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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT  
INTERNATIONAL DEVELOPMENT ASSOCIATION

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THE ECONOMY

OF

KOREA

(in eight volumes)

VOLUME VI

PRICES, MONEY AND CREDIT

June 17, 1966

Far East Department

FILE COPY

CURRENCY EQUIVALENTS

U.S. \$1.00	Won 270
Won 1,000	U.S. \$3.70
Won 1,000,000	U.S. \$3,703.70

This Report is based on the findings of a Mission which visited Korea in November and December, of 1965. The Mission was composed of the following members:

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SUMMARY AND CONCLUSIONS

1. The financial system of Korea centered around the Bank of Korea, the specialized banks and the commercial banks has played an important role in recent economic developments. On the one hand, through their impact on money supply, these institutions have been the focus of attention during the period which was marked by severe inflation. On the other hand, in their capacity of financial intermediaries, the banks have played an important part in the allocation of investible funds.

2. The economy has experienced inflation since the Korean War with the exception of two years only - 1958 and 1959. During the 13 years from 1952 to 1965 prices multiplied by more than 8-fold. Although the rate of inflation since 1960 was, on the average, lower than the rate before 1957, it nevertheless was considerable, particularly in 1963 and 1964 when price increases were 21 percent and 35 percent respectively. Since the second half of 1964 inflation has slowed down very considerably to less than 10 percent per annum.

3. The price increases in recent years are not clearly correlated with the trend in money supply and growth in real income. The velocity of money was very unstable. Whereas the rapid monetary expansion following the May Revolution in 1961 was absorbed by a fall in velocity, having little impact on prices, the rapid price increases in 1963 and 1964 when monetary expansion was modest implied a rising velocity. The fall in velocity in 1961 and 1962 can be explained partly by the lagging response in spending behavior after two years of relative stability, and partly by the strict control measures adopted by the revolutionary government. The excess liquidity accumulated during these years started affecting prices at the beginning of 1963. Inflationary expectations were probably responsible for elevating velocity to the high level it reached in 1964. It was due to this characteristic of the income velocity that the stabilization programs which were successful in controlling the increase in liquidity in 1963 and 1964 failed to achieve price stability.

4. Although there is still some control on prices, it seems that whatever excess demand there may exist is not significant. Even some downward revision of price expectations might have occurred as the slight fall in velocity in 1965 indicates. Nevertheless, an atmosphere of stability has not yet been established. Even official policy is geared to a price rise of 8-10 percent. The Mission considers this degree of inflation too high and would counsel an increase in the money supply which is not more than 5 percent higher than the expected growth in real income.

5. Throughout the post war period, the interest rate structure of the banking system was artificially low. In many years the price rise was so high, that interest rates were really negative. On the one hand, this led to less than optimal funds allocation by the banking system and on the other hand it was responsible for a large unofficial or "curb" money market where interest rates were 60-80 percent per annum. At the

(ii)

beginning of October, 1965, the Government raised the ceiling on interest rates on deposits, loans and discounts of the banking institutions substantially. Rates on savings deposits were raised to 30 percent from their previous level of 9-15 percent, and the rates for ordinary commercial loans and discounts to 26 percent from 16-18.5 percent. At the same time, lending rates of specialized banks were also increased in varying degrees. Following the reform, the increase in time and savings deposits gained momentum. The value of these deposits has almost doubled in the five months from the end of September 1965, to the end of February 1966. Some of these funds may have been transferred from the curb market. However, it is also possible that higher real returns on such deposits - not only due to the interest reform, but also due to relative price stability - have encouraged savings. With price increases of 6-7 percent, the real interest rate on ordinary loans comes to about 20 percent. This looks like a high cost of capital under normal conditions. However, so far, these high rates have not altogether eliminated excess demand for loans. For the time being, it may be wise to watch developments carefully rather than introduce new changes.

## V. PRICES, MONEY, CREDIT

### A. Introduction

1. The banking system of Korea is made up of the Bank of Korea (BOK) which is the central bank of the country, the specialized banks for financing industry and agriculture, and the commercial banks. The Government owns the Bank of Korea and the Korean Reconstruction Bank (KRB) and has controlling interests in all other banks.

2. The financial system centered around these institutions has played a key role in the recent history of the Korean economy. On the one hand, through their effect on monetary developments these institutions have been the focus of attention during the period marked by serious monetary instability and price inflation. On the other hand, in their capacity as financial intermediaries, the banks have played an important role in the allocation of funds and perhaps also on the total of savings. These two aspects will be discussed separately.

### B. Prices

3. The Korean economy has experienced inflation since the Korean War with the exception of two years only - 1958 and 1959. During the 13 years from 1952 to 1965, wholesale prices multiplied by more than 8-fold. During 1960-65 the rate of price increase was about 17% per annum. The analysis below will focus on developments since 1960.

4. Various indicators of price level changes during the period since 1960 are shown in the following table (Table 1) together with the money supply figures for corresponding years. The price indices shown have moved in a slightly different fashion. The GNP implicit deflator rose faster, and the consumer price index slower than the wholesale price index. However, the general picture conveyed by these indicators is the same: since 1960, prices have more than doubled. The price increase was fastest during 1963 and 1964. According to the wholesale price index, the price level increased by an annual average of 11 percent from 1960 to 1962, by an annual average of 27 percent from 1962 to 1964 and by about 10 percent from 1964 to 1965.

# KOREA: MONEY AND PRICES, 1960-1965

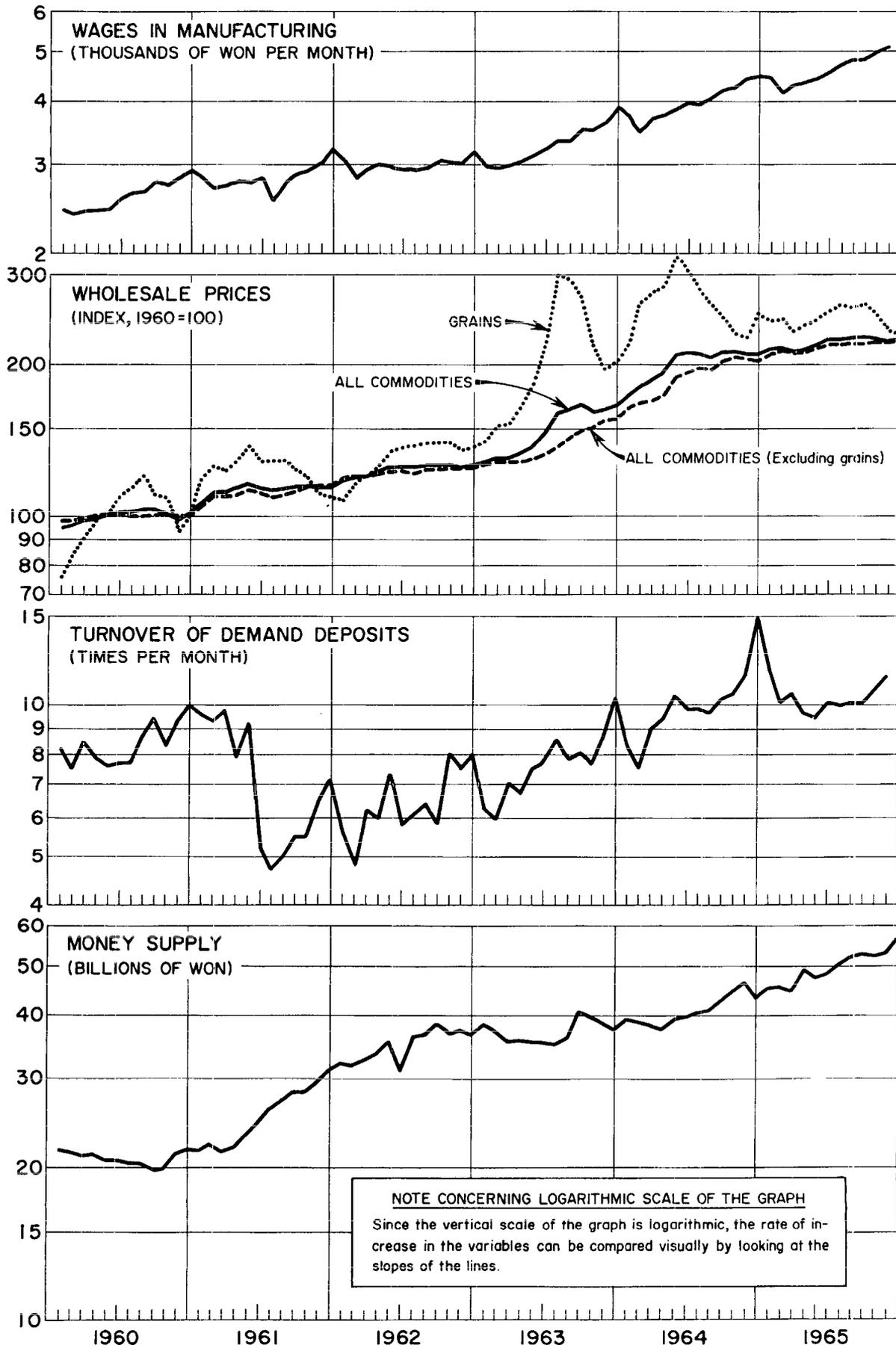


Table 1: PRICES AND MONEY  
1960 - 1965

	Wholesale Price Index (1960=100)	GNP Implicit Deflator (1960=100)	Seoul Consumer Price Index (1960=100)	Money Supply /1 billion won 1960=100	
1960	100.0	100.0	100.0	21.0	100.0
1961	113.2	115.6	108.1	25.5	121.4
1962	123.8	128.3	115.2	35.0	166.6
1963	149.3	168.4	139.0	37.2	177.1
1964	201.1	211.9	180.0	40.9	194.7
1965	221.2	229.6	204.4	49.9	237.6

△ Annual averages

Source: BOK Economic Statistics Yearbook

5. The aggregate price indices do not reveal the sharp variations that occurred between the prices of different commodity categories. Various components of the wholesale price index are given in Table 2. They are also shown in the chart Money and Prices which follows paragraph 6. Due to speculation in grains following bad harvests, grain prices rose much faster than prices of other commodities in 1962 and especially in 1963 and 1964. After favorable crops in 1964, this trend was reversed. There was even an absolute fall in grain prices when other prices kept rising. The prices of food items other than grains followed closely the rise in grain prices. It is interesting to observe, however, that whereas there was a fall in grain prices in 1965, other food prices kept rising. End of year indices for 1965 indicate that prices of categories shown above which diverged significantly in 1963 and 1964 have again converged to their earlier relative positions. In other words, the food and grain prices which had a lead in 1963 and 1964 have either slowed down or even fallen in 1965, and the non-food prices have caught up with them.

Table 2: COMPONENTS OF WHOLESALE PRICE INDEX  
1960-1965

	All Commodities	All commodities Excl. Grain	Grains	Food Excl. Grains
1960	100.0	100.0	100.0	100.0
1961	113.2	111.3	123.9	111.4
1962	123.8	122.5	131.4	123.3
1963	149.3	139.1	208.3	153.6
1964	201.1	190.4	263.1	239.0
1965	221.2	216.8	246.5	247.2
(XII) 1965	223.6	222.9	227.5	242.6

C. Velocity

6. When price changes are compared with trends in money supply and growth in income for the period under consideration, the following picture emerges:

Table 3: VELOCITY OF MONEY

	GNP Current Prices (bil.won)	Money Supply /1 (M) (bil.won)	Total /1 Liquidity /2 (L) (bil.won)	Income Velocity of Money $\frac{GNP}{M}$	Income Velocity of Total Liquidity $\frac{GNP}{L}$
1958	211	16.4	18.3	12.9	11.5
1959	228	20.7	24.7	11.0	9.2
1960	243	21.0	27.0	11.6	9.0
1961	293	25.5	32.4	11.5	9.0
1962	339	35.0	49.7	9.7	6.8
1963	472	37.2	56.2	12.7	8.4
1964	667	40.9	60.0	16.3	11.1
1965	779	49.9	76.5	15.6	10.2

/1 Annual averages

/2 Money supply plus time and savings deposits.

Table 3 also shows the income velocity of money which is a measure of the general willingness in the economy to hold cash balances rather than obtain goods or services for them. A fall in velocity indicates increased willingness to hold cash balances. After a fall in 1959, the velocity of money remains stable until 1961 when another sharp fall occurs. Looking at the monthly data, it can be said that the velocity started to fall in mid-1961. This observation is also supported by the monthly trend of demand deposit turnover 1/ (see chart). After 1962, the trend of velocity is reversed. It rises steeply in 1963 and 1964. In 1965 there is a slight fall.

7. These observations hold both for the income velocity of money supply and the income velocity of total liquidity which includes the outstanding time and saving deposits as well. In other words, the rapid monetary expansion of 1961 and 1962 was absorbed by the fall in velocity, having little impact on prices. On the other hand, the rapid price increases of 1963 and 1964 when monetary expansion was modest were due to the rise in velocity.

8. It is hard to trace fully the reasons for these changes in velocity, which had such great significance for the price level. The money supply which had been absolutely stable during 1960 started rising immediately following the May Revolution in 1961. In spite of this expansion the prices remained quite stable during the year. One explanation of this could be the time lag that should be expected between monetary expansion and prices after more than two years of stability. However, it is very probable that strict price controls, and severe punishment of businessmen accused of profiteering contributed to hesitancy on the part of businessmen. Government measures leading to reduced liquidity culminated in the "monetary reform" of 1962 during which bank accounts were temporarily blocked.

9. Towards the end of 1962, with more settled conditions in the private sector and substantial expansion of the government's own investment activities, mounting excess liquidity started exerting its weight and price controls became weaker. The excess liquidity which was successfully suppressed in 1961 and 1962 showed its first impact on grain prices at the beginning of 1963. Following poor crops, grain prices doubled within a few months and this set off a chain reaction in other prices which started rising, defying controls under the "Special Law Concerning Price Regulations". Even prices of basic goods such as fertilizer, coal briquets and cotton cloth could only be maintained until July and after that they all exceeded legal ceilings.

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1/ Turnover of demand deposits is measured by the total withdrawals during the period divided by the average balance.

10. The financial stabilization program established early in 1963 could not help because the demand pressure was emanating from excess liquidity accumulated in previous years. Therefore, efforts to maintain the money supply at a stable level could not keep prices from rising by about 30 percent in 1963.

11. The price rise continued into the first half of 1964 without any increase in the money supply. If turnover of demand deposits can be taken as a proxy for velocity of the total money stock, then excess liquidity seems to have spent itself in the second half of 1964. In 1965, there is even a drop in velocity.

12. Looking at the secular relationship between money, real income and prices, the notable fact is the high level of present velocity of money compared to the levels in late 1950's. This is contrary to expectations. Abstracting from cyclical fluctuations, velocity normally falls with the growth of real income. There are two reasons for this. First, evidence from other countries suggests that the elasticity of demand for money with respect to real income is above unity. In other words, individuals increase their cash balances at a slightly faster rate than the growth in their real income. Secondly, in a developing country like Korea, industrialization and urbanization increase the use of money - the process of monetization.

13. Two hypotheses can be suggested for explaining the high level of present velocity of money in Korea. In the first place, this may be the result of the money definition used. If time and saving deposits, which are not included in the money definition, are close substitutes for money, then the faster increase in such assets (quasi-money) may have satisfied part of the liquidity demand. It is likely that this has been the case in Korea because the interest paid on time and savings deposits was until recently too low to make these deposit accounts attractive as savings instruments. Taking into account the large price rise of the past decade, the real returns on time and savings deposits have been negative. It is therefore reasonable to assume that time and savings deposits were only made for their near-money aspect. This hypothesis is supported by the fact that a calculation of velocity using total liquidity (money plus time and saving deposits) gives a less unusual trend - the present income velocity of total liquidity is not higher than the level in the 1950's.

14. The second hypothesis is that the present level of velocity is still influenced by inflationary expectations. Demand for money is a function not only of existing prices, but also of expectations about future prices. If scepticism about stability is widespread, then this can keep velocity high and may compensate for the secular decline that would come about as a result of economic development. A corollary of this is that once confidence in stability is established velocity will decline.

15. The future relationship between money and prices will be different depending on the validity of the two hypotheses. If quasi-money is a substitute for money proper, then the monetary plan should aim at regulating the total liquidity rather than money supply alone. To the extent that quasi-money will increase faster than money -- as has been the case in the past - money supply should rise slower than the planned increase in nominal GNP. On the other hand, to the extent that the present demand for money is the result of inflationary expectations, with continuing stability, the velocity may fall. This means that money supply can be expanded faster than the planned increase in nominal GNP.

16. Until more is known about the "moneyness" of quasi-money and about the determinants of demand for liquidity in Korea, it would not be safe to base monetary targets on the premise that velocity will fall. It is, with existing knowledge, by no means certain that velocity will decline in the immediate future, although in the longer run it probably will. Furthermore, faster expansion in quasi-money may compensate this increase in demand for liquidity.

17. Although the scope of price control was greatly reduced in 1965, direct and indirect Government pressure on many commodities still continued. Officially only two commodities had price ceilings - wheat flour and coal briquet. But on a less formal basis, the prices of many commodities classified under daily necessities and basic production materials designated as important commodities under the Price Control Law and Decree were kept under very close surveyance of the Government. The Mission had the impression that the measures taken by the authorities went beyond persuasion and took the form of economic sanctions, such as denial of credits to businesses which did not conform to Government recommendations.

18. Budget revenue projections for 1966 are based on an expected price rise of 8 percent. The Mission views this attitude with some apprehension for two reasons. First, if all expectations are geared to this target, there is grave danger that the actual increase may be higher. Secondly, the distortions caused by this rate of inflation in resource allocation, and the setback to the development of sound saving habits may retard the steady growth of the economy although it is true that if the present system of flexible exchange rates is maintained, there will be somewhat less danger than in the past that distortions will be introduced by unrealistic exchange rates. For these reasons, Korea should aim at not allowing prices to rise at more than, say, 5 percent per annum. Assuming 6 or 7 percent growth in real GNP, this means that the money supply should be increased by not more than 11 or 12 percent per annum unless a strong case can be made that velocity will decline.

D. Money and Its Determinants

19. The distinction between what is normally defined as money and the other liquid assets is one of degree rather than of kind. There exists in an economy a spectrum of financial assets with different degrees of "moneyness", i.e., ability to satisfy the liquidity demands of the individuals even if they do not serve as mediums of exchange. As pointed out above, the time and savings deposits in Korea may be close substitutes for currency and demand deposits and hence be important in the analysis of prices. Nevertheless there is merit in analyzing the trend and the determinants of the money supply, as conventionally defined, for two reasons. First, what is defined as money proper is most likely the main component of the general liquidity and has the greatest impact on price developments. Secondly, this component of liquidity can be manipulated with a certain degree of precision by monetary policy.

20. In line with the conventional definition, money supply in Korea is calculated as total currency in circulation plus monetary deposits (demand deposits). Currency in circulation is equal to the banknotes and coins issued by Bank of Korea plus monetary deposits at BOK minus the reserves of the other banks kept either in the form of vault cash or as deposits at BOK. Average annual totals of the main components of money supply since 1956 are given below:

Table 4: MONEY SUPPLY 1956-1965  
(billion won)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<u>Banknotes &amp; Coins</u>	<u>Bank Reserves at BOK</u>	<u>Total BOK Monetary Liabilities (1 + 2)</u>	<u>Total Reserves of Banks</u>	<u>Currency in Circulation (3 - 4)</u>	<u>Monetary Deposits</u>	<u>Money Supply (5+6)</u>
1956	6.4	1.4	7.8	1.6	6.2	4.1	10.3
1957	8.3	1.3	9.6	1.6	8.0	5.3	13.3
1958	9.0	1.6	10.6	1.9	8.7	7.7	16.4
1959	10.8	2.4	13.2	2.8	10.4	10.3	20.7
1960	12.7	2.1	14.8	2.6	12.2	8.8	21.0
1961	14.6	2.8	17.4	3.4	14.0	11.5	25.5
1962	17.8	6.5	24.3	7.4	16.9	18.1	35.0
1963	19.5	4.2	23.7	6.4	17.3	19.9	37.2
1964	22.5	4.1	26.6	5.2	21.4	19.5	40.9
1965	27.6 <u>/1</u>	5.1 <u>/1</u>	32.7 <u>/1</u>	6.1 <u>/1</u>	26.9	22.9	49.9

Columns 1, 6 and 7

1956, 1957: Annual averages computed as averages of end of year figures.  
 1958, 1959: Annual averages computed as averages of quarterly figures.  
 1960-1965: Annual averages computed as averages of monthly figures.

Columns 2 and 4

Annual averages computed from daily figures.

/1 Average of first 11 months.

Source: BOK, Economic Statistics Yearbook.

21. From 1956 to 1965 the money supply in Korea increased almost five-fold. The immediate determinants of this increase can be analyzed in terms of the following identity:

$$M = B - R + D = B \cdot \frac{\frac{D}{R} (1 + \frac{D}{C})}{\frac{D}{R} + \frac{D}{C}}$$

where

- M: Money supply
- B: Central Bank monetary liabilities
- R: Bank Reserves
- D: Monetary deposits
- C: Currency in Circulation = B - R

According to this equation, money supply is determined by the actions or the behavior of three parties: (1) Bank of Korea, which determines the supply of central bank monetary liabilities (B); (2) individuals, who determine what proportion of money balances to keep in their bank accounts rather than in their pockets (Deposit - Currency Ratio:  $\frac{D}{C}$ ) and (3) the commercial banks, which determine what proportion of currency deposits to hold as reserves (Deposit - Reserve Ratio:  $\frac{D}{R}$ ). The trends of these three determinants of the money supply in Korea are shown in the following table.

Table 5: DETERMINANTS OF MONEY SUPPLY  
1956 - 1965

	BOK Monetary Liabilities (B) (billion won)	Deposit Currency Ratio ( $\frac{D}{C}$ )	Deposit Reserve Ratio ( $\frac{D}{R}$ )	Money Supply (M) (billion won)	Money Multiplier (M/B)
1956	7.8	.66	2.6	10.3	1.3
1957	9.6	.66	3.3	13.3	1.4
1958	10.6	.89	4.1	16.4	1.5
1959	13.2	.99	3.7	20.7	1.6
1960	14.8	.72	3.4	21.0	1.4
1961	17.4	.82	3.4	25.5	1.5
1962	24.3	1.07	2.4	35.0	1.4
1963	23.7	1.15	3.1	37.2	1.6
1964	26.6	.91	3.6	40.9	1.5
1965	32.7	.85	3.7	49.9	1.5

22. No secular trend can be discerned in the behavior of the D/C ratio and the D/R ratio. In 1962 there occurred a sudden jump in the D/C and a sharp fall in the D/R. This may be related to the currency reform that took place in that year. For some time deposits were blocked. Although the effect of the reform on the size of deposits may have lingered on after the restrictions on the use of deposits were removed, this would not fully explain the high D/C ratio in 1963.

23. From 1953 to 1965, legal reserve requirements on time and savings deposits remained at 10 percent, but the reserve requirements for demand deposits altered frequently. They varied between 10 and 20 percent since 1957.

24. In spite of some variations in the D/C and the D/R ratios, the money multiplier (i.e., the relation between money supply and the BOK monetary liabilities) remained quite stable around 1.5. But sharp increases in legal reserve requirements have taken place since the beginning of 1966. In January, legal reserves on demand deposits were raised from 16 percent to 20 percent, and on short term deposits from 10 to 12 percent. Effective February 1, the ratios are set at 35 percent on demand deposits and 15 and 20 percent for long and short time deposits. These increases are bound to affect the money multiplier.

25. A rough calculation shows that D/R may fall down to 2.0 as a result of changes in reserve requirements. If there is no change in D/C, money multiplier will as a result decline to 1.4. As a rough approximation it can be said that a 5 billion won increase in BOK monetary liabilities during 1966 would increase the money supply by 11 - 13%, while a 10 billion won increase would raise the money supply 23 - 27 percent over the end of December 1965 level. According to this calculation, the IMF standby agreement which projects a won 5 billion increase in the net domestic assets of BOK would mean an increase of about 11-13% in the money supply during 1966.

26. It is also interesting to see the relationship between the monetary liabilities of BOK and the total liquidity (money plus time and savings deposits). The behavioral link between time and savings deposits and monetary liabilities of the BOK is weaker than in the case of demand deposit-currency ratio. This is in line with expectations since time deposits are not functionally related to currency, but perhaps more to incomes and the rate of interest. Nevertheless, the rising trend of the liquidity multiplier (quasi-money rose from 15 percent to 55 percent of the money supply) is of significance for future monetary policy.

Table 6: BOK MONETARY LIABILITIES, MONEY AND TOTAL LIQUIDITY  
1956 - 1965

	<u>Liabilities</u> (billion won)	<u>Money</u> (billion won)	<u>Quasi- Money</u> <sup>/1</sup> (billion won)	<u>Total Liquidity</u> (billion won)	<u>Total Liquidity Multiplier</u>
	1	2	3	4 = 2 + 3	5 = $\frac{4}{1}$
1956	7.8	10.3	1.5	11.8	1.5
1957	9.6	10.3	1.7	15.0	1.6
1958	10.6	16.4	1.9	18.3	1.7
1959	13.2	20.7	4.0	24.7	1.9
1960	14.8	21.0	6.0	27.0	1.8
1961	17.4	25.5	6.9	32.5	1.9
1962	24.3	35.0	14.7	49.7	2.0
1963	23.7	37.2	19.0	56.2	2.4
1964	26.6	40.9	19.1	60.0	2.3
1965	32.7	49.9	27.1	76.5	2.3

All figures annual averages

/1 Time and savings deposits

27. Since the money multiplier did not change much during the period under consideration, the main factor responsible for the rapid increase in the money supply was the expansion that took place in the monetary liabilities of the Bank of Korea. The shares of the public sector, the private sector, and the foreign sector in this expansion were as shown in Table 7.

28. Following a period of stabilization in 1959 and 1960, the expansion of monetary liabilities of BOK in 1961 and 1962 was primarily due to public sector borrowing. With the accession to power of the military Government in May 1961, the public sector started borrowing heavily from BOK. This borrowing took the form of overdrafts and selling bonds to BOK. There was also minor borrowing by Government agencies.

29. In 1963, a significant expansion of BOK credit to the private sector took place, together with some additional lending to public sector. The expansionary effect of this credit was more than compensated by the drastic reduction in foreign exchange reserves. In this way, an expansionary credit policy was combined with a stable money supply, at the expense of significant worsening in the exchange reserve situation.

Table 7: DETERMINANTS OF BOK MONETARY LIABILITIES  
1956 - 1964

(Annual changes in billion won)

	Public Sector (1)	Foreign Sector (2)	Private Sector (3)	Total Monetary Liabilities of BOK (4)
1957	- 0.7	0.5	1.5	1.3
1958	1.3	1.5	- 0.4	2.4
1959	3.1	0.3	- 1.3	2.1
1960	- 3.4	1.0	3.8	1.4
1961	6.6	7.2	- 6.2	7.6
1962	10.2	- 4.3	- 1.5	4.4
1963	3.2	-13.1	7.1	- 1.8
1964	- 3.0	4.2	3.6	4.8

Notes: Column (1): Net Government overdrafts from BOK + Government bonds held by BOK plus loans to Government agencies by BOK-Government deposits with BOK.  
 Column (2): Foreign currency assets minus foreign currency liabilities (including deposits of foreign organizations).  
 Column (3): Column (4) - Columns (1+ 2).  
 Column (4): Banknotes and coins and deposits of banks at BOK.

30. The major expansion of the BOK monetary liabilities in 1964 occurred as a result of devaluation in May. Although there was no significant change in the dollar value of foreign exchange reserves during the year, the foreign sector, as shown in the table above, contributed 4.2 billion to the expansion. Most of this was due to payment of compensation for the exchange rate difference which is reflected as a decrease in the foreign exchange evaluation adjustment fund. There was also continued expansion of BOK credits to the private sector. It is only by a reduction of about 3 billion in the BOK net credits to the public sector that primary expansion was kept from reaching dangerous levels.

31. In the eleven months of 1965 up to the end of November, monetary liabilities of BOK increased by about 9 billion won. This was due mainly to increase in fertilizer credits, although increase in exchange reserves and rise in export credits also contributed to this expansion. The increase in fertilizer credit arose because, from early 1965, NACF was required to pay for fertilizer at the time of import. In the past, NACF had to pay for fertilizer only after it was sold to farmers. Thus, the cost of inventory accumulation was financed through BOK credits.

E. Stabilization Programs

32. The stabilization program which had been successful in restraining inflation during 1958 and 1959 was suspended after the May 16 revolution. With inflation gaining momentum at the end of 1962 and beginning of 1963, the stabilization program was reintroduced in coordination with the U.S. mission in 1963. The program aimed at restraining the increase in money supply and set a target increase of 5 percent during the year. To this end, ceilings were set on bank loans and these were controlled on a quarterly basis. During the year, additional measures were taken to counter loopholes in the control system. The program was a success in terms of restraining the increase in money supply. In fact, the end of year figure was 3 percent below the target. However, as explained above, (paragraph 7 - 10) the success of the program in controlling money supply could not restrain inflation.

33. The financial stabilization program for 1964 was adopted on March 14 and set a target growth of money supply of 7 percent until the end of 1964. Again this was implemented through quarterly ceilings on bank lending. In the first half of the year, increase in money supply was very modest. However, following the devaluation in May, a series of measures were taken to promote exports and to help industries which were in financial difficulty. These contributed to expansion and money supply reached 46.7 billion - as compared to the target of 40 billion - in November. The end of year level of 43 billion could be achieved only at the cost of postponing public expenditures and putting a heavy squeeze on bank lending.

34. In 1965, the system of setting money supply and credit ceilings continued on a quarterly basis. After the second quarter, the targets were changed to a net credit concept, meaning increase in loans minus increase in savings deposits, and several measures were taken to simplify the monetary control procedures. On September 30, the current "Regulations for Handling Banking Sector Funds" was revised and greater emphasis was put on indirect controls and overall credit ceilings.

35. The Korean Government signed a standby agreement with the International Monetary Fund in March 1965 for a period of one year in an amount of \$9.3 million. Under this standby, the Government undertook to observe specific limits on credit expansion. According to this agreement, the credit level at the end of the last quarter would be 79.3 billion won. By August it was clear that the credit expansion could not be limited to the targets of the standby agreement and the Korean Government requested a revision. The new targets were 85.5 billion won for end of November and 85 billion won for the end of February, 1966. The end of November credit level could be kept within the target with great difficulty. After November, credits kept expanding and reached 88.9 billion at the end of December and 93.7 billion at the end of January 1966, as compared to a ceiling of

85 billion for the quarter ending February 1966. The excess over the ceiling on total domestic bank credit was mainly due to expansion of bank credit to the private sector in the months following the interest rate reform of October, 1965.

36. In March, 1966, a new standby agreement in the amount of \$12.0 million was signed. This agreement sets targets on net domestic loans. The increase in the net domestic assets of BOK is projected at won 5 billion during 1966, over the amount of 38.5 billion outstanding at the end of 1965. According to the money multiplier estimated above (paragraph 25), such an expansion may lead to an 11-13 percent increase in the money supply.

37. The stabilization program agreed by the Government with the U.S. Aid Mission allows an increase of won 8.4 billion, or 14.8 percent in the money supply during 1966.

F. Banking and Credit

38. The loans outstanding of the five commercial banks and the four specialized banks in Korea are shown in the following table:

Table 8: LOANS AND DISCOUNTS OF BANKING INSTITUTIONS  
1960 - 1965

(billion won end of period)

	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>
Commercial Banks	11.5	12.8	20.9	22.8	23.1	37.5
Korean Reconstruction Bank	15.9	20.3	24.3	27.6	31.7	36.8
Medium Industry Bank	--	2.8	4.5	5.9	6.5	8.4
National Agricultural Cooperatives Federation	12.8	17.1	18.6	19.7	23.1	25.4 <sup>/1</sup>
Citizens National Bank	--	--	0.9	0.9	1.0	1.4
	<u>40.2</u>	<u>53.0</u>	<u>69.2</u>	<u>76.9</u>	<u>85.4</u>	<u>96.5</u>

<sup>/1</sup> End of November

Source: BOK

39. The commercial banks with 184 branches throughout the country carry on mainly conventional commercial banking activities. Since 1962, these banks have also extended longer-term credits, called equipment loans, as part of a drive to channel funds into industry. But at the end of 1964 these equipment loans amounted to only about 6 percent of their total credits. The main source of funds for commercial banks are deposits.

40. Secondly, there are the four specialized banks. Korean Reconstruction Bank (KRB) is more in the nature of an intermediary for channelling Government funds, counterpart funds and foreign loans to industry. At the end of 1965, out of a total loans outstanding of 36.8 billion, 18.4 billion was supplied by counterpart funds and 4.4 billion from budgetary funds. KRB accepts deposits only from enterprises it has financed. These amount to a mere 700 million won. The loans extended by KRB are heavily concentrated in manufacturing and electricity sectors and are mostly medium or long-term loans.

41. National Agricultural Cooperatives Federation (NACF) is an agricultural bank in addition to its marketing and other activities. Its finances are mainly from the budget (52.2%), from deposits (21.2%), from BOK credits (17.3%), and from agriculture debentures (6.5%). More than 90 percent of its loans are for agriculture.

42. The Medium Industry Bank (MIB) and the Citizens National Bank (CNB) are much smaller institutions compared to KRB and NACF. The purpose of the MIB is to finance the small and medium industries. Its main sources of funds are counterpart funds and deposits: its loans are almost completely for manufacturing. CNB specializes in extending small loans and accepting mutual installment deposits and ordinary deposits.

43. Outstanding loans, classified by industry, are shown in the following table:

Table 9: LOANS AND DISCOUNTS OUTSTANDING BY INDUSTRY /2  
1958 - 1964  
(billion won)

	Manufacturing		Agriculture Forestry		Commerce, Banking, Real Estate /1		Electricity		Other		Total	
	Total	Equip- ment	Total	Equip- ment	Total	Total	Total	Equip- ment	Total	Equip- ment	Total	Equip- ment
End of												
1958	11.8	5.9	8.3	3.4	1.1	1.6	1.3	3.8	1.5	26.4	12.1	
1959	14.6	7.7	8.8	4.5	1.8	1.6	1.2	5.6	2.7	32.4	16.1	
1960	16.9	8.2	12.3	5.7	2.7	1.6	1.2	6.7	3.1	40.2	18.2	
1961	20.1	8.3	17.3	6.8	2.8	5.2	4.6	8.6	3.1	53.0	22.8	
1962	27.2	10.0	18.7	8.3	5.7	7.6	7.1	10.1	5.2	69.2	30.6	
1963	29.4	13.6	19.7	8.5	7.1	9.4	9.2	11.3	2.8	76.9	34.1	
1964	32.6	10.6	22.3	8.8	7.4	11.1	10.9	12.2	6.4	85.6	36.7	

/1 The share of real estate is very minor. In 1964, total loans to real estate amounted to a mere 169 million won.

/2 Commercial & Specialized Banks

Source: BOK, Economic Statistics Yearbook, 1965

44. As mentioned in relation to individual banks, the sources of finance for the bank loans in Korea came from deposits, government funds (including counterpart funds), borrowing from the Bank of Korea and some other minor sources, such as capital contributions.

Table 10: SOURCES OF FUNDS FOR COMMERCIAL & SPECIALIZED BANKS  
1958 - 1964

(billion won)							
D e p o s i t s			Gov't	Borrowing	Total	Total	
Demand	Time	Total	Funds	From BOK	Total	/1	Loans /1
1958	9.9	1.8	11.7	14.4	2.7	28.8	26.4
1959	9.5	5.1	14.6	18.7	1.9	35.2	32.4
1960	12.1	5.4	17.5	21.5	5.5	44.5	40.2
1961	16.8	8.6	25.4	29.2	2.9	57.5	53.0
1962	23.2	16.0	39.2	29.4	1.4	70.0	69.2
1963	21.1	16.9	38.0	34.9	4.2	77.1	76.9
1964	21.6	19.9	41.5	39.4	7.7	88.6	85.4

/1 Due to the existence of other accounts in the assets and liabilities of the banks, the sources of funds cannot, of course, be identified with the loans, hence the difference.

Source: BOK, Economic Statistics Yearbook, 1965.

45. Export loans which constitute about 7 percent of the total loans by the banks deserve special attention because of the subsidy involved in the very low rates charged for such loans. Exporters may obtain loans from commercial banks up to 200 won per US dollar upon receipt from abroad of an export letter of credit. In February, 1965, the interest rate on these loans was lowered from 8% to 6.5% a year. This rate has remained unchanged after the interest rate reform of September, 1965. (see paragraph 48 ff) The duration of the credit has a maximum of 90 days. Normally, however, the credit ends when payment has been received from abroad. Since the export letters of credit can be rediscounted with the BOK at 3.5% a year the commercial banks are quite willing to extend export credits. In addition to this, exporters can also obtain credit at the preferential rate of 6% a year for the import of raw materials to be used in export production. Contractors for deliveries to UN forces in Korea enjoy almost equally advantageous credit facilities. They can obtain credit for a maximum duration of six months at 6.5% up to an amount of 150 won per US dollar.

46. The total amount outstanding of export credits and import usance credits for exports, including rediscounts of these credits with the BOK, amounted to somewhat over 6 billion won at the end of 1965. This is equivalent to about \$23 million. Since the monthly level of exports is about \$15 million and since export credits are given up to around 75% of the export value (200 won per US dollar), this suggests an average duration of all export credit of about 2 months. The amount outstanding on loans to contractors with UN forces in Korea amounted to only about 0.6 billion won.

47. The availability of credit at such low rates creates, of course, powerful incentives for diversion to domestic activities. It is certainly hard to tell how much diversion does occur. The average duration of 2 months seems fairly long and this may be partly due to diversion. However, the authorities appear to be screening applications carefully. Moreover, failure to effect exports eventually leads to exclusion from consideration for further export credits. (In the case of contractors with UN forces, failure to supply would lead to losing the qualification to bid in the future.)

#### G. Interest Rates

48. At the beginning of October, 1965, interest rates on deposits, loans and discounts of the banking institutions were raised substantially. Rates on savings deposits were raised to 30 percent from their previous level of 9-15 percent, and rates for ordinary commercial loans and discounts to 26 percent from 16-18.5 percent. At the same time, lending rates of specialized banks were also raised in varying degrees. Rates of NACF loans financed from agriculture and forestry funds, went up from 16 percent to 20 percent for production loans and 23 percent for marketing loans. KRB equipment loans were raised from 7-8 percent to 10-12 percent. Similar increases took place in the rates of special loans by MIB and CNB.

49. The objectives of this drastic operation were: (a) to increase savings; (b) to transfer funds from the curb market into the banks, and (c) to effect better allocation of loans. Following the reform, the increase in time and savings deposits, which had already started since May, 1965, gained momentum. The value of these deposits has almost doubled in the five months from end of September 1965, to end of February, 1966. Some of these funds have probably been transferred from the curb market. However, it is also possible that higher real returns on such deposits - not only due to rate of interest reform, but also due to relative price stability - have encouraged savings. It is not possible to see the relative contribution of each of these effects.

50. With price increases of 6-7 percent, the real interest rate on ordinary loans comes to about 20 percent. This looks like a high cost of capital under normal conditions. However, for the time being, these high rates have not altogether eliminated excess

demand for loans. Some surveys have indicated that the increase in lending rates of the banks have not raised the cost of capital to the firms significantly. This is explained by the high dependence of these firms on loans from the curb market at interest rates of 4-5 percent per month. This extraordinary structure of interest rates is the result of continuing inflationary expectations.

51. In Korea, a sizable unorganized credit market exists outside the banking system. There are varying estimates of the size of this market. Estimates of outstanding loans by the curb market range from one-third to one-half of the credits by the banking system. In any case, it is of considerable size. The curb market comprises various institutions and markets, like individual brokers, finance companies, Kye which are the rotating credit cooperatives for consumer loans and Kaekchu which provide short-term working capital principally in the fishing industry. 1/

52. "It appears that the curb market scores high according to some tests of efficiency. It does less well on others. Costs of transactions seem to be high; information is limited; there is market fragmentation. The market has an allocative bias toward diverting savings into inventory investment with scant attention to finance of fixed investment. Loans are short-term, from a day to perhaps a month. The market has allocative bias towards enterprises with the most and best collateral and not clearly toward enterprises with the most productive investment opportunities." 2/

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1/ J. G. Gurley, H. T. Patrick and E. S. Shaw, *The Financial Structure of Korea*, Reprinted by Research Department of Bank of Korea, 1965.

2/ J. G. Gurley, H. T. Patrick and E. S. Shaw, *op. cit.* pp. 82-83

Table 11: PRICE INDICES  
1953 - 1965

	Wholesale Price Index					Seoul Consumer Price Index
	All Commodities	Grains	All Commodities Excl. Grains	Producer Goods	Consumer Goods	
1953	26.5	33.0	23.5	19.4	30.9	
1954	34.0	26.5	39.4	31.4	35.5	
1955	61.5	63.2	60.9	52.0	66.8	61.3
1956	81.0	101.3	74.5	72.0	86.0	75.4
1957	94.1	116.3	87.0	81.3	101.2	92.9
1958	88.2	95.3	85.9	81.2	90.8	89.6
1959	90.3	85.5	92.3	90.5	90.2	92.5
1960	100.0	100.0	100.0	100.0	100.0	100.0
1961	113.2	123.9	111.3	114.0	112.7	108.1
1962	123.8	131.4	122.5	125.3	122.8	115.2
1963	149.3	208.3	139.1	138.9	156.8	139.0
1964	201.1	263.1	190.4	184.7	212.9	180.0
1965	221.2	246.5	216.8	217.4	223.9	204.4
1964						
III	186.8	276.0	171.4	164.3	203.0	178.1
VI	211.1	306.0	194.7	183.5	231.0	181.5
IX	210.9	248.4	204.5	202.9	216.7	181.5
XII	209.8	235.0	205.4	205.9	212.6	186.8
1965						
III	213.9	233.0	210.6	211.2	215.8	198.4
VI	224.5	256.6	219.0	218.1	229.2	206.8
IX	226.6	264.4	220.1	222.2	229.7	210.4
XII	223.6	227.5	222.9	223.8	223.4	206.0

Source: BOK Economic Statistics Yearbooks and Monthly Statistical Review, January, 1966.

Table 12: MONEY SUPPLY AND PRINCIPAL FACTORS AFFECTING IT

End of	In million won																						
	1/ Currency in Circulation  (A)	2/ Monetary Deposits					Money Supply (A+B)	Bank Credit to Public Sector						Bank Credit to Private Sector				Foreign Sector			12/ Others		
		Private Checking Deposits	Checking of Local Gov'ts	Other Private Demand Deposits	Other Demand Deposits of Local Gov'ts	Checks and Bills in Process of Collection 3/ (minus)		Total	Gov't Overdrafts from ROK Mimus Gov't Deposits with ROK 4/ (minus)	Gov't Bonds Held by All Banking Inst. 5/ (minus)	Claims on Local Gov'ts of Banking inst. 6/ (minus)	Loans to Gov't Agencies by ROK 7/ (minus)	Gov't Inst. 8/ (minus)	Total	H/ With Banking Funds (Loans by all Banking Inst.)	With Gov't Funds	Stocks and Debentures	Time 2/ Savings Deposits (minus)	Total	Net Purchases of Foreign Exchange 10/ (minus)		Deposits of 11/ Foreign Organizations (minus)	Total
1950	223	14	--	33	15	2	60	283	210	3	--	11	--	224	77	--	--	6	71	1	6	-5	-7
1951	539	83	--	99	52	43	191	730	431	9	25	56	--	520	227	--	--	13	214	7	9	-2	-2
1952	974	220	20	297	27	105	459	1,133	596	24	108	138	--	866	564	--	--	27	537	12	8	4	26
1953	2,233	349	53	547	53	204	798	3,032	1,149	77	286	185	--	1,697	1,601	--	--	239	1,362	126	38	88	-115
1954	3,998	926	77	1,121	102	445	1,810	5,808	3,109	834	44	54	23	4,018	2,206	21	1	386	1,842	153	139	14	-66
1955	5,878	1,578	148	2,158	195	604	3,475	9,352	5,238	2,157	83	70	50	7,498	3,734	39	1	699	3,075	223	1,263	-1,040	-181
1956	7,334	2,106	179	3,769	227	1,522	4,759	12,093	2,453	4,392	153	53	53	6,945	7,048	28	21	1,422	5,675	1,390	1,425	-35	-492
1957	8,605	1,789	132	5,054	256	1,318	5,913	14,518	4,882	7,234	181	--	1,077	5,856	9,886	854	21	1,512	9,249	2,597	2,125	472	-1,059
1958	11,105	2,528	216	7,048	451	2,093	8,150	19,255	2,403	7,400	212	--	6,393	3,622	11,112	4,560	256	1,916	14,012	3,925	1,927	1,988	-387
1959	12,359	2,040	175	6,149	475	207	8,631	20,990	5,470	7,332	282	--	7,768	5,316	11,140	6,846	332	5,491	12,827	3,697	1,442	2,255	592
1960	13,932	3,400	258	7,605	790	4,078	7,976	21,908	2,069	7,670	346	--	9,073	1,012	15,712	8,292	339	5,700	18,643	4,429	1,089	3,340	-1,087
1961	16,660	5,356	544	10,394	1,477	3,204	14,564	31,224	5,367	10,820	816	200	11,552	5,651	19,322	10,191	419	9,083	20,849	13,427	2,852	10,575	-5,851
1962	18,002	6,515	957	16,101	1,860	6,728	18,705	36,707	11,864	17,531	474	500	16,079	9,290	29,844	12,940	837	16,806	26,845	11,153	4,225	6,938	-6,336
1963	18,250	6,169	720	14,008	2,545	4,385	19,057	37,307	11,834	13,679	588	2,642	17,740	11,003	34,886	14,681	1,492	17,270	33,789	84	6,745	-6,661	-824
1964	24,896	5,667	472	15,449	2,649	6,046	18,161	43,057	9,373	13,744	1,349	2,100	19,045	7,521	39,406	15,140	1,564	20,317	35,793	6,159	8,100	-1,944	1,684
1963	15,153	5,739	927	12,076	2,865	1,167	20,440	35,593	10,609	13,899	517	500	16,246	9,279	33,079	13,226	857	18,073	29,089	6,787	5,367	1,420	-4,195
3	15,830	5,383	983	12,224	2,544	1,456	19,678	35,508	11,050	13,816	554	2,496	17,606	10,312	33,887	15,215	1,111	20,443	29,770	3,691	5,062	-1,371	-3,203
6	18,739	7,199	1,049	12,738	2,748	1,961	21,773	40,512	13,409	13,600	583	2,842	17,577	12,777	35,422	16,626	1,246	20,445	32,879	2,100	4,777	-2,677	-2,467
9	18,250	6,169	720	14,008	2,545	4,385	19,057	37,307	11,834	13,679	588	2,642	17,740	11,003	34,886	14,681	1,492	17,270	33,789	84	6,745	-6,661	-824
12	18,250	6,169	720	14,008	2,545	4,385	19,057	37,307	11,834	13,679	588	2,642	17,740	11,003	34,886	14,681	1,492	17,270	33,789	84	6,745	-6,661	-824
1964	18,157	7,093	408	15,243	3,927	6,665	20,006	38,163	10,925	13,569	537	--	18,014	7,617	35,980	14,929	1,483	18,287	34,005	621	4,529	-3,908	1,049
3	20,110	7,148	378	16,330	3,063	7,212	19,707	39,817	9,966	13,657	508	3,149	17,777	8,885	37,466	16,532	1,558	19,161	36,395	-85	4,609	-4,694	-769
6	22,736	7,223	531	18,243	2,718	8,737	19,978	42,744	9,879	13,592	580	3,469	17,740	8,831	38,466	17,037	1,564	20,303	36,764	4,486	7,556	-3,076	189
9	24,896	5,667	472	15,449	2,649	6,046	18,161	43,057	9,373	13,744	1,349	2,100	19,045	7,521	39,406	15,140	1,564	20,317	35,793	6,159	8,100	-1,944	1,684
12	24,896	5,667	472	15,449	2,649	6,046	18,161	43,057	9,373	13,744	1,349	2,100	19,045	7,521	39,406	15,140	1,564	20,317	35,793	6,159	8,100	-1,944	1,684
1965	23,321	6,548	562	18,384	3,664	7,706	21,452	44,773	10,322	13,561	923	6,600	19,563	11,843	42,034	15,360	1,564	21,216	37,742	-6,590	5,516	-12,106	7,294
3	25,328	7,319	430	21,755	2,833	9,440	22,927	48,255	10,487	13,546	1,116	10,300	19,897	15,552	45,251	16,841	1,564	24,596	38,660	2,394	8,215	-5,821	-136
6	27,650	8,568	543	24,958	3,786	12,545	25,310	52,860	11,846	13,478	1,483	9,915	18,645	18,077	46,853	16,658	1,509	27,718	37,302	8,329	9,442	-1,113	-1,306
9	31,617	9,396	554	28,434	3,220	16,591	25,013	56,630	7,391	13,429	1,326	12,300	18,748	15,698	57,770	15,747	1,447	39,740	35,224	12,387	5,950	6,437	-729
12	31,617	9,396	554	28,434	3,220	16,591	25,013	56,630	7,391	13,429	1,326	12,300	18,748	15,698	57,770	15,747	1,447	39,740	35,224	12,387	5,950	6,437	-729

1/ Excludes the cash holdings by banking institutions and the Korean Reconstruction Bank.

2/ The sum of checking deposits, passbook deposits, extra deposits, credit control deposits and public deposits with all banking institutions and the Korean Reconstruction Bank.

3/ Excludes treasury checks since December 1962.

4/ Government deposits include government checking deposits with the Bank of Korea and outstanding balance of treasury agency accounts of banking institutions.

5/ Includes industrial finance debentures issued by the Korean Reconstruction Bank.

6/ Includes local government bonds held by banking institutions.

7/ Loans to the Agricultural Cooperatives for financing procurement of fertilizer since 1954.

8/ Excludes the unsecured debt settlement fund of the Agricultural Cooperatives.

9/ The sum of savings deposits, notice deposits, time deposits, special time deposits, installment savings deposits and mutual installment savings deposits with all banking institutions and the Korean Reconstruction Bank.

10/ Won equivalent (at the current official rate) to the net purchases of foreign exchange by the Bank of Korea and commercial banks less outstanding reserves of foreign exchange revaluation profits.

11/ Includes sales proceeds of surplus agricultural products imported under US Public Law 480 and MSA Section 402.

12/ Consists mainly of assets and liabilities not separately presented in this table such as deposits of the Korean Reconstruction Bank with the Bank of Korea, interbranch accounts, profit and loss accounts and unsettled accounts.