why, on theoretical grounds, there is no basis for expecting changes in the holdings of foreign official institutions to correspond to interest-rate movements.

It would be most appropriate for our purpose to examine shifts in a country's reserve holdings between gold and liquid-dollar assets. However, most countries do not publish data on dollar holdings separately, and therefore data on foreign-exchange holdings will be substituted. Since holdings of forgein exchange other than dollars have been extremely small, the conclusions would not

differ significantly if official dollar holdings were used.

The relative proportions of gold and foreign-exchange assets can, of course, vary as a result of changes in either form of reserve holdings; many countries have kept gold reserves constant over long periods of time and permitted moderate changes in payments positions to be reflected in variations in exchange reserves. We shall examine only those instances in which gold holdings were changed between the end of 1956 and the end of 1960. In this period, there were wide fluctuations in U.S. interest rates, and a country that regularly shifted even a part of its reserves between gold and dollars in response to changes in yields on dollar investments would presumably have made changes in gold holdings.

Twenty-six foreign countries changed their gold reserves by \$10 million or more between the end of 1956 and the end of 1960, excluding changes resulting from gold subscription payments to the International Monetary Fund. We consider, first, the 18 countries that increased gold reserves, dividing them into groups according to the pattern of changes in reserves. A number of foreign countries purchased substantial amounts of gold in the fourth quarter of 1960 when speculative demand for gold led to the establishment of a premium price in the London We shall regard these purchases as precautionary in nature rather gold market. than as shifts in the composition of reserves in response to the lower level of U.S. moneymarket rates compared with those in the first half of the year

(a) Four countries (Belgium, the Netherlands, Switzerland, and the United Kingdom) have traditionally kept practically all reserves in gold, and the gains in gold reserves of these four countries have thus paralleled overall reserve gains,

aside from some lags in periods of rapid increases in reserves. (b) Three countries (Australia, Iraq, and Lebanon) do not maintain significant reserves in dollars. Parenthetically, both Iraq and Lebanon added to gold

reserves in late 1960.

(c) Eleven countries have added both to gold and to dollar holdings at times

during the period.

Five countries (Austria, Colombia, Greece, Italy, and Portugal) have increased their gold reserves both in years of high and in years of low U.S. interest rates, and all except Colombia (which experienced large fluctuations in total reserves) have steadily increased the proportion of total reserves held in gold. Increases in gold reserves of Austria and Portugal occurred primarily in 1958 and 1959; U.S. interest rates were relatively low in 1958 and high the following year. Italy increased its gold reserves throughout the period, while Greek gold purchases were concentrated principally at the end of 1960.

Three countries (Indonesia, Peru, and Spain) decreased gold holdings at total reserves declined from 1956 to 1958, and increased gold holdings again after total reserves rose. Peru added to its gold reserves in the fourth quarter of 1959 when yields on dollar assets were at a peak, and all three countries substantially increased gold reserves in the last quarter of 1960. In fact, the rise in Spanish gold reserves in the second half of the year was almost equal to the rise in total

reserves. Variations in the proportion of gold to total reserves for the three remaining countries, France, Germany, and Japan, are shown in chart 1 [not printed in the Record]. The decline in the gold proportion of French reserves that began in mid-1958 resulted from a sharp improvement in total reserves that more than offset substantial rebuilding of French gold reserves. The marked drop in holdings of convertible currencies at the end of 1959 resulted partly from large gold purchases and partly from slower additions to total reserves in consequence of special debt repayments. In 1960 French reserve gains were taken entirely in

<sup>&</sup>lt;sup>5</sup> Official foreign-exchange holdings of the European countries for which exchange holdings were used consist mainly of dollar assets but include some sterling holdings. These latter holdings are relatively small, however. Official sterling holdings of all OEEC countries at the end of 1957 were \$360 million (see "International Financial Statistics," June 1960, p. 260), while official dollar holdings were in excess of 10 times this amount (see Federal Reserve Bulletin, March 1959, chart on p. 247).