

DOCUMENT OF INTERNATIONAL MONETARY FUND AND NOT FOR PUBLIC USE

MASTER FILES

ROOM 612D

11

Any views expressed in the Departmental Memoranda (DM) Series represent the opinions of the authors and, unless otherwise indicated, should not be interpreted as official Fund views.

DM/85/5

INTERNATIONAL MONETARY FUND

Treasurer's Department

Foreign Exchange and Financial Markets in December 1984

Prepared by Nobumitsu Hayashi and Robert A. Feldman

Approved by Muhammad N. Bhuiyan

January 18, 1985

The principal feature of foreign exchange market developments in December was the continued firmness of the U.S. dollar and a significant easing of the pound sterling. The dollar continued to be supported by strong commercial demand and the belief that the U.S. economy was likely to grow strongly this year while the pound sterling was affected by easier oil prices and the inability of OPEC to support oil prices. Trading condition was generally quiet with occasional volatile movement and wide spreads, partly reflecting the thinness of the market, especially toward the year-end. Over the month as a whole, the U.S. dollar firmed by 1.39 percent in effective (MERM) terms and by 0.93 percent in terms of the SDR (see Table 1). The pound sterling eased by 3.26 percent against the dollar and by 2.68 percent in terms of the SDR; other leading currencies eased by 0.85-1.75 percent against the U.S. dollar, except for the Canadian dollar which firmed by 0.19 percent.

The U.S. dollar opened easier partly as a result of technical adjustment and some profit-taking, following its sharp appreciation at the end of November. The Bundesbank's sales on December 6 of \$150-\$200 million in the spot and forward markets in Frankfurt also helped restrain the upward movement of the dollar. The dollar, however, tended to firm steadily from the second week, despite some declines in U.S. interest rates. The dollar was apparently supported by commercial demand and indications of a possible acceleration of the pace of U.S. economic expansion and low inflation. Major U.S. banks cut their prime lending rate by half a percentage point to 10 3/4 percent on December 17 and 18, and the Fed cut its discount rate on December 21. The Bundesbank sold \$50-\$100 million in the open market on several occasions but these interventions appeared to have had only temporary effect on the market. The dollar firmed sharply in the last week of December although trading was reportedly extremely light.

Table 1. Changes in Exchange Rates in December 1984 1/

(In percent)

	<u>Monthly exchange rate changes</u>			<u>Annual changes</u>	
	Against U.S. dollar <u>2/</u>	Against SDR <u>3/</u>	Effective exchange rate <u>4/</u>	Against the U.S. dollar <u>2/</u>	Effective exchange rates <u>4/</u>
Belgium	-1.16	-0.38	-0.03	-11.90	-1.07
Denmark	-0.85	-0.03	+0.33	-12.46	-2.90
France	-1.30	-0.15	+0.16	-13.66	-3.52
Germany	-1.44	-0.72	-0.45	-13.64	-3.97
Ireland	-1.17	-0.57	+1.94	-13.01	-1.25
Italy	-0.85	-0.38	-0.04	-14.45	-4.73
Netherlands	-1.71	-0.72	-0.43	-14.07	-3.90
Austria	-1.36	-0.33	-0.03	-13.30	-3.33
Canada	+0.19	+1.13	+0.92	-5.84	-1.44
Japan	-1.63	-1.00	-1.13	-7.92	-0.83
Norway	-1.24	-0.70	-0.33	-15.19	-6.14
Sweden	-1.58	-1.17	-0.90	-10.86	-1.67
Switzerland	-1.75	-0.60	-0.41	-16.21	-7.60
United Kingdom	-3.26	-2.68	-2.54	-20.21	-12.40
United States	--	+0.93	+1.39	--	+11.82

1/ Positive sign indicates appreciation of the currency.

2/ Based on New York noon quotations.

3/ SDR rates are derived from representative exchange rates advised to the Fund by members and the daily valuation of the SDR against the U.S. dollar.

4/ Based on the Fund's multilateral exchange rate model (MERM). Effective rates are based on representative exchange rates in the domestic markets, as officially advised to the Fund.

The pound sterling was particularly weak against the U.S. dollar and fell to record lows at the end of December, attributed to low oil prices and the prospect of their further declines as the OPEC was finding it difficult to reach an agreement on prices and limit production levels. The Bank of England apparently did not intervene in the market and the exchange rate of the pound sterling was left to be set by market forces. As a result, the pound sterling eased sharply against the U.S. dollar and also against the currencies of its major trading partners; in effective (MERM) terms, the U.K. currency eased by 2.54 percent.

There were little movement in the relative positions of currencies within the European Monetary System in December (see Chart 1) as market activity was centered around the U.S. dollar and the pound sterling. The spread in the narrow EMS band remained in the range of 1.28-2.01 percent, well within the 2.25 percent range permitted by the arrangement. The Danish krone was at the top of the narrow EMS band throughout the month, while the Belgian franc and the Netherlands guilder alternated at the bottom. The divergence indicator for the Danish krone was above its upper threshold during most of the second half of the month (see Chart 2). The Italian lira was the strongest currency in the EMS during most of the month with spreads from the weakest currency in the range of 1.68-2.16 percent, compared with the 6 percent fluctuation range permitted for the lira.

The volatility of exchange rate movements, as indicated by certain statistical measures (see Table 2), decreased in December for all the major currencies. The range within which the major currencies were traded against the U.S. dollar narrowed in December, except for the Japanese yen which rose to 2.1 percent in December, compared with the exceptionally low level of 1.2 percent in November. The Canadian dollar continued to record the narrowest range of 0.7 percent while the pound sterling continued to record the widest range of 4.4 percent. Other currencies were traded in the range of 2.5-3.2 percent. The average of absolute daily percentage changes in December (MAC in Table 2 and Chart 5) also declined slightly for most currencies from November. The Canadian dollar continued to record the smallest MAC value at 0.10 percent while the Italian lira recorded the largest MAC value of 0.51 percent.

Changes in gross foreign exchange reserves of the major industrial countries in December were affected by such special factors as year-end valuation adjustments and premature loan repayments (see Table 3). The largest reserve increase was recorded by Switzerland (\$1,939 million), attributed mainly to the annual year-end valuation adjustments, followed by Austria and Japan. Denmark recorded the largest reserve decline, (\$1,448 million) almost entirely due to premature amortization of foreign loans. Other significant declines were recorded by Germany and Italy, reflecting mainly intervention activities. Over the year as a whole, the large reserve gains were recorded by France (year to November), Japan, and Norway while large decreases were recorded by Germany, the Netherlands, Canada, and the United Kingdom. Table 3 also shows end-of-year reserves expressed as a percentage of 1983 imports. Among the EMS countries, Belgium had by far the lowest ratio, while Germany and Italy had the highest ratios. For the other major countries, Norway and Switzerland have noticeably high ratios, while Canada, the United Kingdom, and the United States had very low ratios. These ratios, it should be noted, were not significantly different from those prevailing in December 1983, except for a sharp increase for Norway.

Table 2. Intra-Month Variations of Exchange Rates  
of Major Currencies 1/

	<u>December 2/</u>		<u>High-low spread in percent 3/</u>		<u>MAC 4/</u>	
	High	Low	Nov.	Dec.	Nov.	Dec.
Belgium	61.595	63.210	5.5	2.6	0.51	0.40
Denmark	11.003	11.280	5.6	2.5	0.58	0.44
France	9.37	9.6475	5.9	3.0	0.57	0.43
Germany	3.05875	3.154	6.2	3.1	0.59	0.46
Ireland	1.0165	0.98925	5.3	2.8	0.60	0.40
Italy	1,886.00	1,939.50	4.8	2.8	0.50	0.51
Netherlands	3.451	3.5625	6.1	3.2	0.59	0.43
Austria	21.48	22.14	6.3	3.1	0.56	0.42
Canada	0.76008	0.75475	1.1	0.7	0.11	0.10
Japan	246.40	251.55	1.2	2.1	0.30	0.23
Norway	8.84875	9.095	4.8	2.8	0.52	0.38
Sweden	8.71375	8.98	6.0	3.0	0.60	0.35
Switzerland	2.524	2.5995	6.0	3.0	0.60	0.47
United Kingdom	1.209	1.1585	6.3	4.4	0.75	0.40

1/ Exchange rates against the U.S. dollar at noon in the New York market.

2/ Domestic currency units per U.S. dollar except for the pound sterling, the Irish pound, and the Canadian dollar, which are in U.S. dollars per domestic currency unit.

3/ Intra-month variation in percent.

4/ Monthly average of absolute daily changes in spot exchange rates in percentage terms.

Table 3. Foreign Exchange Reserves in December 1984 <sup>1/</sup>

(In millions of U.S. dollars)

	End-month reserve level	Change in December	Change over 12 months	Reserves as percentage of 1983 imports
Belgium	3,608	-23	-168	6.5
Denmark	2,644	-1,448	-638	16.3
France (November)	20,467	+64	+1,636	19.4
Germany	35,007	-470	-2,306	22.9
Italy	19,067	-928	+543	23.7
Netherlands	7,778	-226	-924	12.4
Austria	3,586	+576	-300	18.5
Canada	1,741	+110	-1,000	2.7
Japan	22,283	+262	+1,919	17.6
Norway	8,647	-264	+2,718	64.1
Sweden	3,414	-128	-239	13.1
Switzerland	14,706	+1,939	+351	50.4
United Kingdom	6,969	+158	-1,748	7.0
United States (November)	6,263	-54	-647	2.4

<sup>1/</sup> Includes ECU holdings but excludes gold, SDRs and reserve position in the Fund. Foreign exchange reserves are gross and include balances drawn on short-term swap agreements and proceeds from other official borrowings.

The calendar year 1984 witnessed a substantial strengthening of the U.S. dollar on the exchange markets. The dollar firmed by 11.82 percent in effective (MERM) terms and by 6.81 percent in terms of the SDR over the year (see Table 1). For the first time in history, the value of the SDR fell below \$1.00 mark in September 1984. After easing relatively sharply in the period from mid-January to mid-March, mainly on concerns about large U.S. fiscal and trade deficits, the dollar rebounded as U.S. interest rates tended to firm. The firming trend of the dollar continued until mid-September when heavy intervention by the Bundesbank appeared to have held back the dollar's advance. The market became nervous and apprehensive of possible major intervention by the Bundesbank and other central banks, and the dollar generally held its level to end the year near record high levels against a number of major currencies. The strength of the dollar was sustained by the capital movements into dollar-denominated assets induced by favorable interest rate differentials, continued attraction as a safe-heaven currency, and market confidence in the sustained economic recovery in the second half of the year while high unemployment and slow pace of growth prevailed in most of Europe.

The monetary policy pursued by the Federal Reserve was geared primarily toward curbing inflationary pressures in the face of surprisingly rapid economic expansion and large budget deficits. Meanwhile, the U.S. trade deficit continued to widen; the deficit through November amounted to \$115.45 billion, substantially higher than the previous record deficit of \$69.39 billion for the whole of 1983.

Notwithstanding sharp declines against the U.S. dollar, the currencies participating in the European Monetary System were relatively stable in terms of each other and there was no noticeable tension although the Belgian franc came under pressure earlier in the year when the Deutsche mark was firming against the U.S. dollar. The Deutsche mark eased by 13.64 percent over the year to DM 3.154 per U.S. dollar. Germany's economy, affected by the metal workers' strike in spring, recovered steadily and its trade surplus widened, partly under the influence of a weakening mark. The French franc eased by 13.66 percent and the Italian lira eased by 14.45 percent against the U.S. dollar over the year while the Belgian franc depreciated by 11.9 percent. The divergence indicator for the Belgian franc was persistently under its lower threshold until mid-April and the discount of the financial franc against the official franc widened. The National Bank of Belgium intervened in the market to support the franc and maintained Belgium's interest rates relatively high. As the year progressed, the spread in the narrow EMS band narrowed to be well within the 2.25 percent margin permitted in the arrangement, and there were little movements in the relative positions within the band. The Italian lira continued to be the strongest currency during most of the year, but its spread from the weakest currency narrowed and came within the narrow band occasionally. Other EMS currencies eased by 12.5-14.1 percent against the U.S. dollar.

The pound sterling was the weakest of the major currencies, being affected by the coal miners' strike and low oil prices. The pound sterling eased by 20.21 percent to \$1.1585 per pound against the U.S. dollar and by 12.4 percent in effective (MERM) terms. The Swiss franc eased by 16.21 percent to Sw F 2.60 per dollar. The Japanese yen performed relatively better than the European currencies, attributed to its favorable economic performance and large external surplus. As Japan's trade surplus widened, increased attention was focused on the liberalization of the Japanese financial market and internationalization of the yen. The yen eased by 7.92 percent over the year to ¥ 251.55 per dollar from ¥ 231.63 per dollar a year earlier. The Canadian dollar eased by 5.84 percent against the U.S. dollar over the year.

I. Developments in Major Factors Affecting  
the Exchange Market in December

The U.S. dollar continued to firm against most major currencies in December, despite lower interest rates. The "flash" estimate of the real GNP, seasonally adjusted, indicated a growth rate of 2.8 percent (annual rate) in the fourth quarter while the growth rate of the third quarter was revised downward to 1.6 percent from 1.9 percent. The growth in the implicit GNP deflator for the fourth quarter was estimated to be 2.9 percent, compared with 3.9 percent in the preceding quarter. The index of leading economic indicators, seasonally adjusted, rose 1.3 percent in November and the 0.7 percent decline in October was revised to 0.5 percent decline. Among the individual economic indicators, the industrial production rose 0.6 percent in December after an increase of 0.4 percent in November. The civilian unemployment rate, seasonally adjusted, rose to 7.2 percent in December from a revised 7.1 percent in November. The current account deficit rose to \$32.9 billion in the third quarter from \$24.7 billion in the second quarter. The trade deficit widened to a seasonally adjusted \$9.94 billion in November from \$9.18 billion in October, reflecting a sluggish export. The cumulative trade deficit since January 1984 amounted to \$115.45 billion, twice as large as that of \$62.59 billion recorded in the same period of 1983. The budget deficit rose to \$28.46 billion in November from \$21.59 billion a year earlier. The producer price index rose 0.1 percent in December and 1.8 percent year-on-year.

The Deutsche mark eased by 1.44 percent against the U.S. dollar and by 0.45 percent in effective (MERM) terms in December 1984. Germany's real GNP, seasonally adjusted, rose 2.5 percent in the third quarter and 2.8 percent from a year earlier notwithstanding a decline of 1.1 percent in the second quarter under the impact of labor disputes in the metal and print industries. Germany's industrial production was unchanged in November after a 3.6 percent increase in October. Unemployment rate rose to 9.4 percent in December from 8.8 percent in November, mainly due to seasonal factors. The trade surplus narrowed to DM 6.978 billion in November from a record DM 8.811 billion in October but was sharply higher than DM 3.369 billion a year earlier. The current account surplus narrowed to DM 5.9 billion in November from a revised DM 6.1 billion in October and compared with DM 1.2 billion a year earlier. The wholesale price index declined 0.6 percent in November and was 1.0 percent higher than in November 1983.

The French franc eased by 1.30 percent against the U.S. dollar but firmed modestly by 0.16 percent in effective (MERM) terms. France's GDP rose 0.8 percent in the third quarter after a 0.4 percent contraction in the second quarter. The number of unemployed, seasonally adjusted, rose 0.6 percent in November and 13.5 percent year-on-year. The trade balance, seasonally adjusted, turned to a surplus of F 800 million in November from a deficit of F 3.39 billion in October and a deficit of F 1.59 billion a year earlier. Industrial wholesale prices rose 0.2 percent in November and 10.3 percent year-on-year.

The Belgian franc eased by 1.16 percent against the U.S. dollar and was little changed in effective (MERM) terms. It was replaced by the Netherlands guilder at the bottom of the EMS band in mid-December. The discount of the financial franc vis-a-vis the official franc was within one percent during December as speculative pressure against the franc abated. Belgium's industrial production rose 19.9 percent in September and was 10.1 percent higher than a year earlier. The unemployment rate fell slightly to 12 percent in December from 12.1 percent in November. The wholesale price index rose 0.3 percent in November and 3.2 percent year-on-year.

The Netherlands guilder eased by 1.71 percent against the U.S. dollar and by 0.43 percent in effective (MERM) terms. The guilder replaced in midmonth the Belgian franc as the weakest currency in the EMS. The Netherlands' current account surplus, seasonally adjusted, narrowed to f. 3.54 billion in the third quarter from f. 5.08 billion in the second quarter. The trade surplus widened to f. 900 million in October from f. 500 million in September; the trade balance was in deficit of f. 100 million in October 1983.

The Danish krone eased by 0.85 percent against the U.S. dollar but firmed by 0.33 percent in effective (MERM) terms. The krone was the strongest currency in the narrow EMS band throughout the month and on some occasions stronger than the Italian lira. The divergence indicator for the krone was above its upper threshold during most of the second half of the month. Denmark's trade deficit, seasonally adjusted, narrowed to DKr 490 million in November from DKr 2.1 billion in October and DKr 736 million a year earlier. The unemployment rate, seasonally adjusted, fell to 10.0 percent in October from 10.2 percent in September. The wholesale price index rose 0.4 percent in November and 6.5 percent year-on-year.

The Irish pound eased by 1.17 percent against the U.S. dollar but firmed by 1.94 percent in effective (MERM) terms, reflecting mainly the sharp depreciation of the pound sterling.

The Italian lira eased by 0.85 percent against the U.S. dollar but was little changed in effective (MERM) terms. Italy's industrial production rose 9.4 percent in October and 10.9 year-on-year. Overall balance of payments surplus widened to Lit 2.943 trillion in November from Lit 1.105 trillion in October and Lit 742 billion a year earlier.

The pound sterling eased sharply by 3.26 percent against the U.S. dollar and by 2.54 percent in effective (MERM) terms, attributed mainly to easier oil prices. The U.K. unemployment rate, seasonally adjusted, was unchanged at 12.9 percent in December. Industrial production rose 0.8 percent in October, following a revised increase of 1.5 percent in September. The Public Sector Borrowing Requirement (PSBR) widened to £1.84 billion in November from £1.43 billion a year earlier. The trade deficit, seasonally adjusted, narrowed to £122 million in November



from a record £888 million in October and the current account surplus widened to £278 million from £40 million in October. The producer price index rose 0.3 percent in December and 5.8 percent year-on-year.

The Swiss franc eased by 1.75 percent against the U.S. dollar and by 0.41 percent in effective (MERM) terms. Switzerland's real GDP grew 2 percent in the third quarter, following a growth of 1.9 percent in the second quarter. The unemployment rate rose slightly to 1.2 percent in November from 1.1 percent in October. The trade balance turned to a deficit of Sw F 182.4 million in November from a surplus of Sw F 929.7 million in October and that of Sw F 439.7 million a year earlier.

The Japanese yen eased by 1.63 percent against the U.S. dollar and by 1.13 percent in effective (MERM) terms. Japan's industrial production, seasonally adjusted, rose 0.2 percent in October, following an increase of 3.3 percent in September. The trade surplus, seasonally adjusted, narrowed to \$3.394 billion in December from \$4.187 billion in November; the surplus for 1984 amounted to a record \$33.675 billion compared with \$20.534 billion in the previous year. The wholesale price index rose 0.1 percent in December and 0.4 percent year-on-year.

The Canadian dollar firmed by 0.19 percent against the U.S. dollar and by 0.92 percent in effective (MERM) terms. Canada's real GDP, seasonally adjusted, fell 0.1 percent in October, following a decline of 0.2 percent in September. The unemployment rate, seasonally adjusted, declined to 10.8 percent in December from 11.3 percent in November. The budget deficit widened to \$2.86 billion in November from \$1.85 billion a year earlier. The industrial selling prices rose 0.4 percent in November and 3.9 percent year-on-year.

The Austrian schilling eased by 1.36 percent against the U.S. dollar but was little changed in effective (MERM) terms. The Norwegian krone eased by 1.24 percent against the U.S. dollar and by 0.33 percent in effective (MERM) terms. The Swedish krona eased by 1.58 percent against the U.S. dollar and by 0.90 percent in effective (MERM) terms.

#### IV. Monetary Developments, Forward Exchange Quotations and Covered Interest Differentials

Money market conditions in most major industrial countries were relatively steady in December with short-term interest rates changing by 20 basis points or less in most cases. Two notable exceptions were the United States and Canada where short-term interest rates, continuing their trend of previous months, eased markedly from the end of November to the end of December.

Table 4. Inflation Rates and Short-Term Interest Rates

	Month <u>2/</u>	Inflation rates <u>1/</u> (year-on-year percent changes)				Short-term interest rates <u>4/</u> (end-of-month)	
		Wholesale		Consumer		Nov.	Dec.
		price index		price index <u>3/</u>			
Austria	December	2.4	(3.3)	5.0	(5.3)	4.50	4.50
Belgium	Nov./Dec.	3.2	(3.9)	5.3	(5.3)	10.75	10.70
Canada	Sept./Nov.	3.6	(4.0)	4.0	(3.4)	10.48	9.84
Denmark	November	6.5	(6.0)	5.9	(6.1)	7.00	7.00
France	Nov./Dec.	10.3	(12.1)	6.7	(6.9)	10.77	10.90
Germany	December	0.7	(1.0)	2.0	(2.1)	5.93	5.88
Italy	Nov./Dec.	8.9	(9.4)	8.8	(8.6)	17.06	17.06
Japan	Dec./Nov.	0.4	(0.4)	2.2	(2.2)	6.51	6.31
Netherlands	Sept./Dec.	4.9	(3.7)	2.8	(3.0)	5.81	5.69
Norway	May/Nov.	6.4	(7.0)	6.0	(6.1)	8.00	8.00
Sweden	November	--	(--)	7.4	(7.3)	9.50	9.50
Switzerland	December	2.9	(3.3)	2.9	(3.0)	5.06	4.75
United Kingdom	Dec./Nov.	5.8	(5.9)	4.9	(5.0)	9.24	9.31
United States	December	1.8	(1.9)	3.8	(4.1)	8.74	8.12

1/ Rates appearing in parentheses are those for the preceding month.

2/ In case of double entry (month/month), the first entry applies to the wholesale price index and the second entry applies to the consumer price index.

3/ Retail price index for Belgium, France and the United Kingdom, and cost of living index for Germany, the Netherlands, and Switzerland.

4/ Three-month rates are: Market yields on Treasury bills for the United States and the United Kingdom; Treasury bill rate for Canada; inter-bank rates for Germany, France, Italy, and the Netherlands; three-month euro-franc rate for Switzerland; discount rate on two-month private bills for Japan; four-month certificates of the Government Securities Stabilization Fund for Belgium; central bank discount rates for Austria, Denmark, Norway and Sweden.

During the calendar year, money market conditions in most major industrial countries appeared to remain tight into the third quarter and then eased over the remainder of the year. In the United States, short-term interest rates firmed significantly under the influence of rapid economic expansion in the first half of the year and policy concerns of the Federal Reserve over a possible re-emergence of inflationary pressure. The bond-equivalent yield on three-month U.S. Treasury bills, for example, exceeded 11 percent in late August and early September, compared with 9.32 percent at end-1983. By the end of 1984, however, the U.S. Treasury bill yield had declined to 8.12 percent as the U.S. economy slowed, and the Federal Reserve relaxed its degree of reserve restraint. Short-term interest rates in Canada, France, and the United Kingdom followed a somewhat similar pattern, despite differences in economic growth patterns in those countries, with concerns over exchange rate movements seemingly playing a role at times in influencing monetary policy and interest rates. The three-month Canadian Treasury bill rate rose from 9.73 percent at end-1983 to over 12 percent in July and remained around that level into September before easing and closing 1984 at 9.84 percent. The three-month U.K. Treasury bill rate rose similarly from 9.01 percent at end-1983 to around 11 3/4 percent in August and eased thereafter to close the year at 9.31 percent. In France, the three-month interbank rate stayed over 12 percent up to July but eased considerably thereafter, along with a significant deceleration in inflation, to close 1984 at 10.90 percent. On balance, short-term interest rates in the United States and France thus ended 1984 more than one percentage point below their levels at the end of the previous year while those in the United Kingdom and Canada finished the year with rates moderately above end-1983 levels. Among other major countries, short-term interest rates in Germany and Japan were relatively stable during 1984, with the three-month interbank rate in Germany moving in a range of 5.88-6.34 percent and closing the year at 5.88 percent, and the discount rate on two-month (private) bills in Japan moving in the narrower range of 6.19-6.51 percent and ending the year at 6.31 percent.

In the United States, short-term interest rates continued to ease markedly in December. The Federal Reserve appeared to have favored a further easing of monetary restraint and it cut the discount rate on December 21 by a 1/2 percentage point to 8 percent, the lowest level since October 20, 1978 when the rate was 8 1/2 percent. The Federal funds rate also declined steadily in December from around 9 percent at the end of November to about 8 percent in the week preceding the Christmas holiday. After that, however, the Federal funds rate firmed to 8.74 percent at month-end due to end-year seasonal factors but the rate averaged 8.38 percent for December as a whole, 1.05 percentage point below the average for November. The bond-equivalent yield on three-month U.S. Treasury bills also moved up toward month-end but the closing December rate of 8.12 percent was 0.62 percentage point below its end-November level. The interest rate on three-month CDs declined similarly from 8.84 percent at end-November to 8.34 percent at end-December. Yields on U.S. Treasury securities of longer maturities also

eased but by smaller margins so that the yield curve continued to steepen in December. The five-year constant maturity rate on Treasury securities, for example, fell from 11.25 percent at end-November to 11.08 percent at end-December. In line with the general decline in interest rates, major U.S. banks lowered their prime lending rate by 1/2 percentage point to 10 3/4 percent. The M1 measure of the U.S. money supply, seasonally adjusted, averaged \$557.2 billion in the week ended December 31 compared with \$554.2 billion in the week ended November 26. The annual growth rate from the fourth quarter of 1983 base period to the fourth quarter of 1984 was about 5 percent, within the 4-8 percent target range for the period. The broader M2 measure of the money supply grew 7.5 percent over the same period, at the center of the 6-9 percent target range, while M3 grew 10 percent, exceeding the 6-9 percent target range for the period.

Among the countries participating in the European Monetary System, short-term interest rates in France, Germany, and Belgium were narrowly mixed. The three-month interbank money rate in France rose from 10.77 percent at the end of November to 10.90 percent at the end of December. The Bank of France lowered its seven-day Treasury bill discount rate by 3/4 percentage point to 11 3/4 percent around midmonth while leaving its money market intervention rate unchanged at 10 3/4 percent. The Treasury bill discount rate had remained at 12 1/2 percent since November 1983 and the cut was reportedly designed to bring the rate in line with other key rates. The three-month interbank rate in Germany eased in December by 0.05 percentage point to 5.88 percent. Germany's central bank money stock <sup>1/</sup>, seasonally adjusted, is estimated to have grown at a 4 3/4 percent annual rate from the fourth quarter of 1983 base period through the fourth quarter of 1984, well within the 4-6 percent target range for the period. The Bundesbank lowered its 1985 money growth target to a 3-5 percent range for the period from the fourth quarter of 1984 to the fourth quarter of 1985, noting that the new target represented an effort to keep inflation low while permitting the 2 1/2-3 percent real economic growth in 1984 to continue through 1985. In Belgium, the rate on Fonds des Rentes certificates was cut by 0.05 percent to 10.70 percent.

Among the other major countries, short-term interest rates continued to ease markedly in Canada and also eased in Japan but firmed slightly in the United Kingdom. In Canada, short-term interest rates continued to move with U.S. rates, with the three-month Canadian Treasury bill rate closing December at 9.84 percent compared with 10.48 percent at end-November. Major Canadian banks cut their prime rate by 1/2 percentage point to 11 1/4 percent during the third week of December. In Japan, the rate for two-month (private) bills eased moderately and stood at 6.31 percent at the end of December, 0.20 percentage point below the rate at the end of November. The Finance Ministry announced

---

<sup>1/</sup> Currency in circulation (excluding the banks' cash balances of domestic notes and coins) plus required reserves on domestic liabilities (calculated at constant reserve ratios, base: January 1974).

near the end of the month a cut in the coupon on 10-year Japanese Government bonds to 6.5 percent for January issues from 6.8 percent for December issues, consistent with the recent upturn of secondary market bond prices; the new coupon is the lowest since March 1979. Japan's broadly defined money supply M2+CDs rose 8.1 percent in November from its year-earlier level, following a 7.7 percent year-on-year rise in October. In the United Kingdom, the rate on three-month Treasury bills firmed slightly from 9.24 percent at the end of November to 9.31 percent at the end of December. The latest Bank of England data released in January show that growth in sterling M3, seasonally adjusted, turned negative with the aggregate falling by 0.5 percent in the three weeks to December 12 compared with the 2.7 percent growth recorded in the five weeks to November 21. This brought sterling M3 growth since mid-February to 10.1 percent at an annual rate, just outside the target range of 6-10 percent growth for the 14-month period starting February 1984.

In the eurocurrency markets, three-month interest rates for most currencies eased in December, with the eurodollar rate declining by 0.44 percentage point to 8.69 percent. The euro-Swiss franc rate posted the next largest decline, easing by 0.31 percentage point to 4.75 percent, and the euro-yen rate eased by 0.19 percentage point to 6.22 percent. The euro-French franc rate also declined, by 0.13 percentage point to 10.75 percent, as did the euro-Deutsche mark rate by 0.07 percentage point. The euro-sterling rate, however, firmed by 0.37 percentage point to 10.06 percent.

As a result of the movements of eurodollar and domestic interest rates from the end of November to the end of December, the uncovered interest differentials favoring eurodollar investment narrowed for Germany, Japan, and the Netherlands while those favoring domestic investments widened for Belgium, France, Italy, and the United Kingdom (see Table 5).

In the forward exchange markets, the premia against the U.S. dollar narrowed for the Deutsche mark, the Japanese yen, and the Netherlands guilder. The discounts against the dollar widened for the Belgian franc, the French franc, the Italian lira and the pound sterling. As a result of the above-mentioned movements in interest rates and forward exchange quotations, the covered interest differential favoring eurodollar investment widened for the United Kingdom. The covered interest differentials favoring domestic investments narrowed for Belgium, Germany, Japan, and the Netherlands but widened for France and Italy.

Table 5. Covered Interest Differentials for  
Three-Month Investments (End-month)

	Uncovered interest differentials <u>1/</u> (1)		Forward exchange quotations <u>2/</u> (2)		Covered interest differentials <u>1/</u> (3) = (1)-(2)	
	November	December	November	December	November	December
Belgium	-1.62	-2.01	-1.31	-1.83	-0.31	-0.18
France	-1.64	-2.21	-1.63	-1.92	-0.01	-0.29
Germany	+3.20	+2.81	+3.58	+3.16	-0.38	-0.35
Italy	-7.93	-8.37	-4.88	-5.29	-3.05	-3.08
Japan	+2.62	+2.38	+2.87	+2.57	-0.25	-0.19
Netherlands	+3.32	+3.00	+3.36	+3.01	-0.04	-0.01
United Kingdom	-0.11	-0.62	-0.36	-1.24	+0.25	+0.62

1/ Positive sign indicates differential in favor of eurodollar investment relative to domestic investment, while negative sign indicates the reverse. Domestic interest rates for France, Germany, Italy and the Netherlands are interbank rates. For Japan the discount rate for two-month private bills is used, for the United Kingdom the three-month Treasury bill rate, and for Belgium the rate on four-month certificates of the Government Securities Stabilization Fund.

2/ Positive sign indicates three-month forward premium of domestic currency against the U.S. dollar, while negative sign indicates forward discount.

#### V. Yields on the SDR and Other SDR-Denominated Assets

The SDR interest rate declined to 7.79 percent for the week beginning December 31 from 8.21 percent for the week beginning November 26 (see Table 6). The yield on three-month U.S. Treasury bills eased by 0.74 percentage point while the discount rate on two-month (private) bills in Japan and the three-month interbank rate in Germany eased by 0.20 percentage point and 0.05 percentage point respectively. Yields on the relevant instruments in France and the United Kingdom firmed, however, by 0.13 percentage point and 0.10 percentage point respectively, thus partially offsetting the effect of lower yields on the other component instruments. The rate of remuneration paid on creditor positions in the Fund (88.33 percent of the SDR interest rate) fell to 6.88 percent in the last week of December from 7.25 percent in the last week of November.

Table 6. The SDR Interest Rate and the Rate of Remuneration 1/

	November 26	December				
		3	10	17	24	31
SDR interest rate	8.21	8.21	8.15	8.02	7.81	7.79
Rate of remuneration	7.25	7.25	7.20	7.08	6.90	6.88

1/ The rates apply to the weeks beginning with the dates indicated above.

Over the calendar year, the SDR interest rate eased from 8.70 percent in the week beginning December 26, 1983, to 7.79 percent in the week beginning December 31, 1984. While the lowest rate in 1984 was the 7.79 percent prevailing on the last day of the year, the highest rate of 9.67 percent was recorded in the week beginning August 6, 1984; the rate moved in the narrow range of 8.47-9.03 percent in 1983 after a much wider range of 8.90-12.15 percent prevailing in 1982. The maximum absolute weekly change in the SDR interest rate was 0.23 percentage point in 1984.

Combined domestic interest rates for various maturities eased by 0.13-0.43 percentage point from the end of November to the end of December, except for the five-year rate which was unchanged (see Table 7). Yields on the relevant instruments for maturities of less than five years posted the largest declines in the United States where they eased by 0.34-0.79 percentage point; rates in Japan eased by 0.13-0.18 percentage point, except for the six-month rate which firmed, and those in Germany eased by 0.05-0.09 percentage point, the exception being the six-month rate which was unchanged. Yields on the relevant instruments in the United Kingdom and France for maturities shorter than five years firmed by 0.08-0.44 percentage point and 0.13-0.28 percentage point respectively. The five-year combined domestic rate was unchanged, since a 0.04-0.06 percentage point easing of the rates in the United States, Germany and Japan were offset by a 0.37 percentage point rise in the U.K. rate and a 0.18 percentage point rise in the French rate.

The combined eurocurrency offered rates eased by 0.25 percentage point for both the three-month and six-month maturities. Interest rates on eurodollars eased by 0.31-0.44 percentage point while euro-French franc rates and euro-yen rates for both the maturities eased by 0.19 percentage point and 0.13 percentage point respectively. Euro-sterling rates firmed, however, by 0.13-0.19 percentage point while euro-Deutsche mark rates were unchanged.

Average interest rates on SDR-denominated deposits of selected commercial banks eased by 0.25-0.45 percentage point. Deposit rates for December ranged from 7.74 percent for one-month deposits to 8.61 percent for 12-month deposits.

Table 7. Yields on Selected SDR-Denominated Assets 1/

	November	December
Combined market interest rates: <u>2/</u>		
a. Based on domestic rates		
3-month maturity (Rule T-1)	8.17	7.74
6-month maturity	8.38	8.13
12-month maturity	8.63	8.44
2-1/2 year maturity	9.38	9.25
5-year maturity	9.81	9.81
b. Based on eurocurrency offered rates		
3-month maturity	8.63	8.38
6-month maturity	8.88	8.63
Average commercial bank deposit rates <u>3/</u>		
1-month deposits	8.01	7.74
3-month deposits	8.33	7.88
6-month deposits	8.56	8.22
12-month deposits	8.86	8.61

1/ Rates pertain to last Wednesday of the month.

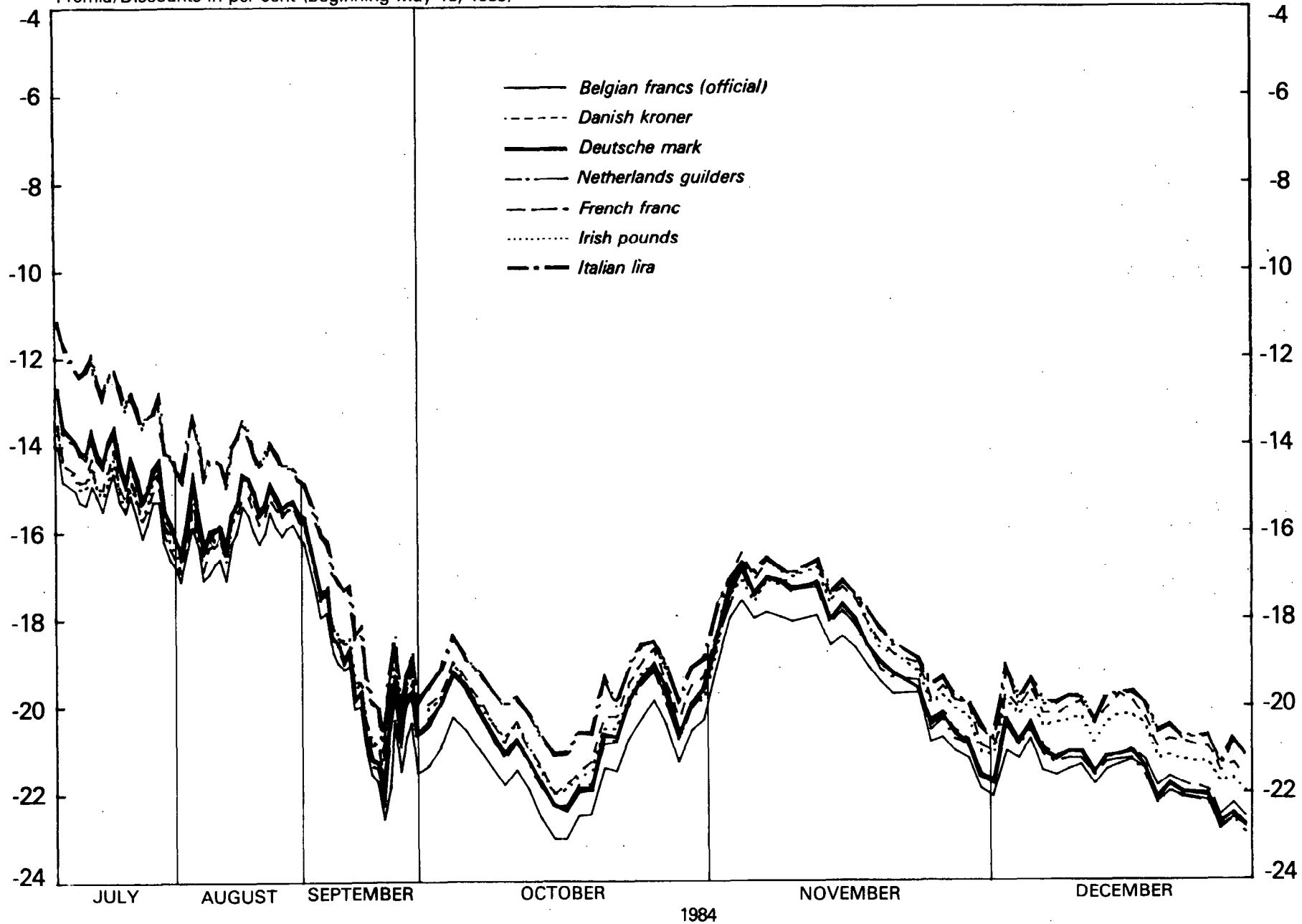
2/ Combined market rates (according to the Rule T-1) are calculated by multiplying the yields or rates of each of the respective instruments by the number of units of the corresponding currency listed in Rule 0-1 and the value in terms of the SDR of a unit of that currency as determined by the Fund under Rule 0-2(a) and (b). Combined interest rates are those that are applicable to Fund-related assets, appropriately rounded.

3/ Average of rates quoted by selected commercial banks. Rates for December pertain to the second to last Wednesday of the month, since quotations were not available for the last Wednesday from banks normally submitting quotes to the Fund.



## SPOT EXCHANGE RATES: EUROPEAN MONETARY SYSTEM

(Based on noon quotations in New York)

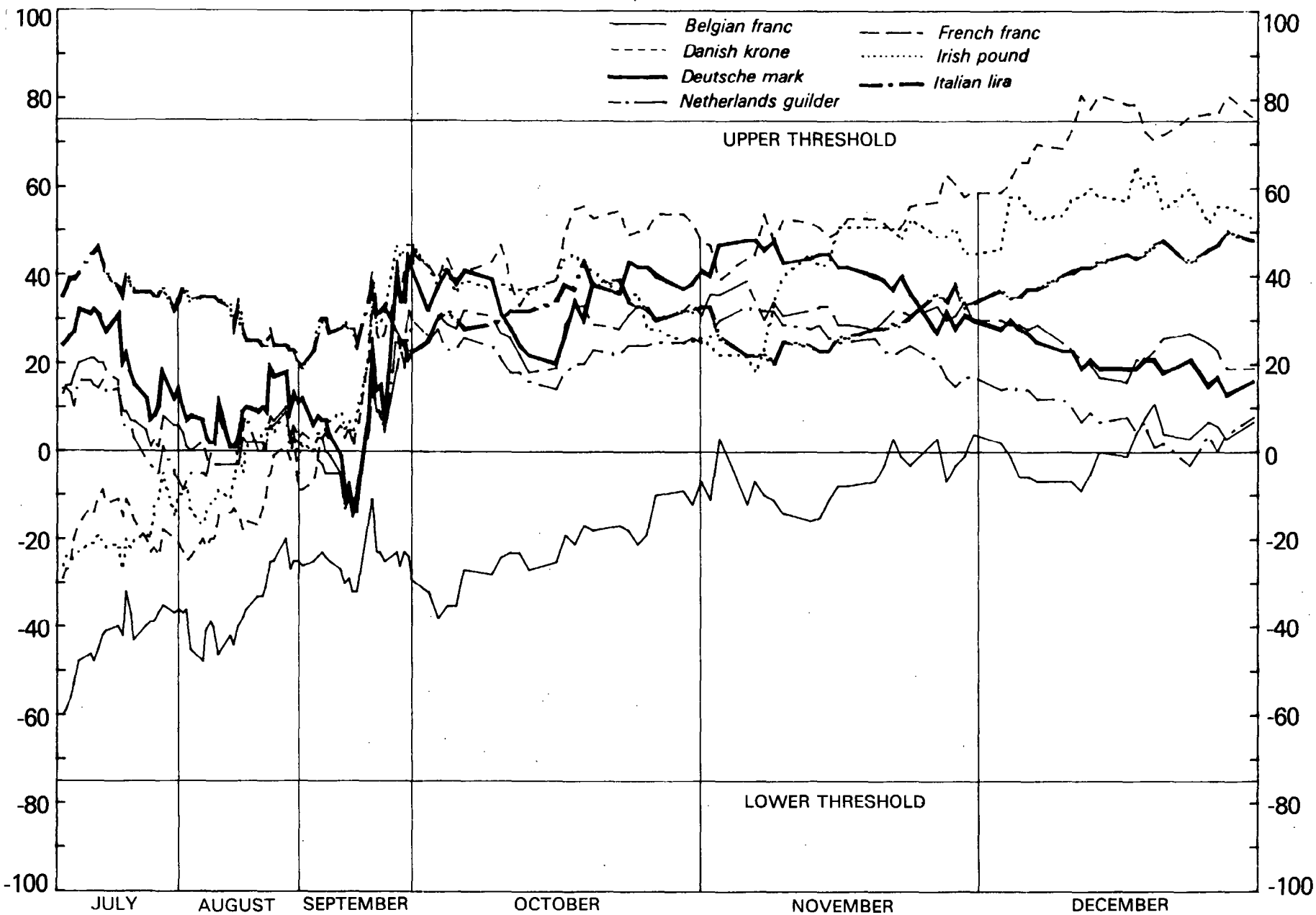
Premia/Discounts in per cent (beginning May 18, 1983)<sup>1</sup>

- 17 -

<sup>1</sup>Effective May 18, 1983 the central ECU rate of the pound sterling was appreciated and those of the other participants depreciated in connection with the Common Agricultural Policy. Premia/discounts over declared ECU central rates have been converted into U.S. dollar terms at the rate of 1 ECU = .920041.

# CHART 2 EUROPEAN MONETARY SYSTEM: DIVERGENCE INDICATORS

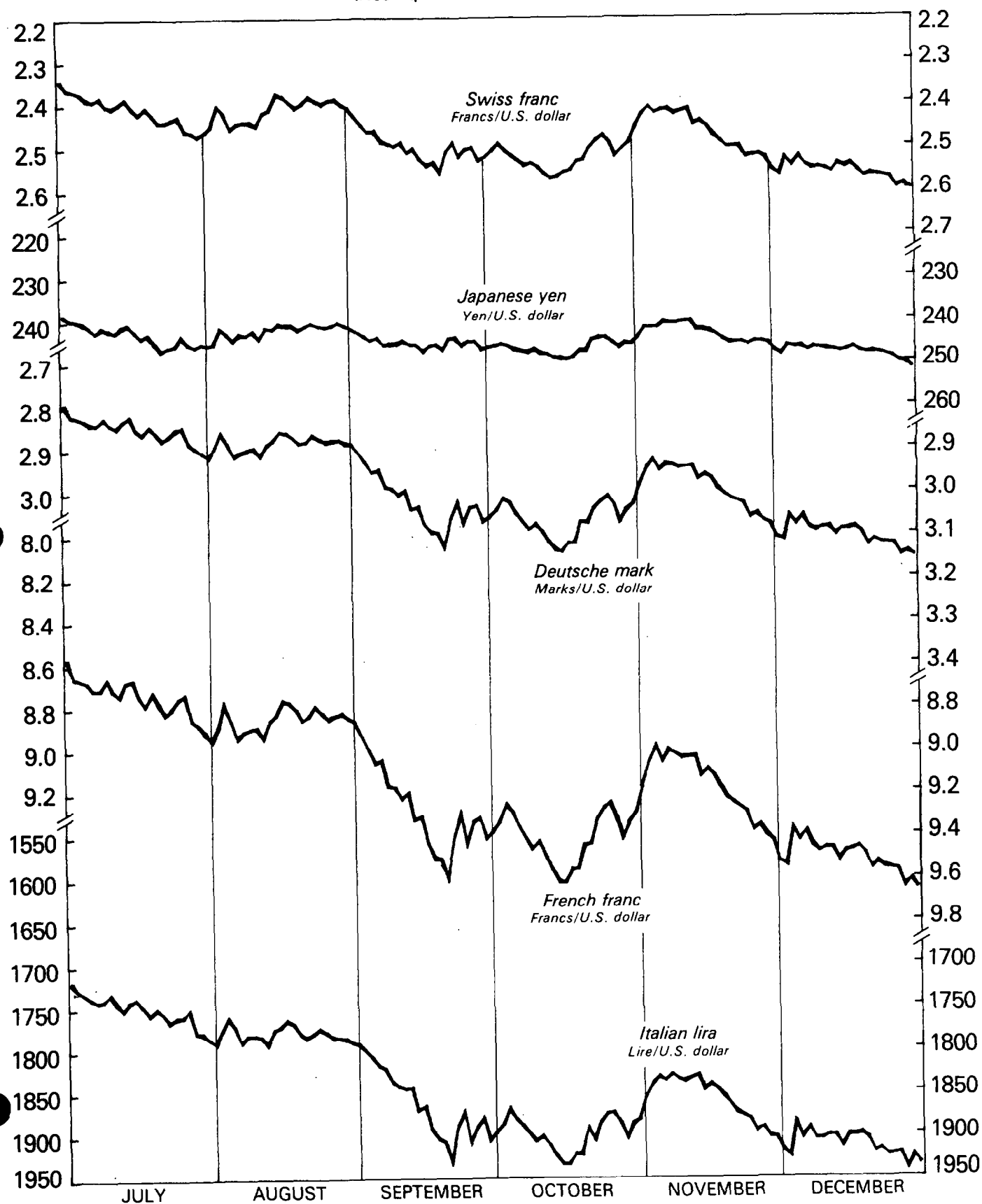
(Based on noon quotations in London)



1984

### CHART 3 SPOT EXCHANGE RATES

(Noon quotations in New York)



# CHART 4 SPOT EXCHANGE RATES

(Noon quotations in New York)

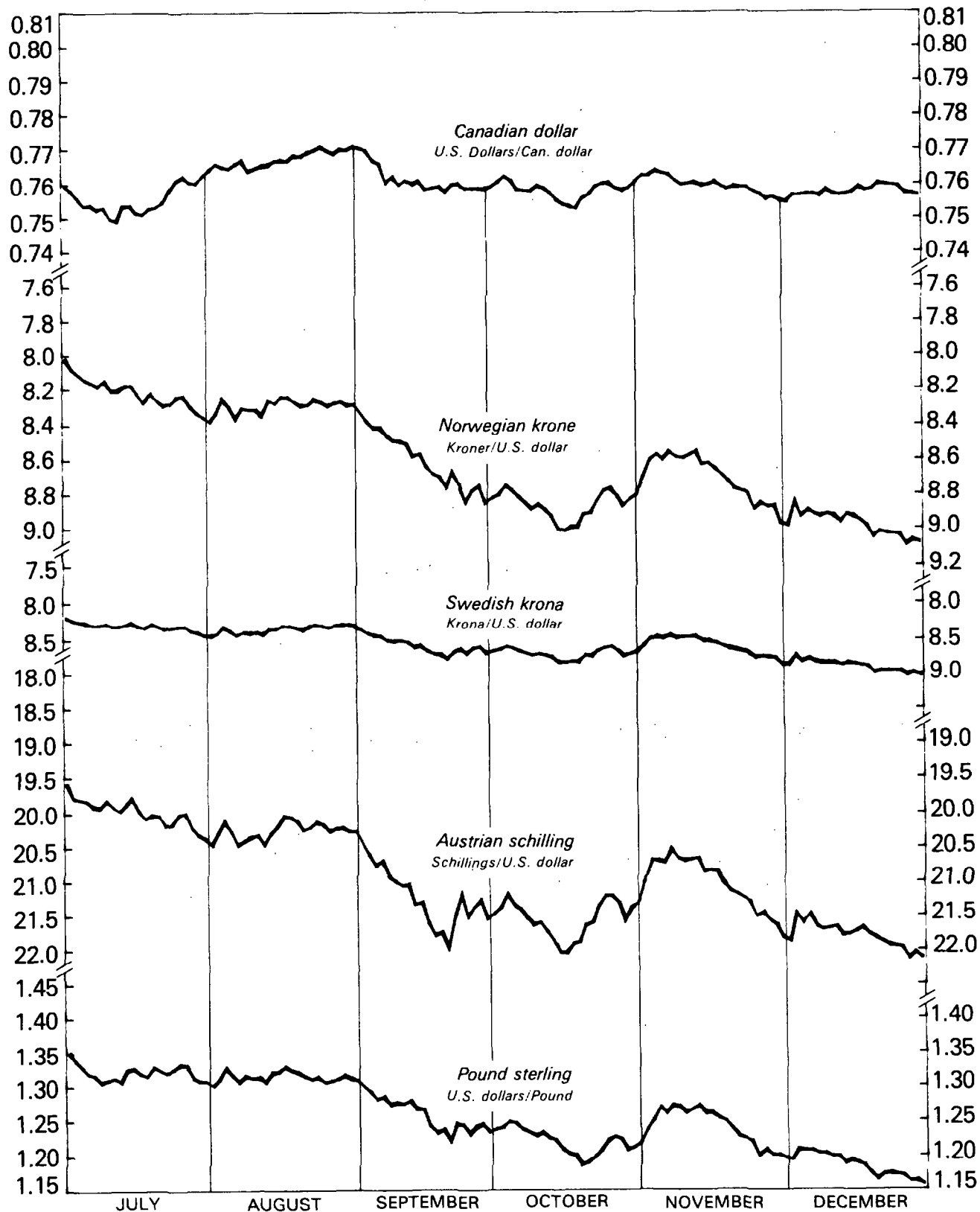
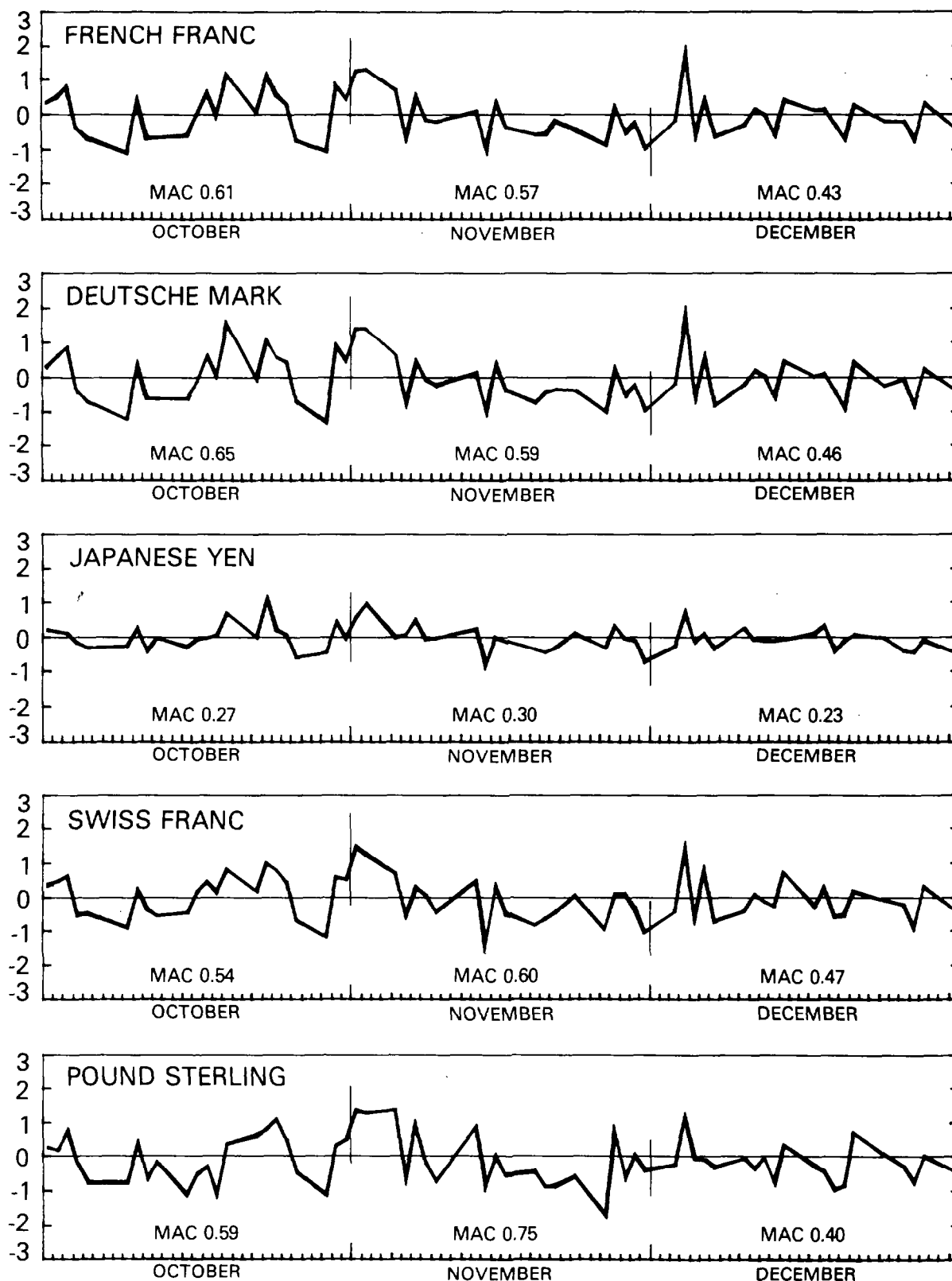


CHART 5  
DAILY CHANGES IN SPOT EXCHANGE RATES

(In per cent against the U.S. dollar, based on noon quotations in New York)<sup>1</sup>



1984

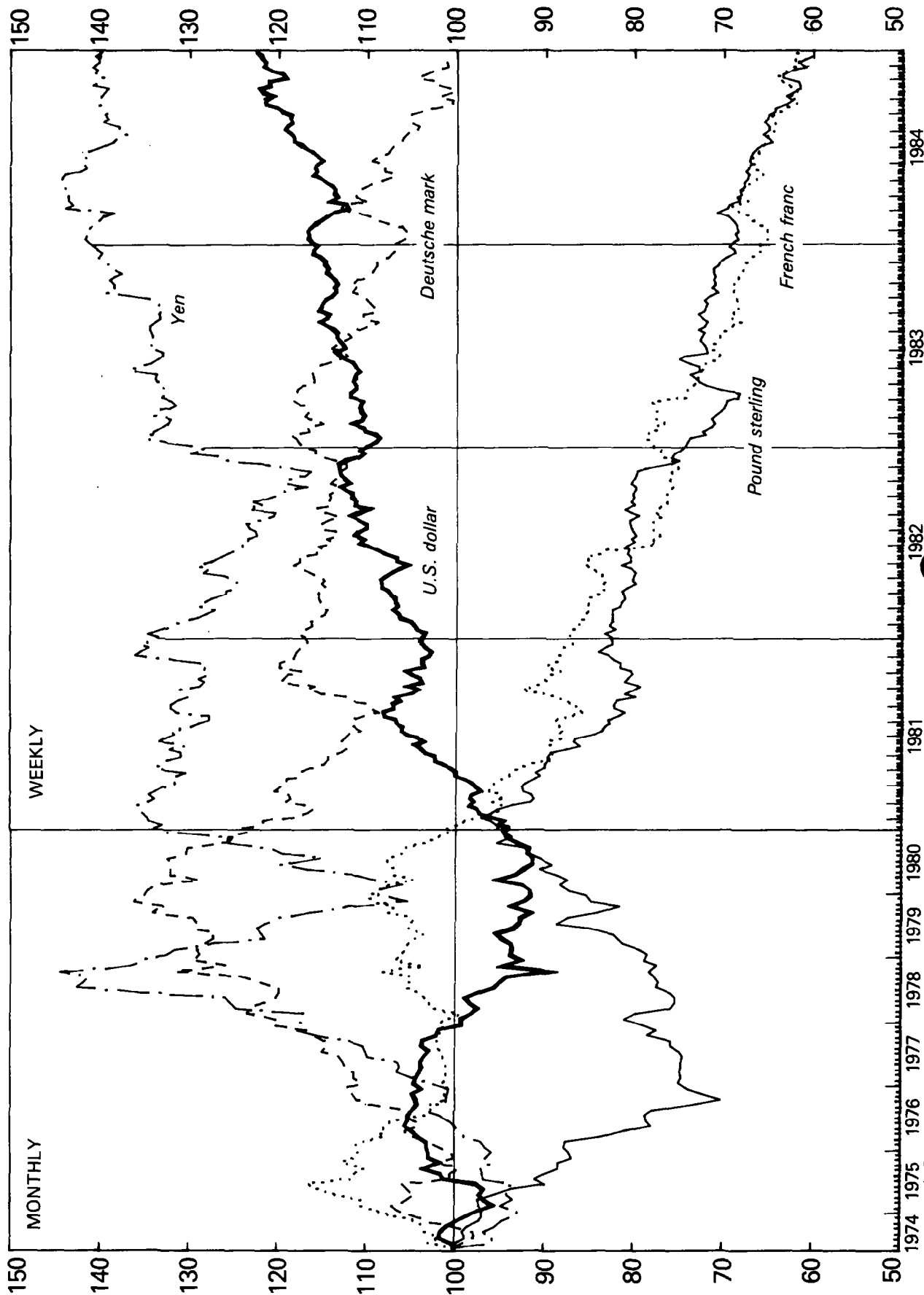
<sup>1</sup>Monthly averages of absolute percentage changes (MAC) are also indicated.

CHART 6

# INDEXES OF EXCHANGE RATES OF FIVE MAJOR CURRENCIES AGAINST THE SDR

JUNE 1974 - DECEMBER 1984

(June 28, 1974=100)



# CHART 7 SHORT-TERM MONEY MARKET RATES

(Per cent per annum)

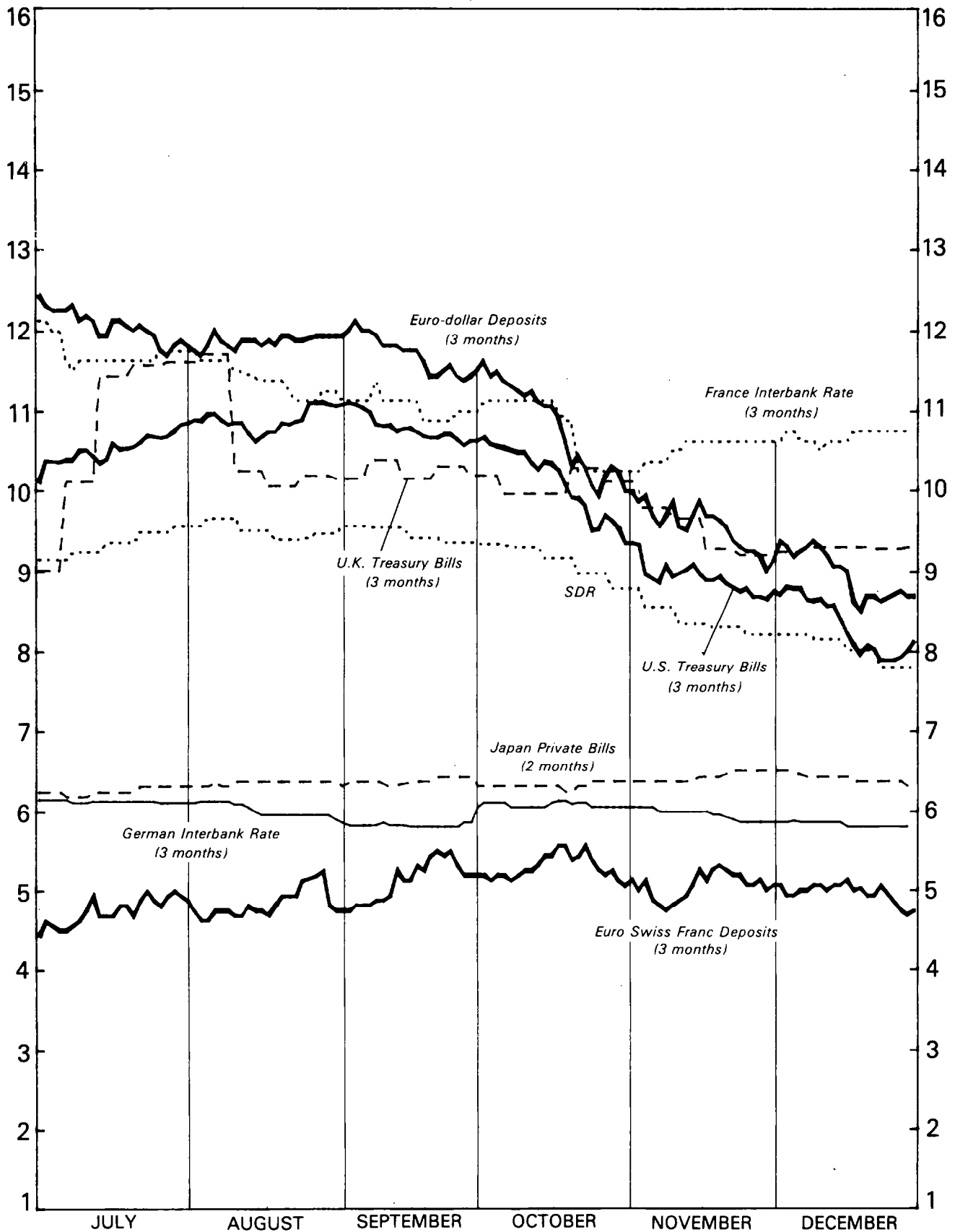


CHART 8

# THREE-MONTH FORWARD RATES

Margins from Spot Rates based on noon quotations in New York  
(Per cent per annum)

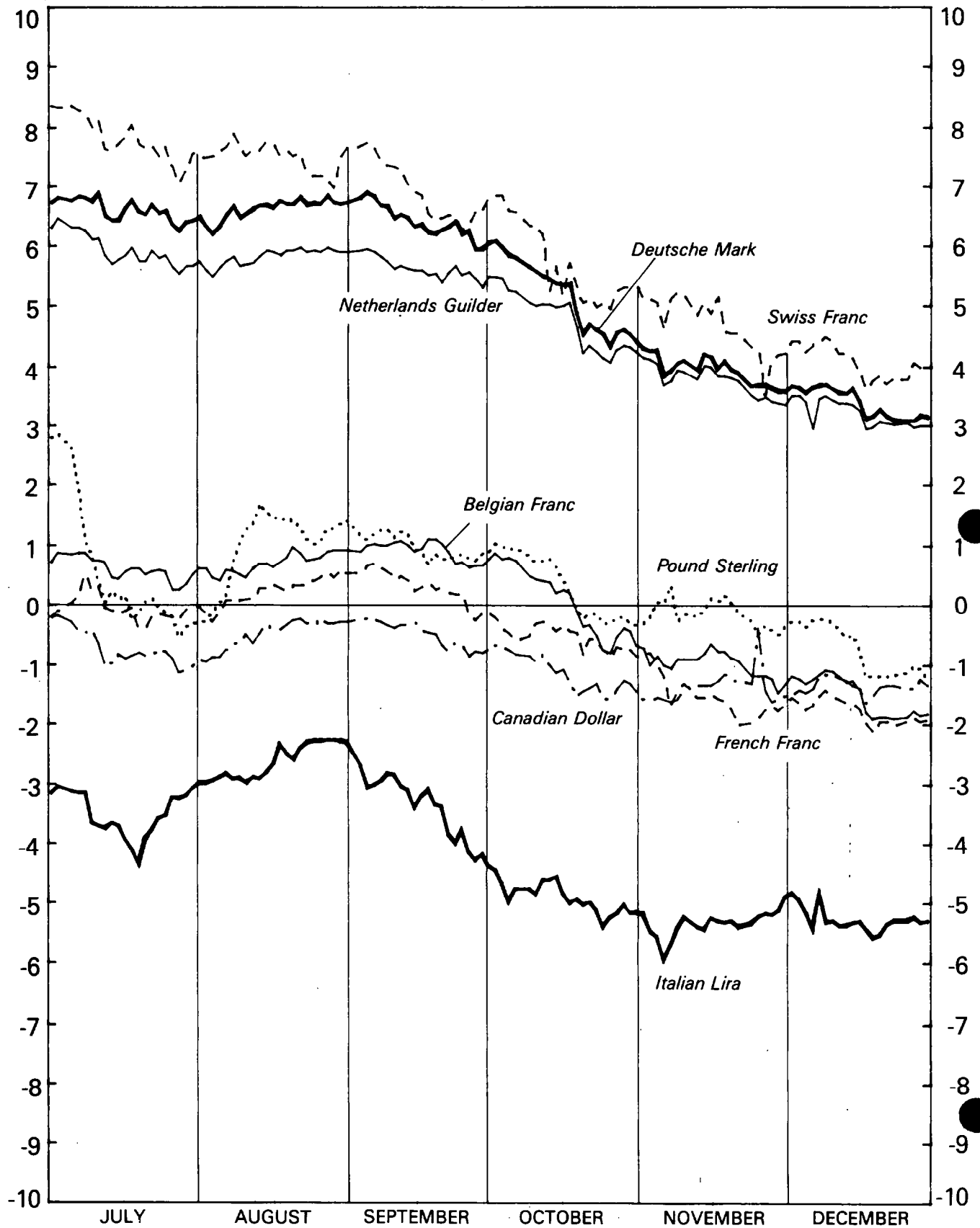
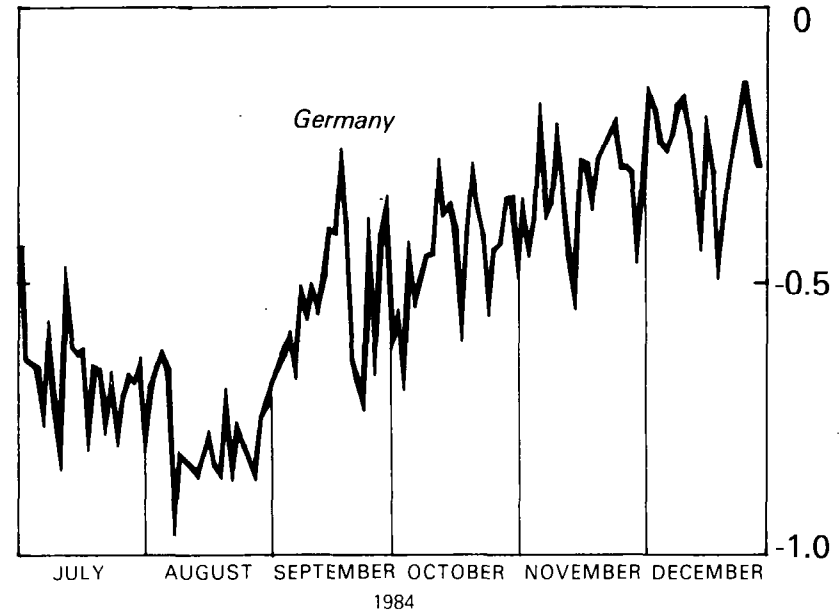
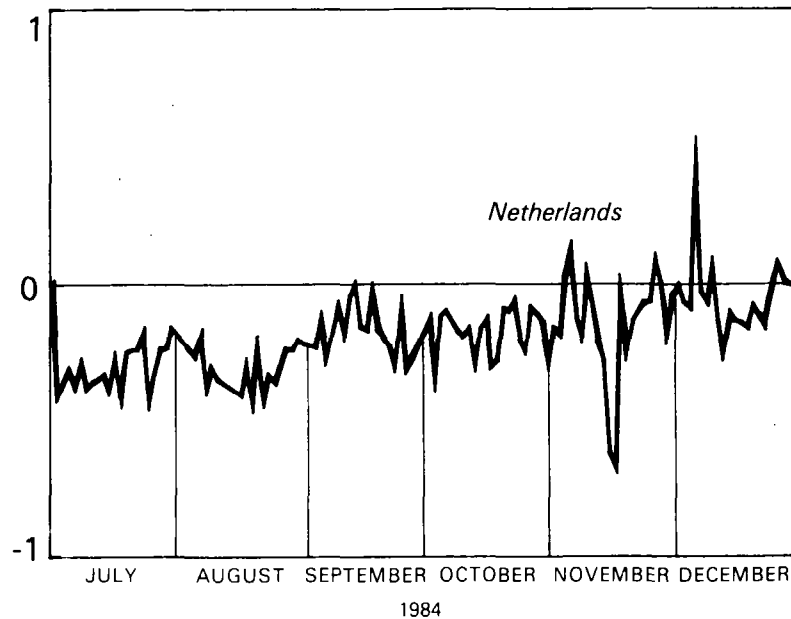
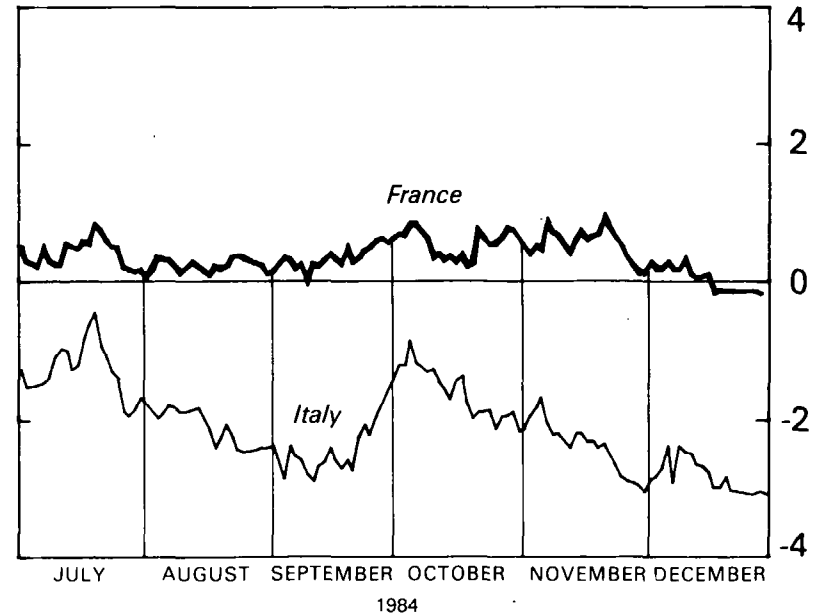
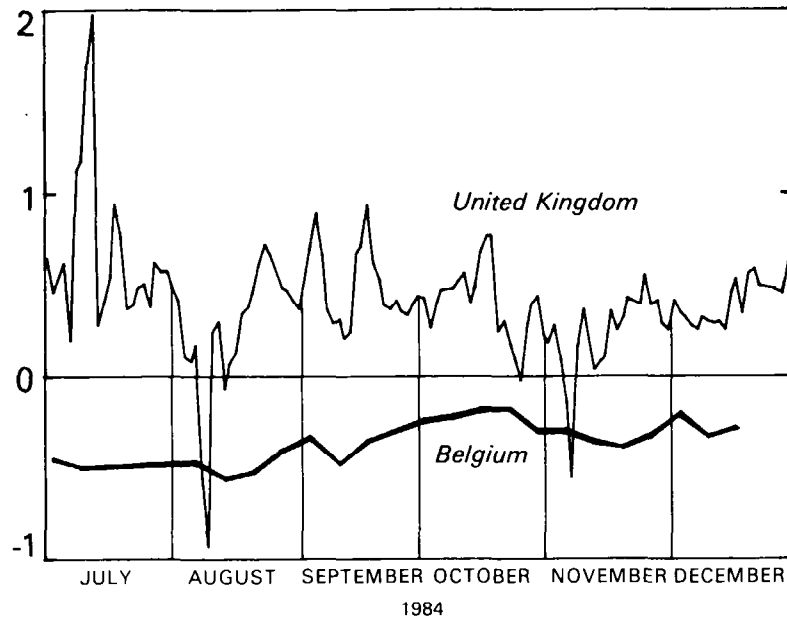




CHART 9

# COVERED INTEREST DIFFERENTIALS BETWEEN THREE-MONTH EURO-DOLLAR DEPOSITS AND LOCAL SHORT-TERM INVESTMENTS

(+ IN FAVOR OF EURO-DOLLAR AND - IN FAVOR OF DOMESTIC INVESTMENT)



Foreign Exchange Rates, November-December 1984

	N o v e m b e r				D e c e m b e r			
	7	14	21	28	5	12	19	26
Austrian schilling	20.5400	20.8700	21.2000	21.5725	21.6150	21.6725	21.7750	21.9650
Belgian franc								
Official	59.425	59.975	60.780	61.800	61.920	62.045	62.135	62.700
Financial	59.445	60.250	61.105	62.305	62.075	62.370	62.355	63.050
Canadian dollars	0.76269	0.75962	0.75904	0.75560	0.75674	0.75726	0.75801	0.75945
Danish kroner	10.6155	10.7185	10.8965	11.0425	11.0700	11.0455	11.0938	11.1900
Deutsche mark	2.93775	2.97250	3.01800	3.07075	3.07825	3.08600	3.09900	3.12500
French francs	9.0075	9.1260	9.2500	9.4050	9.4275	9.4625	9.4875	9.5700
Irish pounds	1.0510	1.0440	1.0295	1.0135	1.0115	1.0113	1.0090	0.9980
Italian lire	1829.500	1847.000	1873.500	1903.000	1904.000	1902.000	1905.000	1923.000
Japanese yen	240.750	242.400	245.500	245.400	246.750	247.200	247.730	249.000
Netherlands guilder	3.3115	3.3495	3.4043	3.4645	3.4715	3.4835	3.4990	3.5275
Norwegian kroner	8.5605	8.6325	8.7750	8.8780	8.9300	8.9325	8.9888	9.0400
Pounds sterling	1.2725	1.2610	1.2275	1.2015	1.2085	1.1992	1.1751	1.1715
Swedish kroner	8.4415	8.5215	8.6390	8.7385	8.7950	8.8175	8.8725	8.9250
Swiss francs	2.41550	2.44850	2.50100	2.51950	2.54450	2.55400	2.55700	2.57450

1/ Wednesday noon spot quotations in New York, expressed in terms of currency units per U.S. dollar, except for the Canadian dollar, the Irish pound, and the pound sterling which are expressed in U.S. dollars per currency unit.

## Short- and Medium-Term Interest Rates

APPENDIX B

(Monthly and weekly averages)

	Domestic Money Markets 1/						Eurocurrency Markets 2/						Lending Rates		U.S. Treasury Securities (five-year) 5/
	United States (1)	Germany (2)	United Kingdom (3)	France (4)	Japan (5)	Combined rate (6)	U.S. dollar (7)	Deutsche mark (8)	Pound sterling (9)	French franc (10)	Japanese yen (11)	Swiss franc (12)	LIBOR 3/ (13)	U.S. prime 4/ (14)	
1983															
Oct.	8.97	6.27	9.06	12.62	6.69	8.54	9.60	5.80	9.37	14.29	6.51	4.13	9.78	11.00	11.28
Nov.	9.11	6.38	9.03	12.50	6.38	8.57	9.84	6.07	9.32	13.06	6.49	4.15	10.06	11.00	11.41
Dec.	9.35	6.57	9.08	12.36	6.38	8.71	10.14	6.29	9.42	13.27	6.63	4.35	10.38	11.00	11.54
1984															
Jan.	9.25	6.21	9.06	12.42	6.22	8.59	9.83	5.98	9.45	13.25	6.35	3.71	10.09	11.00	11.37
Feb.	9.45	6.04	9.06	12.62	6.34	8.69	9.96	5.84	9.38	15.78	6.45	3.54	10.21	11.00	11.54
Mar.	9.88	5.94	8.61	12.72	6.38	8.85	10.45	5.67	8.98	15.57	6.38	3.61	10.81	11.21	12.02
Apr.	10.07	5.92	8.55	12.65	6.25	8.92	10.89	5.66	8.87	13.36	6.23	3.67	11.22	11.93	12.37
May	10.22	6.18	8.97	12.37	6.24	9.07	11.60	5.93	9.37	12.77	6.35	3.92	12.18	12.39	13.17
June	10.26	6.22	8.99	12.39	6.28	9.11	11.94	5.86	9.53	12.91	6.29	4.19	12.44	12.60	13.48
July	10.52	6.21	10.84	11.87	6.27	9.39	12.07	5.83	11.38	12.13	6.31	4.75	12.73	13.00	13.27
Aug.	10.89	6.10	10.85	11.57	6.36	9.56	11.87	5.63	11.11	11.62	6.37	4.83	12.21	13.00	12.68
Sept.	10.79	5.90	10.25	11.21	6.39	9.42	11.73	5.58	10.87	11.35	6.39	5.11	12.01	12.97	12.53
Oct.	10.15	6.16	10.10	10.96	6.32	9.08	10.83	5.87	10.65	11.32	6.32	5.29	11.18	12.58	12.06
Nov.	8.92	6.04	9.50	10.69	6.43	8.32	9.56	5.76	9.91	11.12	6.42	5.07	9.90	11.77	11.33
Dec.	8.34	5.91	9.29	10.83	6.41	7.98	9.04	5.65	9.80	10.81	6.31	4.97	9.51	11.06	11.07
1983 Week ending:															
Oct. 7	8.95	6.27	9.12	12.78	6.83	8.56	9.50	5.81	9.47	14.68	6.71	3.94	9.69	11.00	11.15
14	9.14	6.28	9.02	12.74	6.83	8.65	9.71	5.81	9.38	14.89	6.56	4.02	9.85	11.00	11.36
21	8.86	6.27	9.04	12.57	6.89	8.50	9.56	5.76	9.28	14.35	6.43	4.17	9.75	11.00	11.20
28	8.99	6.26	9.04	12.42	6.38	8.48	9.65	5.81	9.37	13.16	6.42	4.34	9.84	11.00	11.39
Nov. 4	8.92	6.28	9.04	12.50	6.38	8.46	9.75	5.89	9.31	13.23	6.42	4.14	9.94	11.00	11.42
11	9.11	6.35	9.01	12.55	6.38	8.57	9.90	5.98	9.31	13.12	6.45	4.14	10.11	11.00	11.50
18	9.15	6.38	9.02	12.55	6.38	8.60	9.85	6.14	9.34	13.05	6.44	4.13	10.06	11.00	11.42
25	9.13	6.43	9.06	12.55	6.38	8.60	9.80	6.89	9.33	13.02	6.45	4.13	10.06	11.00	11.35
Dec. 2	9.23	6.52	9.05	12.32	6.38	8.64	9.84	6.21	9.32	13.06	6.68	4.15	10.09	11.00	11.38
9	9.32	6.55	9.07	12.29	6.38	8.70	10.01	6.30	9.32	12.93	6.61	4.21	10.31	11.00	11.52
16	9.45	6.58	9.09	12.34	6.38	8.79	10.39	6.43	9.49	13.14	6.70	4.63	10.59	11.00	11.62
23	9.35	6.61	9.11	12.42	6.38	8.73	10.29	6.33	9.51	13.74	6.67	4.56	10.46	11.00	11.55
30	9.31	6.56	9.03	12.42	6.38	8.70	9.92	6.03	9.39	13.44	6.41	3.96	10.21	11.00	11.34
1984 Week ending:															
Jan. 6	9.30	6.11	9.03	12.42	6.25	8.60	9.94	5.91	9.39	13.36	6.38	3.81	10.24	11.00	11.50
13	9.21	6.24	9.08	12.42	6.19	8.57	9.90	6.08	9.51	13.17	6.33	3.81	10.14	11.00	11.42
20	9.23	6.24	9.07	12.42	6.19	8.58	9.76	6.01	9.45	13.36	6.31	3.70	10.02	11.00	11.29
27	9.28	6.24	9.07	12.42	6.23	8.61	9.79	5.94	9.44	13.18	6.38	3.63	10.02	11.00	11.31
Feb. 3	9.26	6.17	9.06	12.47	6.11	8.60	9.70	5.90	9.44	13.39	6.39	3.50	9.96	11.00	11.31
10	9.24	6.09	9.03	12.55	6.31	8.68	9.45	5.84	9.39	14.68	6.38	3.45	10.05	11.00	11.43
17	9.46	6.01	9.06	12.60	6.31	8.69	7.96	5.80	9.42	15.37	6.39	3.48	10.18	11.00	11.55
24	9.34	5.96	9.06	12.74	6.38	8.74	10.12	5.96	9.38	17.52	6.50	3.64	10.39	11.00	11.67
Mar. 2	9.53	5.98	8.99	12.70	6.40	8.73	10.12	5.83	9.24	17.24	6.59	3.68	10.48	11.00	11.75
9	9.64	5.92	8.68	12.67	6.38	8.72	10.23	5.62	9.06	16.14	6.39	3.46	10.56	11.00	11.85
16	9.79	5.91	8.57	12.67	6.38	8.79	10.38	5.64	8.90	15.93	6.44	3.43	10.75	11.00	11.98
23	10.14	5.95	8.53	12.75	6.40	8.99	10.67	5.73	8.89	15.00	6.37	3.79	11.04	11.21	12.17
30	10.10	5.96	8.55	12.80	6.37	8.97	10.66	5.63	8.95	14.72	6.29	3.72	11.00	11.50	12.20
Apr. 6	10.13	5.91	8.55	12.71	6.31	8.96	10.85	5.71	8.93	14.03	6.26	3.69	11.17	11.50	12.36
13	10.02	5.93	8.55	12.67	6.27	8.90	10.79	5.65	8.85	13.45	6.21	3.55	11.12	12.00	12.24
20	10.14	5.91	8.55	12.67	6.24	8.95	10.96	5.66	8.83	13.22	6.19	3.69	11.28	12.00	12.38
27	10.01	5.91	8.54	12.55	6.19	8.87	10.90	5.63	8.88	12.77	6.25	3.76	11.29	12.00	12.47
May 4	10.11	5.93	8.59	12.59	6.19	8.94	11.03	5.67	8.95	12.51	6.23	3.70	11.34	12.00	12.65
11	10.36	6.08	8.88	12.29	6.20	9.11	11.76	5.98	9.50	12.61	6.28	4.09	12.25	12.14	12.99
18	10.27	6.27	9.08	12.29	6.25	9.12	11.80	5.99	9.34	12.58	6.37	3.79	12.36	12.50	13.24
25	10.17	6.28	9.10	12.32	6.29	9.08	11.65	5.98	9.41	12.98	6.44	4.03	12.35	12.50	13.35
June 1	10.14	6.32	9.16	12.48	6.31	9.09	11.74	6.00	10.13	13.34	6.45	4.03	12.55	12.50	13.69
8	10.20	6.25	9.01	12.42	6.29	9.08	11.45	5.79	9.54	13.54	6.31	3.87	12.20	12.50	13.34
15	10.34	6.20	9.00	12.52	6.25	9.15	11.56	5.87	9.38	13.17	6.30	4.02	12.36	12.50	13.36
22	10.30	6.19	8.96	12.37	6.25	9.12	11.80	5.85	9.39	12.51	6.29	4.35	12.48	12.50	13.49
29	10.20	6.22	9.01	12.29	6.31	9.09	12.15	5.92	9.50	12.31	6.25	4.54	12.69	12.71	13.72
July 6	10.31	6.24	9.29	12.10	6.24	9.15	12.30	5.93	9.65	12.36	6.25	4.54	13.00	13.00	13.67
13	10.44	6.20	10.39	11.75	6.21	9.29	12.14	5.89	11.34	12.08	6.27	4.71	12.84	13.00	13.39
20	10.52	6.22	11.47	11.79	6.25	9.44	12.05	5.81	12.16	12.10	6.31	4.74	12.70	13.00	13.23
27	10.67	6.20	11.58	11.84	6.31	9.55	11.89	5.73	12.14	12.05	6.40	4.90	12.53	13.00	13.03
Aug. 3	10.84	6.19	11.63	11.89	6.31	9.65	11.79	5.76	12.28	11.88	6.34	4.84	12.24	13.00	12.77
10	10.90	6.21	11.42	11.76	6.34	9.65	11.85	5.71	11.42	11.79	6.35	4.71	12.18	13.00	12.63
17	10.72	6.09	10.22	11.58	6.38	9.43	11.87	5.64	10.58	11.64	6.38	4.74	12.17	13.00	12.67
24	10.84	6.03	10.09	11.41	6.38	9.44	11.89	5.55	10.79	11.51	6.38	4.95	12.25	13.00	12.66
31	11.09	6.02	10.18	11.36	6.38	9.59	11.94	5.52	10.87	11.33	6.40	5.00	12.28	13.00	12.79
Sept. 7	11.05	5.92	10.20	11.28	6.37	9.55	12.01	5.50	10.95	11.36	6.38	4.79	12.35	13.00	12.84
14	10.80	5.92	10.34	11.33	6.35	9.44	11.82	5.56	10.78	11.34	6.38	5.02	12.13	13.00	12.55
21	10.71	5.88	10.19	11.13	6.40	9.37	11.60	5.62	10.91	11.34	6.40	5.33	11.83	13.00	12.34
28	10.65	5.90	10.28	11.10	6.44	9.35	11.46	5.65	10.85	11.36	6.41	5.33	11.75	13.00	12.46
Oct. 5	10.60	6.17	10.14	11.25	6.31	9.35	11.49	5.84	10.71</						

