



OECD Economics Department Working Papers No. 102

Patterns of Recoveries  
for the Major Seven OECD  
Countries

**Marco Mira d'Ercole**

<https://dx.doi.org/10.1787/728486246887>

OECD  
DEPARTMENT  
OF ECONOMICS AND STATISTICS  
  
WORKING PAPERS

No. 102: PATTERNS OF RECOVERIES FOR THE MAJOR SEVEN OECD COUNTRIES

by

M. Mira d'Ercole

Economic Prospects Division

June 1991





GENERAL DISTRIBUTION

OCDE/GD(91)105

OECD

DEPARTMENT OF ECONOMICS AND STATISTICS

WORKING PAPERS

WORKING PAPER NO. 102

PATTERNS OF RECOVERIES FOR THE MAJOR SEVEN OECD COUNTRIES

by

Marco Mira d'Ercole  
Economic Prospects Division

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Paris 1991

35338

FOR TECHNICAL REASONS, THIS DOCUMENT IS NOT AVAILABLE ON OLIS



GENERAL DISTRIBUTION

ECONOMICS AND STATISTICS DEPARTMENT

WORKING PAPERS

This series of Working Papers is designed to make available, to a wider readership, selected studies which the Department has prepared for use within OECD. Authorship is generally collective, but main individual authors are named.

Comment on the Papers is invited, and may be sent to OECD, Department of Economics and Statistics, 2 rue André Pascal, 75775 Paris Cedex 16, France. Additional copies of the Papers on a limited basis can be forwarded on request.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The paper reviews some key characteristics of the recoveries experienced by the seven major OECD countries in the 1970s and 1980s. It presents data on the cyclical evolution of demand components, fiscal and monetary variables, labour market and inflation around cyclical troughs. A final section sketches the main features of the recovery which is envisaged in the latest OECD projections, presented in Economic Outlook No 49, and compares them with those of earlier periods.

\* \* \*

Cette note examine certaines des caractéristiques principales des processus de reprise économique dans les sept grands pays de l'OCDE dans les années 70 à 80. Elle présente des données sur l'évolution conjoncturelle des composantes de la demande, des politiques budgétaires et monétaires, des marchés du travail et de l'inflation autour des points bas du cycle conjoncturel. La dernière section passe rapidement en revue les aspects essentiels de la reprise qui est envisagé dans les prévisions de l'OCDE, présentées dans les Perspectives économiques de l'OCDE N° 49, et les compare avec ceux des cycles précédents.

No. 102: PATTERNS OF RECOVERIES FOR THE MAJOR SEVEN OECD COUNTRIES

by

M. Mira d'Ercole\*

June 1991

\* The author gratefully acknowledges the comments of Mr. Michael P. Feiner on an earlier draft of this paper.



## PATTERNS OF RECOVERIES FOR THE MAJOR SEVEN OECD COUNTRIES

### TABLE OF CONTENTS

	<u>Page</u>
Introduction	6
Components of aggregate demand	6
The role of fiscal policy	10
Interest rates and monetary aggregates	13
The labour market	13
Sharp differences in disinflation	18
Main features of the Spring 91 Secretariat projections	18

# PATTERNS OF RECOVERIES FOR THE MAJOR SEVEN OECD COUNTRIES

## TABLES AND CHARTS

### LIST OF TABLES

	<u>Page</u>
1. Characteristics of cyclical slowdowns for the OECD area in the 1970s and 1980s	7
2. Contribution of components of aggregate demand to changes in real GNP/GDP around the cyclical trough	8
3. Household saving ratios around the cyclical trough	11
4. Indicators of fiscal stance	12
5. Nominal interest rates and inflation around the cyclical trough	14
6. Monetary and credit aggregates around the cyclical trough	15
7. Employment, unemployment and productivity around the cyclical trough	19

### LIST OF CHARTS

1. Developments in interest rates around the cyclical trough	16
2. Developments in inflation around the cyclical trough	20

## PATTERNS OF RECOVERIES FOR THE MAJOR SEVEN OECD COUNTRIES

### Introduction

With OECD growth slowing sharply and some countries going through recession, there is considerable interest in the likely timing and strength of recovery. This note looks at some of the characteristics of the main recoveries in the 1970s and 1980s in order to shed light on this question. A final section sketches the main features of the Spring 91 Secretariat projections.

Although recoveries share a number of common characteristics, there is no simple pattern across countries and periods. This is partly because of the different characteristics of the periods of cyclical slowdown recorded by OECD countries over the past two decades, in terms of depth, duration and synchronisation of cyclical movements of various countries (Table 1). The recession of 1970/71 was relatively mild, but extended over more than two years and was characterised by large differences in cyclical movements across countries. By contrast, the recessions associated with the oil-price shocks of 1973 and 1979 were highly synchronised and, partly because of this, severe.

### Components of aggregate demand

The contribution of demand components to output growth at the time of the trough of the main recessions of the 1970s and 1980s, and in the two following years of recoveries, is presented in Table 2, using half-yearly data for each of the major seven countries<sup>1</sup>. In most cases, cyclical troughs were characterised by large destocking and falls in business investment, while private consumption maintained positive growth and, hence, provided a floor to the recession. No simple pattern emerges, however, in the recoveries. There are major differences in the relative role of internal and external demand in starting and sustaining the recovery, in the components of internal demand that play a leading role in the recovery, and in the behaviour of inventories.

The role of foreign demand in the recovery appears to have been most limited in the case of the United States; the contribution of exports was generally marginal and, with the exception of the recovery of the mid 70s, was lagging internal demand. Within Europe, a limited role of exports seems also in evidence for France and, partially, for the United Kingdom. French exports appear to have acted more as a floor to activity during recessions than as a mainspring of growth in recoveries: the contribution to growth of export demand was higher in the last two years of the recession than in the first two of the recoveries which followed the two oil crises. In the United Kingdom, although the turnaround of activity in the early 1970s and 1980s was led by export growth, the consolidation of the recovery was underpinned by a rebound in internal demand.

Table 1. Characteristics of cyclical slowdowns for the OECD area  
in the 1970s and 1980s

	From 1968Q4 peak to 1971Q3 trough	From 1973Q1 peak to 1975Q1 trough	From 1980Q1 peak to 1982Q4 trough
Length (number of quarters from peak to trough)	11	8	11
Cumulative percentage change of			
- GNP volume	10.7	-0.1	0.7
- Ind. production (from peak to trough)	11.0	-7.7	-6.2
Output gap at trough (1)	-1.5	-3.4	-3.5
Dispersion of troughs (2)			
- GNP cycle	1.9	0.3	0.6
- Industrial production cycle (in quarters)	1.3	0.2	0.3

1. Percentage deviation of GNP volume from trend.
2. Weighted sum of the difference between country- and area-troughs for the major seven OECD countries. OECD reference chronology [OECD(1987)] for industrial production cycle; country troughs for GNP cycle as shown in the following tables.

Table 2. Contribution of components of aggregate demand to changes in real GNP/GDP around the cyclical trough (1)

	Private consumption (2)	Public expenditure (2)	Fixed business investment	Residential investment	Stock- building	Imports G&S (3)	Exports G&S	GNP/GDP growth
<b>United States</b>								
1970 I	1.6	-1.1	-0.6	-0.6	-1.0	-0.1	0.6	-1.3
1970 II	1.2	-0.3	-0.2	0.7	0.1	-0.0	-0.0	1.4
1971 I	2.3	-0.4	-0.4	1.6	1.6	-0.4	0.1	4.4
1971 II	1.9	0.1	0.0	1.4	-1.4	-1.0	-0.0	1.0
1972 I	3.6	0.7	0.9	1.1	0.5	-1.1	0.7	6.4
1975 I	1.2	0.4	-2.2	-1.0	-4.2	2.8	-0.8	-3.8
1975 II	3.1	0.5	-0.1	0.9	2.0	-1.1	0.5	5.8
1976 I	3.8	-0.2	0.4	1.2	1.9	-1.9	0.5	5.6
1976 II	2.8	-0.2	0.7	0.5	-0.6	-1.5	0.6	2.3
1977 I	3.0	0.3	1.4	1.4	0.5	-1.5	0.2	5.4
1982 II	1.8	1.2	-1.5	0.4	-1.2	-0.1	-1.8	-1.1
1983 I	3.1	-0.1	-0.6	1.9	0.5	-0.3	-0.4	4.2
1983 II	3.9	-0.1	2.0	1.4	2.4	-3.3	0.7	7.0
1984 I	3.1	1.1	2.1	0.7	3.6	-2.9	0.7	8.3
1984 II	2.3	1.3	1.6	-0.1	-1.3	-1.4	0.7	3.1
<b>Japan</b>								
1971 I	2.4	1.6	-0.7	0.5	-2.1	-1.4	1.7	2.0
1971 II	3.5	2.5	-1.4	0.2	-1.0	1.6	0.6	6.0
1972 I	5.8	2.6	0.7	1.6	0.4	-2.0	-0.3	9.0
1972 II	6.1	0.4	1.3	1.5	0.2	-2.6	1.9	8.9
1973 I	5.3	2.7	2.1	1.2	2.4	-3.7	-0.1	9.8
1975 I	2.9	1.0	-0.7	-0.5	-2.0	2.8	-1.8	1.7
1975 II	1.8	1.2	-0.3	1.7	0.7	0.3	0.5	5.9
1976 I	1.4	1.1	-0.1	0.6	-0.3	-1.0	2.1	3.7
1976 II	3.1	-0.6	0.3	-0.3	1.0	-1.4	1.3	3.6
1977 I	2.5	1.8	-0.3	0.3	0.1	-0.1	1.6	5.9
1983 I	1.9	0.2	-0.1	-0.7	-0.2	1.5	-0.5	2.1
1983 II	2.0	0.1	1.2	-0.3	-0.1	-1.1	1.9	3.6
1984 I	2.0	-0.1	1.9	-0.1	0.5	-1.6	2.4	5.1
1984 II	0.6	0.0	1.6	0.0	0.2	-1.0	1.9	3.4
1985 I	2.6	-0.7	1.7	0.3	0.9	0.2	1.4	6.3
<b>Germany</b>								
1971 I	1.7	0.8	0.9	0.1	-1.7	-2.2	1.2	0.9
1971 II	2.5	-0.0	-0.6	0.9	1.6	-1.9	0.4	2.9
1972 I	2.6	1.6	0.2	1.7	-1.8	-0.9	1.3	4.6
1972 II	2.0	-0.4	-0.4	-0.3	2.2	-1.6	2.9	4.5
1973 I	2.6	1.9	0.6	1.4	-0.8	-1.3	2.1	6.4
1975 I	1.7	0.3	-0.5	-0.7	-3.0	2.1	-4.2	-4.2
1975 II	2.8	1.1	0.8	0.1	0.7	-2.1	1.2	4.4
1976 I	2.0	-0.4	0.9	0.2	4.1	-2.8	3.6	7.6
1976 II	1.6	0.4	-0.0	0.6	0.6	-2.4	1.7	2.5
1977 I	2.6	-0.4	1.3	0.3	-1.8	0.4	0.6	3.0
1982 II	-1.0	-1.3	-0.1	0.5	-0.6	2.1	-1.0	-1.4
1983 I	2.5	0.4	0.8	0.0	0.4	-0.7	0.1	3.7
1983 II	-0.1	-0.4	0.7	0.8	1.9	-1.5	0.1	1.7
1984 I	1.8	0.9	-0.9	-0.1	0.6	-2.0	4.0	4.3
1984 II	-0.2	0.3	1.5	-0.1	-1.3	-0.4	3.0	2.7
<b>France</b>								
1971 I	2.6	0.2	0.7	1.2	-2.5	0.2	0.9	3.3
1971 II	3.4	0.9	2.0	-0.3	0.4	-2.4	1.6	5.8
1972 I	2.4	0.5	0.1	1.1	0.7	-2.9	2.0	3.9
1972 II	3.1	0.8	0.8	0.9	-1.9	-1.6	1.9	4.1
1973 I	4.1	0.7	1.4	0.8	1.0	-3.2	1.8	6.6
1975 I	1.3	1.0	-2.0	-1.3	-5.6	4.7	-0.8	-2.5
1975 II	4.0	1.2	0.3	-0.3	-0.5	-1.6	-0.3	2.9
1976 I	2.5	0.9	1.4	-0.0	2.6	-4.4	2.2	5.2
1976 II	2.3	0.3	-0.2	0.3	2.0	-3.1	1.7	3.4
1977 I	0.9	-0.1	0.3	-0.9	0.5	1.5	1.3	3.6

(continued)

	Private consumption (2)	Public expenditure (2)	Fixed business investment	Residential investment	Stock- building	Imports G&S (3)	Exports G&S	GNP/GDP growth
1980 II	0.9	0.5	-0.2	-0.6	-0.5	0.6	-0.7	-0.0
1981 I	0.8	0.6	-0.2	-0.0	-3.7	1.7	1.3	0.5
1981 II	2.3	1.0	-0.6	-0.2	2.1	-2.2	1.4	3.8
1982 I	2.1	0.9	0.4	-0.7	1.5	-0.0	-1.6	2.6
1982 II	1.7	0.5	-0.1	-0.1	-1.0	-0.0	0.3	1.3
<b>Italy</b>								
1971 I	1.6	0.5	-1.3	0.3	-1.1	0.6	-0.0	0.8
1971 II	1.5	0.9	-0.5	0.1	-1.6	-1.0	3.3	2.7
1972 I	1.9	1.4	0.4	-0.4	1.1	-2.9	1.3	2.7
1972 II	3.4	0.6	1.3	-0.3	-1.0	-2.0	0.7	2.6
1973 I	4.8	-0.0	2.6	-0.1	0.7	-1.9	0.8	6.8
1975 I	-0.7	0.6	-2.5	-0.4	-7.0	5.6	-0.8	-5.2
1975 II	2.0	0.6	-0.0	-0.5	1.7	-4.3	2.9	2.5
1976 I	3.6	0.2	0.8	-1.1	6.3	-3.6	1.4	7.6
1976 II	3.4	0.3	1.4	-0.0	1.8	-0.7	2.1	8.3
1977 I	2.3	0.5	0.9	0.1	-1.8	-1.6	3.0	3.5
1982 II	0.2	0.3	-1.0	-0.1	0.3	0.4	-1.5	-1.4
1983 I	0.0	0.6	-0.8	0.4	-1.6	1.7	1.3	1.6
1983 II	1.3	0.7	0.4	0.3	1.4	-2.3	1.0	2.6
1984 I	1.5	0.4	1.2	-0.0	0.6	-2.3	2.0	3.5
1984 II	1.1	0.6	0.5	-0.4	2.4	-3.1	1.2	2.3
<b>United Kingdom</b>								
1971 I	0.5	0.1	-0.1	0.2	-1.5	-0.6	1.5	0.1
1971 II	3.8	0.6	0.2	1.1	0.1	-0.8	1.7	4.0
1972 I	3.6	0.2	-0.0	-0.1	-0.7	-2.7	-0.6	2.3
1972 II	3.7	0.4	0.6	0.4	0.5	-2.4	0.6	5.3
1973 I	4.6	2.5	1.2	-0.2	4.8	-3.0	3.9	11.6
1975 II	-1.7	0.3	0.4	-1.1	2.0	-0.9	0.1	-1.2
1976 I	0.7	1.2	-0.2	1.0	0.6	-0.6	3.3	4.4
1976 II	1.4	-1.6	1.2	-0.7	3.4	-2.4	2.1	3.1
1977 I	-2.4	-1.5	0.1	0.2	0.2	-0.0	1.8	1.6
1977 II	2.4	-0.5	1.0	0.1	-1.5	0.9	1.5	2.6
1981 I	0.5	-1.0	-1.3	-0.2	-0.5	1.4	-0.3	-1.4
1981 II	0.2	-0.7	1.2	-0.3	2.9	-5.9	2.5	2.5
1982 I	-0.4	0.1	0.4	0.3	1.8	0.3	-0.7	0.9
1982 II	2.8	1.0	0.8	0.3	-4.1	0.6	-0.1	1.8
1983 I	3.0	1.5	-0.7	0.2	3.6	-2.5	0.4	4.7
<b>Canada</b>								
1970 I	-0.1	3.0	0.6	-1.2	-1.2	0.1	2.2	1.1
1970 II	3.1	1.0	0.3	0.3	-1.0	1.1	0.7	2.8
1971 I	2.3	1.1	0.2	1.1	-0.4	-1.3	1.1	4.8
1971 II	5.7	2.4	0.8	1.2	2.0	-3.2	1.4	10.2
1972 I	3.6	-0.9	0.1	0.5	-0.7	-1.7	1.5	3.1
1975 I	2.8	1.7	1.5	-0.2	-2.7	2.1	-3.1	1.4
1975 II	5.0	0.7	1.1	1.2	-0.7	-0.4	0.1	4.9
1976 I	3.2	0.4	-0.1	1.3	1.6	-3.0	2.9	7.9
1976 II	4.0	-0.2	-0.7	0.5	-0.9	-0.4	1.9	3.6
1977 I	0.8	1.9	0.8	-0.1	0.2	-0.7	1.6	3.6
1982 II	-0.5	1.0	-2.7	-0.2	-1.3	2.0	-0.3	-3.3
1983 I	2.7	-0.4	-0.6	1.6	2.0	-1.4	1.1	4.9
1983 II	3.2	0.6	0.6	0.4	2.8	-6.6	3.9	6.3
1984 I	2.8	0.3	0.1	-0.3	1.4	-4.0	4.6	6.4
1984 II	2.0	0.5	-0.0	0.3	-0.4	-0.6	3.7	5.7

1. For each country, the table shows data for the cyclical trough and for the following four semesters.
2. Public consumption and investment.
3. A positive contribution of imports implies negative import growth.

Exports appear to have played a more important role in the other countries. In Japan, the recovery of the early 1970s was driven mainly by internal demand, but export growth played a key role in the two post-oil shock recoveries: the contribution of export demand was close to 30 per cent of total GNP growth in the two years of the recovery following the first oil shock and around 40 per cent following the second oil shock, when the Japanese recovery lagged that of other countries by about a semester. In Germany the contribution of exports was generally mild during the first six months of the recovery, but tended to increase as the recovery proceeded. For Italy, the export-led pattern is evident at the turning points of the cycle: all GDP growth recorded in the first six months of the early and mid-1970s recoveries was accounted for by exports, and in the case of the recovery of 1982, the contribution of exports was close to 80 per cent. Canada's recoveries have tended to be led by buoyant exports to the United States. This factor appears to have become progressively more important, accounting for around a quarter of the total GDP growth in the first two years of the 1970/71 recovery, a third in 1975/76 and a half in 1982/83.

Looking at components of internal demand, in the United States and Canada the recovery of residential investment has tended to be one significant factor in the turnaround of activity, leading other demand components when looking at quarterly data. Business investment has tended to lag, despite the improvements in the financial position of firms in the early phase of the recovery. For most European countries and Japan, business investment has tended to follow the same pattern of lagged response, but in France and Italy the response of residential investment in the early phases of the recovery also tended to lag. Private consumption had in some cases an important role in sustaining activity, due to significant cyclical falls in households' saving ratios, in the recoveries of the early 1980s and, especially, of the mid-1970s (Table 3). Particularly striking were falls of some 3 percentage points in the United States and Germany in 1975/77, and in the United Kingdom in 1981/83.

While the pace of the recovery ultimately depends on the strength in final demand, stock movements have significantly affected the profile of output growth and the strength of the recovery in its initial phase. In most cases, stock falls have amplified the contraction of activity during the final part of the recession and have delayed the transmission of the recovery in demand to production. Once the downward correction of inventories has been completed, stocks have risen in line with higher sales and the technical turnaround in the stock cycle has been an element sustaining the recovery. Although this sequence has characterised most episodes, the size of the downward adjustment of stocks during the final phase of the recession was particularly large in the mid-1970s, in terms of its strength and coincidence, reflecting abnormally high levels of stocks (as indicated by business surveys) going into the recession. The subsequent technical recovery was correspondingly marked.

### **The role of fiscal policy**

There were major differences in the role of fiscal policy between the recoveries of the 1970s, on one hand, and that of the early 1980s, on the other (Table 4). While in the first two cases governments not only allowed automatic stabilisers to operate in the recession year but also actively pursued discretionary expansion (particularly in 1975), medium-term consolidation of

Table 3. Household saving ratios around the cyclical trough

<b>United States</b>					
(1970 I-1972 I)	7.8	8.7	9.1	8.6	6.9
(1975 I-1977 I)	9.9	8.9	8.3	7.4	6.3
(1982 I-1984 I)	7.3	6.7	5.6	5.4	6.5
<b>Japan</b>					
(1971 I-1973 I)	18.2	17.4	17.6	18.7	18.8
(1974 II-1976 II)	24.0	21.8	23.8	23.6	22.9
(1983 I-1985 I)	16.4	16.2	15.6	16.4	16.2
<b>Germany</b>					
(1971 I-1973 I)	12.9	14.1	14.5	14.3	13.4
(1975 I-1977 I)	16.1	14.1	13.1	13.5	12.3
(1982 II-1984 II)	12.3	10.6	11.0	11.0	11.7
<b>France</b>					
(1971 I-1973 I)	18.3	18.1	18.8	18.9	18.4
(1975 I-1977 I)	20.4	20.0	18.5	18.0	18.7
(1980 II-1982 II)	17.6	18.4	17.7	17.9	16.7
<b>Italy</b>					
(1971 I-1973 I)	29.7	30.2	31.0	30.0	28.0
(1975 I-1977 I)	26.2	27.6	26.5	24.9	23.9
(1982 II-1984 II)	16.5	17.3	17.9	18.2	18.5
<b>United Kingdom</b>					
(1971 I-1973 I)	7.5	7.1	9.5	8.8	9.0
(1975 II-1977 II)	11.3	10.7	10.8	8.4	9.8
(1981, I-1983 I)	13.1	11.9	12.5	10.4	10.2
<b>Canada</b>					
(1970 I-1972 I)	5.5	5.6	7.2	6.5	8.2
(1975 I-1977 I)	12.9	12.4	12.8	10.8	11.5
(1982 II-1984 II)	17.3	14.1	15.5	14.4	15.5



Table 4. Indicators of fiscal stance (changes in ratios to GNP/GDP)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>United States</b>																					
GNI	-2.1	-0.7	1.5	0.9	-0.8	-3.8	1.9	1.2	0.9	0.5	-1.7	0.3	-2.5	-0.3	1.0	-0.5	-0.1	1.0	0.4	0.3	-0.7
CAGNI	"	"	"	"	"	"	"	0.4	0.0	0.4	-0.9	0.6	-0.8	-0.3	-0.4	-0.9	-0.2	0.7	-0.2	0.2	-0.2
CAPB	"	"	"	"	"	"	"	0.4	0.0	0.4	-0.8	1.0	-0.7	-0.3	-0.0	-0.8	-0.3	0.7	-0.3	0.4	-0.1
Output	-0.3	2.8	5.0	5.2	-0.5	-1.3	4.9	4.7	5.3	2.5	-0.2	1.9	-2.5	3.6	6.8	3.4	2.7	3.4	4.5	2.5	1.0
<b>Japan</b>																					
GNI	0.5	-0.5	-1.3	0.7	-0.2	-3.1	-0.9	-0.1	-1.7	0.8	0.3	0.6	0.2	-0.1	1.6	1.3	-0.1	1.6	1.4	0.7	0.4
CAGNI	0.1	0.7	-1.0	1.1	1.6	-2.9	-1.5	-0.8	-2.3	0.0	-0.1	0.9	0.8	0.4	1.3	1.1	0.7	1.6	0.9	0.5	-0.3
CAPB	"	0.7	-1.0	1.0	1.6	-2.8	-1.3	-0.6	-2.0	0.3	0.1	1.1	0.9	0.6	1.4	1.1	0.5	1.2	0.6	0.2	-0.5
Output	10.8	4.4	8.5	7.9	-1.4	2.7	4.8	5.3	5.2	5.3	4.3	3.7	3.1	3.2	5.1	4.9	2.5	4.6	5.7	4.9	6.1
<b>Germany</b>																					
GNI	-0.9	-0.4	-0.4	1.7	-2.5	-4.3	2.2	1.0	-0.0	-0.1	-0.3	-0.8	0.4	0.8	0.6	0.8	-0.2	-0.6	-0.3	2.4	-3.3
CAGNI	-1.2	0.1	-0.3	1.5	-1.8	-2.7	0.3	0.5	-0.8	-1.3	0.2	0.5	2.1	1.0	0.2	1.0	-0.1	-0.2	-0.8	1.7	-4.1
CAPB	"	0.1	-0.4	1.7	-1.8	-3.0	0.4	0.5	-0.9	-1.3	0.1	0.7	2.5	1.3	0.3	1.0	-0.1	-0.2	-0.9	1.7	-4.1
Output	5.0	3.0	4.2	4.7	0.2	-1.4	5.6	2.7	3.3	4.0	1.5	0.0	-1.0	1.9	3.3	1.9	2.3	1.6	3.7	3.9	4.2
<b>France</b>																					
GNI	-0.3	-0.3	0.0	-0.0	-0.3	-2.7	1.7	-0.1	-1.2	1.2	0.8	-1.9	-0.8	-0.4	0.4	-0.1	0.1	0.8	0.2	0.3	0.2
CAGNI	-0.6	-0.2	0.3	-0.1	0.5	-1.7	0.8	-0.7	-1.8	0.7	1.1	-1.4	-0.9	0.4	1.0	0.2	0.1	0.9	-0.5	-0.3	0.2
CAPB	"	-0.2	0.2	-0.3	0.5	-1.3	0.8	-0.6	-1.7	0.9	1.1	-1.0	-0.9	0.9	1.1	0.3	0.1	0.8	-0.5	-0.1	0.3
Output	5.7	4.8	4.4	5.4	3.1	-0.3	4.2	3.2	3.4	3.2	1.6	1.2	2.5	0.7	1.3	1.9	2.5	2.2	3.8	3.6	2.5
<b>Italy</b>																					
GNI	-0.5	-1.9	-2.7	0.7	0.1	-5.1	3.1	1.2	-1.8	0.3	1.6	-3.0	0.2	0.7	-0.9	-1.0	0.9	0.6	0.2	0.7	0.2
CAGNI	-0.3	-1.3	-2.3	-0.5	-0.4	-3.0	1.9	1.2	-1.9	-0.7	1.3	-2.4	1.2	1.3	-1.0	-0.9	0.9	0.4	-0.5	0.4	0.2
CAPB	"	-1.3	-2.3	-0.5	-0.4	-3.0	1.9	1.2	-1.9	-0.7	1.3	-2.4	1.2	1.6	-0.5	-1.1	1.4	0.6	-0.2	1.3	0.9
Output	5.3	1.6	2.7	7.1	5.4	-2.7	6.6	3.4	3.7	6.0	4.2	1.0	0.3	1.1	3.0	2.6	2.5	3.0	4.2	3.2	2.6
<b>United Kingdom</b>																					
GNI	0.8	-1.6	-2.6	-1.4	-1.1	-0.7	-0.4	1.7	-1.1	1.1	-0.1	0.8	0.2	-0.8	-0.6	1.2	0.5	0.9	2.4	-0.2	-0.7
CAGNI	1.0	-1.3	-2.8	-2.8	-0.5	0.2	-1.0	1.3	-2.1	0.4	1.5	2.4	0.8	-1.1	-0.5	0.6	-0.2	-0.0	1.5	-0.2	-0.4
CAPB	"	-1.7	-2.9	-2.7	-0.2	0.0	-0.6	1.5	-2.0	0.6	1.7	2.5	0.6	-1.2	-0.2	0.6	-0.3	-0.2	1.2	-0.4	-0.6
Output	2.3	2.0	3.5	7.0	-1.5	-0.7	2.7	2.2	3.6	2.8	-2.0	-1.1	1.7	3.4	2.1	3.9	3.9	4.7	4.6	2.2	1.6
<b>Canada</b>																					
GNI	-1.3	-0.8	-0.1	0.9	1.0	-4.4	0.7	-0.7	-0.6	1.1	-0.8	1.3	-4.5	-1.0	0.4	-0.3	1.4	1.4	1.2	-0.5	0.2
CAGNI	-0.3	-0.8	-0.2	0.1	1.3	-3.9	-0.4	-0.8	-1.5	1.1	0.2	1.4	-1.6	-1.0	-1.1	-1.3	1.2	0.8	0.5	-0.6	1.1
CAPB	"	-0.9	-0.1	0.1	1.1	-3.9	-0.2	-0.8	-1.2	1.2	0.3	1.9	-1.2	-1.0	-0.4	-0.7	1.3	0.7	0.6	-0.1	1.5
Output	2.6	5.8	5.7	7.7	4.4	2.6	6.2	3.6	5.6	3.6	1.1	3.4	-3.2	3.2	6.3	4.7	3.3	4.0	4.4	3.0	1.1

GNI= General government net lending  
 CAGNI= Cyclically adjusted government net lending  
 CAPB= Cyclically adjusted primary balance  
 Output=GNP/GDP growth

fiscal deficits dominated the stance of fiscal policy in the early 1980s, resulting in a discretionary tightening in most countries.

In the early 1970s, most countries recorded a deterioration of government net lending. The active easing of fiscal stance was substantial for the United Kingdom, Italy, Canada (in 1971) and Japan (in 1972), but smaller for the United States and Germany. After the first oil shock, the stance of fiscal policies swung from restrictive in 1974, which tended to offset the operation of automatic stabilisers, to expansionary in 1975 (particularly in the United States, Japan, Italy and Canada). For the period following the second oil-price shock, only in the United States and Canada did automatic stabilisers and active expansion lead to a significant deterioration of government net lending. Most other countries followed restrictive policies throughout the period, although fiscal policy in France was expansionary in 1982 and 1983 and became restrictive only in 1984.

### **Interest rates and monetary aggregates**

All periods under consideration were characterised by large falls in nominal interest rates which led the recovery in activity (Chart 1). The reduction was particularly marked for short-term interest rates and was generally coupled with increases in stock prices. The fall in interest rates partly reflected a disinflationary process gathering momentum, but also an easing of real interest rates (Table 5). The fall in nominal interest rates was generally faster than that of (CPI) inflation in the final phase of the recession, while the process has tended to be reversed in the following recovery year.

The stock of money has tended to increase more than nominal income in the final phase of the recession (Table 6), as monetary authorities injected liquidity into the economy to reduce interest rates, while the fall in velocity decelerated or reversed during the recovery. The growth of bank credit has tended in general to mirror that of the money stock, although with differences in both timing and strength (in most cases the deceleration in the growth of bank credit extended to the first six months of the recovery). However, there are exceptions to this general observation: in the recovery of the early 1980s credit growth increased considerably while money growth was either constant or falling in the United States, Germany, Italy and the United Kingdom.

The behaviour of consumer credit during the recoveries has tended to follow that of private consumption, but with differences in the size of the adjustment and sometimes in the timing of the turnaround of the two series. The data, shown in Table 6, for the United States, the United Kingdom (since the early 1980s) and Canada, suggest that the slow initial recovery in consumer credit has tended to strengthen considerably at a later stage of the cycle.

### **The labour market**

The labour market is significantly affected by the cyclical evolution of the economy. Falls in unemployment rates were damped in the early phases of the recovery because of changes in participation rates (due to the entry or re-entry on the labour market of discouraged workers, important in the case of

Table 5. Nominal interest rates and inflation around the cyclical trough

	First period			Second period			Third period		
	Two quarters before the trough	Trough	After one year of recovery	Two quarters before the trough	Trough	After one year of recovery	Two quarters before the trough	Trough	After one year of recovery
<b>United States</b>									
Short term rate	(70Q2)	(70Q4)	(71Q4)	(74Q3)	(75Q1)	(76Q1)	(82Q1)	(82Q3)	(83Q3)
Long term rate	6.7	4.9	4.0	8.1	5.5	5.0	12.5	7.9	9.0
CPI inflation	7.0	6.0	5.6	7.3	6.8	6.9	13.0	11.5	11.3
(Year on Year)	6.0	5.6	3.5	11.4	11.1	6.4	7.4	5.7	2.4
(annual rates)	6.8	5.5	2.3	12.9	7.4	3.9	3.0	8.1	4.5
<b>Japan</b>									
Short term rate	(71Q2)	(71Q4)	(72Q4)	(74Q3)	(75Q1)	(76Q1)	(82Q3)	(83Q1)	(84Q1)
Long term rate	6.5	5.5	4.7	13.0	12.9	8.0	7.0	6.7	6.4
CPI inflation	7.3	7.2	7.2	9.5	9.3	8.7	8.4	7.6	6.6
(Year on Year)	6.4	5.6	5.0	23.5	14.7	9.4	2.7	2.1	2.4
(annual rates)	7.5	5.2	5.6	15.4	6.6	9.7	2.0	-1.2	1.7
<b>Germany</b>									
Short term rate	(71Q2)	(71Q4)	(72Q4)	(74Q3)	(75Q1)	(76Q1)	(82Q2)	(82Q4)	(83Q4)
Long term rate	6.8	6.6	8.6	9.7	5.7	3.7	9.3	6.6	6.5
CPI inflation	8.2	7.9	8.6	10.7	8.7	7.6	9.1	7.9	8.2
(Year on Year)	5.1	5.7	6.2	7.1	5.9	5.5	5.3	4.7	2.7
(annual rates)	5.8	4.1	6.6	3.7	7.7	7.5	4.9	3.7	2.0
<b>France</b>									
Short term rate	(70Q3)	(71Q1)	(72Q1)	(74Q3)	(75Q1)	(76Q1)	(80Q3)	(81Q1)	(82Q1)
Long term rate	6.6	6.2	5.0	13.9	8.9	7.8	11.8	12.6	15.2
CPI inflation	8.9	8.5	8.4	11.4	10.6	10.2	14.0	15.2	16.8
(Year on Year)	5.5	4.8	5.7	14.6	13.9	9.6	13.6	12.6	14.0
(annual rates)	4.1	5.6	5.0	14.0	11.6	10.1	13.4	12.4	11.8
<b>Italy</b>									
Short term rate	(71Q4)	(72Q2)	(73Q2)	(74Q4)	(75Q2)	(76Q2)	(82Q1)	(82Q3)	(83Q3)
Long term rate	6.0	6.0	6.4	15.6	9.6	17.9	19.7	17.7	17.2
CPI inflation	6.8	6.4	6.9	10.8	10.0	13.5	20.1	19.2	17.8
(Year on Year)	4.7	5.0	11.0	24.7	19.7	16.1	17.0	16.7	14.0
(annual rates)	5.8	5.5	14.6	27.1	11.4	27.8	17.1	17.5	9.5
<b>United Kingdom</b>									
Short term rate	(70Q3)	(71Q1)	(72Q1)	(75Q1)	(75Q3)	(76Q3)	(80Q4)	(81Q2)	(82Q2)
Long term rate	6.8	6.6	4.3	9.4	10.5	12.3	13.1	11.9	12.3
CPI inflation	9.3	9.0	8.8	14.1	14.3	14.6	12.1	13.1	12.7
(Year on Year)	7.0	8.9	8.2	20.7	26.3	13.4	15.6	11.8	8.8
(annual rates)	8.5	10.2	5.5	26.6	19.0	12.2	8.0	20.4	12.7
<b>Canada</b>									
Short term rate	(70Q2)	(70Q4)	(71Q4)	(74Q3)	(75Q1)	(76Q1)	(82Q2)	(82Q4)	(83Q4)
Long term rate	5.9	4.4	3.2	8.9	6.3	9.1	14.9	12.7	9.2
CPI inflation	8.1	7.0	6.6	9.7	8.3	9.4	16.0	11.7	12.0
(Year on Year)	3.7	2.1	4.3	10.9	11.6	9.3	11.5	9.7	4.5
(annual rates)	3.5	-1.3	2.9	12.4	8.6	5.6	12.8	6.6	3.5

Table 6. Monetary and credit aggregates around the cyclical trough

	First period		Second period		Third period	
	In the last two quarters of the down turn	In the first two quarters of the recovery	In the last two quarters of the down turn	In the first two quarters of the recovery	In the last two quarters of the down turn	In the first two quarters of the recovery
<b>United States</b>	(70Q2-70Q4)	(71Q4-71Q2)	(74Q3-75Q1)	(75Q1-75Q3)	(82Q1-82Q3)	(82Q3-83Q1)
M3	15.1	15.6	6.6	10.1	9.7	10.5
Credit to consumers (2)	7.6	7.5	2.5	-3.4	8.9	3.6
Nominal GNP	7.9	8.3	-1.1	1.8	4.7	4.2
	4.4	12.7	4.8	13.9	4.3	5.5
<b>Japan</b>	(71Q2-71Q4)	(72Q2-73Q2)	(74Q3-75Q1)	(75Q1-75Q3)	(82Q1-83Q1)	(83Q1-84Q3)
M2	26.0	26.2	12.9	13.9	6.6	7.5
Credit to consumers (1)	24.3	24.7	11.3	10.9	10.1	9.6
Nominal GNP	9.2	22.1	5.5	11.5	4.2	3.8
<b>Germany</b>	(71Q2-71Q4)	(72Q2-73Q2)	(74Q3-75Q1)	(75Q1-75Q3)	(82Q1-83Q1)	(83Q1-84Q2)
M3	9.8	13.2	9.0	5.8	5.6	7.5
Credit to consumers (4)	16.4	15.5	3.4	3.3	5.9	5.3
Nominal GNP	7.2	11.2	-0.8	8.6	2.2	7.3
<b>France</b>	(70Q3-71Q1)	(71Q3-72Q3)	(74Q3-75Q1)	(75Q1-75Q3)	(80Q3-81Q1)	(81Q3-82Q3)
M1+M2	22.2	20.4	18.0	17.9	12.4	11.4
Credit to consumers (5)	..	..	..	..	14.0	13.2
Nominal GNP	10.2	11.2	9.3	13.0	8.2	16.7
<b>Italy</b>	(71Q4-72Q2)	(72Q4-73Q4)	(74Q4-75Q2)	(75Q2-75Q4)	(82Q1-82Q3)	(82Q3-83Q1)
M3	18.2	22.0	20.6	22.6	9.8	23.5
Credit to consumers (6)	11.1	17.5	10.0	18.3	6.3	18.5
Nominal GNP	9.0	28.3	11.0	13.7	14.1	18.7
<b>United Kingdom</b>	(70Q3-71Q1)	(71Q3-72Q3)	(75Q1-75Q3)	(75Q3-76Q1)	(80Q4-81Q2)	(81Q2-81Q4)
M1+M2	..	26.1	5.5	9.0	24.3	11.3
Credit to consumers (7)	3.1	43.5	-22.2	-1.6	7.0	25.8
Nominal GNP	8.7	10.6	22.2	21.6	3.7	10.5
<b>Canada</b>	(70Q2-70Q4)	(71Q2-72Q2)	(74Q3-75Q1)	(75Q1-75Q3)	(82Q1-82Q4)	(82Q4-83Q2)
M2	10.0	10.0	14.0	13.9	5.1	5.5
Credit to consumers (9)	8.6	26.2	16.7	13.1	0.7	-12.0
Nominal GNP	7.4	15.3	14.0	13.9	-3.4	-0.5
	6.6	12.0	9.5	15.9	4.3	11.5

Note: percentage changes at annual rates.

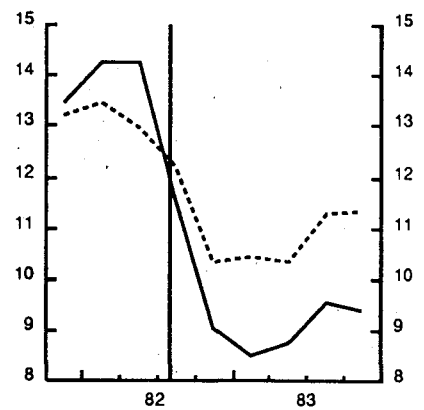
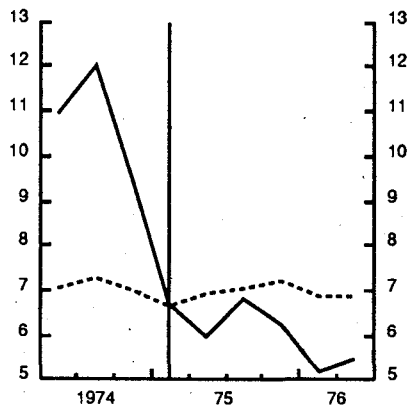
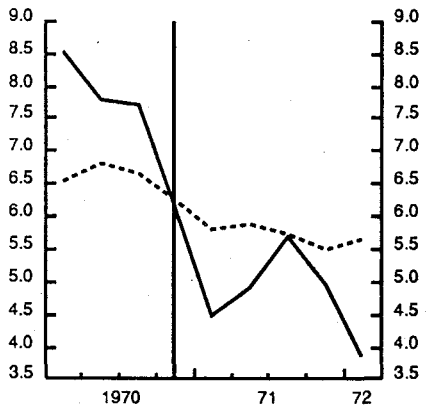
1. Loans by commercial banks.
2. Consumer credit outstanding, retail outlets and financial institutions.
3. Loans and discounts by commercial banks.
4. Bank credit to economy (short, medium and long term credit).
5. Bank credit to the economy, total.
6. Credit of commercial and saving banks to the private sector.
7. Bank credit (industry and others).
8. Consumer credit outstanding, total (Great Britain).
9. Credit to the economy by commercial banks.
10. Consumer credit outstanding.

# Chart 1. Developments in interest rates around the cyclical trough

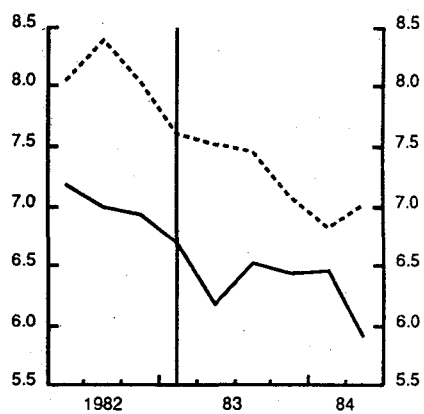
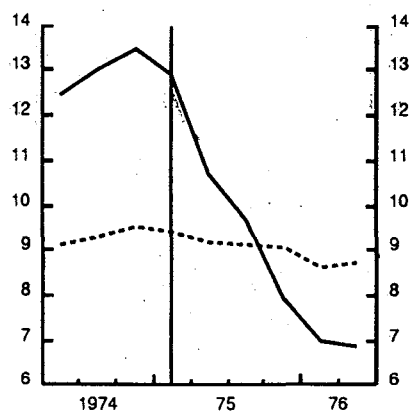
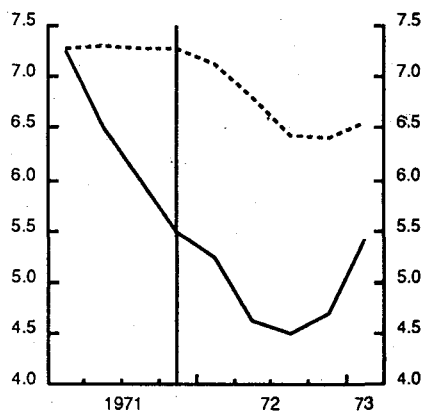
(Vertical line corresponds to the trough of the recession)

— Short term interest rates  
 - - - Long term interest rates

## United States



## Japan



## Germany

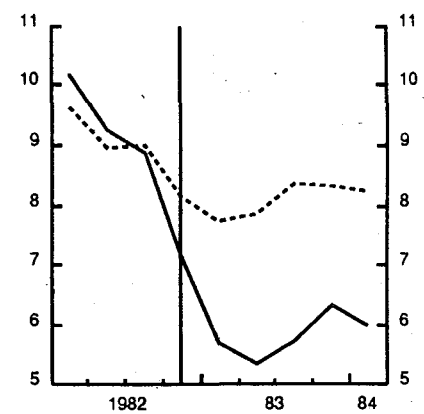
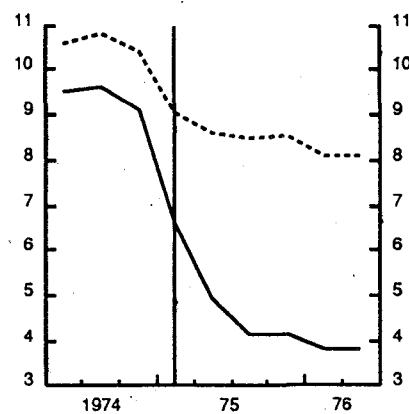
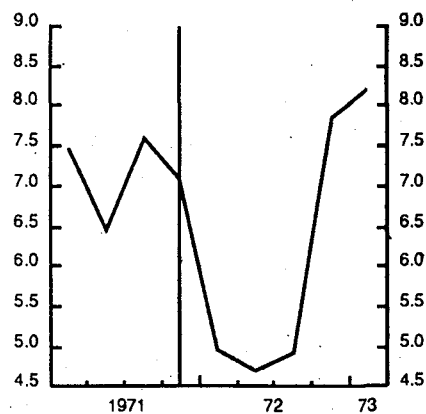
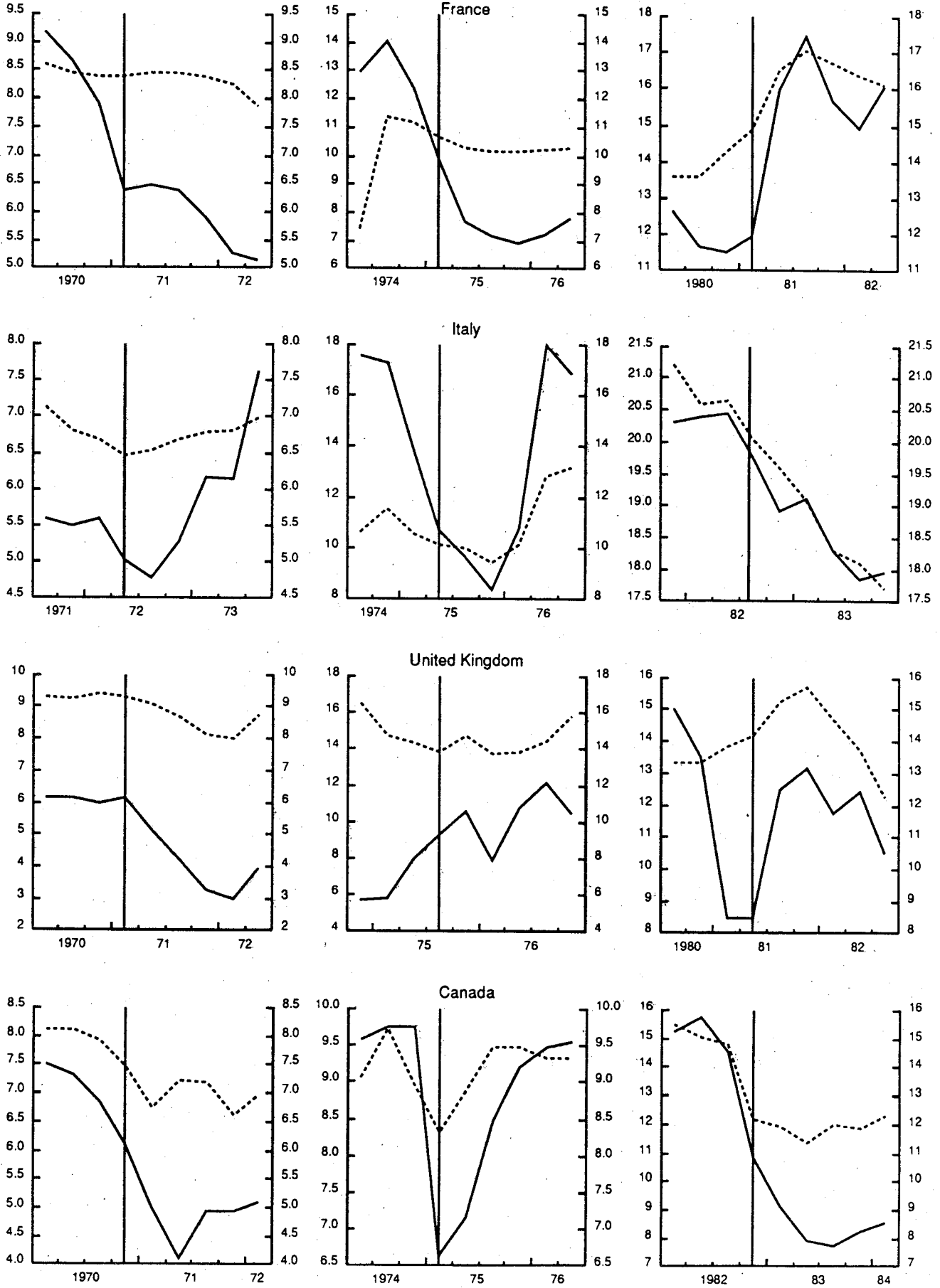


Chart 1 (cont)



Japan) and pro-cyclical movements of labour productivity (measured by output per worker), which result from the lead of hours on employment in the recovery (Table 7). There are, however, large differences in the form of employment adjustment across both periods and countries.

In the recession which followed the first oil shock, adjustment of labour inputs took mainly the form of a cut in hours worked, which resulted in negative productivity growth for most countries, and slow reduction in unemployment when the recovery started. In the early 1980s labour hoarding by firms appeared to have been less common, and adjustment of hours of less importance, resulting in a larger increase in unemployment during the recession. The "labour shake out" continued in the first phase of the recovery, and unemployment rates kept increasing well into the recovery in most European countries and in Japan.

#### Sharp differences in disinflation

Countries have generally achieved disinflation during the recession and in the early phase of the recovery. However, there have been marked differences in the speed and extent of disinflation, as well as in the rate of inflation attained by the time the recovery started (Chart 2). Features of the recession of the early 1970s were the limited progress achieved in reducing the inflationary tensions, the high and accelerating wage growth during the recovery, and a severe profit squeeze.

Progress in the reduction of inflationary tensions was more in evidence in the case of the recovery of the mid 1970s, although the levels achieved remained high by historical standards. The disinflation was most pervasive in the case of the recovery of the early 1980s and, in a majority of countries, wage increases were below those of consumer prices. In Japan, Germany and (marginally) the United States the level of CPI inflation was below that achieved in the case of the recovery of the early 1970s, by the time the recovery started, but inflation remained high in the case of most European countries.

#### Main features of the Spring 91 Secretariat projections

Secretariat projections are that, after virtually stagnating in the first half of 1991, OECD growth will recover in the second half of 1991 and in 1992. By comparisons with previous episodes in the 1970s and 1980s the current recession is projected to be shallow and short lived, reflecting among other influences large differences in the cyclical position of Member countries. The return of oil prices to levels recorded before the Gulf crisis, a rebound in confidence and the easing of monetary policy are the main forces behind this recovery. Lean inventories in the current situation should partly account for the modest size of the pick-up in the early phase of the recovery.

- In the United States, a 1 3/4 point fall of GNP (at an annual rate) in the first half of 1991, is projected to be followed by a recovery (to rates around 3 per cent) led by a rebound in private consumption, while the contribution of exports should remain higher than that recorded during previous recoveries. The easing of short-term interest rates (by 175 basis points since the first half of 1990)

Table 7. Employment, unemployment and productivity around the cyclical trough (1)

	First period		Second period		Third period	
	In the last two quarters of the down turn	In the first two quarters following year recovery	In the last two quarters of the down turn	In the first two quarters following year recovery	In the last two quarters of the down turn	In the first two quarters following year recovery
<b>United States</b>	(7002-7004)	(7004-7102)	(7403-7501)	(7501-7503)	(8201-8203)	(8203-8301)
Total employment	0.0	3.7	3.9	1.8	-0.3	-0.8
Unemployment rate	0.8	-0.2	2.6	0.1	1.1	0.4
Participation rate	-0.4	1.8	-0.2	0.3	0.3	-0.3
Average hours	2.0	1.8	-5.5	3.6	2.1	2.1
GNP (vol.)	0.6	4.7	-5.5	5.5	-1.0	2.0
Productivity per head	0.6	1.0	-9.4	3.7	-0.7	2.8
<b>Japan</b>	(7102-7104)	(7104-7202)	(7403-7501)	(7501-7503)	(8203-8301)	(8301-8303)
Total employment	-0.6	2.3	-1.0	1.6	3.3	0.6
Unemployment rate	0.0	-0.0	0.4	0.1	0.3	0.0
Participation rate	-1.8	0.0	-2.7	2.4	-1.1	1.7
Average hours	0.0	0.0	-8.1	5.0	-0.6	2.4
GNP (vol.)	5.6	8.8	-0.5	7.4	2.7	3.8
Productivity per head	6.2	6.6	-0.5	5.8	-0.6	3.2
<b>Germany</b>	(7102-7104)	(7104-7202)	(7403-7501)	(7501-7503)	(8202-8204)	(8204-8302)
Total employment	0.4	0.9	-4.1	-2.9	-1.2	-1.3
Unemployment rate	0.2	-0.1	1.4	0.5	0.8	0.9
Participation rate	2.0	0.3	-10.8	4.5	-4.2	2.7
Average hours	1.7	4.1	-7.0	7.4	-1.6	4.7
GNP (vol.)	2.1	5.0	-2.9	4.5	-0.4	6.0
Productivity per head	1.7	4.1	-2.9	7.4	-0.4	6.0
<b>France</b>	(7003-7101)	(7101-7103)	(7403-7501)	(7501-7503)	(8003-8101)	(8101-8103)
Total employment	0.4	0.7	-1.6	-1.2	-0.3	-0.5
Unemployment rate	0.1	0.1	0.8	0.0	0.7	0.6
Average hours	..	..	..	..	-1.0	0.0
GNP (vol.)	2.9	3.9	-4.5	3.0	-1.1	4.1
Productivity per head	2.5	2.9	-2.9	3.2	-0.8	4.6
<b>Italy</b>	(7104-7202)	(7202-7204)	(7404-7502)	(7502-7504)	(8201-8203)	(8203-8301)
Total employment	-1.3	2.0	-0.9	1.1	-0.7	0.3
Unemployment rate	0.5	-0.8	0.4	0.2	0.0	0.4
Participation rate	0.0	9.5	-2.2	4.6	-1.8	2.0
Average hours	4.6	7.5	3.6	3.6	-1.1	2.7
GNP (vol.)	6.9	6.9	-0.6	5.9	-3.7	2.2
Productivity per head	6.3	2.9	-3.1	4.8	-7.2	3.8
<b>United Kingdom</b>	(7003-7101)	(7101-7103)	(7501-7503)	(7503-7601)	(8004-8102)	(8102-8104)
Total employment	-1.9	1.1	-0.6	-1.1	-3.7	-2.2
Unemployment rate	0.1	-0.3	1.0	0.8	1.2	0.9
Average hours	-1.2	0.5	-3.1	0.2	-7.2	3.8
GNP (vol.)	-0.7	2.7	-3.6	5.9	-0.3	2.4
Productivity per head	-1.2	1.6	-3.0	4.8	-0.3	4.6
<b>Canada</b>	(7002-7004)	(7004-7102)	(7403-7501)	(7501-7503)	(8202-8204)	(8204-8302)
Total employment	1.4	3.4	-0.3	3.2	-3.9	3.3
Unemployment rate	0.4	-0.2	1.4	0.3	2.2	-0.4
Participation rate	-0.1	0.6	-0.2	0.4	0.0	0.7
Average hours	-2.0	1.0	-0.5	-0.5	-2.6	3.9
GNP (vol.)	3.2	6.6	1.5	4.9	-2.9	8.1
Productivity per head	1.8	3.2	1.7	1.7	-1.0	4.8

1. Percentage changes at annual rates for employment, average hours and output. Percentage point changes for unemployment and participation rates.



## Chart 2. Developments in inflation around the cyclical trough

Percentage changes from one year earlier

(Vertical line corresponds to the trough of the recession)

— CPI  
 - - - WPI  
 - - - Hourly earnings

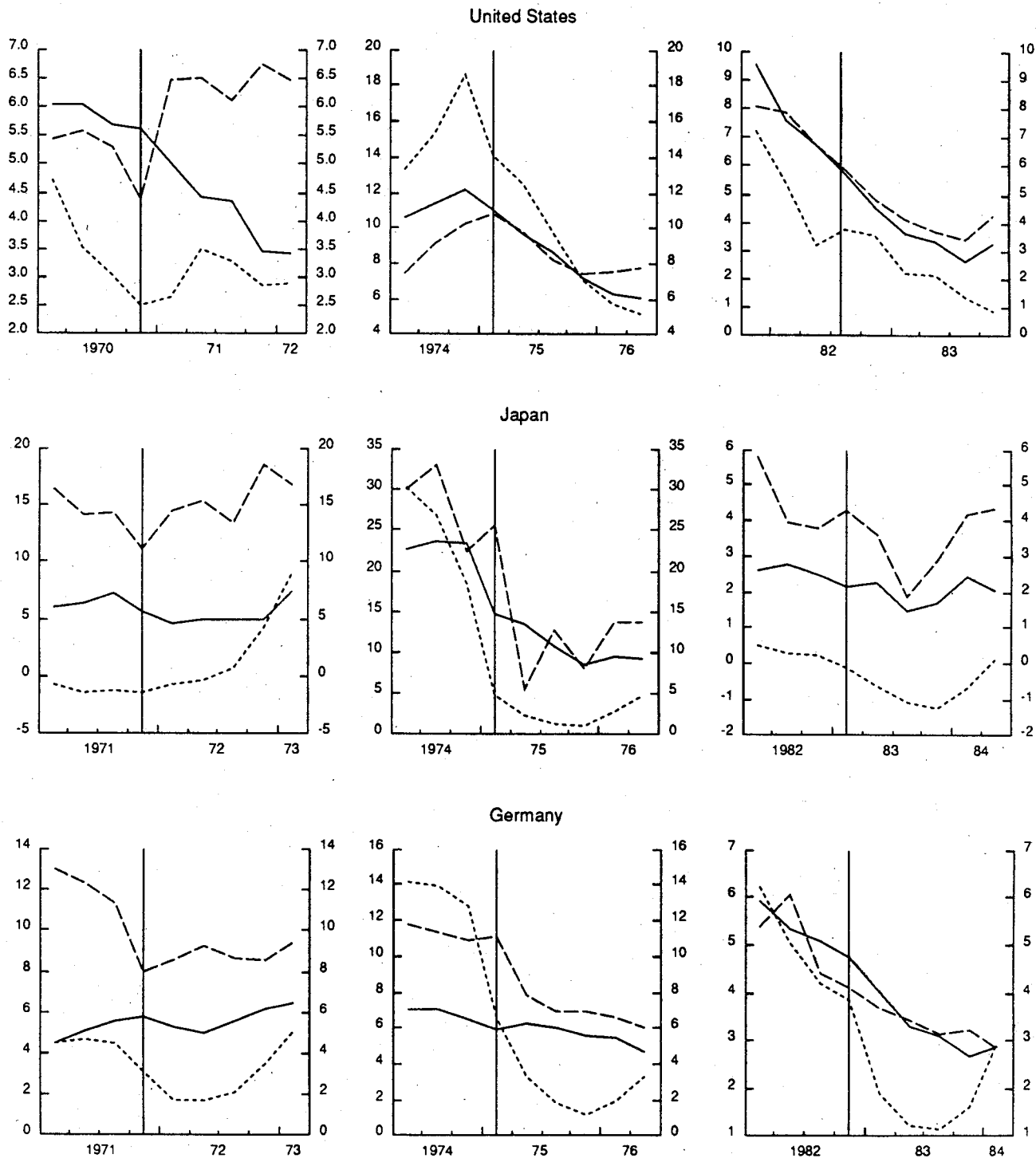
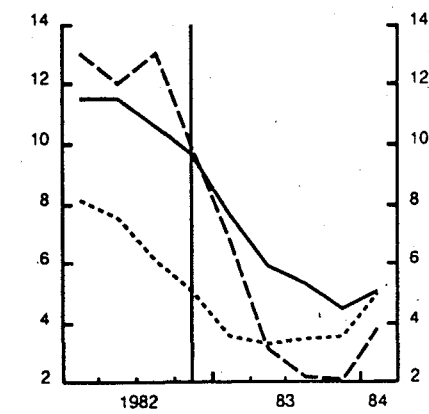
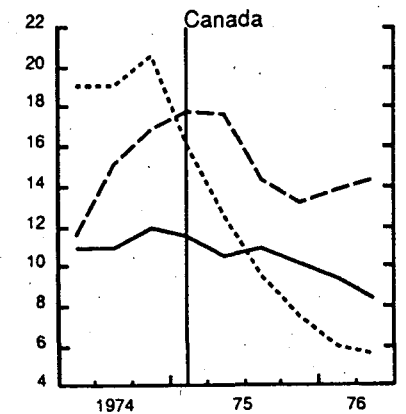
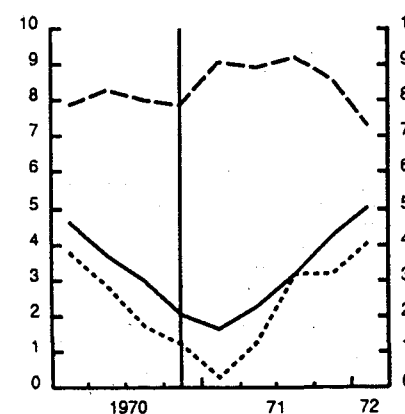
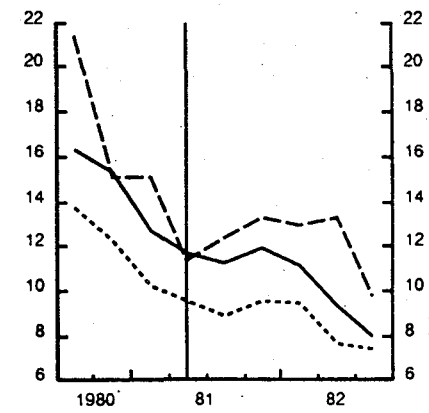
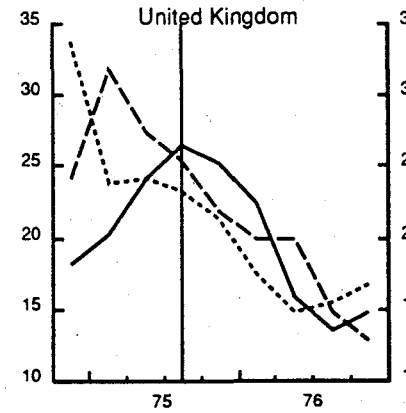
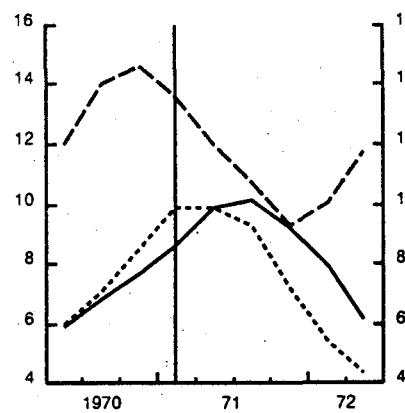
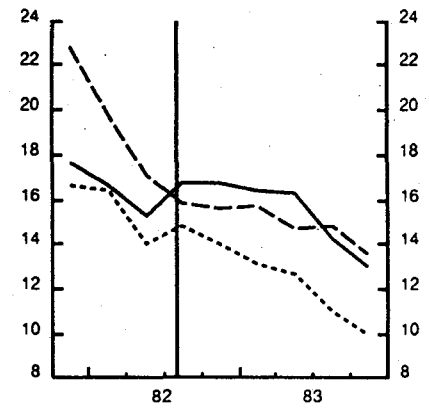
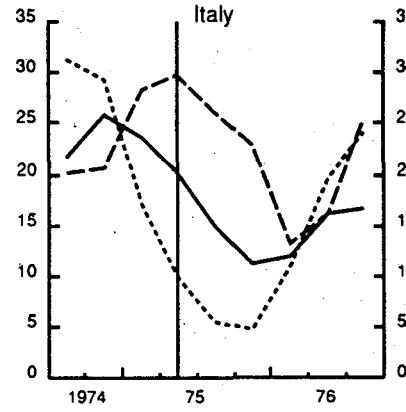
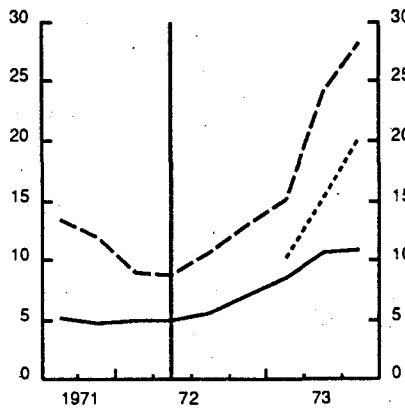
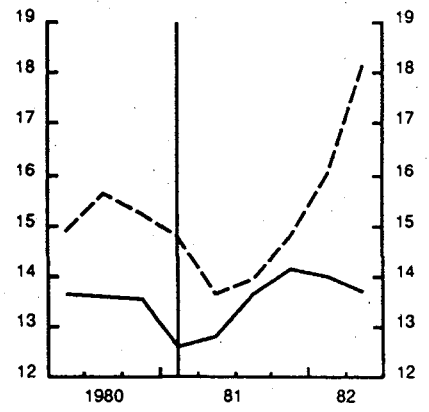
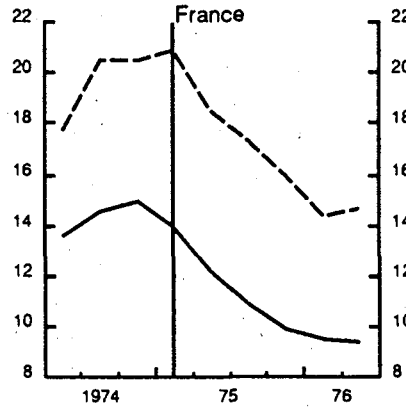
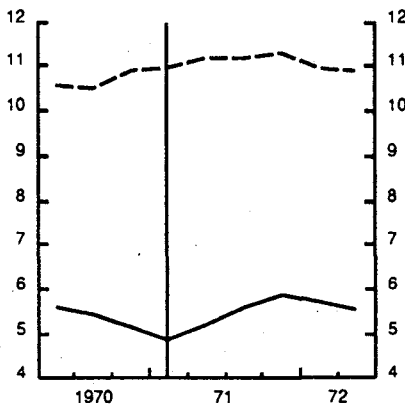


Chart 2 (cont)



should contribute to reverse, as early as the second half of 1991, the decline in residential investment, while business investment should start recovering since early 1992. Canada's exports should benefit from the recovery in the United States, and lead the recovery of the second half of 1991, while the easing of short-term interest rates (more than 300 basis points since the first half of 1990) is expected to increase the role of internal demand at a later stage of the recovery. The recovery in the United Kingdom, led by consumption and exports, is modest in the second half of 1991 but gathers momentum in 1992.

- In France and Italy growth is projected to remain positive in the first half of 1991, and the subsequent acceleration of growth should be mainly led by a recovery in consumption and business investment. In the case of Italy, the importance of internal demand in leading the recovery contrasts with the export-led pattern which was in evidence in previous recoveries.
- In Japan growth is projected to decelerate to a sustainable rate. In Germany, the economy could slow to a below-potential pace as the fiscal stimulus arising from expenditures associated with unification is followed by a more restrictive stance designed to check inflationary tensions.

A moderate output gap is expected to open up and persist over the projection period. The increase of the OECD private consumption deflator is therefore projected to decelerate moderately, with a progressive reduction in inflation differentials across countries (particularly in 1992). Growth rates of GNP and private consumption deflators for the OECD area are currently lower than at cyclical troughs of the past two decades, and the moderate recovery in activity is expected to delay the emergence of inflationary tensions relative to previous episodes.

## NOTES

1. Cyclical troughs of individual countries are based on GNP/GDP growth rates. It should be noted that when the analysis is based on half yearly data, the semester of the trough may be different from that indicated by quarterly data. Quarterly troughs here used are close to those reported in Nilsson (1987), which are based on the deviation of GNP/GDP from trend; the two major exceptions are France and Italy for the period following the second oil shock, where recession troughs here used predate those in Nilsson (1987).

## **References**

Nilsson, R. (1987), "OECD leading indicators", in OECD Economic Studies, Autumn.

ECONOMIC AND STATISTICS DEPARTMENT

WORKING PAPERS

A complete list of Working Papers is available on request.

A complete list of Working Papers No's 1-97 is available  
in Working Paper No. 98.

101. P-Star as an Indicator of Inflationary Pressure  
Peter Hoeller and Pierre Poret
100. Old Age Income Maintenance  
Murray Petrie, Peter Sturm
99. The Measurement of Output and Factors of Production for the Business  
Sector in the 24 OECD Member Countries (March 91)  
Mark Keese, Gerard Salou, Pete Richardson
98. Macroeconomic Consequences of Financial Liberalisation: A Summary Report  
(February 1991)  
Adrian Blundell-Wignall and Frank Browne
97. Deregulation, Credit Rationing, Financial Fragility and Economic  
Performance (February 1991)  
Michael Driscoll
96. Increasing Financial Market Integration, Real Exchange Rates and  
Macroeconomic Adjustment (February 1991)  
Adrian Blundell-Wignall and Frank Browne
95. Financial Liberalisation, Asset Prices and Exchange Rates (February 1991)  
Marcus Miller and Paul Weller
94. Financial Liberalisation and International Trends in Stock, Corporate  
Bond and Foreign Exchange Market Volatilities (February, 1991)  
Paul Kupiec
93. A macroeconomic model for Debt Analysis of the Latin America region  
and Debt Accounting models for the highly indebted countries  
(February, 1991)  
Peter Dittus and Paul O'Brien
92. Unemployment Persistence and Insider-Outsider Forces in Wage  
Determination (February, 1991)  
Bertil Holmlund
91. Infrastructure and Private-Sector Productivity (January 1991)  
Robert Ford and Pierre Poret

90. The Public Sector: Issues for the 1990s(December, 1990)  
Howard Oxley, Maria Maher, John P. Martin, Giuseppe Nicoletti  
and Patricia Alonso-Gamo
89. A Survey of Studies of the Costs of Reducing  
Greenhouse Gas Emissions (December 1990)  
Peter Hoeller, Andrew Dean and Jon Nicolaison
88. Business investment in the OECD economies: recent performance and some  
implications for policy (November 1990)  
Robert Ford, Pierre Poret
87. The "PUZZLE" of wage moderation in the 1980s (November 1990)  
Pierre Poret
86. Modelling wages and prices for the smaller OECD countries (October 1990)  
Kenichi Kawasaki, Peter Hoeller, Pierre Poret
85. Simulating the OECD INTERLINK Model under Alternative Monetary  
Policy Rules (October 1990)  
Pete Richardson
84. WALRAS -- A multi-sector, multi-country applied general equilibrium model  
for quantifying the economy-wide effects of agricultural policies : a  
technical manual (August 1990)  
Jean-Marc Burniaux, François Delorme, Ian Lienert and John P. Martin
83. Exchange Rate Policy in Advanced Commodity-Exporting Countries:  
The Case of Australia and New Zealand  
Adrian Blundell-Wignall  
Robert G. Gregory
82. Economies and the environment: a survey of issues and policy options  
(July 1990)  
Jon Nicolaisen and Peter Hoeller
81. Financial liberalisation and consumption smoothing (forthcoming)  
Adrian Blundell-Wignall, Frank Browne and Stefano Cavaglia
80. Fiscal indicators (April 1990)  
Edward E. Gramlich, The University of Michigan
79. Suggestions for a new set of fiscal indicators (April 1990)  
Olivier Blanchard (MIT and NBER)
78. Indicators of fiscal policy: a re-examination (April 1990)  
Jean-Claude Chouraqui, Robert P. Hagemann and Nicola Sartor
77. Monetary policy in the wake of financial liberalisation (April 1990)  
Adrian Blundell-Wignall, Frank Browne and Paolo Manasse
76. The dollar position of the non-U.S. private sector, portfolio effects,  
and the exchange rate of the dollar (February 1990)  
Bixio Barenco

75. Measuring industrial subsidies: some conceptual issue (February 1990)  
Neil Bruce
74. Industrial subsidies in the OECD economies (January 1990)  
Robert Ford and Wim Suyker
73. The saving behaviour of Japanese households (January 1990)  
Kenichi Kawasaki
72. The role of indicators in structural surveillance (January 1990)
71. Modelling business sector supply for the smaller OECD countries  
(October 1989)  
Raymond Torres, Peter Jarrett and Wim Suyker
70. On the sequencing of structural reforms (September 1989)  
Sebastian Edwards
69. The information content of the terms structure of interest rates: theory  
and practice (September 1989)  
Frank Browne and Paolo Manasse
68. The impact of increased government saving on the economy (June 1989)  
Richard Herd
67. Saving trends and behaviour in OECD countries (June 1989)  
Andrew Dean, Martine Durand, John Fallon and Peter Hoeller
66. Potential output in the seven major OECD countries (May 1989)  
Raymond Torres and John P. Martin
65. A post mortem on OECD short-term projections from 1982 to 1987  
(February 1989)  
Byron Ballis
64. Revised groupings for non-OECD countries in OECD's macroeconomic model  
INTERLINK (January 1989)  
Paul O'Brien, Laure Meuro and Arthur Camilleri
63. Modelling housing investment for seven major OECD countries  
(December 1988)  
Thomas Egebo and Ian Lienert
62. The economic dynamics of an ageing population: the case of four OECD  
economies (January 1989)  
Alan J. Auerbach, Laurence J. Kotlikoff, Robert P. Hagemann and  
Giuseppe Nicoletti
61. Ageing populations: implications for public finances (January 1989)  
Robert P. Hagemann and Giuseppe Nicoletti
60. Compatible trade and production data base: 1970-1985 (November 1988)  
Claude Berthet-Bondet, Derek Blades and Annie Pin