and competitive behaviour in the domestic market, several additional critical issues should be addressed. First, the goals of competition policy and, therefore, the objectives assigned to the competition authorities, have to be clearly defined. It seems reasonable, that, in accordance with the principles underlying German – and also EC – competition law, the protection of the competition process *per se* should be established as an overriding objective. Hence, a revised Swiss competition law should include: *i)* the prohibition of collusive agreements that prevent, restrict or distort competition; *ii)* an effective control on mergers and acquisitions, through an obligation of concerned firms to notify the competition authority which would be endowed with a veto power, in order to minimise the risk that existing cartels survive under the guise of concentrated or grouped firms. However, the law should be designed so as not to hamper the freedom (already constitutionally enacted) and the guarantee of contracts and to allow for sufficient flexibility in business arrangements provided these do not prevent effective competition. Second, the competition authority, which would be given additional responsibility, should also be given appropriate legal means of investigation and sanction as well as adequate operational resources. In particular, the staff of the Cartel Commission is presently very low by international standards.

In addition to changes to the competition law, an assessment of remaining anti-competitive regulations and practices should be made and the removal of harmful provisions should be envisaged. This is likely to be the case for shopping-hour regulations as well as many provisions included in the law on fair competition, which may well deprive the consumer of useful price reducing practices in retail trade. Also, the liberalisation of smaller public procurement applications, not directly affected, through EEA, by EC rules in this field, should be pursued, mainly at the lower levels of government.

IV. Conclusions

After eight years of sustained expansion, the Swiss economy entered recession in 1991, following the slowdown in world trade and the adoption of a restrictive monetary policy to counter the mounting inflationary pressures. As in previous episodes of anti-inflationary policy tightening, the price-damping impulses of monetary policy were channelled through interest-rate-sensitive demand components and exchange-rate appreciation, and then needed a long time to work themselves through the economic system. Signs of slowing inflation in the course of the first semester of 1990 proved short-lived, as inflation was temporarily boosted by a jump in energy prices induced by the Gulf crisis. Consumer price inflation peaked only by mid-1991, two and a half to three years after monetary policy had changed course. Inflation has declined since then, helped by rapidly decelerating import prices. Service prices, which account for half of the consumer price index (CPI), have slowed less, suggesting stubbornly high underlying inflation. A major element of service price inflexibility in the short run remains the link established by tenant protection law between housing rents – more than one-third of services in the CPI – and mortgage rates. The observation of still high core inflation is confirmed by the acceleration of labour costs in 1991, stemming largely from the de-facto indexation of nominal wages to the previous year's price inflation and stagnating labour productivity, which more than offset a softening of real wage demand.

A particular feature of the present cyclical episode is an unexpectedly rapid and sharp increase in unemployment in response to the relatively mild recession. Labour hoarding by firms, a usual buffer for labour market slack, appeared to be less than during the 1982 recession. Total employment decreased almost simultaneously with real GDP. With labour supply growing further, due to the continuing rise in the foreign population, unemployment rose at an unprecedented pace and in the summer of 1992 was more than five times the level registered in the

summer of 1990. At a little over 3 per cent in August 1992, the unemployment rate was the highest in more than fifty years. About two-fifths of the unemployed are foreigners, which suggests that the supply of foreign labour has become somewhat less responsive to cyclical fluctuations than experienced in the past. This may reflect an improved integration of foreign workers in the Swiss labour market as well as a recent move towards more generous unemployment-benefit eligibility. These developments are likely to have raised the "natural" or equilibrium rate of unemployment, the rate which is consistent with non-accelerating wages and prices.

Economic activity remains weak in 1992, but is projected to recover in 1993. Exports should continue to pick up, supported by stronger market growth and the real exchange rate depreciation in the first half of 1992. Private consumption will benefit somewhat from the customary adjustment of contractual wages to past price inflation, which tends to boost real labour incomes in periods of diminishing inflationary pressures. However, several factors seem set to keep the pace of output expansion moderate. First, macroeconomic policies are likely to be less easy than in past recoveries. Secretariat projections are based on the assumption that the monetary authorities aim at stabilising the Swiss franc's external value, which implies a broadly stable short-term interest differential *vis-à-vis* the Deutschemark; and the fiscal policy stance is gauged to be slightly expansionary this year, but broadly neutral next. Second, the rise in private consumption may be small since further employment losses are likely to damp disposable incomes in 1992, and the rapid increase in unemployment might induce precautionary savings by households. Third, private fixed investment may contract again in 1992 and pick up only moderately in the course of 1993, although this depends crucially on business and household expectations.

Given the current system of labour market regulations and the determination of policy makers to achieve economic growth under conditions of price and cost stability, it is unlikely that the unemployment rate will ever return to the extremely low levels of the 1980s. The unemployment rate may average around 3 per cent in 1992 and 1993. With the economy expanding below its potential, inflation should come down further, to perhaps 4¼ per cent in 1992 and 3½ per cent in 1993 – or 3 per cent if adjusted for the impact of the increase in the customs duty on petrol. With the terms of trade expected to remain broadly

unchanged this year, but to improve thereafter, the current external surplus may exceed 5 per cent of GDP in 1992 and 1993.

Although consumer price inflation seems now on a downward trend, its current high level relative to the National Bank's (SNB) implicit goal of 1 per cent leaves only limited scope for easing monetary policy to stimulate sluggish domestic demand. Monetary conditions were allowed to ease already in August 1990 and again in early 1992, but the subsequent depreciation of the Swiss franc, which was partly due to the widening of the negative interest rate differential *vis-à-vis* Germany, put the SNB's anti-inflationary policy at risk. Hence, on both occasions, the National Bank saw itself called upon to restrain the supply of base money gradually in order to exert some upward pressure on money market interest rates and to stabilise the franc. These interventions were in line with the SNB's stated policy approach since 1991, which abstains from setting annual monetary targets, but puts much more emphasis on the exchange rate in the short run. The Bank refrains, however, from announcing exchange rate targets or target zones. For the medium term, growth of the monetary base of 1 per cent a year is deemed by the Bank to be compatible with an inflation-free expansion of real GDP in line with potential output.

Persisting with monetary-base targeting between 1988 and 1990, during a period when legislative and technological innovation had made base money a misleading indicator of monetary conditions, together with the undershooting of annual monetary targets by substantial margins for three years in a row, clearly had a detrimental effect on the SNB's credibility. Hence, the Bank's discontinuation of the annual base money targeting exercise in 1991 and 1992 was an appropriate – if delayed – adjustment to the changed environment. However, the alternative formulation of monetary policy for 1991 and 1992 had severe drawbacks: one problem is the absence of reliable empirical evidence that the envisaged expansion of base money over the medium term will be compatible with sustained growth of output under conditions of stable prices. Moreover, within its medium-term approach, it is unclear to what extent there is scope for the SNB's intention to take exchange rate considerations into account. And more important in the short run, the cryptic formulation of the exchange rate policy pursued provides little guidance for markets about the course of monetary policy. The lack of a clear orientation for markets, whether in terms of pursuit of price stability directly or indirectly through a firm exchange rate commitment, may

contribute to greater variability of financial indicators, which implies conflicting signals about market conditions; this would be a cost for the real economy.

It would therefore seem desirable to enhance the transparency of monetary policy in the short run, beyond the current practice of announcing quarterly projections of the monetary base, which at present contain only limited information on the stance of monetary policy. Focusing more directly on inflation outcomes, as Canada and New Zealand have done, would seem not to be a promising approach for Switzerland, given the slow response of prices to monetary policy. One possible option would be to choose an alternative intermediate monetary aggregate, for example M1, which might prove to have a reasonably stable velocity if its statistical deficiencies were eliminated. Further research might focus on a range of financial indicators as a guide to the effects on inflation of current monetary policy. Another possibility would be to peg the franc to the ECU or the Deutschemark, an option which other small and open economies have adopted with a varying degree of success. Clearly, this would entail the abandonment of long-standing Swiss ambitions to be a paragon of macroeconomic stability and the loss of monetary policy autonomy, which in the past may have allowed Swiss interest rates to be considerably below those abroad. But, given the prospects of greater integration with the rest of Europe, it is uncertain whether this interest differential can be safeguarded in the future.

Rising public-sector deficits after several years of surpluses have become another preoccupation of policy makers. The combined deficit of Confederation, cantons and communes more than doubled from 1990 to 1991, to an estimated SF 8.0 billion (2.5 per cent of GDP), with the deterioration of the federal government's budget particularly pronounced. Although the magnitudes of the deficits and the debt stock relative to GDP are still lower than in most other OECD countries, the primarily structural nature of the deficits and the high speed of expenditure growth are worrying. Corrective action already initiated at all levels of government is therefore welcome. The federal government designed an emergency package consisting of a linear cut in many transfers, indirect tax increases, a higher government share in the National Bank's profits and restrictions on the Parliament's discretion to decide on extra spending in the course of the fiscal year. It is, however, particularly uncertain whether the latter proposal will be accepted by the Parliament. If approved, the package would reduce the federal deficit to an annual average of some SF 1 billion between 1993 and 1995,

which represents a reasonable goal. However, in the light of recent information, this target will be difficult to achieve.

The government has to act quickly to safeguard federal tax revenues beyond 1994 because the constitutional basis for the Confederation's direct tax and turnover tax expires at the end of 1994 and because Swiss legislative procedures are complex and time-consuming. Moreover, there remains the unfinished task of modernising the turnover tax, stamp duty and corporate tax. The federal government's tax reform project was rejected in a national referendum, slowing the progress towards a more modern tax system. The government has subsequently put forward a proposal which would widen the scope for later introduction of a modern consumption tax on goods *and* services in a common legislative procedure, which would be subject only to *optional* referendum, instead of a *compulsory* popular vote. The Parliament approved in the autumn of 1991 a separate project, suggesting the abolition of stamp duty on a variety of transactions, thereby correcting the competitive disadvantage which the current design of stamp duty puts on Switzerland as a financial centre. The Parliament's stamp duty reform project has been approved in a popular referendum on 27th September 1992.

By contrast, the reform of corporate law has come into effect in July 1992, restricting those practices of Swiss corporations that reduced the transparency of their financial situation and hampered the functioning of the market for corporate control. The accountability of Swiss corporations has been improved by stricter rules on the accumulation and the dissolution of hidden reserves as well as the obligation for holdings to provide consolidated accounts. However, Swiss disclosure requirements still lag behind EC rules. The existing protection of established management in Swiss companies has been only partially dismantled. Hence, Swiss-based companies will continue to be better protected against hostile takeovers than is the case in many other OECD countries. Extensive discussions of another reform project, the revision of the legislation on stock exchange and trade of securities have taken place and a draft of a federal law will be submitted to Parliament in 1992, its principal aim being the protection of investors and the financial system.

In view of the mounting criticism of the high level of farm product prices and in order to align Swiss agricultural policy more closely with EC policy and GATT rules, the Federal Council submitted to Parliament in 1992 a reform

project which redefines the direction of Swiss agricultural policy. The new approach envisages the partial dismantling of agricultural price support and its replacement by a system of direct income payments to farmers, not linked to production, but partly designed to attain environmental objectives. This is a move in a right direction. When put into effect, the new system will diminish distortions of the price system. But as designed, it will also impose a considerable extra strain on the Federal budget as the burden of supporting farm incomes shifts from consumers to government without a corresponding increase in revenues.

Another matter of concern for the government, and currently intensely discussed by the general public, is that of inadequate competition in numerous domestic markets. Collusive behaviour of firms in particular, which has long been accepted as an established feature of the Swiss economic system, is being increasingly regarded as an obstacle to efficiency and flexibility, and is also seen to be contributing to the high price levels by international standards as well as to the comparatively long lags of monetary policy to bring down inflation. While no comprehensive quantitative evidence on collusive practices is available, occasional official investigations carried out by the Swiss Cartel Commission as well as academic studies suggest that a large number of domestic markets operate under strong horizontal and vertical cartel agreements; these regulate prices, delivery conditions, market segmentation and other market parameters, thereby severely limiting competition at the production and distribution level. Other indicators, such as the rigidity of pricing behaviour, low entry and exit rates and the persistence of excess profitability, also suggest widespread collusive behaviour. While in recent years there have been some signs of a weakening of the power of traditional cartels, it is clear that this is not sufficient to promote competition on a large scale. Moreover, as experience in other countries shows, there is the risk that formal cartels will be transformed into informal arrangements or will be replaced by mergers and acquisitions.

The hitherto tolerant official approach to cartel arrangements is to a large measure at the origin of insufficient competition in numerous domestic markets. Until 1986, legislation was particularly benevolent *vis-à-vis* cartels. In addition, public regulations which aim at agricultural income support, protection of perceived consumer interests or avoidance of predatory behaviour, have hindered competition in food production and processing, and in retail trade and services. Lastly, public procurement practices, mainly at subsidiary levels of government,

result in protection of local firms. Some strengthening of the competition law and of its enforcement took place in 1986; since then, several cartels, particularly in banking and insurance, have been or are in the process of being dismantled. But the basic principles have not been revoked under the current legal framework so that at present only the *abuse* of cartels, not collusive arrangements *per se,* are prosecuted. The EEA agreement, if it passes the forthcoming referendum, will cover the major part of the activity of Swiss domestic firms by EC competition law. But economic activity exclusively restricted to the domestic market will remain unaffected by EC law under the EEA agreement.

A reform of Swiss competition law, including a change to the prohibition of cartels and the control of merger activity are presently under official consideration. In order to realise a maximum of efficiency gains, a reform of competition law and policy would need to be comprehensive and to address a cluster of closely related issues. First of all, collusive agreements should be prohibited; exemptions should be allowed only in cases of compelling evidence of superior efficiency of cartel agreements. Secondly, transparency should be a major objective of competition policy. This calls for a sufficient degree of public notification of exempted agreements; it also implies that existing cartels should be required to register. Thirdly, the control of mergers and acquisition should be established and competition authorities should be able to veto any operation with anti-competitive implications. Lastly, legal and operational means available to the Cartel Commission should be significantly increased in order to improve the effectiveness and credibility of competition policy.

In sum, the recession of 1991 and in the first half of 1992 confronted economic policy with an unpleasant combination of problems not encountered for nearly a decade: unacceptably high inflation together with sluggish economic activity, surging unemployment, weakening international competitiveness and deteriorating public sector finances. However, the prospects for improvement are good: inflation is on a downward trend thanks to tight monetary policy; a turnaround of economic activity is projected for 1993, triggered by foreign demand; corrective action to improve public finances has been undertaken and is likely to show in lower deficits at all levels of government. Once an economic upswing is under way, unemployment should decrease, albeit not to previous low levels. On the other hand, progress in advancing the structural reform agenda has been slow, notably the reform of federal taxation and of competition policy.

However, once put into effect, Switzerland's participation in the agreement on the European Economic Area will provide an impetus to further reform in these and other important areas.

Notes and references

1. Some researchers connect the two Beveridge-curve shifts to the introduction of a compulsory unemployment insurance scheme in April 1977 and a revision of this scheme in January 1984. This does not, however, provide an explanation for the shift of the curve from 1974 to 1976. In addition, the revision in unemployment insurance in 1984 did not imply a sufficiently substantial extension of insurance coverage to make plausible the marked move of the curve from 1983 to 1984.
2. The Hodrick-Prescott filter decomposes the actual unemployment rate into a smooth non-stationary component – used as approximation of the natural rate – and a stationary cyclical component. The method is described in King, R.G. and S.T. Rebello, "Low frequency filtering and real business cycles", Rochester University Centre for Economic Research Working Paper No. 205, October 1989.
3. A Federal decree authorises for each quarter of a percentage point increase in the mortgage rate an increase of rents by 2 to 3 per cent, depending on the actual level of the mortgage rate. This has been discussed in the previous two OECD *Economic Surveys of Switzerland,* Part I.
4. The estimates of the *Office fédéral de l'industrie, des arts et métiers et du travail* are based on data for wages of workers who had a work accident.
5. In 1991, relative unit labour cost in common currency are estimated to have risen by 1¼ per cent on average and relative export prices in common currency by 2 per cent.
6. The seasonally-adjusted monetary base consists of notes in circulation and sight deposits held with the National Bank. In addition to its seasonal adjustment, the series is corrected for the biennial peak in note circulation at the end of even years, when property and income taxes are assessed, because of evidence that taxpayers try to reduce their tax base by converting parts of their financial assets into currency.
7. Banque Nationale Suisse, *84e rapport de gestion,* 1991, p. 8.
8. Cf. Rich, G., "Die schweizerische Teuerung: Lehren für die Nationalbank", *Monnaie et conjoncture,* Quarterly Bulletin of the Swiss National Bank, March 1992.
9. This reasoning is based on empirical evidence presented in the 1990/91 OECD *Economic Survey of Switzerland,* Chapter II (in particular footnote 16).
10. The current version of M1 suffers from a statistical deficiency (cf. further below).
11. When examining a constructed monetary aggregate which consists of the official M1 and that fraction of the salary accounts (see below) which has been estimated as being used for

transaction purposes, Lambelet, J.-Ch., (''Optionen der Geldpolitik'', *Die Volkswirtschaft,* December 1991) dates the change to monetary restriction also at the beginning of 1990.

12. Cf., for example, the 1987/1988 OECD *Economic Survey of Switzerland,* Part II.

13. Under the old liquidity rules, money-market interest rates regularly increased sharply at the end of the month (the so-called ''ultimo-problem''), which regularly induced institutional depositors to convert sight deposits into short-term time deposits. Since the monetary statistics of the SNB are based on end-of-month figures, the data underrepresented the actual volume of M1 until the end of 1987. In 1988, when the new liquidity regime had done away with these temporary sharp peaks in money-market interest rates, year-on-year rates of change of M1 were biased upwards for twelve months.

14. This has been analysed by Lambelet, J.-Ch. and D. Nilles, ''Statistique monétaire et demande de monnaie en Suisse'', *Revue suisse d'Économie politique et de Statistique,* December 1987. The authors conclude that over their sample period about two-thirds of the salary accounts were used for transactions and should therefore be added to the official M1 series.

15. Cf. for example Fischer, A.M. and M. Peytrignet, ''Are larger monetary aggregates interesting? - Some exploratory evidence for Switzerland using feedback models'', *Revue suisse d'Économie et de Statistique,* December 1990.

16. Divisia monetary aggregates attach weights to individual money stock components which reflect the different degrees of ''moneyness'' of individual assets. Cf. Fluri, R., ''Monetäre Divisia-Aggregate - eine Alternative zu den traditionellen Geldmengenindikatoren?'', *Monnaie et conjoncture,* Quarterly Bulletin of the Swiss National Bank, December 1990.

17. Economic theory (cf. Poole, W., ''Optimal choice of monetary policy instruments in a single stochastic macro model'', *Quarterly Journal of Economics,* Vol. 84, 1970) suggests that there exists no ''ideal'' monetary policy strategy for all possible circumstances, but that the choice of the optimal policy instrument depends on whether disturbances originate in the real or the monetary side of the economy. It has been suggested that in the case of shocks stemming from financial markets, exchange rate targeting is superior to a money supply rule. (Cf. Henderson, D.W., ''Exchange market intervention operations: Their role in financial policy and their effects'', in: Bilson, J.F.O. and R.C. Marston (eds.), *Exchange rate theory and practice,* Chicago 1984.) In general, the theoretically optimal choice of monetary instruments is subject to uncertainty about the nature of future disturbances. However, the introduction of the SIC and the new liquidity rules in 1988 were clearly an example of a shock which not only originated in the financial sphere, but which was also predictable.

18. Cf. in particular ''La politique monétaire suisse en 1990 et 1991'', *Monnaie et conjoncture,* Quarterly Bulletin of the Swiss National Bank, December 1990.

19. See, for example, OECD *Economic Outlook 46,* December 1989.

20. Data used in the table ''Government accounts'' for the Confederation's finances are in the definition of the ''Revised Finance Statistics'' in order to be comparable with cantons and communes and to allow their aggregation to government finances. These figures differ from those used in the central government budget presented below, which are in the definition of the federal financial accounting system. The Revised Finance Statistics treats the Confederation's interest payments and its contributions to the Federal Insurance Fund *(''Eidgenössische Versicherungskasse'')* as actual expenditures while the federal accounting

system neutralises them by commensurate revenues. Therefore the former account arrives at much worse budget balances than the latter.

21. This includes old-age insurance (AVS), unemployment insurance (AC), disability insurance (AI), loss-of-earnings insurance (APG) and accident insurance (CNA).

22. In the case of Switzerland, the breakdown of actual budget balances into cyclical and structural components is complicated by the existence of various lags between the generation of incomes and their taxation. For further detail, cf. Ammann, Y., "Le budget de plein emploi", *Cahier de conjoncture,* No. 2, 1988.

23. A list of recent examples is presented in Gygi, U., "Finances fédérales: quelle sera la suite?", *La Vie économique,* Décembre 1991. This practice contributed to the observation – supported by econometric evidence – that Swiss government revenues seem to cause expenditures (cf. note 23 of the 1990/91 OECD *Economic Survey of Switzerland*).

24. The direct federal tax is calculated on the basis of two years' average income, with 50 per cent being levied, after a one-year lag, in each of the two subsequent years. Moreover, encouraged by tax rebates on advance payments, taxpayers tend to pay the bulk of their income taxes during the first year of the collection period rather than spreading them evenly over the two years. Since the first year of the collection period is always an even year, the system results in strong growth of tax revenues in even years and a tendency to stabilisation in odd years, whatever the phase of the business cycle. The revenues from the federal direct tax in 1991 were the second annual payment of the two-yearly collection period 1990/91, which refers to incomes that accrued in 1987 and 1988. A similar procedure applies to income tax levied by most cantons and communes, with a somewhat reduced lag.

25. For example, total revenues grew by only 2.2 per cent in 1989; in 1987, they even fell by 1.5 per cent. On the other hand, revenues increased by 12.3 and 11.2 per cent in 1988 and 1990, respectively.

26. In spite of the higher weight of consumption in total demand, revenues from the taxation of investment account for roughly one half of total turnover tax receipts (53 per cent in 1990). About two-fifth of turnover-tax income stem from household consumption, the remainder is attributable to government consumption. The main reasons for the high weight of investment in turnover tax revenues are the exclusion of services from the tax base and the taxation of investment goods in the current system.

27. Estimates for this revenue position of the budget are complicated by the fact that it is the difference between gross receipts and repayments. High gross revenues from withholding tax generally lead to increased repayments in following periods, which may cause strong fluctuations in the growth of (net) revenues from this tax.

28. In the definition of the Revised Finance Statistics, the projected deficit amounts to SF 2.8 billion in 1992.

29. The extraordinary buoyancy of withholding tax revenues in the past two years was partly a consequence of the shift of asset holders' portfolios from sight and savings deposits to high-yielding time deposits.

30. The share of import duties in total revenues fell from about one-third in 1960 to an estimated one-eighth in 1992.

31. It is also planned to change the article of the Constitution dating from 1925 that restricts gambling in casinos to a stake of SF 5 only. This is hoped to become effective from 1996 and could raise additional federal revenues of possibly SF 150 million per year.

32. A detailed discussion of features of the current federal tax system which call for reform can be found in the 1989/1990 OECD *Economic Survey of Switzerland,* Chapter IV. A section of chapter II of the 1990/1991 OECD *Economic Survey of Switzerland* provides a brief overview of the government's reform project rejected in 1991.

33. A major problem of the present turnover tax on goods (accounting for about 30 per cent of government revenues) is that it charges investment goods and intermediate inputs at each stage of production and distribution; this feature is usually referred to as the hidden tax *(''taxe occulte'').* This cumulative effect of the current turnover tax raises the cost of goods, services and capital by a non-negligible amount. It thus has a harmful effect on investment and international competitiveness. As the *''taxe occulte''* brings about a high share of taxes on investment in total turnover tax revenues, it contributes to the relatively strong cyclical responsiveness of this important source of federal revenue.

34. Main elements of reform remain the introduction of a VAT-type taxation technique, which will abolish the *''taxe occulte'',* and the inclusion of services in turnover taxation.

35. Cf. OECD, *Agricultural policies, markets and trade: Monitoring and outlook,* 1992.

36. Cf. Popp, H.W., ''Neuorientierung der Agrarpolitik mit ergänzenden ahlungen'', *Die Volkswirtschaft,* April 1991.

37. After several decades of sustained flows of outward direct investments, a significant part of Swiss business in manufacturing and in services is located abroad. The book value of direct investments abroad amounted to 38 per cent of GDP in 1989. For the same year, according to Secretariat estimates, the workforce in Swiss-owned firms abroad amounted to 24 per cent of the domestic workforce in industry and 11 per cent in services.

38. See Stigler, G., ''The Division of Labour is Limited by the Extent of Markets'', *Journal of Political Economy,* June 1951.

39. ''Les fusions d'entreprises en Suisse de 1973 à 1985'', *Cahiers de la Société de banque suisse,* No. 30, Janvier 1987; ''Plus de 300 fusions en Suisse en 1988'', *Journal de Genève,* 6 Janvier 1989.

40. According to the 1984 Merger guidelines by the Anti-trust division of the U.S. Department of Justice, industries are said to be ''unconcentrated'' if the Herfindahl-Hirschmann Index is under 1000; in the 1000-1800 range, ''moderately concentrated''; above 1800, ''highly concentrated''. See, U.S. Department of Justice, *Merger guidelines,* 1984.

41. See, Rossi, A., *Concentration des entreprises et dépendance économique spatiale en Suisse,* Office fédéral de la statistique, Berne, 1989.

42. Swiss firms are also on record as having participated in international export cartels.

43. In the fifties, an official body counted up to 1000 associations, 650 of which were cartels. See, *Les Cartels et la concurrence en Suisse,* 31e publication de la Commission d'étude des prix du Département fédéral de l'économie publique, Berne 1957, p. 49.

44. See, Glatthard, A., *Unternehmenskonzentration in der Schweiz, Stand und Entwicklung von 1929 bis 1983,* Peter Lang, Bern, 1987.

45. Anecdotal evidence suggests that cartel organisations may request signed blank checks from their members. It should be stressed that, as cartel agreements are not *per se* prohibited, they are normal contracts, the provisions of which can, at least theoretically, be enforced through Court actions.

46. This role of wholesalers is evident in various cases dealt with by the Cartel Commission.

47. See, Commission des cartels, *L'état de la concurrence dans la branche sanitaire,* Berne, 1991.

48. However, after allowing for size, transportation costs and the trade regime, the share of imports in Swiss GDP seems "normal" over the period 1974-1984. See, Barbone, L., "Import Barriers: an analysis of Time-Series Cross-Section Data", *OECD Economic Studies,* No. 11, Autumn 1988, pp. 155-168.

49. See OECD, *Progress in structural reform: an overview,* forthcoming, Table No. 4. However, non-tariff barriers (NTB) rose substantially over the sixties and the seventies: the proportion of total imports covered by NTB (e.g. export restraints, quotas, advertising restrictions, etc.) rose from 19 per cent in 1966 to 50 per cent in 1986. In 1986, the share of goods affected by NTB was nearly 100 per cent in food and 39 per cent in manufactured goods (mainly textile). See Laird, S. and A. Yeats (1986), "Non-Tariff Barriers of Developed Countries, 1966-1986", *Finance and Development,* March, pp. 12-13. The present import regime on textiles will be abolished by the end of 1992.

50. See, Union des Banques Suisses, *Le marché intérieur communautaire - Défi et chances pour la Suisse,* Zurich, 1989.

51. See, Grin, F., B. Bürgenmeier and Th. Butare, "Facteurs déterminant le niveau des prix à la consommation en Suisse", *Rapports sur les structures économiques,* Office fédéral des questions conjoncturelles, Annex II, comptes rendus d'entretiens, Association des fournisseurs de la branche radio et télévision).

52. See, *inter alia,* Geroski, P.A and A. Jacquemin, "Imports as a Competitive Discipline", *Recherches Économiques de Louvain,* Vol. 47, No. 3, Septembre 1981, pp. 197-208.

53. The transfers of "tied" registered shares is effective only on approval by the Board of directors. Corporate charters could exclude certain investors – foreigners, in many cases – from registration. Furthermore, Swiss stockbrokers have declared publicly that they would refuse to exercise buy orders from clients that are unlikely to qualify for registration. This actually discouraged a bidder during a take-over on a Swiss insurance company in 1988. More restrictive rules have been enforced by the new corporate law. See Chapter III of the present *Survey.*

54. See, Chapter II of the present Survey.

55. See, Schreiner, J.P., "Le capital financier et le réseau des liaisons personnelles entre les principales sociétés en Suisse", *Revue d'économie industrielle,* No. 29, 3e trimestre 1984, pp. 9-95.

56. The costs charged by the Swiss authorities for the approval of imported telephone sets amount to twice those in neighbour countries. Also, the rate of refusal is unusually high by OECD standards. See, Elias, J. "Étude comparative des services de communication sur le plan international", *Cahiers de questions conjoncturelles,* 4/1990, pp. 75-81.

57. See OECD, *Competition Policy and the Deregulation of Road Transport,* Paris, 1990, pp. 34-35.

58. See Cartel Commission, 1988, fasc 2.

59. As of 1990, foreign workers (excluding seasonal and trans-border workers) amount to 25 per cent of total workforce.

60. See, Doppman, R.J., S. Graf and A. Jans, ''Les entraves étatiques à la concurrence placent-elles les entreprises suisses dans une position 'hors-jeu'' en Europe? Résultats d'un sondage dans sept branches', *Cahiers de questions conjoncturelles,* 2, 1991.

61. See, 1989-1990 OECD *Economic Survey of Switzerland,* Diagram 16. As it is well known, international differences in real per capita income tend to be reflected in prices of non-tradeable goods and services. See Balassa, B., ''Purchasing Power Parity Doctrine: A Reappraisal'', *Journal of Political Economy,* Vol. 72, 1964. However, in the case of Switzerland, regional retail price comparisons with South Germany suggest that price differences in pure service activities, like hair cutting, are smaller than in consumer goods. See, Füeg, R., *Zur Situation des Fachhandels in der Nordwestschweiz angesichts der europäischen Integration,* Basle, May 1991, Table 21, p. 37.

62. An international price comparison for a basket of 559 selected pharmaceutical specialities, performed by The National Corporation of Swedish pharmacies over the period 1987-1988, finds that costs in Switzerland were the highest in all Western Europe: they cost 77 per cent more than in Sweden, 42 per cent more than in France, 14 per cent more than in Germany, 7 per cent more than in Holland. See Jönsson, B, ''The Pharmaceutical Market'', in Y. Bourdet (ed), *Internationalisation, Market power and Consumer Welfare,* Routledge, London, 1992, pp. 145-170.

63. See, Füeg, *op. cit.*

64. According to *Wirtschaftswoche* (München), July 1992, Swiss importers sell cars at prices ''5 to 63 per cent higher than in neighbour countries''. See also ''In der Schweiz sollen die vielen Kartelle beseitigt werden'', *Frankfurter Allgemeine Zeitung,* 14.4.1992: according to this article, the cartel rent pocketed by Swiss car importers would amount to 500 millions SF.

65. See, Gardener, P.M. and J.L. Tepett, *The Impact of 1992 on the Financial Services Sectors of EFTA Countries,* EFTA, Economic Affairs Department, Occasional paper, No. 33.

66. According to a recent study, the cost of public purchases could decrease by 40 per cent if price concerns were given a predominant role. See, Scheidegger, E., *Kosten einer Nicht-Integration der Schweiz in die EG,* WWZ-Forschungsbericht, 3/1991.

67. This need not reflect lower efficiency, but rather the consequences of sales policy by exporters to small markets with specific tastes and norms, such as the Swiss domestic market. Hence, Swiss middlemen are sometimes forced to buy large amounts, representing an important fraction of annual turnover (up to 6 months of sales in audio-visual equipments). See, Grin *et al., op. cit.*

68. See, Genberg, H., T. Helbing and S. Neftci, *Monopoly Power in Swiss Financial Markets,* Graduate Institute of International Studies, Geneva, April 1991.

69. See, *inter alia,* Encaoua, D. and P. Geroski, ''Price Dynamics and Competition in Five OECD Countries'', *OECD Economic Studies,* No. 6, Spring 1986, pp. 47-74. However, even

competitive markets may show price rigidities, for example, if one allows for quantity adjustments through time (see Carlton, D.W., "The theory and the facts of how markets clear", in *Handbook of Industrial Organisation,* Edited by R. Schmalensee and R.D. Willig, Elsevier Science Publishers B.V, 1989, chapter 15). Preliminary results of a recent study by the Office fédéral des questions conjoncturelles show that price rigidity above average can be observed both in competitive and in less competitive markets. See Bundesamt für Konjunkturfragen, *Teuerung bei Inlandgütern,* Berne, August 1992.

70. The indicator of persistence is the nonparametric estimate of the infinite sum of moving average coefficients of the Wold representation of the price inflation series, suggested by Campbell, J.Y. and N.G. Mankiw: "Are Output Fluctuations Transitory?, *Quarterly Journal of Economics,* 102, 1987, pp. 857-880"; "Permanent and Transitory Components in Macroeconomic Fluctuations", *American Economic Review,* (Papers and Proceedings), 77, 1987, pp. 111-117.

71. See, Glatthard, *op. cit.,* Table 6, p. 64.

72. Data are taken from Office fédéral de la statistique, *Les résultats comptables des entreprises suisses,* 1980, 1985/1986 and 1989/1990. Data transmission by firms is voluntary. Hence the representativeness of the sample is unknown and the coverage may differ from one year to another.

73. Cartel rents may also be partly passed on to employees through higher wages. They can also be dissipated in other ways. For example, data on advertising point to a generally higher level of selling costs by Swiss firms:

Advertising spending as a share of GDP (in per cent)

Switzerland	Italy	France	Germany	Japan	U.K.	USA	Spain
1.8	0.6	0.8	0.8	0.9	1.2	1.4	1.9

Source: Association des agences conseils en communication; Fondation statistique suisse en publicité.

74. For manufacturing, construction and commerce, the calculations have been made using a transformed Harberger formula, that is, $WL = (1/2) * R(p/R)^2e$, where WL, R, p, and e are welfare loss, industry revenue, industry profit and the negative of the industry demand elasticity; the latter varies across industry, depending on the Lerner and Herfindahl indexes and a conjectural variation elasticity. See, Dickson V.A. and W. Yu, "Welfare losses in Canadian Manufacturing under Alternative Oligopoly Regimes, *International Journal of Industrial Organisation,* 1989, pp. 257-267; for financial services, see, Gardener, P.M. and J.L. Teppet, *op. cit.*

75. Before the bluntest restrictions to foreign ownership were removed, "tied" registered share prices were 15 to 20 per cent under that of bearer shares issued by large Swiss firms. See, Hermann W. and G.J. Santoni, "The Cost of Restricting Corporate Take-Overs: a Lesson from Switzerland", *Federal Reserve Bank of St. Louis,* November/December 1989, pp. 3-11.

76. See, Antille G., F. Carlevaro, N. Schmitt, M. Bachetta, Ch. Maranon, T. Müller, *Effets d'équilibre général de l'intégration de la Suisse à l'Europe,* Université de Genève, Département d'économétrie, Verlag Rüegger, Chur/Zürich, 1991.

77. Indeed, empirical evidence seems to support the hypothesis of economies of scale in the Swiss economy. See, Mountain, D.C., "Economies of scale versus technical change: an aggregate production function for Switzerland", *The Review of Economics and Statistics,* 1986, Vol. 66, pp. 707-711.

78. See, Commission des cartels, *Les effets de portée nationale des accords entre banques,* Publications de la Commission des cartels et du Préposé à la surveillance des prix, Berne, 1989.

79. See, Meier, S., *Switzerland and the EEA,* Swiss Bank Corporation, Basle, 1992. According to the Basle-based Economic Research Institute (BAK), the completion of the EEA would boost Swiss rate of growth by 1.3 percentage point a year till 2000.

80. See, Conseil Fédéral, 1981, quoted in Petitpierre-Sauvain, A., "Au nom de la liberté économique: de la libre concurrence au partage du pouvoir", *Revue suisse du droit international et de la concurrence,* No. 17, Février 1983, pp. 3-25; Schmidhauser, B., "La politique de concurrence en Suisse", *La Vie économique,* 4/1988, pp. 16-17.

81. The law provides a long list of preponderant legitimate interests: *a)* the maintenance of a loyal and unbiased competition; *b)* the establishment of reasonable professional or technical requirements; *c)* the promotion of a desirable structure in a branch or a profession; *d)* the application of imposed price when justified by quality or the service to customer. By contrast, actions that have no other justification but to prevent entry or to harm interest of third parties are not legal.

82. The Federal public economy department may request the Cartel commission to start an enquiry. In addition to public action, the law also provides civil court actions by individuals whose interests are harmed. Interestingly, plaintiffs may ask the Court to order their admittance into a cartel. However, civil actions are not often used.

83. For example, in the 1970s, restrictive delivery aspects of the beer cartel were justified by the Cartel Commission, on the ground that its positive effects on production and marketing costs were a compensation for the "quasi non-existence of competition". More recently, but still under the 1962 law, public health and cultural concerns have been invoked to exonerate price-setting agreements imposed on distribution of drugs and books, respectively.

84. See, Commission des cartels, *Rapport sur l'état de la concurrence dans la* branche sanitaire, Berne, fasc. 2, 1991.

85. The Cartel commission's secretariat consists of seven specialists only. In a country like Norway, comparable in size to Switzerland, the staff of the competitive authority is around 100.

86. Approximately US$ 70 000, at 1991 average exchange rate. The yearly 1989 average turnover per employee across non-agricultural, non-financial firms that report to the official statistical agency lies between one and 9 times this amount.

87. If not by the tenants of the Chicago School in anti-trust economics.

88. It should be noticed that a major part of these restrictions stems from the 1986 law on fair competition. This piece of legislation contains only civil law dispositions which can be invoked only by private persons in court actions.

89. The decay of the beer cartel *("Convention des brasseurs")* has accelerated since 1989, when the second-ranking Swiss brewer quit in order to pursue an independent pricing policy. The decision to dismantle the cartel was made in June 1991, taking effect six month later. The growing market share of low-price imported beers together with the rising concentration in brewing were probably strong factors underlying the collapse of the beer cartel. However, other influences, such as changes in the management of the dissident firm and excess investment, which drove down both capacity utilisation rates and profitability, have also played a role.

90. See, Favre J., "La politique suisse de la concurrence dans l'optique de l'ajustement structurel", *Cahiers de questions conjoncturelles,* No. 1, 1991, pp. 4-7; Schmidhauser, B., "La politique de concurrence en 1990 – la Commission des cartels face à des décisions importantes", *La vie économique,* No. 6, pp. 9-13.

91. Before the implementation of anti-cartel laws at the national and community levels, continental Europe was "a Mecca for cartels". See, Jacquemin, A., *Économie européenne,* Dunod, Paris, 1975, p. 294.

92. See, Conseil Fédéral, *Rapport sur le Programme de la Législature 1991-1995,* 25 Mars 1992, objectif 23; Conseil National, Motion Loeb du 12 Mars 1992.

Annex

Calendar of main economic events

1991

March

The maximum share of real estate in pension funds' portfolios is raised from 30 to 50 per cent.

The second Chamber of Parliament endorses the 10th revision of the old-age and disability insurance system. This introduces, *inter alia,* the possibility for men to retire at the age of 62 at the cost of a pension reduction. The retirement age of 62 for women has been left unchanged. The revision is estimated to induce additional cost for the insurance system of about SF 800 million per annum.

The Federal Council suggests a list of measures to reduce the pollution of the air by motor vehicles; these include stricter rules for the operation of lorries and the promotion of electric vehicles.

The Parliament decides to support residential construction for lower income groups by an extra SF 1.7 billion between 1992 and 1996.

June

The federal tax reform proposal, adopted by Parliament in December 1990, is rejected by the Swiss people in a referendum.

The Parliament adopts the prolongation of the "emergency programme" *("programme urgent")* with respect to the direct federal tax, which is planned to be integrated into a future reformed tax law.

August

The National Bank raises the discount rate by 1 percentage point to 7 per cent in accordance with other central banks.

September

The Federal Council puts into effect a law which subjects to the Price Surveyor's scrutiny interest rates on loans, premiums of private insurance and health insurance as

well as the prices of medicine. Moreover, the Price Surveyor is now allowed to make proposals for the price setting of agricultural products, public transport and air fares.

October

The Federal Council submits to Parliament the draft budget for 1992, which projects a deficit for the first time in seven years. The expected deficit of SF 2 billion is due to an expenditure growth by 12 per cent, twice the rate of revenue growth. The Parliament rejects the draft and requests savings of SF 1½ billion.

The Federal Council requests from the Finance Department a proposal of a new federal tax law. It is planned to convert the current law, which expires at the end of 1994, into a indefinite law. Thus, for the time being, it is not suggested to replace the present retail sales tax by a value-added tax, thereby abolishing the taxation of investment goods (the so-called "*taxe occulte*").

The Parliament endorses the reform of stamp duty to enhance the attractiveness of Switzerland as financial market. The reform proposal is estimated to entail revenue losses of about SF 400 million per year. The new law is planned to come into effect by mid-1992.

The Parliament decides to spend SF 2.1 billion for university research between 1992 and 1995.

The Parliament agrees with the decision of the Federal Council to join IMF and World Bank.

The Parliament adopts a law on farm land which aims at the preservation of family-owned farms as basis of the agricultural sector. This is accompanied by a new law on subsidised investment for farmers.

The Parliament adopts a decision about the improvement of the federal railway networks, which aims at shifting transport capacity from roads to the railway system.

December

The Parliament endorses a change to the laws on old-age and disability pensions and on accident insurance which allows a quicker adjustment of pensions to inflation.

The Parliament adopts the federal budget for 1992, which now projects a financial deficit of SF 1.3 billion.

The National Bank reaffirms its target of expanding the seasonally-adjusted monetary base by 1 per cent over an average period of three to five years in order to stabilise the price level.

1992

February

The National Bank, in agreement with the Federal Council, decides to raise the distribution of its profits. Apart from the distribution to cantons of SF 0.80 per inhabitant it will distribute a residual amount to government (two-thirds to the cantons and one-third to the federal government). The residual amount is determined by maintaining a constant ratio of Swiss foreign exchange reserves to GDP. Hence, in 1993, the National Bank will distribute SF 600 million.

March

The Federal Council submits to Parliament the Seventh Report on Agriculture. The Federal Council also proposes an amendment to the law on agriculture, allowing for supplementary income support payments, which are the major element of the re-orientation of farm policy as suggested by the Report.

May

The government signs the Treaty on the European Economic Area, which is planned to come into effect on 1st January 1993. A separate treaty with the EC is signed which regulates the transit through Switzerland.

June

The Swiss people endorse by referendum the country's membership in IMF and World Bank.

Assuming the depletion of the unemployment insurance reserves by the end of the year and an average unemployment rate over 2 per cent next year, the government raises unemployment insurance contributions from 0.4 to 1.5 per cent of salaries (shared equally by employers and employees) as from 1st January 1993.

September

The National Bank lowers its discount rate from 7 to 6½ per cent, in line with interest rate cuts in other European countries.

STATISTICAL AND STRUCTURAL ANNEX

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Selected background statistics

	Average 1981-91	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
A. Percentage change from previous year at constant 1980 prices											
Private consumption	1.7	0.0	1.7	1.6	1.4	2.8	2.1	2.1	2.2	1.5	1.5
Gross fixed capital formation	3.8	–2.6	4.1	4.1	5.3	7.9	7.4	6.9	5.8	2.6	–2.5
Construction	3.0	–1.6	3.0	4.1	3.0	4.2	5.4	6.4	6.9	0.9	–3.2
Machinery and equipment	5.6	–4.6	6.6	4.3	10.4	15.4	11.3	7.9	3.9	3.7	–1.2
GDP	1.9	–0.9	1.0	1.8	3.7	2.9	2.0	2.9	3.9	2.3	–0.1
GDP price deflator	4.1	7.1	3.0	2.8	3.1	3.8	2.6	2.4	4.2	5.7	6.1
Industrial production	2.2	–5.0	0.0	3.6	5.0	3.9	0.6	8.9	2.6	2.7	0.5
Employment	0.9	0.5	0.0	1.0	1.9	1.4	1.2	1.2	1.1	1.3	–0.1
Compensation of employees (current prices)	6.3	7.4	4.6	4.1	6.0	6.1	4.9	5.9	6.9	8.9	7.9
Productivity (real GDP/employment)	1.0	–1.4	1.0	0.8	1.7	1.5	0.8	1.7	2.7	1.0	0.0
Unit labour cost (compensation/real GDP)	4.2	8.4	3.6	2.3	2.2	3.1	2.8	2.9	2.8	6.6	7.6
B. Percentage ratios											
Gross fixed capital formation as per cent of GDP at constant prices	26.8	23.7	24.4	25.0	25.4	26.6	28.0	29.1	29.6	29.7	29.0
Stockbuilding as per cent of GDP at constant prices	1.3	0.9	0.7	0.7	0.6	2.0	2.3	1.4	2.0	2.1	0.9
Foreign balance as per cent of GDP at constant prices	–4.1	–1.3	–2.6	–3.0	–1.8	–4.5	–6.2	–6.1	–6.3	–6.3	–5.8
Compensation of employees as per cent of GDP at current prices	60.8	61.1	61.5	61.2	60.7	60.3	60.4	60.7	60.0	60.5	61.5
Direct taxes as per cent of household income	12.4	12.4	12.5	12.7	12.5	12.9	12.3	12.4	12.1	12.2	11.7
Household saving as per cent of disposable income	8.1	6.2	5.8	5.8	5.7	7.0	8.4	10.0	10.9	12.0	12.5
Unemployment as per cent of total labour force	0.7	0.4	0.9	1.1	1.0	0.8	0.8	0.7	0.6	0.6	1.3
C. Other indicators											
Current balance ($ billion)	6.5	4.1	3.8	4.4	5.0	6.9	7.6	9.0	7.0	8.6	10.1

Source : OECD, *National Accounts.*

Table A. **Gross national product**

Million Swiss francs, current prices

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Private consumption	122 060	127 340	133 610	140 555	144 925	150 210	156 970	166 150	177 650	190 440
Public consumption[1]	25 935	27 770	28 925	30 880	32 325	33 025	35 405	38 485	42 850	47 205
Gross fixed asset formation	45 300	47 500	49 800	54 200	58 995	64 370	71 480	79 860	84 545	84 810
Change in stocks[2]	1 795	1 345	1 600	1 365	4 370	4 975	3 355	6 435	7 310	5 625
Domestic demand	195 090	203 955	213 935	227 000	240 615	252 580	267 210	290 930	312 355	328 080
Exports of goods and services	69 550	71 760	80 450	89 015	89 115	90 525	97 990	110 510	115 050	116 740
Imports of goods and services	68 660	71 850	81 155	88 065	86 380	88 420	96 790	111 080	113 415	112 135
Gross domestic product at market prices	195 980	203 865	213 230	227 950	243 350	254 685	268 410	290 360	313 990	332 686
Factor income from abroad	15 140	16 735	19 795	21 250	20 595	20 900	24 185	28 010	28 130	28 740
less: Factor income paid abroad	5 950	6 650	6 965	7 845	9 020	9 495	9 645	13 200	14 535	14 965
Gross national product at market prices	205 170	213 950	226 060	241 355	254 925	266 090	282 950	305 170	327 585	346 460

1. Includes private social security.
2. Including statistical discrepancy.

Source: Office fédéral de la statistique.

Table B. **Gross national product**

Million Swiss francs, 1980 prices

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Private consumption	108 525	110 335	112 060	113 665	116 870	119 290	121 845	124 560	126 430	128 285
Public consumption[1]	22 785	23 665	23 955	24 735	25 650	26 115	27 235	28 365	29 695	30 520
Gross fixed asset formation	40 525	42 190	43 935	46 260	49 910	53 620	57 340	60 650	62 210	60 670
Change in stocks[2]	1 565	1 165	1 290	1 155	3 805	4 335	2 715	4 105	4 335	1 825
Domestic demand	173 400	177 355	181 240	185 815	196 235	203 360	209 135	217 680	222 670	221 300
Exports of goods and services	63 715	64 395	68 480	74 170	74 445	75 695	80 090	84 090	86 630	86 065
Imports of goods and services	65 935	68 850	73 760	77 500	82 965	87 530	92 145	97 080	99 905	98 195
Gross domestic product at market prices	171 180	172 900	175 960	182 485	187 715	191 525	197 080	204 690	209 395	209 170
Factor income from abroad	14 090	15 505	18 025	18 935	17 665	17 415	18 810	19 520	20 570	19 460
less: Factor income paid abroad	5 435	6 110	6 260	7 185	8 790	9 475	9 180	12 200	12 620	11 985
Gross national product at market prices	179 835	182 295	187 725	194 235	196 590	199 465	206 710	212 010	217 345	216 645

1. Includes private Social Security.
2. Including statistical discrepancy.

Source: Office fédéral de la statistique.

Table C. **Wholesale prices**

1963 = 100

	1988	1989	1990	1991	1990 T1	1990 T2	1990 T3	1990 T4	1991 T1	1991 T2	1991 T3	1991 T4	1992 T1	1992 T2
Total	172.8	180.2	182.9	183.6	182.2	183.2	183.6	182.5	183.1	183.5	184.0	183.9	183.7	184.5
By category of merchandise														
Farm goods	174.1	173.7	176.2	177.1	178.4	178.3	174.2	174.1	176.9	176.7	177.2	177.5	175.0	171.9
Energy and related products	215.3	228.3	235.8	239.0	231.3	226.4	240.7	244.5	241.4	236.3	238.0	240.5	236.4	240.0
Processed food products, drink and tobacco	193.1	197.0	202.6	206.0	199.1	203.1	204.4	203.8	204.6	205.2	206.8	207.5	207.4	207.8
Textiles	119.6	129.5	128.5	123.8	131.1	130.0	128.4	124.6	123.2	124.1	124.9	123.1	122.9	122.8
Wood and cork	169.4	173.5	183.1	186.7	180.4	183.6	185.2	183.4	185.2	186.8	187.6	187.0	188.4	189.7
Paper and paper products	154.7	161.6	165.7	164.3	166.2	166.8	165.6	164.2	164.5	164.8	164.6	163.5	162.2	160.3
Hides and skins, rubber and plastic products	158.4	163.2	164.7	166.7	166.1	166.4	164.4	162.0	166.4	166.3	165.9	168.0	170.9	171.2
Chemicals and related products	138.3	146.0	147.4	147.4	146.5	147.6	147.6	147.7	147.7	147.8	147.4	146.6	146.8	147.6
Building materials, ceramic and glass	245.0	254.0	268.1	285.0	263.7	269.3	269.5	270.1	280.2	286.9	286.6	286.5	294.0	298.4
Metals and metal products	191.0	207.5	201.8	197.6	201.6	203.9	202.9	198.7	196.2	198.9	198.4	196.9	197.3	201.6
By origin of merchandise														
Domestic	180.5	186.2	190.5	193.0	189.1	190.9	191.3	190.8	192.0	192.9	193.6	193.7	193.7	194.7
Foreign	154.4	165.9	164.5	161.1	248.3	164.5	165.0	162.7	161.7	161.1	161.0	160.4	159.6	160.0

Source: Département fédéral de l'économie publique, *La vie économique,* et Banque nationale suisse, *Bulletin mensuel.*

Table D. **Money supply**

Million Swiss francs, yearly average

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Monetary base[1]	28 699	29 730	30 484	31 142	31 768	32 708	31 420	29 925	28 898	29 274
Money supply M1	57 365	61 545	63 140	63 210	66 354	71 351	81 480	77 032	73 781	75 016
Money supply M2	110 988	105 280	111 095	119 182	126 168	138 502	149 097	179 036	202 343	208 693
Money supply M3	218 068	233 153	247 605	259 599	277 146	303 392	333 089	353 719	362 145	374 391

1. Average of daily figures. Through 1988, the numbers are for the adjusted monetary base. From 1989, the series is the seasonally adjusted monetary base.
Source: Banque nationale suisse, *Bulletin mensuel.*

Table E. **Interest rates and capital markets**

Million Swiss francs and percentages

	1988	1989	1990	1991	1990 T1	1990 T2	1990 T3	1990 T4	1991 T1	1991 T2	1991 T3	1991 T4	1992 T1	1992 T2
Interest rates (average for the period)														
Discount rate (end of period)	3.5	6.0	6.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Three-months deposits (Zurich)	2.58	6.4	8.3	7.7	8.7	8.4	8.0	8.1	7.7	7.6	7.5	7.7	7.4	8.6
Government bond yield	4.02	5.2	6.5	6.2	6.4	6.4	6.4	6.6	6.3	5.9	6.2	6.6	6.3	6.8
Savings deposits of cantonal banks	3.11	3.5	4.6	5.1	4.2	4.6	4.7	4.7	5	5.1	5.1	5.1	5.1	5.1
Memorandum items:														
Euro-dollar, three-month	7.85	9.2	8.2	5.9	8.3	8.3	8.1	8.0	6.7	6.0	5.7	4.9	4.1	3.9
Euro-bond yields (dollars)	9.22	9.3	9.3	8.2	9.2	9.5	9.2	9.1	8.6	8.4	8.3	7.6	6.9	7.4
Capital market														
Foreign bonds	39 880	31 103	32 095	31 931	11 065	6 089	7 824	6 953	8 991	7 496	8 528	6 915	6 468	3 747
Domestic bonds	15 100	15 491	18 234	17 631	5 052	4 224	4 547	4 410	5 268	5 517	2 980	3 865	8 221	5 917
Public market issues[1]	13 527	14 219	17 146	16 202	4 624	3 948	4 415	4 158	5 082	4 531	2 876	3 713	7 512	5 119
of which: Government	1 773	1 455	3 340	4 332	812	524	706	1 298	1 410	963	713	1 246	3 679	2 167
Financial Institutions[2]	8 484	9 389	11 068	9 663	3 813[3]	3 424[3]	3 710[3]	2 357	2 947	3 060	2 012	1 644	2 208	2 230
Other private	3 270	3 376	2 738	2 207	503	725	508	151	823	1 624	722			
Shares														
Public market issues	2 193	5 160	3 356	1 899	276	1 450	903	727	230	430	691	548	668	845
Redemptions	19 940	13 894	10 223	11 418	2 394	2 612	2 146	3 072	3 103	2 477	2 308	3 530	5 126	4 150

1. According to date of payment.
2. Including holding companies.
3. Financial institutions and other private.

Source: Banque nationale suisse, *Bulletin mensuel*, and OECD, *Financial Statistics*.

Table F. **Foreign trade by area**

Million US dollars

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
	Exports, fob									
OECD countries	18 842.7	19 055.2	19 739.8	20 914.9	29 310.8	35 867.3	40 165.8	41 003.5	50 929.7	49 212.4
EEC	13 455.7	13 446.4	13 711.7	14 337.1	20 570.8	25 465.3	28 684.9	29 399.7	36 899.3	36 078.0
EFTA	2 006.4	1 985.8	1 936.9	2 039.2	2 820.5	3 335.2	3 540.2	3 422.8	4 221.7	3 952.4
United States	2 034.7	2 210.7	2 551.6	2 831.5	3 560.1	4 004.9	4 344.4	4 589.5	5 079.7	5 038.1
Other	1 345.9	1 412.3	1 539.6	1 707.1	2 359.3	3 061.9	3 596.2	3 591.4	4 729.0	4 143.9
Non-OECD countries	7 093.7	6 538.5	6 073.8	6 201.3	7 936.2	9 382.9	10 448.3	10 506.0	12 601.2	12 116.3
COMECON	721.2	735.0	723.4	802.1	1 014.0	1 283.3	1 388.8	1 450.6	1 657.0	1 365.1
OPEC	2 287.7	2 096.1	1 827.5	1 604.9	1 697.0	1 888.0	1 988.7	1 591.9	1 979.0	2 077.8
Other	4 084.8	3 707.4	3 522.9	3 794.3	5 225.2	6 211.5	7 070.8	7 463.4	8 965.2	8 673.4
Total	25 936.4	25 593.8	25 813.6	27 116.2	37 246.9	45 250.2	50 614.1	51 509.4	63 531.0	61 328.7
	Imports, cif									
OECD countries	24 633.2	25 216.1	25 478.5	26 790.9	37 155.3	45 428.5	50 627.4	52 380.4	62 673.9	59 379.6
EEC	19 393.4	19 629.6	20 328.6	21 577.7	29 909.6	36 447.3	40 220.9	41 312.2	49 841.4	46 514.5
EFTA	1 863.3	1 838.6	1 856.7	1 966.3	2 796.7	3 562.8	4 036.9	4 219.6	5 010.7	4 593.8
United States	2 054.5	2 387.4	1 949.4	1 791.2	2 212.0	2 686.5	3 124.5	3 722.5	4 269.0	4 867.1
Other	1 321.9	1 360.5	1 343.8	1 455.6	2 236.9	2 732.0	3 245.0	3 126.1	3 552.9	3 404.2
Non-OECD countries	3 963.5	3 874.7	3 897.4	3 647.0	3 709.7	4 981.4	5 682.8	5 817.4	6 871.4	6 890.8
COMECON	1 099.0	947.1	865.5	804.9	745.5	654.3	598.5	654.3	683.1	935.7
OPEC	982.9	1 009.7	959.0	973.9	614.8	715.4	604.4	327.6	851.5	912.0
Other	1 881.6	1 918.0	2 073.0	1 868.1	2 349.4	3 611.7	4 480.0	4 835.4	5 336.8	5 043.1
Total	28 596.7	29 090.8	29 375.9	30 437.9	40 865.0	50 409.9	56 310.2	58 197.7	69 545.4	66 270.4

Source: OECD, *Foreign Trade Statistics, Series A.*

Table G. **Foreign trade by commodity group**

Million US dollars

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
	Exports, fob									
0. Food and live animals	747	729	687	731	982	1 154	1 144	1 142	1 407	1 392
1. Beverages and tobacco	141	151	155	138	188	228	258	255	359	377
2. Crude materials, inedible, except fuels	358	365	384	383	457	526	664	678	740	671
3. Mineral fuels, lubricants and related materials	36	73	91	91	65	62	69	57	83	127
4. Animal and vegetable oils and fats	16	15	18	18	17	19	18	20	24	23
5. Chemicals	5 440	5 539	5 503	5 879	8 137	9 976	11 045	10 912	13 653	13 476
6. Manufactured goods, classified chiefly by material	4 834	4 946	5 462	5 572	7 370	8 732	10 101	10 211	12 352	11 362
7. Machinery and transport equipment	8 453	8 045	7 725	8 546	12 249	15 045	16 436	16 066	20 519	19 360
8. Miscellaneous manufactured articles	5 571	5 379	5 567	5 892	8 095	9 548	10 625	11 739	15 386	14 242
9. Commodities and transactions, not classified according to kind	21	30	39	35	36	72	271	360	476	446
Total	25 617	25 272	25 631	27 285	37 596	45 362	50 631	51 440	64 999	61 477
	Imports, caf									
0. Food and live animals	2 042	1 962	1 912	1 949	2 536	2 960	3 037	2 859	3 399	3 381
1. Beverages and tobacco	442	382	360	392	531	651	715	726	906	884
2. Crude materials, inedible, except fuels	931	984	1 030	1 039	1 273	1 484	1 644	1 672	1 896	1 637
3. Mineral fuels, lubricants and related materials	3 340	3 272	3 030	3 074	2 421	2 252	2 086	2 318	3 235	3 105
4. Animal and vegetable oils and fats	57	50	59	64	66	56	55	54	69	62
5. Chemicals	3 208	3 315	3 397	3 665	4 798	5 721	6 675	6 617	7 954	7 617
6. Manufactured goods, classified chiefly by material	5 681	5 852	6 435	6 476	8 993	10 994	12 291	13 270	15 412	13 766
7. Machinery and transport equipment	7 525	7 670	7 274	7 974	12 225	15 975	18 187	18 250	22 353	21 122
8. Miscellaneous manufactured articles	5 319	5 381	5 655	5 822	8 275	10 415	11 443	11 991	14 900	14 235
9. Commodities and transactions, not classified according to kind	33	28	168	179	80	50	192	379	520	480
Total	28 578	28 896	29 320	30 634	41 198	50 558	56 325	58 136	70 644	66 288

Source: OECD, Foreign *Trade Statistics, Series C.*

Table H. **Balance of payments**

Million US dollars

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Exports, fob	27 153	26 555	26 785	28 100	38 470	46 685	52 258	53 182	65 594	63 373
Imports, fob[1]	28 459	28 815	29 084	30 070	40 456	49 789	55 449	57 304	68 834	65 512
Trade balance	–1 306	–2 260	–2 299	–1 970	–1 986	–3 104	–3 191	–4 122	–3 240	–2 139
Services, net	6 377	7 020	7 503	7 812	9 943	12 165	13 948	12 828	14 206	14 958
of which: Investment income	5 987	6 163	6 710	6 753	8 499	10 506	13 343	12 691	14 756	14 909
Other factor income	–1 424	–1 355	–1 250	–1 299	–2 063	–2 855	–3 407	–3 635	–4 966	–5 310
Balance on goods and services	5 071	4 760	5 204	5 842	7 957	9 061	10 757	8 706	10 966	12 819
Private transfers, net	–919	–886	–825	–840	–1 206	–1 549	–1 712	–1 666	–2 185	–2 275
Official transfers, net	–99	–27	–9	34	116	45	–2	–18	–146	–460
Current balance	4 053	3 847	4 370	5 036	6 866	7 557	9 043	7 022	8 635	10 086
Balance on non-monetary transactions[2]	–1 505	3 449	2 127	704	5 757	4 294	–8 941	–16 910	–9 186	–4 097
Private monetary institutions' short-term capital	2 904	–3 076	–629	467	–4 704	–1 165	6 577	18 388	10 387	5 052
Assets (- = increase)	1 256	–2 309	–849	–4 881	–10 167	–13 407	3 174	8 854	–2 125	1 984
Liabilities	1 648	–767	221	5 348	5 463	12 243	3 404	9 534	12 511	3 068
Balance on official settlements[3]	1 399	373	1 498	1 172	1 053	3 130	–2 363	1 478	1 201	955
Special transactions	..	..	..	..	..	..	..	..	..	..
Miscellaneous official accounts	–115	–465	2	–1 456	–2 045	–2 284	1 361	839	–2 929	1 154
Change in reserves (+ = increase)	1 284	320	2 630	–284	–992	846	–1 001	2 316	–1 727	2 111
Gold	..	..	..	..	..	..	..	..	..	..
Currency assets[4]	1 225	23	2 668	–126	–773	1 071	–884	2 344	–1 672	2 108
Reserve position in IMF	59	286	–35	–152	–215	–237	–125	–86	–47	..
Special Drawing Rights	..	11	–3	–7	–4	12	8	57	–8	3

1. Imports cif minus 5 per cent as estimate for freight and insurance.
2. Change in definitions from 1983.
3. Central Bank liabilities and other assets.
4. Including Roosa-bonds held by the Confederation.

Source: Banque national suisse, *Bulletin mensuel,* and OECD estimates.

Table 1. **Gross value added by main area of activity**

	1975	1985	1975	1985
	SF million		As a percentage of GDP	
Enterprises	124 685	203 930	89.0	89.6
Non-financial enterprises	116 282	180 271	83.0	79.1
Agriculture, forestry	6 487	8 180	4.6	3.6
Energy, metal ore mining	2 808	5 023	2.0	2.2
Industrial arts and crafts	41 687	58 625	29.7	25.7
Building and civil engineering	11 210	17 325	8.0	7.6
Distributive trades, hotels and catering, repairs	29 430	44 077	21.0	19.3
Transport and communications	9 140	14 763	6.5	6.5
Real estate and consultancy services	5 946	13 335	4.2	5.9
Rental and dwellings	5 290	9 878	3.8	4.3
Other services	4 284	9 065	3.1	4.0
Banking and insurance	8 403	23 659	6.0	10.4
Government and social insurance	14 452	26 065	10.3	11.4
Household and private non-profit institutions	2 453	4 655	1.8	2.0
Total (unadjusted)	141 590	234 650	101.1	103.0
Adjustments				
Imputed value of bank service charge	–4 565	–10 400	–3.3	–4.6
Import duties	3 130	3 700	2.2	1.6
Adjusted total = gross domestic product	140 155	227 950	100	100

Source: Office fédéral de la statistique, *National Accounts.*

Table J. **Labour market: structural and institutional characteristics**

	1975	1980	1985	1987	1988	1989	1990	1991
Labour force (thousand)	3 172	3 246	3 270	3 465	3 500	3 535	3 583	3 602
of which: foreigners[1], end-August	754	706	756	822	864	904	955	989
Participation rate[2] (per cent)								
Total	48.9	49.7	52.0	52.4	52.5	52.6	52.7	..
Male	65.0	64.6	66.5	66.8	66.7	66.5	65.7	..
Female	33.3	33.3	37.6	38.4	38.8	39.1	38.7	..
Employment/population between 15 and 64 years	74.5	74.3	74.8	75.5	75.7	76.1	76.3	..
Employment by sector								
Agriculture	7.6	6.9	6.1	5.9	5.7	5.6	5.6	5.5
Industry	42.2	38.1	35.6	35.4	35.1	35.1	35.0	34.4
Services	50.2	55.0	58.3	58.8	59.2	59.3	59.5	60.1
Wholly unemployed	..	6 255	27 024	21 918	19 524	15 133	15 980	35 605
of which: foreigners (per cent of total)	..	..	33.1	39.0	41.0	41.1	42.7	44.0
Unemployment rate	0.3	0.2	1.0	0.8	0.7	0.6	0.6	1.3
Vacancies: full-time[3]	..	12 312	7 875	12 348	13 552	17 007	16 711	10 145
part-time	..	..	647	848	816	545	550	404
Number of days not worked[4] (lock-out and strikes)	1 733	5 178	662	..	870	265	4 090	51

1. Includes established workers, workers on a one-year contract and seasonal and border workers.
2. Labour force as a percentage of the total corresponding population.
3. The decomposition between full and part-time begins in 1983, so for 1980 it is total vacancies.
4. Approximate value.

Source: Office fédéral de la statistique, *Annuaire statistique de la Suisse, 1992;* Département fédéral de l'économie publique, *La vie économique*, and OECD, *Labour Force Statistics.*

Table K. **The public sector**

	1980	1985	1986	1987	1988	1989	1990	1991
Budget indicators: General government accounts (per cent of GDP)								
Current receipts	40.3	42.5	43.0	42.6	43.2	42.5	42.4	41.9
Non-interest expenditures	33.7	35.5	35.0	34.5	35.0	34.6	34.6	35.0
Primary budget balance	6.6	7.0	8.1	8.1	8.2	7.9	7.7	6.9
Net interest	2.0	1.6	1.6	1.6	1.9	1.9	1.7	1.7
General government budget balance	4.6	5.4	6.5	6.5	6.3	6.0	6.0	5.2
The structure of expenditure and taxation (per cent of GDP)								
Government expenditure								
Transfers	3.1	3.4	3.4	3.4	3.5	3.6	3.5	3.6
Subsidies	1.3	1.4	1.4	1.4	1.4	1.4	1.3	1.3
Tax receipts	30.8	32.0	32.5	32.0	32.6	31.7	31.5	30.8
Personal income tax	11.0	11.2	11.4	10.9	11.1	10.6	10.9	10.3
Corporate tax	1.8	1.9	2.0	2.0	2.2	2.0	2.1	2.0
Social security tax	9.5	10.3	10.2	10.3	10.4	10.4	10.4	10.6
Consumption tax	5.8	5.6	5.7	5.7	5.7	5.5	5.4	5.3
of which: specific taxes	3.0	2.6	2.6	2.6	2.5	2.3	2.2	2.2
Other indicators								
Income tax as a per cent of total tax	41.4	40.9	41.4	40.3	40.8	39.9	41.1	39.9
Gross public debt as a per cent of GDP	42.6	36.8	34.5	32.9	28.7	28.6	25.9	..

Source: Office fédéral de la statistique, *Annuaire statistique de la Suisse*, 1992 and OECD, *Revenue Statistics of OECD Member Countries, 1965-1991.*

Table L. **Interest rate margins in banking**[1]

Per cent of average balance sheet total

	1981	1985	1986	1987	1988	1989	1990
Large banks	1.1	1.4	1.4	1.3	1.36	1.37	1.24
Cantonal banks	1.0	1.1	1.1	1.1	1.13	1.13	1.22
Regional and saving banks	1.3	1.2	1.2	1.2	1.21	1.2	1.32
Loans associations and agricultural credit co-operatives	1.0	1.0	1.0	0.9	0.95	0.96	1.04
Other Swiss and foreign banks	2.0	2.0	1.9	1.8	1.98	2.05	2.01

1. Interest received less interest paid.

Source: OECD, *Bank Profitability (Statistical Supplement), Financial Statements of Banks, 1981-90,* 1992.

BASIC STATISTICS

BASIC STATISTICS:

INTERNATIONAL COMPARISONS

BASIC STATISTICS: INTERNATIONAL COMPARISONS

	Units	Reference period[1]	Australia	Austria	Belgium	Canada	Denmark	Finland	France	Germany	Greece	Iceland	Ireland	Italy	Japan	Luxembourg	Netherlands	New Zealand	Norway	Portugal	Spain	Sweden	Switzerland	Turkey	United Kingdom	United States
Population																										
Total	Thousands	1990	17 085	7 718	9 967	26 620	5 141	4 986	56 420	63 232	10 140	255	3 503	57 647	123 540	382	14 951	3 379	4 241	9 859	38 959	8 559	6 796	56 473	57 411	251 523
Inhabitants per sq. km	Number	1990	2	92	327	3	119	15	103	254	77	2	50	191	327	147	366	13	13	107	77	19	165	72	235	27
Net average annual increase over previous 10 years	%	1990	1.5	0.2	0.1	1	0	0.4	0.5	0.3	0.5	1.1	0.3	0.2	0.6	0.5	0.6	0.7	0.4	0	0.4	0.3	0.6	2.4	0.2	1
Employment																										
Total civilian employment (TCE)[2]	Thousands	1990	7 850	3 412	3 726	12 572	2 638	2 457	21 732	27 946	3 677	126	1 115	21 123	62 500	189	6 268	1 472	1992	4 474	12 578	4 508	3 563	19 209	26 577	117 914
Of which : Agriculture	% of TCE		5.6	7.9	2.7	4.2	5.6	8.4	6.1	3.4	24.5	10.3	15	9	7.2	3.2	4.6	10.6	6.5	17.8	11.8	3.3	5.6	47.8	2.1	2.8
Industry	% of TCE		25.4	36.8	28.3	24.6	27.5	31	29.9	39.8	27.4	30.2	28.6	32.4	34.1	30.7	26.3	24.6	24.8	34.8	33.4	29.1	35	19.9	29	26.2
Services	% of TCE		69	55.3	69	71.2	66.9	60.6	64	56.8	48.2	59.5	56.4	58.6	58.7	66.1	69.1	64.8	68.8	47.4	54.8	67.5	59.5	32.3	68.9	70.9
Gross domestic product (GDP)																										
At current prices and current exchange rates	Bill US $	1990	294.1	157.4	192.4	570.1	129.3	137.3	1 190.8	1 488.2	66	5.9	42.5	1 090.8	2 940.4	8.7	279.1	44	105.7	59.7	491.2	228.1	224.8	108.4	975.1	5 392.2
Per capita	US $		17 215	20 391	19 303	21 418	25 150	27 527	21 105	23 536	6 505	22 907	12 131	18 921	23 801	22 895	18 676	13 020	24 924	6 085	12 609	26 652	33 085	1 896	16 985	21 449
At current prices using current PPP's[3]	Bill US $	1990	271.7	127.4	163	510.5	85.2	82.2	980.4	1 151.6	74.3	4.1	37.2	919.7	2 179.9	7.3	234.8	45.8	68	82	457.3	144.6	142.1	189.7	911.8	5 392.2
Per capita	US $		15 900	16 513	16 351	19 179	16 570	16 487	17 376	18 212	7 323	16 158	10 627	15 953	17 645	19 282	15 708	13 564	16 033	8 364	11 738	16 896	20 911	3 318	15 882	21 449
Average annual volume growth over previous 5 years	%	1990	3.1	3.1	3.2	3	1.5	3.4	2.9	3.1	1.7	2.7	4.4	3	4.6	4.3	2.7	0.4	1.6	4.6	4.5	2.1	2.8	5.9	3.2	3
Gross fixed capital formation (GFCF)	% of GDP	1990	22.9	24.3	20.3	21.4	17.7	26.3	21.2	21.2	19.7	19.4	19.1	20.2	32.2	25.3	21.5	19.8	18.8	26.4	24.6	20.7	27.1	22.7	19.2	16.1
Of which: Machinery and equipment	% of GDP		9.7	10.1	10.4	7.2	8.1	10	9.7	9.8	8.7	6.2	9.3	10	13.7	11	10.7	9.9	6.8	13.1	8.1	8.9	9.1	11.7 (87)	8.5	7.8 (89)
Residential construction	% of GDP	1990	4.8	4.6	4.3	6.8	3.7	7.1	5.2	5.6	5	4.4	4.2	5.2	6.1	5	5.1	4.8	2.8	4.5	5	5.5	17.9[9]	5.8 (87)	3.4	4.4 (89)
Average annual volume growth over previous 5 years	%	1990	2.4	4.6	9.5	5.8	0.8	4.8	5.8	5.2	2.3	2.1	4.4	4.3	9	11.7	5.1	2.7	–2.8	10.4	11.7	4.9	6	4.7	5.8	2.7
Gross saving ratio[4]	% of GDP	1990	19.7	26	21.8	17.4	18	23.1	21	25.2	13.8	16	23.4	19.3	34.6	60.9	25.4	16.1	24.1	26.6	22.1	17.3	33	22.2	15.6	14.4
General government																										
Current expenditure on goods and services	% of GDP	1990	17.3	18	14.3	19.8	25.2	21.1	18	18.4	21.2	18.8	15.7	17.3	9.1	16.3	14.8	16.7	21	16.7	15.2	27.1	13.3	19.4	19.9	18.1
Current disbursements[5]	% of GDP	1990	34.9	44.9	53.1	44	56.5	37.5	46.2	42.6	50.9	31.5	49.9 (87)	48.1	26.2	45 (86)	51.7	..	51.6	39.3	35.5 (88)	59.1	30.7	..	38.1	34.6 (89)
Current receipts	% of GDP	1990	35.1	46.7	49.5	41.6	56.1	41.2	46.5	43.4	34.7	34.9	43.7 (87)	42.1	34.6	52.9 (86)	49.5	..	56.2	37.6	36.3 (88)	63.9	34.2	..	40	31.8 (89)
Net official development assistance	Mill US $	1990	0.34	0.25	0.45	0.44	0.93	0.64	0.79	0.42	0.07	0.03	0.16	0.32	0.31	0.29	0.94	0.22	1.17	0.23	0.16	0.9	0.31	..	0.27	0.21
Indicators of living standards																										
Private consumption per capita using current PPP's[3]	US $	1990	9 441	9 154	10 119	11 323	8 639	8 602	10 482	9 841	5 298	9 824	5 886	9 866	10 122	11 017	9 241	8 475	8 174	5 278	7 326	8 748	11 933	1992	10 051	14 465
Passenger cars per 1 000 inhabitants	Number	1989	570	416	416	613	370	439	494	526	234	488 (85)	278	458	455	546	399	549	459	181	347	462	479	37	449	748
Telephones per 1 000 inhabitants	Number	1989	550 (85)	540	500 (88)	780 (88)	880 (88)	620 (85)	610 (85)	680 (88)	360 (88)	525 (83)	265 (85)	510 (88)	555 (85)	413 (85)	660 (88)	720 (88)	622 (84)	220 (88)	396 (87)	889 (83)	880 (88)	120 (88)	524 (84)	650 (84)
Television sets per 1 000 inhabitants	Number	1988	217	484 (89)	255	586	526	486	399	379	175	306	260	419	589	250	478	296	350	160	380	395	408	172	435	812
Doctors per 1 000 inhabitants	Number	1990	2.3	2.1	3.4	2.2	2.7 (87)	1.9	2.6 (89)	3 (89)	3.3 (89)	2.8 (89)	1.5 (88)	1.3 (89)	1.6 (88)	1.9 (88)	2.5	1.9 (89)	3.1	2.9	3.7 (89)	3.1 (89)	2.9 (89)	0.9	1.4 (89)	2.3
Infant mortality per 1 000 live births	Number	1990	8.2	7.8	7.9	7.2 (89)	7.5 (89)	6.1 (89)	7.2	7.5 (89)	9.1 (89)	5.9	7.6 (89)	8.5	4.6 (89)	9.9	6.9	8.3	7.9 (89)	11	7.8 (89)	5.9	7.3	6.5 (89)	7.9	9.2
Wages and prices (average annual increase over previous 5 years)																										
Wages (earnings or rates according to availability)	%	1990	5.6	5	3	4.3	6	8.2	3.7	4.2	16	..	5.6	6.1	3.7	..	1.7	8.1	8.7	..	8.2	8.2	..	..	8.5	2.6
Consumer prices	%	1990	7.9	2.2	2.1	4.5	3.9	5	3.1	1.4	17.4	20.2	3.3	5.7	1.3	1.7	0.7	9.4	6.2	11.3	6.5	6.2	2.5	53.7	5.9	4
Foreign trade																										
Exports of goods, fob*	Mill US $	1990	39 813	40 985	118 291[7]	127 334	34 988	26 583	216 157	409 620	8 014	1 589	23 796	170 330	287 358	..[8]	131 778	9 533	33 905	16 338	55 289	57 422	63 847	12 836	185 710	393 812
As % of GDP	%		13.5	26	61.5	22.3	27.1	19.4	18.2	27.5	12.2	27.1	56	15.6	9.8	..	47.2	21.7	32.1	27.4	11.3	25.2	28.4	11.8	19	7.3
Average annual increase over previous 5 years	%		11.9	19.1	17.1	7.8	15.6	14.3	16.5	17.6	11.8	14.2	18.1	16.6	10.2	..	14	10.6	11.2	23.5	18	13.7	18.4	9.9	12.9	13.1
Imports of goods, cif*	Mill US $	1990	38 907	48 914	120 330[7]	116 561	31 647	26 950	225 260	344 454	19 831	1 648	20 687	181 863	235 407	..	126 215	9 458	27 218	24 874	87 373	54 659	69 811	22 224	225 327	494 842
As % of GDP	%		13.2	31.1	62.5	20.4	24.5	19.6	18.9	23.1	30.1	28.1	48.7	16.7	8	..	45.2	21.5	25.7	41.7	17.8	24	31	20.5	23.1	9.2
Average annual increase over previous 5 years	%		11	18.6	16.5	8.8	11.8	15.3	16.8	16.9	14.1	12.7	15.7	14.8	12.6	..	14.1	9.6	11.9	26.5	24	14	17.8	14.2	15.5	7.4
Total official reserves[6]	Mill SDR's	1990	11 432	6 591	8 541[7]	12 544	7 445	6 779	25 851	47 729	2 398	307	3 672	44 232	55 179	..	12 289	2 902	10 777	10 182	36 008	12 644	20 541	4 252	25 201	50 791
As ratio of average monthly imports of goods	ratio		3.5	1.6	0.9	1.3	2.8	3	1.4	1.7	1.5	2.2	2.1	2.9	2.8	..	1.2	3.7	4.8	4.9	4.9	2.8	3.5	2.3	1.3	1.2

* At current prices and exchange rates.

1. Unless otherwise stated.
2. According to the definitions used in OECD Labour Force Statistics.
3. PPP's = Purchasing Power Parities.
4. Gross saving = Gross national disposable income minus Private and Government consumption.
5. Current disbursements = Current expenditure on goods and services plus current transfers and payments of property income.
6. Gold included in reserves is valued at 35 SDR's per ounce. End of year.
7. Including Luxembourg.
8. Included in Belgium.
9. Including non-residential construction.
10. Federal Government Statistics.

Sources: Population and Employment: OECD Labour Force Statistics.
GDP, GFCF, and General Government: OECD National Accounts, Vol. I and OECD Economic Outlook, Historical Statistics.
Indicators of living standards: Miscellaneous national publications.
Wages and Prices: OECD Main Economic Indicators.
Foreign trade: OECD Monthly Foreign Trade Statistics, series A.
Total official reserves: IMF International Financial Statistics.

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The Economics Department of the OECD offers challenging and rewarding opportunities to economists interested in applied policy analysis in an international environment. The Department's concerns extend across the entire field of economic policy analysis, both macro-economic and micro-economic. Its main task is to provide, for discussion by committees of senior officials from Member countries, documents and papers dealing with current policy concerns. Within this programme of work, three major responsibilities are:

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- to issue full twice-yearly reviews of the economic situation and prospects of the OECD countries in the context of world economic trends;
- to analyse specific policy issues in a medium-term context for theOECD as a whole, and to a lesser extent for the non-OECD countries.

The documents prepared for these purposes, together with much of the Department's other economic work, appear in published form in the *OECD Economic Outlook, OECD Economic Surveys, OECD Economic Studies* and the Department's *Working Papers* series.

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10-1992

PRINTED IN FRANCE

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OECD PUBLICATIONS
2 rue André-Pascal
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No. 46333
(10 92 26 1) ISBN 92-64-13774-2
ISSN 0376-6438

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