TECHNICAL ANNEX

I. Supporting Notes and Tables

DOMESTIC PROSPECTS

DEMAND AND OUTPUT

TABLE 21
Growth of real GNP of Member countries, 1970 to 1973 I and medium-term trends
Percentage changes
Estimates and forecasts

	Weights in total[a]	Average 1958-59 to 1968-69	From previous year 1970	1971	1972	1972 II to 1973 I[b]
Major seven countries	87.4	5.4	2.4	3.2	5	6
Belgium	1.3	4.7	6.1	4.2	4	4½
Netherlands	1.5	5.3	5.6	4.0	2¼	2¾
Australia[c]	1.7	(5.3)	5.0	4.5	4½	5½
Other OECD North[d]	5.2	4.6	4.9	2.9	3¾	4¼
Austria	0.7	4.5	7.8	5.2	4	3
Denmark	0.8	4.9	3.2	3.6	3¾	4
Finland	0.5	5.1	7.8	1.3	3½	4½
Ireland	0.2	4.2	1.5	2.7	2½	2½
Norway	0.6	4.8	3.5	5.0	4	4½
Sweden	1.5	4.5	4.7	0.3	3½	4½
Switzerland	1.0	4.5	4.5	4.3	4¼	4½
Other OECD South[e]	2.9	6.3	6.1	6.2	6½	7
Of which: Spain	1.6	6.6	5.7	4.8	6	7
Total OECD	100.0	5.4	2.8	3.3	5	6
Of which: Europe	37.3	5.0	5.1	3.1	3¼	5

a) Member countries' GNP for 1970 in current prices converted into United States dollars at 1970 rates of exchange.
b) Seasonally adjusted at annual rates
c) Non-farm GNP.
d) Including Luxembourg and Iceland.
e) Greece, Portugal, Spain and Turkey.

COSTS AND PRICES

TABLE 22
Non-food consumer prices in seven major countries
Percentage changes; seasonally adjusted at annual rates

	Average 1958-59 to 1968-69	From previous year 1970	1971	From previous half-year 1970 II	1971 I	1971 II	From previous quarter 1972 QI
United States	2.2	6.0	4.6	6.0	4.5	3.6	2.8
Canada	2.3	4.0	3.7	3.7	3.4	4.2	4.2
Japan	4.7	7.6	6.4	6.1	7.0	5.8	4.2
France	4.1	4.8	5.0	4.0	5.2	5.7	2.6
Germany	2.9	4.5	5.9	5.0	6.3	6.2	4.5
Italy	4.1	5.4	5.3	5.7	5.5	4.9	5.3
United Kingdom	3.5	6.8	9.5	9.2	10.4	8.3	5.1
Total of above countries[a]	2.8	5.9	5.3	5.9	5.4	4.6	3.5

a) Weighted by 1970 private consumption at 1970 exchange rates.

TABLE 23
Food consumer prices in seven major countries
Percentage changes; seasonally adjusted at annual rates

	Average 1958-59 to 1968-69	From previous year 1970	1971	From previous half-year 1970 II	1971 I	1971 II
United States	1.9	5.5	3.0	-3.0	0.8	6.4
Canada	2.4	2.1	1.2	1.7	3.3	3.6
Japan	5.7	8.1	5.7	4.7	5.6	6.6
France	3.6	5.7	6.6	6.1	5.4	7.1
Germany	1.7	2.9	3.7	1.7	3.9	5.8
Italy	2.8	4.3	4.3	4.1	4.1	4.8
United Kingdom	3.1	5.9	9.3	6.8	10.1	10.0
Total of above countries[a]	2.3	5.4	4.1	2.7	4.2	5.1

a) Weighted by 1970 private consumption at 1970 exchange rates.

TABLE 24
Unit wage or labour costs in manufacturing
Seasonally adjusted
Indices, 1967 = 100

		1969	1970	1971	1970 Q1	1970 Q2	1970 Q3	1970 Q4	1971 Q1	1971 Q2	1971 Q3	1971 Q4	1972 Q1
		Annual percentage changes											
United States													
Unit labour costs	$	3.6	6.0	2.7	112.3	112.7	114.0	115.3	115.9	116.1	117.3	117.2	119.1
Canada													
Unit wage and salary costs	C $	5.2	6.4	5.1	109.4	110.6	113.5	114.9	116.2	118.7	118.9	117.6	..
	$	5.2	10.0	8.7	109.4	112.7	119.9	121.8	124.6	126.7	126.5	126.8	..
Japan													
Unit wage and salary costs	Yen	3.0	4.2	8.1	103.0	104.8	107.6	113.1	112.5	116.2	117.9	119.3	118.8
	$	3.0	4.2	11.7	103.0	104.8	107.6	113.1	112.5	116.2	121.7	131.4	139.4
France													
Unit wage costs	FF	1.5	4.2	4.8	103.4	105.3	106.9	108.4	108.8	112.6	111.1	113.0	..
	$	-2.9	-3.2	5.2	91.9	93.6	95.0	96.4	96.7	100.1	99.2	101.7	..
Germany (Mining and manufacturing)													
Unit wage and salary costs	DM	2.2	13.0	7.9	107.4	108.3	112.7	117.9	116.2	119.7	124.0	124.0	121.8[a]
	$	3.9	21.4	13.3	117.4	118.4	123.2	128.9	127.0	133.5	145.2	149.7	152.1[a]
Italy													
Unit labour costs	Lire	4.4	13.7	13.3	108.7	117.1	118.6	121.7	126.8	131.7	135.3	134.2	..
	$	4.4	13.7	14.3	108.7	117.1	118.6	121.7	126.8	131.7	136.6	137.8	..
United Kingdom													
Unit wage and salary costs	£	5.7	10.8	7.7	113.0	117.3	120.0	122.2	125.5	126.4	127.9	129.0	..
	$	5.7	10.8	9.3	98.2	101.9	104.2	106.1	109.0	109.8	112.8	116.9	..

a) January February.

Note : Conversion into U.S. dollars has been made at official parity rates up to August 1971, except for periods of float for the Canadian dollar and Deutschemark. From August 1971 average daily spot rates have been used.

Sources: Various national sources; see Tables 25-31 and " Sources and Methods ".

TABLE 25
Costs and prices
FRANCE
Indices, 1967 = 100

	1969	1970	1971	1970 Q1	1970 Q2	1970 Q3	1970 Q4	1971 Q1	1971 Q2	1971 Q3	1971 Q4	1972 Q1
Manufacturing (s.a.)												
Hourly rates[a]	125.0	138.2	153.6	133.0	136.5	139.8	143.5	147.7	151.8	155.5	159.5	..
Employment[a]	99.6	101.2	101.7	100.8	101.2	101.5	101.4	101.2	101.6	102.2	102.1	..
Output	117.3	124.9	132.3	123.4	124.3	125.3	126.6	129.9	128.9	134.1	135.1	..
Unit wage costs[b]	101.7	106.0	111.0	103.4	105.3	106.9	108.4	108.8	112.6	111.1	113.0	..
Prices												
Consumer prices (s.a.)	111.3	117.3	123.9	115.1	116.8	118.1	119.4	120.7	122.8	124.8	126.4	127.7
Wholesale prices:												
Intermediate goods[c]	107.9	115.1	119.7	114.6	115.6	114.8	115.2	117.3	119.5	120.6	121.6	122.9
Raw materials	111.9	122.7	118.8	125.1	125.8	121.5	117.9	119.4	119.4	118.3	118.2	119.0

a) Survey relating to the last complete week of previous quarter; figures shown are moving averages of succeeding quarters, and are not seasonally adjusted.

b) A crude measure of unit wage costs (excluding salaries) has been derived using hourly wage rates, employment and hours worked divided by the output index.

c) Excluding food and fuel.

Sources : INSEE, *Bulletin Mensuel de Statistique* and OECD, *Main Economic Indicators.*

TABLE 26
Costs and prices
GERMANY
Indices, 1967 = 100

	1969	1970	1971	1970 Q1	1970 Q2	1970 Q3	1970 Q4	1971 Q1	1971 Q2	1971 Q3	1971 Q4	1972 Q1
Manufacturing and mining (s.a.)												
Hourly rates[a]	111.1	125.2	142.4	118.1	121.7	126.3	134.7	138.9	140.9	144.3	145.6	151.0
Wages and salaries per manhour	116.3	135.5	152.9	128.6	131.9	137.3	144.0	147.3	150.0	156.7	157.4	160.4[b]
Output per manhour	117.1	120,5	126.0	120.0	120.8	120.8	120.8	125.4	125.4	125.4	126.9	130.7[b]
Unit wage and salary costs	99.2	112.1	121.0	107.4	108.3	112,7	117.9	116.2	119.7	124.0	124.0	121.8[b]
Prices												
Consumer prices (s.a.)	104.6	108.5	114.1	107.0	108.0	108.9	110.1	111.5	113.3	115.0	116.6	117.8
Industrial producer prices:												
Investment goods	98.7	108.1	117.1	105.6	106.9	108.2	111.8	115.7	116.8	117.6	118.4	120.7
Consumer goods	95.4	100.0	104.8	98.7	99.3	100.4	101.6	104.0	104.6	105.0	105.6	107.5

a) Manufacturing industries not seasonally adjusted.
b) January-February.

Sources : Statistical Supplement of the Bundesbank and OECD, *Main Economic Indicators.*

TABLE 27
Costs and prices
ITALY
Indices, 1967 = 100

a) Excluding family allowances.
b) All employees.
c) Not seasonally adjusted.
d) Including iron and steel and construction materials.

Sources : Bollettino Mensile di Statistica; Banca d'Italia, Annual Report and OECD, Main Economic Indicators.

	1969	1970	1971	1970 Q1	1970 Q2	1970 Q3	1970 Q4	1971 Q1	1971 Q2	1971 Q3	1971 Q4	1972 Q1
Manufacturing (s.a.)												
Hourly wage rates[a] c	111.4	135.4	153.8	129.6	134.1	137.0	141.2	149.6	152.3	155.4	158.0	..
Employment[b] c	105.4	109.0	111.3	107.2	108.7	109.5	110.6	111.1	111.3	111.4	111.3	109.3
Output	116.2	117.6	113.7	119.3	116.9	116.3	118.1	116.0	112.5	109.9	116.3	115.2
Unit labour costs	102.5	116.5	132.0	108.7	117.1	118.6	121.7	126.8	131.7	135.3	134.2	..
Prices												
Consumer prices (s.a.)	104.0	109.2	114.5	107.1	108.6	109.7	111.3	112.5	113.8	115.1	116.6	117.8
Wholesale prices	104.3	111.9	115.6	110.4	111.9	112.1	113.5	114.6	115.1	116.0	116.7	..
Investment goods[d]	108.0	120.0	122.1	118.9	120.5	120.5	120.3	121.4	122.0	122.6	122.5	123.8
Consumer goods	103.7	110.3	113.5	108.8	110.3	110.2	112.0	112.5	112.9	113.8	115.0	116.5

TABLE 28
Costs and prices
UNITED KINGDOM
Indices, 1967 = 100

a) Not seasonally adjusted.
b) Beginning 1970 new classification.

Sources : Department of Employment Gazette and OECD, Main Economic Indicators.

	1969	1970	1971	1970 Q1	1970 Q2	1970 Q3	1970 Q4	1971 Q1	1971 Q2	1971 Q3	1971 Q4	1972 Q1
Manufacturing (s.a.)												
Hourly wage rates (males)[a]	114.2	125.3	139.6	120.9	123.3	126.7	130.3	135.5	138.2	140.7	144.0	149.2
Average weekly earnings (GB)[a]	117.1	132.0	146.9	125.2	130.4	133.9	138.3	142.1	146.1	148.3	151.1	156.3
Employment	100.7	100.4	97.1	100.8	101.0	100.4	99.8	99.3	97.7	96.5	94.9	93.7
Output	110.0	111.3	111.1	110.9	110.5	111.5	112.4	111.0	111.5	112.2	111.0	108.3
Unit wage and salary costs[b]	106.6	118.1	127.2	113.0	117.3	120.0	122.2	125.5	126.4	127.9	129.0	..
Prices												
Consumer prices (s.a.)	110.4	117.4	128.5	114.1	116.1	118.4	121.0	123.9	127.5	130.4	132.2	133.8
Wholesale prices:												
Manufactured goods	107.1	115.2	125.3	111.4	114.2	116.2	118.6	121.7	124.7	126.9	127.9	129.6
Raw materials	115.3	118.5	125.2	119.9	119.2	117.2	117.9	121.0	126.7	127.2	125.6	126.6

TABLE 29
Costs and prices
UNITED STATES
Indices, 1967 = 100

Sources: Survey of Current Business; Business Conditions Digest; Employment and Earnings and OECD, Main Economic Indicators.

	1969	1970	1971	1970 Q1	1970 Q2	1970 Q3	1970 Q4	1971 Q1	1971 Q2	1971 Q3	1971 Q4	1972 Q1
Manufacturing (s.a.)												
Hourly earnings less overtime	112.9	119.6	127.6	116.6	118.7	120.9	122.4	125.0	126.9	128.7	129.9	132.9
Wages and salaries	117.4	118.0	119.9	119.7	118.6	118.6	115.6	118.4	119.8	119.6	121.6	125.8
Manhours	103.3	96.3	92.7	100.5	97.7	95.8	91.4	92.6	93.0	92.0	93.0	93.9
Output	110.5	105.2	104.8	106.7	106.5	105.7	101.3	103.5	105.2	104.5	105.4	107.5
Unit labour costs	107.2	113.6	116.7	112.3	112.7	114.0	115.3	115.9	116.1	117.3	117.2	119.1
Prices												
Consumer prices (s.a.)	109.8	116.3	121.3	114.0	115.8	117.0	118.5	119.6	120.9	122.0	122.7	123.8
Wholesale prices	106.5	110.4	113.9	109.6	110.1	110.8	111.0	112.5	113.8	114.7	114.8	117.0
Manufactured goods	106.6	110.4	113.5	109.9	109.8	110.5	111.2	112.7	113.4	113.9	114.3	116.0

TABLE 30
Costs and prices
CANADA
Indices, 1967 = 100

a) Major collective agreements in force excluding retroactive increases.
b) January-February.

Sources: Canadian Statistical Review; Bank of Canada Review; Canada Department of Labour and OECD, Main Economic Indicators.

	1969	1970	1971	1970 Q1	1970 Q2	1970 Q3	1970 Q4	1971 Q1	1971 Q2	1971 Q3	1971 Q4	1972 Q1
Manufacturing (s.a.)												
Basic rates agreement index[a]	114.0	121.7	132.7	118.7	120.3	122.4	125.3	128.4	131.4	134.3	136.6	138.5
Wages and salaries	118.3	124.8	134.2	123.7	124.5	125.3	125.7	129.8	133.4	136.2	137.3	..
Hours worked	99.3	98.5	98.5	98.9	98.6	98.2	98.5	97.8	98.0	98.3	99.8	98.6[b]
Output	112.3	111.3	113.9	112.9	112.5	110.4	109.3	111.7	112.3	114.5	116.8	117.7
Unit wage and salary costs	105.3	112.0	117.8	109.4	110.6	113.5	114.9	116.2	118.7	118.9	117.6	..
Prices												
Consumer prices (s.a.)	108.9	112.5	115.7	111.8	112.5	112.8	113.0	113.7	115.0	116.5	117.8	119.3
Wholesale prices	106.9	108.4	109.8	109.4	109.0	107.9	107.6	108.3	109.3	110.4	111.1	114.3
Manufactured goods	107.5	108.8	112.8	108.9	109.0	108.5	109.0	110.2	112.0	113.7	115.2	118.0
Raw materials	105.6	107.7	103.9	110.2	109.1	106.6	104.9	104.4	104.1	104.0	103.1	106.9

TABLE 31
Costs and prices
JAPAN
Indices, 1967 = 100

a) Including raw materials, fuels and energy, construction materials and semi-finished goods.

Sources: Bank of Japan, Economic Statistics Monthly and OECD, Main Economic Indicators.

	1969	1970	1971	1970 Q1	1970 Q2	1970 Q3	1970 Q4	1971 Q1	1971 Q2	1971 Q3	1971 Q4	1972 Q1
Manufacturing (s.a.)												
Monthly earnings per regular worker	133.7	157.2	178.8	145.0	153.4	160.3	164.7	169.7	175.2	182.9	184.1	194.2
Employment (regular workers)	107.9	111.3	111.2	110.1	111.0	111.8	112.2	111.9	111.2	111.1	110.5	109.4
Output	138.1	160.7	160.8	152.8	160.8	164.9	164.0	167.2	165.3	171.4	171.4	177.6
Unit wage and salary costs	104.5	108.9	117.7	103.0	104.8	107.6	113.1	112.5	116.2	117.9	119.3	118.8
Prices												
Consumer prices (s.a.)	110.8	119.4	126.7	116.9	118.8	119.6	122.3	123.6	126.2	128.1	128.9	128.9
Wholesale prices	103.0	106.7	105.9	106.3	106.9	106.8	106.7	106.1	106.2	105.2	105.3	105.5
Producer goods[a]	101.7	106.1	103.4	106.1	106.9	106.1	105.1	104.0	103.9	103.5	102.1	102.5
Investment goods	101.3	103.1	103.9	102.1	102.9	103.6	103.8	103.7	103.9	104.0	103.9	103.8

RECENT BEHAVIOUR OF WAGES IN THE SEVEN MAJOR OECD COUNTRIES

Wage equations for five major OECD countries were set out in Annex A.5 of the Report by the Secretary-General of the OECD, *Inflation: the Present Problem.*[1] This earlier work has now been updated, and extended to cover Italy and Japan in addition to the five countries treated earlier.[2]

The main difference between the earlier and present equations is that in the case of Germany and France the labour market variable has been replaced by a variable reflecting capacity utilisation in industry.[3] The new variable gives improved results. There are a number of possible reasons why this should be so. It can be argued that industry is the leading sector in the economy in the wage determination process; the labour market variables relate to the whole economy. Capacity utilisation is probably a more sensitive indicator of demand pressure than labour market developments.

A variable has also now been tried to test whether an acceleration of price increases influences wages. It can be argued that price expectations are not only determined by the rate of past price increases, but also by changes in the rate of increase.

1. Paris, December 1970.
2. The observation period includes the nineteen-sixties and, for some countries, the last years of the nineteen-fifties.
3. For Germany, the DIW capacity utilisation index; for France an index derived from the INSEE Business Survey indicator of production bottlenecks.

TABLE 32
Wage equations

							Constant	R^2	STE	DW
Canada	$\frac{1}{u_{t-1}}$	$DPnf_{t-1}$								
	13.42	0.96					0.06	0.78	0.91	1.2
	(4.3)	(6.9)					(0.1)			
United States	$\frac{1}{u_{t-1}}$	DPc_{t-1}	+ DDPc	$DProf_{t-1}$						
	18.28	0.35	0.30	0.03			-0.11	0.72	0.72	1.3
	(5.2)	(3.1)	(2.6)	(3.7)			(0.2)			
Japan (half-yearly figures)	$\frac{1}{u_{t-1}}$	$DPc_{t-\frac{1}{2}}$		$DProf_{t-1}$						
	6.52	0.58		0.68			-4.59	0.84	1.56	1.4
	(2.5)	(2.4)		(4.7)			(2.1)			
France	$\frac{1}{CAP_{t-1}}$	DPc_{t-1}	+ DDPc		DUM (1)	DUM (2)				
	-55.17	0.30	0.12		9.08	-1.12	8.25	0.90	1.0	0.6
	(3.4)	(6.3)	(2.5)		(16.8)	(3.0)	(10.5)			
Germany	$UCAP_{t-1}$	DPy_{t-1}	+ DDPy	DProd		DUM				
	0.41	0.70	0.79	0.42		2.25	-31.47	0.85	0.90	1.9
	(7.6)	(2.6)	(3.8)	(3.1)		(2.8)	(7.9)			
Italy	$\frac{1}{u_{t-1}}$	DPc_{t-1}	+ DDPc							
	34.05	1.05	0.62				-7.02	0.81	1.87	0.8
	(3.4)	(4.0)	(3.2)				(2.9)			
United Kingdom	VAC_{t-1}	DPc_{t-1}		DProd	DVAC	DUM				
	2.68	0.49		0.22	3.39	-3.52	1.72	0.55	0.97	1.2
	(2.6)	(4.2)		(2.0)	(2.7)	(4.8)	(1.7)			

SYMBOLS USED IN TABLE

D	Percent change of quarter over same quarter in previous year.
t-1	(Subscript) one quarter lagged.
$\frac{1}{u}$	Weighted average of the reciprocal of the unemployment rate.
SVAC	Weighted average of vacancy rate.
UCAP	Weighted average of percentage of unused capacity in industry.
$\frac{1}{CAP}$	Weighted average of the reciprocal of capacity utilisation.
DVAC	Change in vacancies.
Py	GNP deflator.
Pc	Consumer prices.
Pnf	Consumer prices less food.
Prod	Productivity.
Prof	Profits.
+ DDPc	Acceleration variable for prices positive values for: $((Pc_{t-1}/Pc_{t-3}) \times 100 - (Pc_{t-3}/Pc_{t-5}) \times 100) \times 2$
DUM	Dummy variables: United Kingdom : 1967 wage freeze. France (1) : wage settlements of summer 1968. France (2) : stabilisation measures from 1964 III to 1967 III. Germany : severe winter in 1963.
STE	Standard error of the equation in % of dependent variable.
R^2	Regression coefficient corrected for degrees of freedom
DW	Durban Watson ratio.

Figures in brackets are *t* ratios.

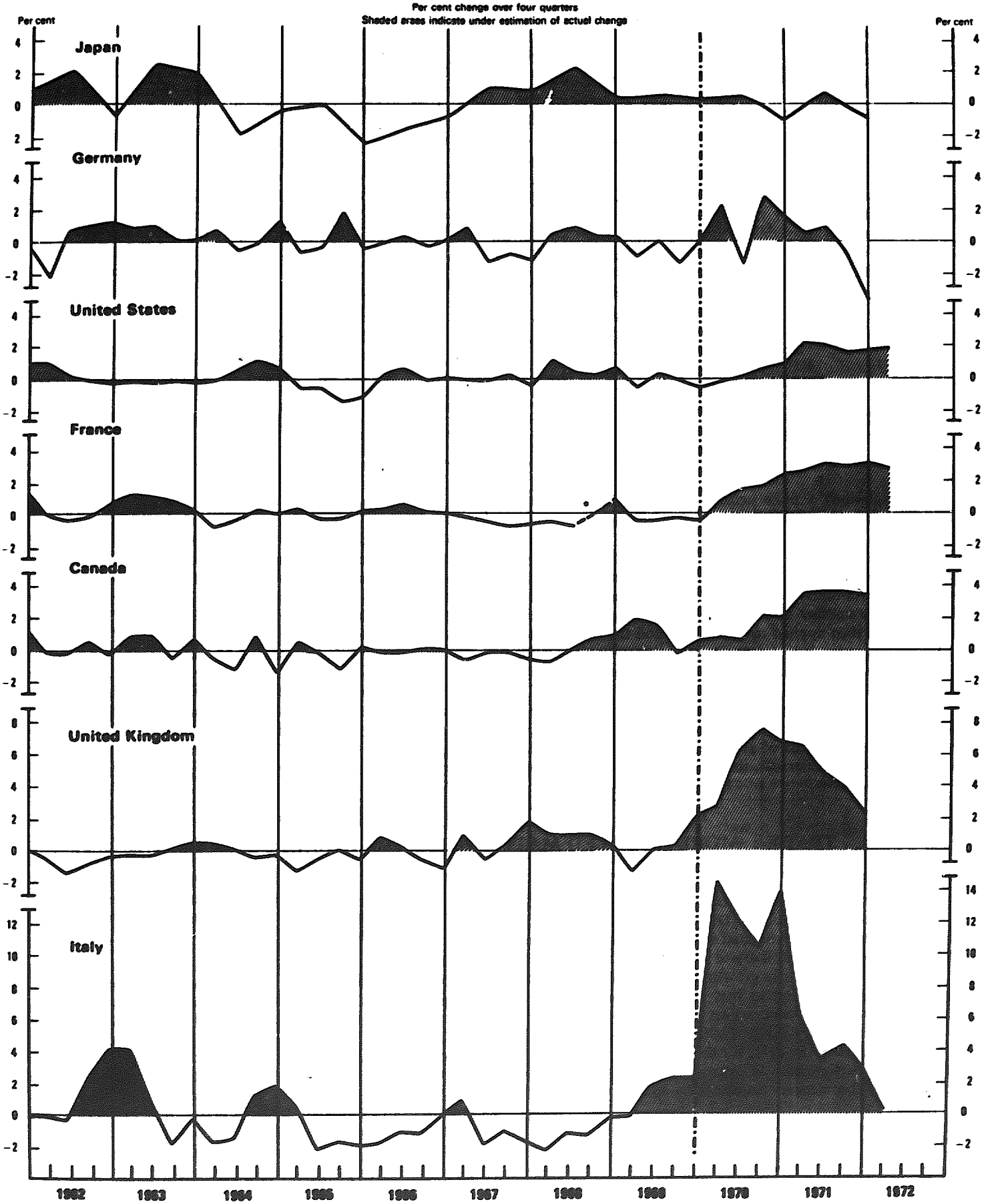
Dependent variables:
Canada: hourly earnings in manufacturing.
France and Italy: hourly rates in manufacturing.
United Kingdom, Germany and Japan: compensation per employee.
United States: hourly compensation per employee in the private non-farm sector.

CHART R

EVOLUTION OF WAGES IN SEVEN MAJOR COUNTRIES, ACTUAL *minus* PREDICTED 1962-1969, ACTUAL *minus* FORECAST 1970-1972

Per cent change over four quarters

Shaded areas indicate under estimation of actual change



* Dummy of 9.0 % reflecting the exceptional circumstances of May-June 1968.

TABLE 33
Actual and forecast changes of wages
Percentage change over the same period in the previous year.

		Forecast period									
		1970				1971				1972	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Canada	A	7.9	7.7	8.3	8.2	9.3	9.2	9.0	8.8		
	F	7.2	7.0	6.3	6.1	5.8	5.4	5.3	5.6		
	A-F	0.8	0.7	*2.1*	*2.1*	*3.5*	*3.7*	*3.6*	*3.3*		
United States	A	6.7	6.7	7.1	6.9	7.3	7.3	6.5	6.4	6.6	
	F	6.8	6.5	6.3	6.0	5.2	5.2	4.9	4.7	4.7	4.3
	A-F	-0.2	0.2	0.7	0.9	*2.1*	2.0	1.6	1.7	1.9	
Japan (half-yearly figures)	A	15.9		16.9		15.4		13.3			
	F	15.6		17.8		14.7		14.1			
	A-F	0.3		-0.9		0.7		-0.8			
France	A	9.4	10.6	10.5	10.9	11.0	11.2	11.2	11.3	11.0	
	F	8.6	8.9	8.8	8.5	8.3	8.1	8.3	8.2	8.2	8.1
	A-F	0.8	1.6	1.7	*2.4*	*2.7*	*3.1*	*2.9*	*3.1*	*2.8*	
Germany	A	15.0	15.1	15.6	14.3	15.0	12.7	12.4	11.0		
	F	12.8	16.4	12.9	12.9	14.5	11.8	13.3	14.6		
	A-F	*2.2*	-1.3	*2.7*	1.4	0.5	0.9	-0.9	*-3.6*		
Italy	A	22.2	21.0	20.7	22.6	15.4	13.6	13.5	11.8	9.1	
	F	7.8	8.9	10.1	8.8	9.4	10.0	9.1	9.0	8.9	9.5
	A-F	*14.4*	*12.1*	*10.6*	*13.8*	*6.0*	*3.5*	*4.3*	*2.9*	0.2	
United Kingdom	A	9.6	12.9	14.8	14.1	13.9	11.9	11.5	10.7		
	F	6.8	6.6	7.2	7.4	7.4	7.1	7.6	8.4		
	A-F	*2.8*	*6.3*	*7.5*	*6.7*	*6.5*	*4.8*	*3.9*	*2.3*		

A = Actual.
F = Forecast.
Note : Figures *italicised* are residuals larger than two per cent.

In several equations a price acceleration variable was found significant. Variables for decelerating prices however were not significant.

The equations were estimated over a period ending in 1969. Dummy variables were included to take into account exceptional events in certain countries during the observation period, notably in France in the summer of 1968 and certain other cases.[1] The equations were then applied to 1970, 1971 and the first quarter of 1972 to determine how far the relationships established for the earlier period were reflected in wage developments in the more recent past.

As chart R shows, wage increases in the United Kingdom and Italy have recently exceeded considerably what would have been forecast on the basis of past relationships. For Canada, France and, to a lesser extent, the United States, the equations also underestimate actual wage developments. A certain synchronisation of the residuals in five of the seven countries is conspicuous. Such synchronisation can also be noted in milder form on some earlier occasions, for example in 1963 and 1968 —especially when taking into account that a dummy variable has been introduced for France. In the case of Germany and Japan, although wage increases in 1970 and 1971 have been of record size, wage developments do not appear to have been greatly out of line with past experience, taking into account the prevailing demand pressures, prices rises and the evolution of the other variables in the equations. It should be noted, however, that the rather low Durbin-Watson statistics, indicating a high intercorrelation of the residuals among the variables of individual equations, cast some uncertainty on the statistical significance of these findings.

TRADE AND CURRENT BALANCES

TRADE : MORE DETAILED MATERIAL ON INDIVIDUAL COUNTRIES

United Kingdom

An acceleration of import growth in volume is forecast for 1972, reflecting a strong GDP forecast. Imports in the first half seem to have been inflated somewhat by special imports induced by the miners' strike and a catch-up from the U.S. dock strikes. The half-yearly growth path of imports thereafter should roughly correspond to that of GDP. The realignment is unlikely to have any major effect on the volume of imports or exports. The United Kingdom made a gain of export market share in volume terms in 1971, for the first time in many years, but this good performance is apparently not continuing. It is expected that the marked deterioration in the United Kingdom's price competitiveness observed in the recent period will have an increasingly adverse effect on its export performance. A growing loss of market share in volume is forecast for 1972 and the first half of 1973.

United States

Exports and imports in 1971 and early 1972 were greatly distorted by dock strikes, obscuring underlying developments [2]. On the import side, the effect of the dollar devaluation is likely to be masked, during the forecast period, by the strong import demand associated with relatively fast GNP growth and the mechanical rebound from the strike-depressed 1971 level. In 1971 the volume of U.S. exports actually fell. However, the large effective devaluation of the dollar, together with a recent relatively favourable underlying price performance, should progressively improve the U.S. competitive position. Thus, increasing gains of market share in volume terms, partly aided by a rebound from the dock strikes, are assumed for the forecast period.

1. It may be argued that the more recent wage explosion in Italy is as "exceptional" an occurence as those for which dummy variables have been introduced. No such treatment of the Italian experience was appropriate in the present study, however, since it occurs outside the observation period.

2. The West Coast strike began 1st July 1971 and ran to early October. It was resumed on 17th January 1972 and ran until mid-February. The East Coast strike started on 1st October 1971 and lasted through November.

France

Since the relative position of the French franc was barely changed by the realignment, there is unlikely to be much effect on French import and export volumes. Starting from the high level reached in 1971 second half, imports are expected to keep growing steadily, in line with the growth of GDP. France realised another large gain of market share in volume terms in 1971, reflecting continued competitive strength, and continuing strong export performance is expected during the forecast period.

Germany

The deceleration of real import growth that started, with the slowdown of the domestic economy, in 1971 seems to be continuing in the early part of 1972. Nevertheless, the expected recovery of the economy, coupled with the upward effect of the effective revaluation on import volumes, should lead to the resumption of strong import growth in the course of 1972. Germany gained export market shares in volume in 1971 despite the 1969 revaluation and the upward floating of the DM from mid-1971. For 1972 and the first half of 1973 losses of volume market share are forecast as the adverse effects of the revaluation work themselves through.

Italy

Following the decline in import volume last year, imports are expected to rebound, despite the expectations of only a modest recovery from last year's stagnant domestic demand. Although the forecast volume growth of imports is relatively high, they remain well below high employment levels, since the slack in the economy is expected to remain important throughout the forecast period. Last year Italy recorded a small gain in market shares after two years of extraordinary losses. With export supply conditions normalised, Italy is expected to make substantial real gains of market share in 1972 in view of weak domestic demand and the additional boost of the effective devaluation of the Italian lira.

TABLE 34

Imports of OECD countries in volume

Percentage changes, seasonally adjusted at annual rates

	From previous year			From previous half-year				
	1970	1971	1972	1971 I	1971 II	1972 I	1972 II	1973 I
United Kingdom	5.2	5.1	7½	5.9	1.2	12	10	8
United States	3.4	8.5	11	16.2	0.4	20	6½	9½
France	7.3	6.3	10	-1.4	11.9	10	9	10
Germany	14.4	10.8	6½	10.4	9.0	3	9½	11
Italy	15.0	-2.1	8	-5.1	-3.4	13	9½	10½
Belgium-Luxembourg	9.4	6.5	6¾	4.6	4.2	6½	9	9½
Netherlands	14.3	5.4	3½	-0.9	8.6	½	5	6½
Canada	-3.6	9.7	14	17.3	16.6	14½	10½	10
Japan	19.9	0.6	11½	-1.6	-3.6	14½	15½	15
Australia	8.0	-2.4	5¾	-8.4	-2.0	7¾	9¾	10
Other OECD North	13.7	1.6	4¾	-1.9	2.6	5½	8½	9½
Other OECD South	8.1	2.2	13	0.9	6.3	21	8½	11½
Total OECD	9.1	5.2	8½	4.6	3.6	10¾	9½	10

TABLE 35

Export performance of OECD countries

Volumes, percentage changes

	Annual rate of growth of						Relative export performance[b]				
	Markets[a]	Exports	Markets[a]	Exports	Markets[a]	Exports	1960 to 1970 Annual rate	1969 to 1970	1970 to 1971	1971 to 1972	1972 I to 1973 I
	1970 to 1971		1971 to 1972		1972 I to 1973 I						
United Kingdom	4.8	6.0	5½	½	8½	5¾	-3.5	-6.8	1.2	-4¾	-2¾
United States	4.7	-1.3	9½	11½	7¾	11	-1.8	0.8	-6.0	2½	3½
France	5.4	8.2	6½	9½	8¾	9½	1.2	4.6	2.8	2¾	½
Germany	5.0	6.7	7	4½	8½	4½	0.8	-1.0	1.7	-2½	-3¾
Italy	6.7	7.2	7¾	12	8¾	9½	3.8	-3.4	0.5	4½	¾
Belgium-Luxembourg	6.7	4.0	7½	2¾	9½	6½	0.8	1.2	-2.7	-4¾	-2¾
Netherlands	5.9	11.4	8	5½	9½	8	1.2	1.7	5.5	-2½	-1½
Canada	9.0	4.7	8½	6½	8½	8	-1.7	6.1	-4.3	-1¾	-½
Japan	7.1	16.5	6	7½	7½	8½	8.5	8.3	9.4	1½	1
Other OECD North	4.8	2.4	7½	8½	8¾	9½	..	-3.0	-2.4	1	½
Other OECD South	5.5	10.6	7½	17½	8	12¾	..	2.0	5.1	9¾	4¾
Total OECD[c]	6.0	6.0	7½	7½	8½	8½	—	—	—	—	—

a) The growth of a country's export markets in current dollar value has been deflated by an index of the export unit value pertaining to a country's export markets. To obtain this index, total export unit values have first been weighted by exporters' shares in each market, and the results have then been weighted by the distribution of the country's exports. See page 116.

b) The difference between the rates of growth of markets and exports (both in volume terms), i.e., a measure of the extent to which countries have gained (+) or lost (—) market shares on average in volume terms.

c) Australian data have not yet been included in this calculation.

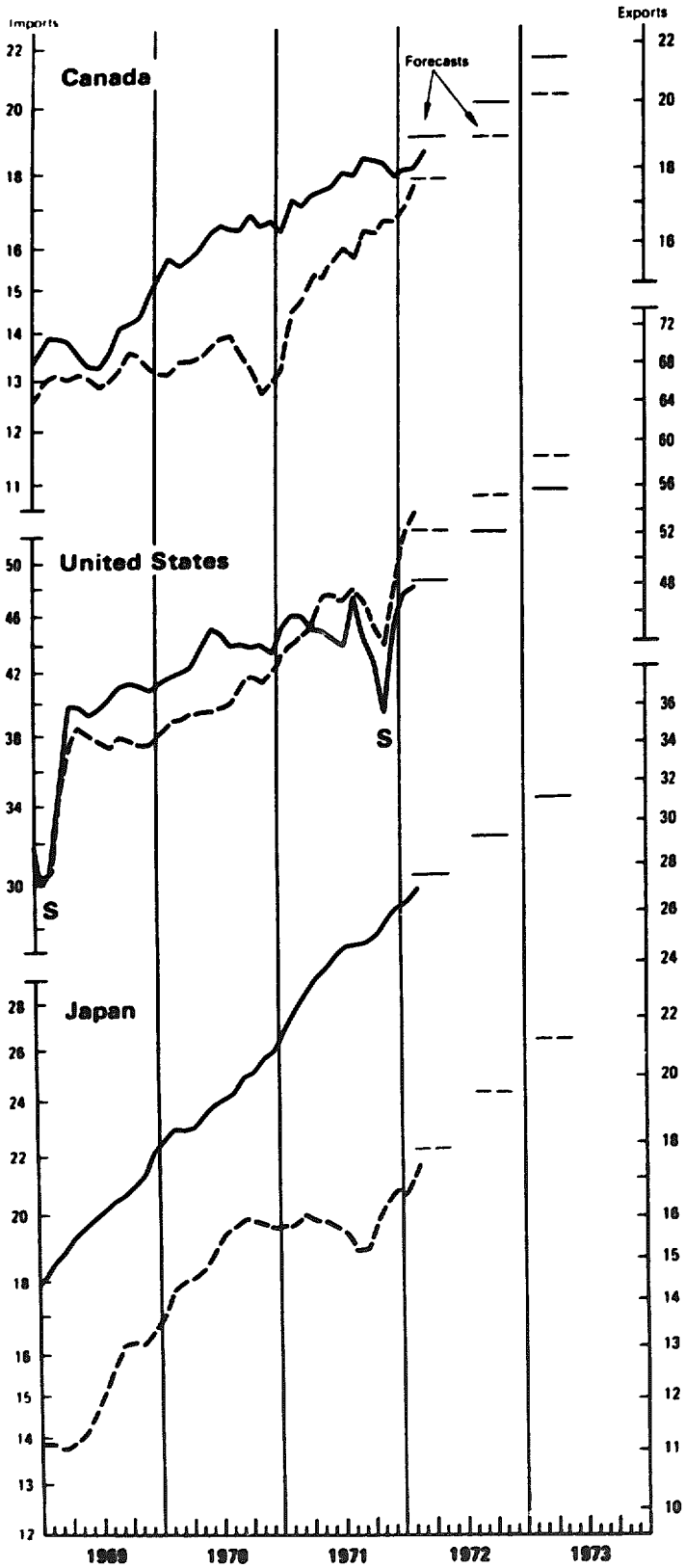
CHART S

TOTAL TRADE OF MAJOR O.E.C.D. COUNTRIES

3 month moving averages, seasonally adjusted
billion dollars at annual rates

---- Imports
—— Exports

Except for the United States and Canada, the import figures are on a c i f basis, but the import scale (left) has been adjusted downwards to take into account the average discrepancy between f o b and c i f



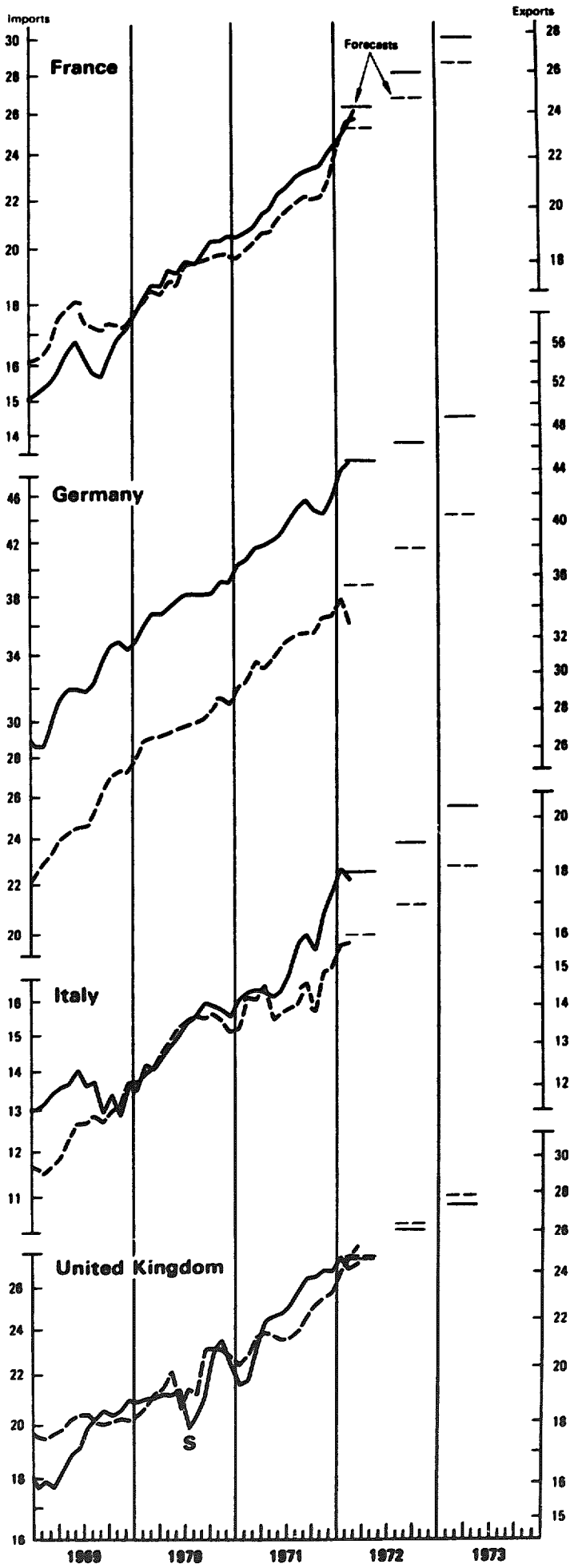


TABLE 36

Imports, export markets, and exports of OECD countries

U.S. dollar values, percentage changes

	Imports			Export Markets[a]			Exports		
	1970 to 1971	1971 to 1972	1972 I to 1973 I	1970 to 1971	1971 to 1972	1972 I to 1973 I	1970 to 1971	1971 to 1972	1972 I to 1973 I
United Kingdom	10.3	19	12¾	11.3	15½	12¾	14.5	12¾	10¾
United States	14.1	18¼	11½	10.1	18	12	2.1	15½	15½
France	11.5	22½	13¼	11.4	17	13	14.9	22½	14¼
Germany	15.1	16½	14¾	11.1	17½	12½	14.1	17	9
Italy	7.0	16½	14	12.7	18¼	12¾	14.6	21½	13¾
Belgium-Luxembourg	11.6	17½	12½	12.7	18½	13½	6.1	18	10½
Netherlands	12.8	12	9¼	11.8	18½	13½	17.5	18	12
Canada	16.4	19	13¾	15.1	17¾	12½	8.8	11¼	12½
Japan	4.3	18¼	19½	13.2	15½	11½	24.0	17¾	13½
Australia	3.4	13½	13	..	..	..	9.8	12	12½
Other OECD North	8.4	13½	12½	10.9	17¾	13	9.6	18½	13
Of which:									
Austria	16.9	17¼	11½	11.6	18	12¾	10.1	15½	10½
Denmark	4.7	9¾	13¾	10.8	17½	13½	9.9	19½	13½
Finland	5.9	13	12½	9.9	18½	12½	2.1	22	13½
Ireland	16.8	14½	13	12.2	19¾	13½	26.7	23	13
Norway	10.7	9¾	13½	10.9	17¼	13½	4.4	16½	15½
Sweden	0.7	13½	13¾	10.5	17	13¼	9.7	13¼	15¼
Switzerland	11.9	15	10¼	11.3	17¾	13½	12.1	16¾	9½
Other OECD South	8.5	21½	13	11.4	17½	12	16.0	25	16
Of which:									
Spain	4.5	27	14¼	11.8	17¾	13	23.1	27¼	18¾
Total OECD	11.1	17¾	13¼	11.9	17	12¾	11.9	17	12¾

a) The growth which would occur in a country's exports if it exactly maintained its share in total OECD exports to each market. The figures are adjusted for certain special factors such as U.S.-Canadian trade in cars under the Ottawa agreement; they are also adjusted for the Canadian strikes (late in 1969) and for the U.S. dock strikes (1971-72).

Canada

The high import growth recorded in 1971 is likely to be sustained through the forecast period, given the buoyant forecast for GNP. Last year's large loss of export market share in volume erased the large gain recorded in 1970. The 1971 performance might be attributable to the divergent cyclical position of Canada and its competitors and the adverse effects of the upward floating in 1970. For the forecast period, a much smaller loss of volume market share is expected, reflecting the smaller effective appreciation of the Canadian dollar following the realignment and a narrowing of relative cyclical positions.

Japan

The volume of imports hardly changed in 1971, reflecting the stagnation of the domestic economy and a very low rate of stockbuilding. For the forecast period, the expected upturn of domestic production and rebuilding of stocks should induce strong import growth. The large effective revaluation of the yen should provide some further stimulus to import growth, although potentially price-elastic items do not weigh heavily in Japan's total imports. There was an above-average gain of export market shares in 1971, which may have owed something to "export-leads" and "export drive", the latter stemming from the slack in the domestic economy. Adverse volume effects of the realignment should sharply reduce Japan's market gains in the course of the forecast period, and some further effect may come from such factors as "voluntary" export restraint programmes and the unprecedentedly long seamen's strike.

TABLE 37

Current invisible transactions[a], 1971 to 1973 I and medium-term trends

$ billion. Estimates and forecasts.

	Annual averages 1960-64	Annual averages 1965-70	1971	1972	1973 I[b]
United Kingdom	0.46	0.86	1.59	1.45	1.40
United States	-2.10	-1.33	0.10	0.30	0.90
France[c]	-0.61[d]	-0.55[d]	-1.10	-1.10	-1.30
Germany	-1.86	-3.41	-6.24	-7.35	-7.80
Italy	1.11	1.58	1.52	1.55	1.60
Belgium-Luxembourg	0.04	0.02	0	0	0
Netherlands	0.51	0.46	0.53	0.60	0.60
Total EEC	-0.81	-1.90	-5.29	-6.30	-6.90
Canada	-1.32	-1.65	-2.19	-2.50	-2.70
Japan	-0.49	-1.40	-2.02	-2.40	-2.70
Australia	-0.61	-1.05	-1.53	-1.65	-1.80
Other OECD North	1.27	1.89	2.45	2.75	2.90
Other OECD South	1.09	2.32	4.10	4.90	5.30
Total OECD	-2.51	-2.26	-2.79	-3.45	-3.60

a) Services (including factor incomes), private and official transfers.
b) Seasonally adjusted, annual rates.
c) Transactions with all countries.
d) Partially estimated by the Secretariat.

Other OECD

Four countries whose currencies were effectively revalued (Table 38), i.e. Belgium, the Netherlands, Austria and Switzerland, are expected to experience some negative impact on export volume over the forecast period ; while the volume effects on imports will tend to offset, to varying degrees, the deceleration of import demand. Australian imports and exports are expected to grow more rapidly in 1972 than in 1971, reflecting stronger demand prospects in the domestic economy and some recovery in metal and wool prices. Imports of Spain and the Scandinavian countries, except Norway, are forecast to grow more rapidly as the pace of economic activity revives. Most Scandinavian countries have experienced very buoyant exports in the early part of 1972, perhaps partly the result of the mild winter, though these countries could anyway be expected to make gains of share over the forecast period, given their relative cyclical situation and the fact that they effectively devalued slightly last year. Spanish exports are also forecast to continue on a strong upward trend over the forecast period.

POSSIBLE EFFECTS OF THE REALIGNMENT ON CURRENT BALANCES

The forecasts presented elsewhere in this issue include an element attributable to the exchange rate changes of 1971. This element (Table 39) can scarcely be regarded as a forecast in the normal sense, but rather as an illustrative consistent set of figures resulting from the application of a number of assumptions regarded as reasonable by the Secretariat. The figures in Table 39 only show the estimated effects of the realignment within the forecast period. Although there is much uncertainty as to the timing of these effects, it seems clear from past experience that lags are long — certainly longer than the period covered by the forecasts. The figures shown in Table 39 for the first half of the year are therefore not the estimated ultimate effects of the realignment.

The most detailed calculations were carried out in respect of merchandise trade, and in particular trade in manufactures. Econometric evidence regarding price elasticities in foreign trade provides a wide range of different results, even for individual countries. Moreover, it could be doubted whether elasticities calculated over an observation period in which year-to-year changes in relative prices were typically small and, for a number of countries, predominantly in one direction, would necessarily be applicable to a large change, particularly one which went in the opposite direction to the previous persistent movement. A further complication is that despite the widely held view that parity changes take two years or more to work through in full, econometric evidence of lags of this length is generally shaky.

In these circumstances, choice of appropriate price elasticities is largely a matter of judgement, as regards both their ultimate size and their evolution through time. The calculations performed here assumed slightly differing volume elasticities from one country to another, with magnitudes [1] in general as indicated in the following table:

	After adjustment period of :			
	3 to 6 months	9 to 12 months	15 to 18 months	21 to 24 months
Imports of manufactures	$-\frac{1}{4}$	$-\frac{1}{2}$	$-\frac{3}{4}$	-1
Exports of manufactures [2]	$-\frac{1}{2}$	-1	$-1\frac{1}{2}$	-2

The exchange rates of the various countries did not change simultaneously or abruptly. The effects of the early floats (from May to October 1971) were calculated separately from those of the later changes (from October to recent levels following the December agreement) ; thus for any given forecast period somewhat higher elasticities were applied to the earlier floats than to the later movements.

An equally difficult problem is the assessment of the changes in relative prices [3] to which these elasticities should be applied. There appeared to be no previous experience which would throw much light on how international traders would adjust prices following a general realignment of currencies. In the calculations made here, the starting point was a set of " effective changes " in exchange rates (Table 38). There seemed a pre-supposition that countries with little or no change in their effective exchange rate would tend to show little or no change [4] in export prices, expressed in their own local currencies, while countries undergoing effective devaluation (revaluation) would be expected to raise (lower) their local currency export prices, to an extent that would depend, inter alia, on exporters' profit margins and the import content of exports. A source of complication is that in the past there seems to have been a tendency for exporters in other countries to treat the United States as a separate market for purposes of price-setting, tending to gear their dollar prices in the United States to U.S. domestic prices. [5]

Taking account of these various factors, and of the most recent statistical indications available, it was assumed that exporters in Germany and other effectively revaluing countries in Europe would make only very small cuts in their prices expressed in local currency terms — in other words, would " pass on " nearly all of the revaluation in higher foreign currency prices — while Japanese exporters might on average cut export prices in yen terms by perhaps 5 per cent. United States export prices were assumed to rise by 2 per cent.

Before these export price assumptions could be translated into implications for import prices, a further assumption had to be made concerning the export prices of the less-developed countries. The non-OECD area experienced an average devaluation of about 5 per cent relative to the OECD area as a whole. [6] The dollar price of these countries' exports of manufactures could be expected to rise on average at least to the

1. These elasticities refer to trade in manufactures, in which virtually all the volume effect on merchandise account is expected to occur. For non-manufactures, price changes bring about important effects on balances, but assumed volume changes are very small.

2. It might seem strange at first sight that import and export price elasticities are assumed to be of different sizes. This is, however, entirely possible, given that a country's exports are potentially substitutable not only for domestic production in other countries but also for other suppliers' exports.

3. The term " price " is used here loosely to refer to unit values, the only indicator that exists for most countries.

4. It should be borne in mind that " change " in this context is taken to mean " as compared with what would otherwise have been expected ", and does not refer to a movement through time.

5. While for most countries, import prices appear to be largely determined by the general level of other countries' export prices.

6. Using weights corresponding to trade between the two areas the OECD area's average exchange rate appreciated by about 8 per cent in U.S. dollar terms, and that of the non-OECD by about 3 per cent.

extent of the 3 per cent revaluation, and perhaps more, following the price leadership of OECD countries. For commodity prices, the situation is extremely complex. These prices are determined to a great extent in U.S. dollars ; it seemed unlikely that, following the realignment, market forces alone would pull them up by more than a few percentage points. The OPEC countries swiftly renegotiated an increase of 8½ per cent in the dollar price of oil, but this appears a special case as there are probably no other commodities whose producers are so well organised. The calculations here nevertheless additionally assumed a certain amount of further "concerted action" on the part of primary producers ; allowing for this, the assumed rise in commodity prices [1] in dollar terms was about 5 per cent.

The devaluation of the non-OECD area against the OECD area has the consequence, on the assumptions made here, of improving the former's balance, despite a fairly substantial terms of trade loss. It is then further assumed that in response to this the non-OECD countries would adjust their import policies in order to absorb the improvement. There is thus a "feedback" to OECD countries, each of whose exports would be increased — to an extent depending on the various countries' shares in OECD trade with the rest of the world. This feedback is incorporated in the effects assumed for the last period (1973 first half) shown in the table.

Most of the impact on invisible transactions during the forecast period was assumed to take the form of "terms of trade" — or change of valuation — effects. Thus flows of investment income or of foreign workers' earnings would in general be determined in the currency of the host country. The realignment might have affected the timing of such remittances within the immediately preceding and following periods, but it is scarcely possible to assess what the slightly longer term "volume" effects might be. The same appears true for government transactions, including military. With freight rates being largely determined internationally and relative fleet sizes changing only gradually, a significant volume impact also appears unlikely in the short run on transportation account. Volume effects have, however, been incorporated in the forecast in respect of travel, the one category of invisible transactions that has been found clearly price-sensitive.

The combined results of these various assumptions are brought together in Table 39. As could be expected, by far the most important changes are in the balances of the United States, Germany and Japan, the three major countries whose effective rates changed significantly. Some features of the table may, however, call for comment. The change in Germany's balance may look large in relation to that in Japan's, given the relative magnitudes of their revaluation . This comes about because the gross flows of German trade are very much larger, the appreciation of the mark occurred somewhat earlier than that of the yen, and the assumed effect on German invisibles is significantly larger. Again, some of the implied "terms of trade" effects may look surprising. The reason for this is that while such effects go generally in a "perverse" direction on trade account [2] they may (when factor income is an important component) go to a great extent in the "right" direction on invisibles.

1. As measured by the U.N. unit value indices. Most commodity price indices would probably show a significantly larger rise.
2. Depending on the initial imbalance.

TABLE 38

Nominal and effective changes in exchange rates[a]

Per cent

	Nominal changes[b]	Effective changes[c]
United States[d]	0	-10(-11½)
Canada[d]	2.0(9.0)	-3(4)
Japan	18.5	12½
United Kingdom	8.7	0
France	10.5	0
Germany	15.2	6½
Italy	7.3	-2
Belgium-Luxembourg	13.5	3
Netherlands	12.7	2
Other OECD	8.4	0
of which:		
Sweden	8.5	-2
Switzerland	11.7	2½
Austria	12.5	3½
Denmark	7.3	0
Finland	1.3	-5
Ireland	8.7	1
Norway	8.5	-1
Spain	8.4	0

a) Average spot rates during April-May 1972 compared with par values existing on 1st May, 1971. The Canadian change is based on spot rates; for Switzerland, the comparison is with the average of spot rates in the first quarter of 1971.

b) In terms of the U.S. dollar.

c) Changes for the first eleven countries listed are calculated with the weights implicit in the IMF's *Multilateral Exchange Rate Model*, but further assuming no change in the OECD area's balance with non-OECD countries. Effective changes in the rates of the other countries are based on their total trade.

d) Figures in brackets are those that result if May 1970 is taken as the starting point and therefore take into account the upward floating of the Canadian dollar. The differences for countries other than the United States and Canada would be very small.

TABLE 39

Possible effects of the realignment on current balances

$ billion; annual rates.

	Volumes[a]						Values[b]					
	1971 II		1972 I		1973 I		1971 II		1972 I		1973 I	
United States[c]	0	(½)	1½	(2½)	6½	(7½)	-½	(-½)	0	(½)	4¾	(5½)
Canada[c]	0	(-½)	½	(-½)	½	(-½)	0	(0)	½	(-½)	½	(-½)
Japan	0		-1		-4½		½		1		-2½	
United Kingdom	0		0		0		0		0		0	
France	0		0		0		0		0		0	
Germany	-½		-1½		-3¾		¾		0		-2½	
Italy	0		0		½		0		0		½	
Belgium-Luxembourg	0		-½		-½		0		0		-½	
Netherlands	0		-½		-½		0		0		-½	
Other OECD	0		0		0		-½		-½		-½	
Total OECD	0		-1		-1¾		-½		-1		0	

a) Measured in 1970 dollars.

b) In current dollars.

c) Bracketed figures are the estimated effects when May 1970 rather than May 1971 is taken as the starting point (differences for other countries would be very small).

MONETARY AND FINANCIAL DEVELOPMENTS

INTERNATIONAL LIQUIDITY

This note briefly discusses the concept of *adjusted* reserves, and explains in some detail the calculation of sources and uses of *recorded* international liquidity as shown in Table 10. There are no unique criteria for establishing an operational definition of international liquidity. The problem is, in some respects, similar to that of defining domestic liquidity. In both cases the appropriate definition varies according to the purpose of the analysis. In *Economic Outlook* No. 5 the concept of " adjusted reserves " was developed in order to obtain an impression of the underlying development of reserve assets readily usable for making settlements. The basic difference between recorded and adjusted reserves relates to the treatment of currency assets originating from short-term support operations between Central Banks. An extension of support operations normally increases the recorded total of countries' reserves because the countries extending the support generally include the counterpart of such transactions among their own holdings of reserve assets. Drawings on U.S. facilities generally increase recorded global reserves by double the amount of the drawings because foreign central banks receive dollars and the United States increases its foreign currency claims. The " adjusted reserves " concept regards only the dollars created by such " swaps " as additions to freely usable reserves. Adjusted reserves are thus obtained by subtracting from recorded reserves all the non-dollar holdings of foreign currency assets arising from this kind of operations.

Table 40 shows sources and uses of recorded international liquidity. It provides a simplified analysis of the ways in which official reserve assets can potentially be created, the factors which prevent the potential creation taking place, and actual reserves changes. Some items are presented as potential sources of liquidity creation and others as offsets, according to the values typically taken by these items in the 1960's.

1.1 *U.S. balance on official settlements* (excluding allocation of SDRs)

This item gives the potential liquidity-creating effect of a U.S. deficit, i.e. the extent to which U.S. liabilities to central monetary institutions would rise if no other means of financing the deficit were used. But a U.S. deficit can be, and in the past actually has been, partly financed by a reduction of U.S. non-currency reserve assets—gold, reserve position in the IMF and SDRs. Thus the item " Changes in U.S. non-currency reserve assets " appears as an offset in Table 40. The counterpart of the net liquidity creating effect of the U.S. deficit is to be found in item 6.4, " Currency assets ", on the uses side.

1.2 *SDR allocation*

This item is self-explanatory. Its counterpart on the uses side is mainly item 6.2, " SDRs ", and (since SDRs can be used in transactions with the IMF) item 6.3, " Reserve position in the Fund ".

1.3 *Gold purchases from the private sector*

This item is equal to the net changes in countries' gold holdings and in IMF gold holdings (excluding gold deposits and investment), as given in *International Financial Statistics*. The private sector as defined here includes international organisations other than the IMF and countries whose holdings are not reported in IFS. This item is thus affected, among other things, by changes in the net gold position of the BIS. Its counterpart on the uses side is to be found in item 6.1, " Gold ", and part of item 6.3, " Reserve position in the Fund ".

1.4 *Use of IMF credit*

This is defined in IFS as " drawings other than drawings against a Gold Tranche Position (i.e. drawings against the Credit Tranche Position, drawings that raise Fund holdings

TABLE 40
Sources and uses of international liquidity
SDR billion, not seasonally adjusted

	Annual average 1961-70	1971[a]	1972 Q1
1. POTENTIAL SOURCES	3.0	24.1	6½
1.1 U.S. balance on official settlements (deficit = +)[b]	2.0	30.2	3
1.2 SDR allocation	0.3	2.9	3
1.3 Gold purchases from private sector	0.1	-0.7	0
1.4 Use of IMF credit	0.3	-1.9	0
1.5 Support operations extended by the United States[c]	0.1	-0.7	0
1.6 Support operations extended by other countries	0.1	-2.6	0
1.7 Changes in countries official holdings of sterling[d]	-0.1	1.5	½
1.8 Changes in countries official holdings of DM[e]	0.1	-0.2	½
1.9 Estimated impact of currency realignment on currency reserve assets	0	-4.5	0
2. IDENTIFIED OFFSETS	0.7	4.5	1½
2.1 Changes in U.S. non-currency reserve assets (decrease = +)[f]	0.6	2.7	0
2.2 Other offsets[g]	0.1	1.8	1½
3. NET IDENTIFIED SOURCES OF LIQUIDITY (1 — 2)	2.3	19.7	5½
4. RESIDUAL ITEM (6 — 3)	0.9	6.8	½
5. TOTAL SOURCES OF LIQUIDITY (3 + 4)	3.2	26.5	6
6. USES: CHANGES IN COUNTRIES' RECORDED RESERVES	3.2	26.5	6
6.1 Gold	-0.1	-1.1	-½
6.2 SDRs	0.3	2.8	3
6.3 Reserve position in the Fund	0.4	-1.3	0
6.4 Currency assets	2.6	26.1	3½
7. *Memorandum items:*			
7.1 Adjustment item[h]	0.3	-1.0	0
7.2 Change in currency assets adjusted (6.4 — 7.1)	2.3	27.1	3½
7.3 Changes in countries' reserves adjusted (6 — 7.1)	2.9	27.5	6

a) Some of these figures, in addition to representing true changes in stocks, also reflect changes in the SDR value of existing stocks of non-SDR and non-gold items as a result of the currency realignment of December 1971.

b) Excluding the allocation of SDRs.

c) Counted as double.

d) Other than those resulting from support operations.

e) May include some liabilities to international and regional organisations.

f) Gold (excluding changes resulting from IMF gold deposits and investment), SDR transfers and reserve positions in the Fund. The 1971 figure excludes the impact of the currency realignment.

g) U.S. financing by special transactions (such as debt prepayments); IMF gold deposits and investments, and IMF surplus; and Japan's investment in U.S. Government bonds not included in its official reserves.

h) Changes in creditor countries' holdings of currency assets (other than dollars) arising from support operations and incorporation of dollar portfolio in U.K. reserves.

beyond 200 per cent of quota and Compensatory Financing drawings)". The drawing country receives currencies of other members which are normally converted into dollars: the countries drawn upon are generally credited with increases in their reserve position in the IMF (item 6.3 on the uses side) equal to their sales of dollars, so that their total reserves are unchanged, while the drawing country has at its disposal additional reserves equal to the drawing. When the currency drawn is the U.S. dollar, total reserves are increased by the amount of drawings in dollars against Gold Tranche Positions, and doubly increased by drawings in dollars that represent use of IMF credit. This is so, because the counterpart of the resulting increase in the U.S. reserve position in the IMF is not a drop in U.S. foreign exchange reserves but increased U.S. liabilities to foreign monetary authorities. Drawings on the IMF in dollars should therefore be treated as a separate source of liquidity, but in the present simplified approach, net drawings in dollars are included (with minus sign) in item 2.1, "Changes in U.S. non-currency reserve assets".

1.5 *Support operations extended by the United States*

As briefly explained above, drawings on U.S. facilities generally increase recorded reserves by double the amount of the drawings. For simplicity's sake, the changes in international liquidity resulting from such drawings have been taken to equal twice the amount of the change in U.S. holdings of foreign currency assets. The counterpart of this item is "Currency assets" (6.4).

1.6 *Support operations extended by other countries*

Support operations between other countries than the United States in general affect reserves by an equivalent amount. They have been estimated on the basis of these countries' liabilities to foreign official institutions. The counterpart of this item is "Currency assets" (6.4). Support operations extended to the United States normally have no effect on recorded world reserves.

1.7 *Changes in countries' official holdings of sterling*

This item reflects the role of the United Kingdom as a reserve currency country. Ideally, the potential source of liquidity creation by the United Kingdom would be its official settlements deficit. However, to simplify the analysis and limit the number of offset items, U.K. liabilities to central monetary authorities have been used (excluding liabilities arising from support operations). This item is therefore to be seen as an *actual* source; its counterpart on the uses side is "Currency assets" (6.4).

1.8 *Changes in countries' official holdings of Deutschemarks*

This item also represents an *actual* source of international liquidity; its counterpart is again "Currency assets" (6.4).

2.1 *Changes in U.S. non-currency reserve assets*

This item has already been discussed in relation to the U.S. balance on official settlements. The effect on the U.S. gold stock of IMF gold deposits and investment, and the allocation of SDRs to the United States have not been taken into consideration because these changes in reserve assets have their counterpart below the official settlements line. For the same reason, the impact of the currency realignment of December 1971 on U.S. non-currency reserve assets has not been included here. On the other hand, this item reflects changes in the U.S. reserve position in the Fund resulting from other countries' dollar drawings. In this way, the increase in "Currency assets" on the uses side resulting from such drawings has its counterpart on the sources side (see the discussion of item 1.4 above).

2.2 *Other offsets*

This item includes:

i) IMF surplus and IMF gold deposits and investment in order to reconcile "Use of Fund credit" and "Gold purchases from the private sector", on the sources side, with "Gold", "SDRs" and "Reserve position in the Fund", on the uses side;

ii) U.S. financing by special transactions (such as debt prepayments) because these transactions reduce the actual liquidity-creating effect of a U.S. deficit.

iii) Japan's investment in U.S. Government notes and bonds not included in its reserves since this investment reduces the actual liquidity-creating effect of a U.S. deficit.

4. *Residual item*

In principle, "Net identified sources", and "Changes in countries' recorded reserves" should be equal. In practice, these two items can differ markedly. The primary reasons for the discrepancy are probably represented by shifts of official funds to and from the Eurodollar market (either directly or through the BIS), and, more recently, a switch of official funds into currencies of several industrialised countries other than the U.S. and the U.K.

6. *Changes in countries' recorded reserves*

Changes in countries' holdings of gold, SDRs, and currency assets and their reserve position in the Fund are basically similar to those published in *International Financial Statistics*.

II. Sources and Methods

The OECD *Economic Outlook* draws heavily on the statistical work of the Department of Economics and Statistics. The following notes describe briefly the statistical concepts and methods applied as well as the forecasting techniques used. Special emphasis is given to deviations from national (or other international) practices.

FORECASTING TECHNIQUES

The general forecast tables, the country tables on demand and output and the balance of payments of seven major countries are based on an internally consistent set of forecasts of national accounting aggregates for the OECD area. Relatively detailed forecasts are prepared for the major seven OECD countries (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States), which account for more than 70 per cent of total OECD trade. For the other OECD countries only GDP and foreign trade forecasts are made. While account is taken of forecasts prepared in the countries concerned, both official and unofficial, the forecasts given here are entirely the responsibility of the Economics and Statistics Department. Some of the forecasting methods employed, particularly in the major countries, have been described in an OECD Report: *Techniques of Economic Forecasting*, Paris 1965. Increasing use is being made of econometric techniques notably for forecasting wage and price developments and private consumption and investment flows; the Secretariat is also in the process of constructing short-term forecasting models for some of the more important Member countries.

Forecasts are first prepared for what may be broadly called the exogenous elements of demand: public consumption, gross fixed investment and exports of goods and services. For public consumption and public investment as much use as possible is made of budgetary statements, although their availability and usefulness vary from country to country. With regard to private investment extensive use is made of the intention surveys which are carried out in most of the seven countries. Exports are initially forecast in the light of past trends, but, as will be seen below, they are reconsidered as the general forecasts for each country and for all countries together take shape.

The forecast for these exogenous elements of demand, plus any information that may be obtained regarding stock changes, provides a first indication of the likely development of the pressure of demand. In order to get some indication of the possible growth of supply, use is made of relationships describing the " potential " growth rate of the economy. [1] At this stage an appropriation account for the household sector is constructed which takes into account the probable development of incomes as indicated by wage settlements and by the forecast change in the pressure of demand and provides an estimate of personal disposable income. Little is known about the short-term behaviour of the personal savings ratio and hence the forecast underlying consumers' expenditures usually assumes an unchanged ratio unless there are particular reasons to assume otherwise. The forecast for the exogenous elements of demand, together with that for personal disposable income, provides a basis for a first assessment of likely price developments. This in turn is used to forecast the likely development of personal consumption in real terms.

Thus, a first forecast of the change in final expenditure is obtained and on the basis of past cyclical relationships with imports, an estimate is also made of the likely import demand. In this respect a number of relationships have been developed linking import demand with domestic demand which have thrown some light on the cyclical variation in import propensities. Forecasts for merchandise imports and for imports of services are usually made in terms of customs and balance of payments statistics (see below) and then transposed into national accounting terms.

The subsequent stages of the forecasting procedure consist of reiterations, with a view to ensuring the international consistency of foreign trade forecasts of individual countries.

OECD trade forecasts are based on the projected import demand of individual countries, described above. The figures obtained for the seven major countries, together with direct import forecasts for the other OECD countries, provide the aggregate OECD import demand, which is broken down into:

i) demand for OECD exports;

ii) demand for imports from the rest of the world.

The forecast for OECD imports from the rest of the world is taken as the starting point for a forecast of OECD exports to the rest of the world, via an assessment of possible movements in other elements in the rest of the world's balance of payments with the OECD area, the financial position of the primary producing countries, and special factors affecting exports to the Sino-Soviet countries.

Export to the rest of the world, in combination with *i*) above, yield the projected total of OECD exports, [2] which is allocated among exporting countries on the basis of the projections shown in Table 36.

These projections distinguish between:

i) Growth of markets—defined for each country as the exports which would take place in any given period if the country retained its share in OECD exports to each individual export market, [3]

ii) Export performance—defined as a country's gain or loss of market shares. This has been found to be affected both by longer-run factors and by short-run changes in relative prices and pressures on capacity.

The export forecasts thus obtained are transposed into national accounting terms and incorporated in the forecasts of the seven major countries.

The foreign trade forecasting procedure outlined above was, until recently, normally carried out in terms of current values. Lately it has increasingly been carried out in volume terms, to some extent making use of an econometric world trade model. [4] Explicit forecasts are also made for foreign trade average values, and the confrontation, for individual trade flows, of the forecasts of value, volume and average value permits a three-way consistency check.

A similar but much simpler process is employed in arriving at forecasts of invisible transactions. For each main category

1. These relationships will be described in more detail in a forthcoming issue of *Economic Outlook—Occasional Studies*.

2. Allowing for inconsistent recording of intra-OECD trade, as discussed on p. 118.

3. For the purpose of this calculation, the following markets are distinguished; each major OECD country, other OECD countries aggregated into four groups, the primary-producing countries aggregated into seven groups and the Sino-Soviet area.

4. This model is a revised version of: F. Meyer-zu-Schlochtern and A. Yajima, " OECD Trade Model: 1970 Version ", *OECD Economic Outlook—Occasional Studies*, December 1970.

of invisibles—travel, transportation, investment income, government services, other miscellaneous services, private and official transfers—forecasts are prepared for each country's imports (debits) and for the OECD's transactions with the rest of the world. The resulting total OECD exports (or credits) are then allocated to individual OECD countries.

The consistency check imposed by the foreign trade matrix and the invisibles forecast often contributes to the country forecasts themselves, since the inter-dependency of the OECD area is such that developments in one country or in a group of countries are as a rule reflected in developments elsewhere.

All forecasts are prepared on a half-yearly basis. In most cases this can be done on the basis of quarterly national accounts compiled in Member countries. In others, the half-yearly national accounts aggregates covering the past periods are prepared by the OECD Secretariat on the basis of the short term economic indicators available and can only be considered as more or less rough estimates.

NATIONAL ACCOUNTS

The figures shown in the country tables on Demand and Output follow, in general, the *OECD Standardized System*[1] definitions, which need not be summarized here. There are, however, some important deviations from the *Standardized System*. Thus, the line public investment includes, whenever possible, fixed capital formation by both general government and government owned and controlled enterprises. The latter's definition and coverage may vary as between countries.

a) *France*

In the French system the main aggregate is " Gross Domestic Production " which has a narrower definition of production. It excludes the services provided by the General Government, financial institutions and domestic servants.

It follows from the French definition that " Government consumption " excludes salaries paid to civil servants. On the other hand, expenditure on goods and services of so-called " private administrations ", which would come under private consumption in the *Standardized System*, are included with government consumption in the French system.

In 1964 the French definition of stocks was extended to include unfinished as well as new, finished, but unsold dwellings which are excluded from " fixed capital formation " and " residential construction ".

Exports include net services plus freight earned on imports, the latter being given c.i.f.

Finally, the activities are recorded on a territorial basis and thus, for instance, expenditure by foreign tourists is treated as part of French personal consumption, whereas in the *Standardized System* it is classified under exports.

As for the line public investment shown in the table on Demand and Output, it includes investment carried out by " entreprises publiques ".

The figures shown in this number of the *Economic Outlook* are based on the new series of French national accounts (see *Economic Outlook*, No. 4, pp. 99-101), revised and adjusted to the definitions of the *Standardized System*.

Recently INSEE has commenced publishing quarterly national accounts for France and has for some time published quarterly data on private consumption on a national accounts basis.

1. OEEC, *A Standardized System of National Accounts*, Paris 1958.

b) *Germany*

The German official national accounts follow the *Standardized System* and are published on a half yearly basis by the Statistisches Bundesamt in *Wirtschaft und Statistik*. The seasonal adjustments to the official series are made by the OECD Secretariat.

c) *Italy*

The definitions used are those of the *Standardized System*. Following improvements in the basic statistics, the annual national accounts published by the Istituto Centrale di Statistica (ISTAT) have been substantially revised for the period 1951-1970.

The line public investment includes investment by " autonomous bodies " (e.g. railways) and by IRI, ENI, EFIM and ENEL.

The annual aggregates for 1969, 1970 and 1971 are drawn from the data published in *Relazione Generale, 1971*.

Past half-yearly developments are based on seasonally adjusted quarterly national accounts estimated by the Istituto Nazionale per lo Studio della Congiuntura (ISCO).

d) *United Kingdom*

The quarterly national accounts for the United Kingdom are published in *Economic Trends* by the Central Statistical Office and follow the *Standardized System*. Investment by nationalised industries is included in public investment.

However, since the published expenditure, output and income accounts show different quarter to quarter movements, a weighted average of the three series is used to produce a " compromise estimate " of GDP. Any differences between the compromise and expenditure estimates of GDP are allocated to the expenditure components at the forecasters' discretion. All GDP aggregates published in this issue are based on OECD Secretariat compromise estimates.

e) *United States*

Government fixed investment expenditures (including those of government enterprises) are included in " public expenditure " and no allowance is made for depreciation of government fixed capital. The investment figures therefore refer to the private sector only. Official quarterly national accounts are published in the *Survey of Current Business* of the Office of Business Economics of the U.S. Department of Commerce.

f) *Canada*

Official quarterly national accounts appear regularly in the *Canadian Statistical Review* of Statistics Canada.

The Canadian national accounting convention includes a separate entry for the " residual error of estimate ". This item is included in the Secretariat figures for GNP, which are therefore not the sum of the expenditure components. To avoid distorting the time-path it has been assumed in the forecast that the residual error will remain unchanged from the first half of 1972 onwards.

g) *Japan*

Quarterly national accounts are published in the *Annual Report on National Income Statistics* and *National Accounts Statistics Quarterly* of the Economic Planning Agency.

COST AND PRICE DEVELOPMENTS

In order to facilitate the interpretation of current cost and price trends the OECD Secretariat has compiled from various sources short-term indicators on wage costs, consumer and producer prices. In spite of the efforts made to make such series reasonably comparable there are still considerable divergencies in definitions and statistical methods and the figures can only be taken as indicators of broad orders of magnitude. The series marked (s.a.) are seasonally adjusted.

Price indices

The coverage and methods of calculation of the *consumer price indices* vary a great deal from country to country. In some countries the weights used to calculate the index are revised fairly frequently on the basis of family expenditure surveys using large samples; and in such cases the index generally moves quite closely in line with the price deflator for private consumption. In some countries, however, the weighting system relates only to low income groups and/or is seriously out of date; and in such cases the weight given to food is generally high and that given to services low, compared with the pattern of expenditure for private consumption as a whole. Coverage varies considerably and also the degree to which seasonal price changes are eliminated.[1] Consumer price series for all countries were seasonally adjusted by the OECD Secretariat.

The lack of uniformity is even more marked when it comes to *wholesale price indices*. Differences in coverage are particularly important with regard to the degree to which the index covers finished goods in addition to raw materials and semi-finished products. The number of items included varies from a few hundred to several thousand.

Wages

The wage indices are also not comparable from country to country, not only because of the wide variety of sources and methods of calculations, but also because of important differences in definitions (e.g. hourly rates, hourly earnings, monthly earnings, inclusion or exclusion of fringe benefits, etc.).

The different series used in Chart C and their sources are as follows:

United States: Hourly earnings: gross hourly earnings per production worker: *MEI*. Hourly rates: gross hourly earnings adjusted for overtime: *Employment and Earnings*.

Canada: Hourly earnings in firms employing 20 persons and over; last payroll of month: *MEI*. Contractual rates: basic rates agreement index: *Department of Labour*.

Japan: Monthly earnings: cash payments including bonuses earned by regular workers in firms employing 30 or over: *MEI*. Contractual increases: the 'Spring Round' for major firms in all industries: *Ministry of Labour*.

France: Hourly earnings: half yearly enquiry covering wage earners on time and piece work bases: *Tendances de la Conjoncture*. Hourly rates: wage earners excluding juniors and piece work: *MEI*.

Germany: Hourly earnings: all production workers, all regular payments including efficiency and social premiums and bonuses, and overtime: *MEI*. Hourly rates: contractual rates, all production workers: *MEI*.

Italy: Hourly earnings: earnings including family allowances, and bonuses per production worker. 1968-1969, Ministry of Labour: *Quaderni Analitici*. 1969-1972, ISTAT: *Congiuntura Italiana*. Hourly rates including family allowances per production worker, ISTAT: *Bollettino Mensile di Statistica*.

United Kingdom: Average weekly earnings: all employees (G.B.): *MEI*. Hourly rates, males (U.K.): *MEI*.

Apparently seasonal movements are important in some countries because of the tendency for wage settlements to bunch at the same period of the year. Seasonally adjusted data are used when available.

Unit labour costs in manufacturing

For each of the major countries, unit labour or wage and salary cost data are shown. Ideally, these series should include, for manufacturing, *wages and salaries* including bonuses, tips and the value of payments in kind, and *supplementary labour income*, employers' contributions to social security, pension funds etc. and, where applicable, payroll taxes. These labour cost series are then related to output series. For most countries this is the index of industrial production in manufacturing; the exceptions are Germany where mining is included and Italy where a quarterly indicator of value added at factor cost at 1963 prices is used.

In practice, unit labour cost figures are only available on a quarterly basis for the United States and Italy. For the other countries only unit wage and salary costs (excluding supplementary labour income) are available. These are based on monthly wage bill surveys for Germany (firms of more than 9 workers including mining) and Canada, and monthly earnings surveys for Japan and the United Kingdom. For France a wage bill series was derived from a quarterly survey of hourly rates for wage-earners, total employment and average hours worked by wage and salary earners. An adjustment was made for the abolition of the French 5 per cent payroll tax in 1968, but for the United Kingdom no adjustment has been made for the Selective Employment Tax. In the choice of series used several factors were taken into account; availability was of prime importance, and comparisons were made with the development of long-run unit labour cost series based on national accounts. It should be emphasised that these series are not comparable between countries, that the output and manpower cost data may be on a different basis, and that the figures are published as a guide to recent developments within Member countries.

BALANCE OF PAYMENTS DATA

a) *Sources*

Annual balance of payments statistics in *Economic Outlook* are derived from OECD countries' annual submissions to the Organisation, on the basis of a reporting system common to OECD and the IMF. The concepts and definitions underlying this system are, with few exceptions, those described in the IMF *Balance of Payments Manual* (third edition, July 1961).

Up-to-date information and figures for periods of less than one year are normally derived from national sources and adjusted by the Department of Economics and Statistics to internationally comparable definitions. Seasonally adjusted series are taken from national sources for Canada, Germany, Italy, the United Kingdom, the United States and, for some data, Japan, and estimated by the Department of Economics and Statistics for other countries.

1. A supplement included in *Main Economic Indicators* every three months shows recent consumer price developments in eight selected countries, analysed in terms of four standard sub-indices: food; all goods less food; rent; and all services less rent.

b) *Presentation*

For analytical purposes, the *Economic Outlook* makes use of a uniform presentation of the balance of payments data of all OECD countries. The analytical groupings adopted are the following:

A) *Trade Balance.* This is defined as merchandise exports less imports fob frontier. It is recorded on a transactions basis, i.e. derived from customs records of merchandise trade, with valuation and coverage adjustments required:

i) to put the figures on to a fob frontier basis;

ii) to ensure that the data reflect as closely as possible the net transfer of ownership of goods to and from abroad by the residents of a country.

B) *Current Balance.* This is the sum of the trade balance, net services and private and official transfers.

C) *Balance on non-monetary transactions.* This covers all current and long-term capital transactions, as well as the short-term capital transactions of the non-monetary sector of the economy (including the balance of unrecorded transactions). It excludes, however, official transactions undertaken for specific balance of payments reasons: such " special transactions " relate, in particular, to the anticipation or postponement of public debt servicing, and changes in official long-term assets and liabilities, such as the extension of special credits to international lending institutions.

D) *Balance on official settlements.* This is the sum of the balance on non-monetary transactions and the net change in the external short-term position of commercial banks. It is financed by:

i) changes in official holdings of gold, currency assets and SDRs;

ii) changes in the net IMF position;

iii) changes in official liabilities to foreign official monetary institutions, and in official short-term assets other than gold and currency;

iv) special transactions, as described above.

c) *Relation to national concepts*

In a number of cases, the uniform concepts and definitions used by the Department of Economics and Statistics to ensure inter-country comparability differ from those most commonly found in national presentations of balance of payments statistics. The main deviations are listed below:

A) *Trade Balance.* While the trade balance concept appears in all national publications, its definition may differ from that adopted in *Economic Outlook.*

i) In Canada, the trade balance as usually defined excludes inland freight on both imports and exports, and gold production available for export.

ii) In France and Belgium, trade as well as other components of the balance of payments are recorded on a settlements basis, i.e. based on foreign exchange rather than customs statistics. The same applies to Italy, although data on a transactions basis are also given in national publications.

iii) In Germany, the trade balance concept which appears most frequently in public discussion is based on the customs figures. It includes, therefore, all freight on imports and excludes the coverage adjustments of customs data to a balance of payments basis.

B) *Current Balance.* Aggregates corresponding to the current balance concept appear in all national presentations, under various denominations. They are identical with the data appearing in *Economic Outlook* subject to the remarks made above about France, Italy and Belgium.

C) *Overall Balance.* Most national presentations emphasize some form of overall balance which either takes the form of a balance of monetary movements (akin to the balance on non-monetary transactions) or a balance on official reserve transactions (akin to the balance on official settlements). The concepts used in major OECD countries are related to those shown in *Economic Outlook* as follows:

i) The overall balance as defined under various denominations in France, Italy, and Japan corresponds fairly closely to the balance on " non-monetary transactions ", except insofar as special transactions are generally not shown below the line.

ii) The United States " official reserve transactions balance " corresponds to a balance on official settlements with non-scheduled repayments of U.S. Government assets (including sales of foreign obligations to foreigners) and the allocations of Special Drawing Rights recorded above the line. A further U.S. concept of overall balance, the " net liquidity balance " includes below the line, in addition to official settlements, all changes in liquid private assets and liabilities. The reconciliation of this balance with the OECD " balance on non-monetary transactions " is shown in the table below.

iii) The overall balance as defined in the United Kingdom, Canada and Germany approximates the concept of the " balance on official settlements " except insofar as special transactions are included above the line. In addition, the figures appearing in German publications include changes in the Central Bank's holdings of IBRD bonds and certificates which are treated as non-monetary transactions in *Economic Outlook.* And the United Kingdom's concept includes changes in liabilities to

UNITED STATES
Reconciliation between OECD " balance on non-monetary transactions " and U.S. " net liquidity balance "

	Balance on non-monetary transactions (OECD Basis)	Sources[a]
Less :	Liquid claims reported by U.S. non-banking concerns	*SCB*, table 1, line 37
Plus :	Non-liquid, short-term claims reported by U.S. banks	*SCB*, table 1, line 28
Plus :	Non-scheduled repayments of U.S. Governement assets	*SCB*, table 1, line 17
Plus :	Allocation of special drawing rights (SDRs)	*SCB*, table 1, line 31
Equals :	Net liquidity balance	*SCB*, table 1, line 33

a) *SCB* refers to the U.S. Department of Commerce *Survey of Current Business*, March 1972 (Article on Balance of Payments).

national monetary authorities, *other* than those arising from assistance operations, in items above the line, while the presentation here treats them as financing items.

d) *Inconsistencies in balance of payments recording*

A uniform accounting framework does not by itself ensure consistent recording of each transaction by the two participating countries. In fact, transactions of the same type among OECD countries do not sum to zero as theoretically they should. The sum of any particular balance for all OECD countries should therefore not be taken to be the balance of the OECD area with the rest of the world, and developments in this type of aggregate should be interpreted with due regard to the possibility that the net effect of inconsistent recording may vary over time.

The analysis done to date points to the following main sources of inconsistency in OECD countries' balance of payments recording:

A) On current account, inconsistencies arise in connection with the classification, coverage and valuation of transactions. In particular, the border-line between merchandise and service transactions tends to be blurred in the case of government purchases, while the distinction between services and transfers may be interpreted differently by the two partner countries in the case of workers' remittances; a cross-classification problem also arises from official indemnification payments to private recipients. Discrepancies occur in the estimation of freight on imports (which tends to exceed the corresponding receipts) and in the recording of foreign travel (where receipts tend to exceed payments). Further discrepancies result from the inclusion in some countries' data of re-invested earnings of foreign subsidiaries, which are not covered in most countries' statistics. Some, but by no means all, of these inconsistencies cancel out at the current balance level. For a more detailed discussion of the various problems arising out of the inconsistent recording of invisible transactions, see the Technical Notes at the end of the article "OECD Invisibles in the 1960's", *Economic Outlook — Occasional Studies*, July 1970.

B) On capital account, asymmetries result in the first place from the inconsistent recording of current transactions (the net effect of which produces an offsetting entry under unrecorded transactions). Further asymmetries result from the principle of allocating changes in assets and liabilities according to the domestic sector involved, which implies that international transactions between two different sectors (e.g. banks on one side and non-banks on the other) will be reported under different headings by the two partner countries. Inconsistent recording of official settlements will also be reflected in the capital account.

C) On official settlements account, the sum of all OECD countries' balances will not reflect the change in the area's net official position vis-à-vis the rest of the world, due to:

i) changes in total official gold holdings resulting from the incorporation of newly mined gold or sales to private users;

ii) the inclusion in official reserve assets of claims on commercial banks (either in the form of non-reserve currencies or of Euro-dollars) the counterpart of which is not reported as a liability to monetary authorities.

EXPORT PERFORMANCE IN VOLUME TERMS

The traditional growth of markets/growth of exports tables as shown in previous issues of *Economic Outlook* have become increasingly difficult to understand. While gains or losses of market share *measured in current prices* seem to be a useful measure of export "performance" over the medium term, year-to-year gains or losses are not very informative when there are substantial changes in relative prices; in these conditions the market-share approach to export forecasting also becomes difficult to apply. A measure of "volume performance" has therefore been developed which it is hoped will aid analysis and forecasting over the period following the realignment. Results are given in Table 35.

The basic problem was of course to estimate figures of market growth in volume terms. It is clear that, in the absence of information on volumes and deflators for trade flows by origin and destination, there can be no definitive method for making such calculations, and some kind of arbitrary estimation procedure has to be adopted. The method used here consists, first, of producing for each market a "market deflator" (which is done, on the assumption of non-discriminatory pricing, by appropriately weighting together the export average values of exporters to the market); these "market deflators" are then weighted together for each exporting country on the basis of the structure of its exports. The result is a "deflator for markets" for each exporting country which can be used in conjunction with the standard figures for market growth in dollar value to produce "market growth in volume". If the "deflators for markets" are averaged across OECD exporting countries, weighting by total exports, it can be shown that the result is precisely equal to the total OECD export unit value as conventionally measured. This implies that, for the area as a whole, export market growth is equal to actual export growth, so that OECD countries' "export performance" in volume averages to zero in any period.

The assumption of non-discriminatory pricing would naturally mean that this method would be of limited use for calculating performance in a single market, but it is felt that for global performance the method may be of some help (and better than simply deflating every market by the average export deflator of the OECD area as a whole).

Another possibility would have been to approach the problem from the import side, but there would then have been difficulties associated with the breakdown between intra-OECD imports and imports from the non-OECD area, and for non-OECD markets essentially the same procedure as that in fact adopted would have been necessary. Moreover, whether export performance is measured in volume or in value, it is generally preferable to compile the market indices for past periods from export data rather than from import data, owing to asymmetries and lags in the recording of given flows.

MONETARY DEVELOPMENTS AND CAPITAL MOVEMENTS

a) *Exchange rates*

Chart H: Spot and forward exchange rates are expressed in terms of the percentage deviation from the central rate or parity for the currency. The upper and lower bands drawn on the charts represent the 2.25 per cent maximum deviation agreed upon at the Smithsonian Meetings.

Chart I: Each currency is expressed in terms of the percentage deviation from the central rate or parity for the currency. The white band shows the 2.25 per cent maximum spread between dollar spot rates agreed upon by present and prospective EEC countries. The actual gap between the strongest and weakest currencies is the so-called "snake in the tunnel". The band is drawn so that the difference between the ceiling of the band and the strongest currency is the same as the difference between the floor of the band and the weakest currency.

b) *Interest rates*

Chart J: The interest rates or yields shown are generally those at or near ends of periods indicated. With the exceptions noted below, they are those on Government bonds and 3-months Treasury bills as published in OECD, *Main Economic Indicators:* see the notes therein.

Canada: Finance company paper—*Bank of Canada Statistical Summary.*

France: Call money on collateral of private bills—OECD, *Main Economic Indicators;* Public corporation bonds—Conseil National du Crédit, *Compte Rendu Trimestriel.*

Germany: 3-months interbank money—*Monthly Report of the Deutsche Bundesbank;* 7 per cent Government bonds—*Blick durch die Wirtschaft.*

Italy: Commercial bank deposit rate—Morgan Guaranty Trust Company, *World Financial Markets;* Bonds of Corporations and Financial Institutions—*Mediobanca.*

Japan: Call money, Telegraph and Telephone bonds—Bank of Japan, *Economic Statistics Monthly.*

Switzerland: Short-term bank deposits—OECD, *Main Economic Indicators.*

United Kingdom: Local authority deposits, Company debenture and Loan Stocks (20 years to maturity)—*Financial Statistics.*

United States: Certificates of Deposit, Corporate (Aaa) bonds—*Federal Reserve Bulletin* and other publications and releases of the Federal Reserve System.

3-months Euro-dollar deposits in London: various material prepared within the Federal Reserve System.

$ and DM denominated Eurobonds: Morgan Guaranty Trust Company, *World Financial Markets.*

USE OF CURRENT NATIONAL STATISTICS

Unless otherwise stated, all the national statistics quoted in the *Economic Outlook* are taken from the *Main Economic Indicators* published monthly by the OECD (MEI). Starting in September 1967, supplements to MEI have been published describing in detail the sources and methods of these statistics. The following notes are therefore confined to some methodological points of special importance for the understanding of the text.

Unemployment statistics

The figures are taken from the OECD *Main Economic Indicators,* which generally reproduces the most usually quoted national series, the figures being seasonally adjusted by the OECD Secretariat, except for Canada, the United States and France, data for which are adjusted by national authorities. These series, however, vary considerably from one country to another insofar as methods of collection, coverage and definition are concerned.

The Italian unemployment figures are based on national *sample surveys,* carried out in the first months of each quarter. The figures for Germany, Netherlands, Norway and the United Kingdom relate to *registered unemployed.* For the United Kingdom, it should be noted that the figures cover the whole country and are related to the civilian labour force, in contrast to the commonly quoted figures relating to wholly unemployed in Great Britain as a per cent of employees and unemployed. There is usually a difference of about one-fifth between the two figures. The figures for Austria and France relate to *registered job applicants.* These figures depend very much on the proportion of unemployed who usually register. In France, this proportion was estimated to be about 60 per cent in 1968, compared with slightly more than 50 per cent six years earlier. Since then, the National Employment Agency has extended its coverage and by 1971 the proportion had increased to approximately 75 per cent.

In Belgium, Denmark, Ireland and Sweden the figures relate to *insured unemployed* and do not include unemployed not entitled to unemployment benefits (a similar series is also available for France but it covers only a fraction of total unemployment). In Sweden there is also a quarterly sample survey on employment and unemployment which usually shows a higher unemployment figure.

In a number of countries, including Germany and France, sample surveys of employment are carried out at yearly or more infrequent intervals and their results are of some use for the correction and interpretation of the monthly unemployment figures.

The series showing adult male unemployment seasonally adjusted are taken directly from published sources for the United States and Canada. For France and the United Kingdom data were estimated based on a regular survey of the age structure of unemployed. For Germany and the Netherlands total male unemployment series are published monthly.

Index of industrial production (Country tables and charts)

The figures shown include, as far as possible, mining, manufacturing and public utilities, but exclude construction. The exact coverage, the weighting system and the methods of calculation vary from country to country but the divergences are somewhat less marked than in the case of the price and wage indices. With the exception of Germany and certain smaller countries, the indices are seasonally adjusted by national statistical offices, using different methods, derived from the U.S. Bureau of the Census Method II.

Changes have recently taken place in the indices for certain countries. A quarterly index of industrial production has been published in France since the beginning of 1970; a description of this was given in *Economic Outlook,* No. 8, p. 70.

For Italy an index of value added in industry is also given; because of differences in concept, coverage and base year, this index and the index of industrial production show significantly different developments over the period.

The series shown in the Technical Annex tables are taken from the same sources, but cover only manufacturing (except for Germany).

Merchandise trade

Except where otherwise indicated, merchandise import and export data are taken from OECD foreign trade statistics as published in *MEI* and the OECD Foreign Trade Bulletins.[1] Except for Canada, whose trade is recorded fob place of shipment, exports are recorded fob frontier and imports cif frontier.

United States trade figures are taken from national publications; both import and export data are fob frontier and relate to general trade; exports exclude Department of Defense shipments.

1. The OECD publishes three sets of foreign trade bulletins. *Series A*—overall trade by countries; *Series B*—trade by commodities, analysis by main trading areas; and *Series C*—trade by commodities, detailed analysis in the form of trade matrices.

Seasonal adjustments are made by the Department of Economics and Statistics except for Canada, the United Kingdom and the United States[1] where national estimates are used.

Data for total OECD trade by areas differ from the aggregates published in *MEI* on account of:

i) revisions of back data to adjust for significant changes in coverage, such as the inclusion of under-recorded exports in United Kingdom statistics or of trade in silver in United States data since 1969;

ii) adjustments for inconsistent recording of intra-OECD trade from the import and export sides respectively, arising from differences in timing, coverage and valuation, and inconsistencies in the seasonal adjustment of individual series. These adjustments could only be applied to major aggregates of OECD trade; where relevant, they are signalled by a footnote.

1. For the United States and Canada, data seasonally adjusted by the Department of Economics and Statistics are also published in *MEI*.

Seasonal adjustment

As noted above, some of the series used have been seasonally adjusted by the Department of Economics and Statistics, notably in the area of foreign trade but also in some cases for industrial production, unemployment, and retail sales. The method used is the X-11 variant of the U.S. Bureau of the Census Method II as programmed for computer use by that Agency. (Further details may be found in Technical Paper No. 15 of the Bureau of the Census and in the July 1972 edition of MEI). Where appropriate, series are also corrected for calendar variations.