DEMAND FOR MONEY, THE FINANCIAL SYSTEM AND ECONOMIC DEVELOPMENT IN AFGHANISTAN

by

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with a foreword
by
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Kabul: United States Agency for International Development, November, 1972

FOREWORD

Economic development can be achieved only from the mobilisation of resources into productive uses. In the present technological era, this often necessitates the concentration of capital into large units of production. In a mixed economy, the most important way in which this can be done is through the voluntary pooling of resources. This is where the financial system plays its crucial role. The business enterprise needs resources for five, ten, maybe fifty years to use in what at the outset will be an uncertain, risky venture. On the other hand, individuals generally wish to keep the majority of their wealth in liquid, risk-free forms. By drawing together large numbers of savers, who will not all want to withdraw their savings at the same time, and financing large numbers of enterprises, thereby spreading and reducing risk, the financial system can meet not only business medium and long-term financial needs but also depositors' requirements of liquidity and security. The more developed the financial system, the more efficiently can it perform this function of channelling savings into the most productive investment opportunities.

There has been general recognition of the fact that Afghanistan's financial system woefully fails to meet the needs of a developing economy. USAID has therefore asked Dr. Maxwell Fry to analyse the existing system and report on its potential role in the process of economic development. Here are the first results of this work. In comparing Afghanistan with other developing countries,

he finds that Afghanistan's financial system approximates to one which would be found in a country where the annual per capita income was $12 or 942 afs. Since per capita income in Afghanistan is at least five times greater, this indicates that the financial system lags behind other parts of the economy in relative terms. Such a deficiency in financial institutions is a drag on the whole economy and inhibits growth.

A country's financial system can be likened to the blood system of the body. To be sure, both bodies and economies require a complex mix of inputs, yet without a well-functioning system for converting and channelling these to where they are needed and can be productive, survival is impossible. The blood system performs these functions for the body, the financial system for the economy.

Having given us an indication of the existing state of Afghanistan's financial system, Dr. Fry turns to an examination of one particular benefit which a programme of financial development could produce, namely, additional resources for development. As almost 90 per cent of development expenditure during the Fourth Plan period is to be undertaken by the public sector, stress is given to the resources which financial development would make available to this sector of the economy. Over 30 per cent of the public sector's investment programme could be financed through the financial system without inflationary effects, if development of financial institutions were encouraged. In the longer run, moreover, financial development would undoubtedly lead to a much more rapid increase in private investment than has hitherto been witnessed in Afghanistan.

Financial development requires a number of positive measures to be taken. These include the recognition of legal negotiable financial instruments; provision for speedier debt collection and credit standing enquiries; the development of a postal savings scheme; commercial banking legislation enabling the establishment of foreign bank branches as well as more domestic banks; and central banking legislation to regulate the emerging financial system and to allow a Central Bank to perform normal central banking functions. With such steps economic development can move forward rapidly on an expanding supply of finance. Without them it would continue to be confined to the choice between stagnation and inflation.

I hope that this contribution by Dr. Fry will provide the impetus and incentive for the implementation of such measures during the Fourth Plan period. I therefore urge you to consider the material in this report as a matter of the greatest priority.

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DEMAND FOR MONEY, THE FINANCIAL SYSTEM AND ECONOMIC DEVELOPMENT IN AFGHANISTAN

1. INTRODUCTION

If the demand for money at every level of G.N.P. can be increased, ceteris paribus, development expenditure can be increased through expansion of domestic credit by a concomitant amount without an increase in the rate of inflation occurring. Calculations of the "safe" level of domestic credit expansion invariably assume that the capacity of the economy to absorb new money without producing inflation is exogenously determined. This is usually expressed either in the form of an estimated income elasticity of demand for money or a time trend monetisation factor. The aim of this paper is to examine some new aspects of this problem and the related problem of deficit finance which emerge when it is assumed that the capacity of the economy to absorb new money without an accompanying increase in the rate of inflation is in part endogenous or policy determined, a factor which can to some extent be influenced by the government.

This alternative approach to domestic credit expansion and deficit finance is of relevance to the continual problem of financing Afghanistan's development programme. One of the major difficulties faced by the Government

in attempting to execute another five-year plan lies in its inability to increase revenue significantly whilst at the same time being faced with escalating current expenditure.[1] Domestic currency funds to finance the development programme are now so severely curtailed that foreign aid funds lie idle through lack of the necessary budget appropriations to finance the local costs of aid-financed projects.[2] An examination of a politically feasible method of increasing these funds might, therefore, be of some practical value to those now redrafting the Plan.

The subsequent section sketches the theoretical background upon which the analysis is based. Section 3 presents a comparative picture of velocity and currency/deposit ratios in 45 underdeveloped countries which is then used in conjunction with results of another comparative study to measure the extremely primitive nature of Afghanistan's financial system. Such conditions provide enormous potential for development; in Section 4 some methods for developing the financial system and so increasing the demand for money to allow larger domestic credit expansion without a higher rate of inflation are outlined. Examples from the neighbouring RCD countries[3] are also provided

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1 See, for example, /5/

2 This seems to have been the experience of the majority of donors.

3 The Regional Cooperation for Development (RCD) was established in 1964 with the object of setting up "a strong regional group ..... to initiate and

in this and the subsequent section. Part 5 uses alternative assumptions concerning possible financial development in Afghanistan during the Fourth Plan period to calculate "safe" levels of domestic credit expansion and deficit finance. The paper ends with some conclusions which can be drawn from the analysis.

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3 (continued)

participate in measures for facilitating concerted action for the economic reconstruction of this region, for raising the level of this region's economic community and for maintaining and strengthening the economic relations of the countries of this region both among themselves and with other countries of the world" /13, p. 3/. For more discussion of development in the RCD, see /3/.

2. DEMAND FOR MONEY, MONEY-INCOME MULTIPLIERS AND DEFICIT FINANCE

The very simplest demand for money model -

$$M^d_t = q\, Y_t$$

$$M^d_t = M^s_t$$

$$M^s_t = \bar{M}_t$$

where M^d_t represents demand for money at time t, Y_t the level of income, M^s_t supply of money, and $\bar{M}_t$ an exogenously determined variable, indicates that the proportion of additional income to be held in the form of money is constant. If this relationship is statistically stable, changes in the level of income must be accompanied by changes in the quantity of money. If changes in one variable are always accompanied by proportional changes in the other, the stability of the demand for money function is both a necessary and sufficient condition for the stability of the simple money-income multiplier -

$$Y_t = b\, M_t$$

Such an equation is the reduced form of the simple demand for money model presented above. In the more general case, however, where the demand for

money is determined by variables other than or in addition to the level of income, a stable demand for money function is only a necessary, though not sufficient, condition for a stable or constant money-income multiplier.

Continuing the analysis with the simple money-income multiplier, it is evident that a given change in the quantity of money is uniquely related to a change in the nominal level of income. The latter can be divided into the change in the real level of income and the change in the price level. If the price level is to be held constant and the rate of growth in the real level of income is predetermined, the money supply must be increased at the same rate as the rate of growth in real income. Alternatively, if the real level of income is to increase by Xm. afs., the money supply must be increased by $\frac{Xm.\ afs.}{b}$.

Two simplifying assumptions implicit in the model presented above need to be removed. First, where the demand for money function contains variables in addition to the level of income, the latter can move independently from the quantity of money without upsetting the stability of the demand for money function. Demand for and supply of money functions of the form -

$$M^d_t = p + q\,Y_t + s\,r_t$$

$$M^s_t = \bar{M}_t$$

where r_t represents the rate of interest, are consistent with an income function of the form -

$$Y_t = A_t + b Y_t$$

where A_t might, for example, take the form -

$$A_t = a r_t$$

The reduced form money-income multiplier can be derived -

$$Y_t = \frac{a}{s\left(1 - b + \frac{aq}{s}\right)} \bar{M}_t - \frac{ap}{s\left(1 - b + \frac{aq}{s}\right)}$$

A necessary, though not sufficient, condition for the constancy of the money multiplier in this case is a stable demand for money function; the parameters of the demand function appear in the money-income multiplier reduced form equation. It is not a sufficient condition since the parameters of the income function also appear, thus necessitating the latter's stability as well.

The simple money-income multiplier is recognisable as the basic version of the quantity theory; the other multiplier has been derived from the Keynesian system in which the rate of interest acts as the crucial link between the money and commodity markets. A more realistic model of the economy might be produced by incorporating both the indirect interest rate effect with a direct relationship between the level of income and the quantity of money. The

following is one example of such a model -

$$M^d_t = p + q\,Y_t + s\,r_t$$

$$M^s_t = \bar{M}_t$$

$$Y_t = A_t + b\,Y_t$$

$$A_t = a\,r_t + c\,M_t$$

The reduced form equation -

$$Y_t = \frac{(\frac{a}{s} + c)}{(1 - b + \frac{aq}{s})} M_t - \frac{ap}{s\,(1 - b + \frac{aq}{s})}$$

can now be derived. In this case, the constancy of the money-income multiplier requires the stability of the demand for money function in all cases where $a \neq 0$.

The result which now emerges is that given the necessary stable functional relationships a change in the money supply still produces a unique change in the level of income and that, ceteris paribus, given the growth rate of real income and a price stability prerequisite, the necessary increase in the money supply can be calculated. The rate of change in the money supply will equal the rate of change in real income.

The second simplifying assumption which must be removed is that the income elasticity of demand for money is one. There is considerable evidence to suggest that income elasticity is usually greater than one in an economy such as the Afghan economy. A common way of removing this restriction is to formulate the demand for money function in natural logarithmic form -

$$\log_e M_t^d = p + q \log_e Y_t + s\, r_t$$

q is now the income elasticity of demand. The money-income multiplier can be derived as before but in this case a given percentage change in the money supply will result in the same percentage change in income only when $q = 1$, i.e. when income elasticity of demand is one. If $q = 2$, for example, a 5 per cent growth in real income will, ceteris paribus, require a 10 per cent increase in the money supply to maintain a stable price level. If $q = 1.5$ the same growth in real income would require a 7.5 per cent increase in the money supply.

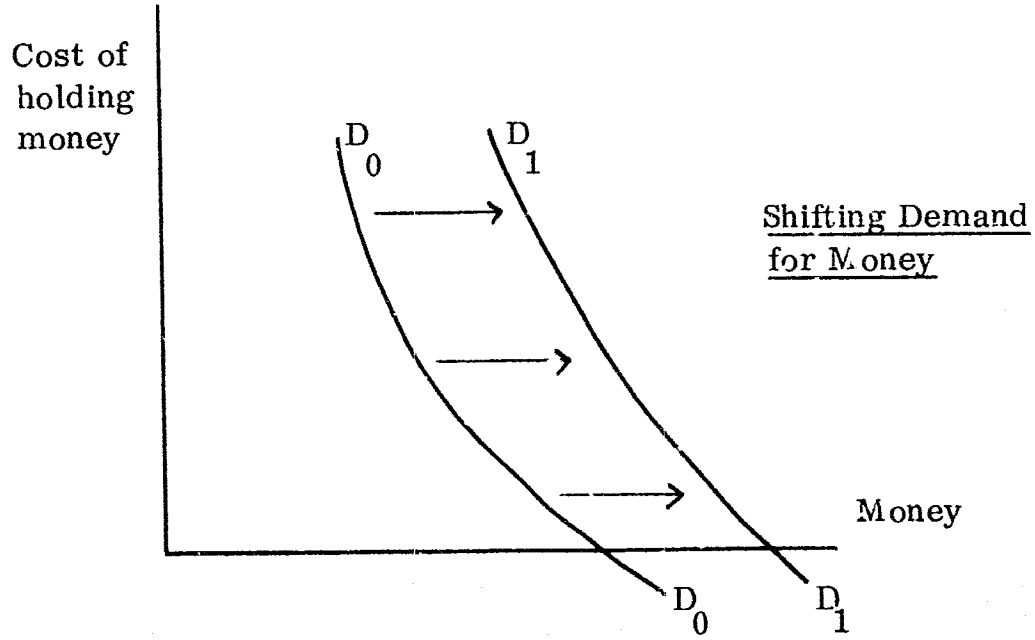
The money supply can be increased by central bank lending to the government and by commercial bank lending to the private sector. Programmes of planned economic development in the underdeveloped countries have generally been accompanied by significant increases in public expenditure. Even with accelerated rates of economic growth, public revenues have failed to increase as fast as expenditure. The consequent public sector deficit typically has to be financed, in the absence of a capital market, through foreign aid (defined to include all grants and loans from abroad) and/or increases in the money supply. The latter

can result from government borrowing from the central or commercial banks; in both cases this leads to an increase in the money supply and similar effects on the level of demand [7, p. 526]. Provided the money supply is increased at the appropriate rate in relation to the rate of growth in real income, the price level will remain stable. Typically, however, the requirements of the public sector necessitate deficit finance involving increases in the money supply of a greater magnitude; in this Afghanistan does not provide an exception.

There exist, however, devices which can be used to manipulate the parameters of the money and commodity market functions, and so the parameters of the money-income multiplier, to enable a larger non-inflationary increase in the money supply than is dictated by calculations based on the original parameter estimates.

For example, if the demand for money can be shifted as illustrated in Figure 1,

FIGURE 1



the money supply can be expanded by that magnitude without causing inflationary pressures. Similarly, if the income elasticity of demand for money can be increased the money supply can be expanded at a faster rate and thus finance more development expenditure for any given growth in real income. Looked at from another viewpoint, the more velocity of circulation can be reduced the larger the non-inflationary increase in money supply and hence the larger the non-inflationary domestic credit expansion which is possible. Reducing velocity of circulation implies persuading the private sector to increase its cash balances at every level of income thereby voluntarily freeing resources for use by those who provide the counterpart claims to the increase in the money supply.

3. THE POSSIBLE SIZE OF NON-INFLATIONARY DOMESTIC CREDIT EXPANSION

Velocity in the neighbouring countries of Iran and Pakistan was 3.6 in 1970. Assuming an income elasticity of 2.0, an initial velocity of 3.6 and an annual growth in real income of 5 per cent, the non-inflationary increase in the money supply and, on the assumption that foreign exchange reserves remain unchanged, domestic credit would be 2.78 per cent of G.N.P. Using the Ministry of Planning's G.N.P. estimate of 89.5b afs. for Afghanistan in 1350 (1971-2) [10, Table 88, p.147] would allow a "safe" expansion in domestic credit of 2,486m afs., a not insubstantial sum (equal to 34 per cent of total investment in 1348[4]).

The example presented above is quite unrealistic in the actual circumstances now existing in Afghanistan. It simply illustrates the potential level of domestic credit expansion to which Afghanistan might aspire. Afghanistan's velocity lies around 10 which, even with an income elasticity of demand of 2, would allow a "safe" annual level of domestic credit expansion of 895m afs. There is, however, no evidence to suggest that income elasticity is as high as 2 in Afghanistan, although elasticity in Iran, Pakistan and Turkey appears to lie within this range. If income elasticity in Afghanistan under the existing institutional constraints were

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4 Investment data were taken from [4, Table A, Annex, p.6]

more realistically estimated at 1.4, the "safe" annual level of domestic credit expansion falls still further to 627m afs., still assuming a 5 per cent rate of real economic growth.

Table 1 presents estimates of currency/deposit ratios and velocities of circulation for 45 underdeveloped countries. Afghanistan has both the highest velocity, (with the exception of Indonesia which experienced an increase in the level of prices of 27,510 per cent between 1964 and 1969) and the highest currency/deposit ratio (with the exception of Syria).

The G.N.P. estimates for Afghanistan are extremely unreliable; the money supply data are also imperfect. More confidence might be placed in the resulting velocity figure if it could be corroborated by independent evidence. In a recent 47 - country comparative study [12], Perlman found the following two relationships

$$\log M = 0.337 + 0.396 \log Y - 0.923 \dot{P}$$
$$R^2 = 0.53 \qquad (0.045) \qquad (0.272)$$

$$\log C/D = 1.05 - 0.56 \log Y$$
$$R^2 = 0.59 \qquad (0.05)$$

where M is the money supply broadly defined (M2) expressed in terms of the number of weeks of income held, Y is per capita real income in dollars, adjusted for distortions introduced by fixed exchange rate systems, $\dot{P}$ is the expected rate of

TABLE 1

Currency/Deposit Ratios and Velocities of Circulation in 45 Underdeveloped Countries, 1969

Country	Currency/Deposit Ratio (Demand and Time Deposits)	Velocity
Afghanistan	2.700	10.068
Argentina	0.446	3.442
Bolivia	1.673	6.807
Brazil	0.201	4.646
Ceylon	0.649	4.268
Chile	0.278	6.580
China (Taiwan)	0.190	2.974
Colombia	0.397	5.010
Costa Rica	0.361	4.409
Cyprus	0.191	2.066
Ecuador	0.370	4.772
Egypt	0.846	2.542
El Salvador	0.292	4.277
Ethiopia	1.191	7.368
Greece	0.392	2.062
Guatemala	0.397	5.347
Guyana	0.320	2.355
Honduras	0.357	5.043
India	0.737	4.381
Indonesia	1.105	14.282
Iran	0.220	3.970
Iraq	1.407	3.754
Israel	0.200	2.413
Jamaica	0.129	2.976
Jordan	1.453	2.034
Korea (South)	0.217	3.780
Kuwait	0.134	2.581
Lebanon	0.311	1.270
Libya	0.592	4.487
Malawi	0.433	5.945
Malaysia	0.343	3.255

TABLE 1 (Continued)

Country	Currency/Deposit Ratio (Demand and Time Deposits)	Velocity
Mauritius	0.345	2.852
Morocco	0.589	2.999
Nicaragua	0.379	6.527
Pakistan	0.618	4.073
Paraguay	0.463	6.434
Philippines	0.298	3.744
Portugal	0.169	1.214
Saudi Arabia	1.094	4.356
Spain	0.166	1.246
Sudan	0.986	5.408
Syria	4.371	3.579
Thailand	0.392	2.999
Tunisia	0.392	2.448
Turkey	0.333	3.786

SOURCE: Afghanistan - Monetary data from Ministry of Planning, Department of Statistics, Survey of Progress 1970 - 1971 (Kabul: Ministry of Planning, 1971), Tables S-16a and S-17b. G.N.P. data from Ministry of Planning, Department of Statistics, Statistical Pocket-Book of Afghanistan 1350 (Kabul: Ministry of Planning, August 1972), Table 88, p. 147. 1971 figures were used for Afghanistan.

All Other Countries - International Monetary Fund, International Financial Statistics, 25 (9), September 1972 and International Monetary Fund, International Financial Statistics: 1971 Supplement

inflation, which is approximated by the slope of the logarithmic trend fitted to the cost-of-living index over preceding eight-year periods, and C/D is the ratio of currency to bank demand and time deposits.

Taking a per capita income in Afghanistan of $88 [14, Table A.1, p.177] and using Perlman's method of calculating expected inflation, which gives an expected inflation of 4.57 per cent[5], the velocity predicted for Afghanistan from his equation is 4.513 and the currency/deposit ratio 0.914. In 1350, actual velocity was 10.068 and the currency/deposit ratio 2.700. These two figures are both predicted by Perlman's equations if, instead of taking a per capita income of $88, an income of $12 is used. One might conclude, therefore, that measured velocity and currency/deposit ratios for Afghanistan are consistent with one another, and hence that money supply and G.N.P. estimates are also consistent, but that the financial system is so undeveloped that it should only be found in an economy in which per capita income was $12. Since per capita income in Afghanistan is at least five times greater, the financial system lags behind other parts of the economy to an alarming degree.

McKinnon has recently presented a theory of development in which he argues that the importance of financial development in the process of economic development

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5 Cost-of-living data were taken from [9, Table S-19] for this purpose.

has been grossly underestimated [8]. In his empirical work he finds a strong relationship between rapidly falling velocity (which can be used to measure financial development) and the rate of growth in G.N.P. in a cross-country survey. Using the only available series of G.N.P. at current prices[6], which appear to be about 15 per cent lower than the Ministry of Planning's estimates, velocity in Afghanistan has averaged 9.2 between 1341 and 1350. There is no evidence to suggest that any distinctive trends have occurred in the movements of either velocity or real per capita income over this period.

The conclusions which can be drawn here are first that if velocity can be reduced the "safe" level of domestic credit expansion will be considerably increased, second that falling velocity per se (implying an income elasticity of demand for money greater than one) will also substantially increase the "safe" level of domestic credit expansion, third that the potential for a substantial reductio in velocity seems high on the basis of the comparative figures presented in Table 1, and finally that a conscious effort to reduce velocity by encouraging financial development should act as a spark for economic growth both by enabling a larger level of "safe" domestic credit expansion and also by allocating the supply of funds more efficiently.

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6 These World Bank estimates were taken from [1, Table 3, Ch. 4]

4. INCREASING DEMAND FOR MONEY

Money is a commodity supplied by the central bank in the form of currency and by the commercial banks in the form of deposits. Increasing the demand for money involves the same factors as increasing the demand for any other commodities, the two most important being price competitiveness and marketing.

The price competitiveness of Afghanistan's money supply can be measured by two inter-related variables, namely, the price of an afghani in terms of the commodities for which it can be exchanged and the price of an afghani in terms of foreign currencies. More precisely, price competitiveness of the afghani is determined by the level of inflation (the change in the rate at which commodities can be exchanged for afghanis) and the speed of depreciation (the change in the rate at which foreign currencies can be exchanged for afghanis). The lower the level of inflation and the speed of depreciation the greater the price competitiveness of Afghanistan's money and hence, ceteris paribus, the greater the demand for it.

Friedman has shown that with realistic demand for money parameters and a positive rate of economic growth, the level of domestic credit expansion in real terms is maximised in the long-run when prices are falling [2]. This result springs from the generally estimated high cost elasticities of demand for money. Hence, when the return on holding money is actually positive, as is the case when the price level is falling, the demand for money increases and hence enables a

larger level of domestic credit expansion. In practice, deflation has disadvantages; an optimal policy might, therefore, be to aim for a stable price level, thus gaining a demand for domestic currency both from those who previously preferred to hold tangible assets whose prices were rising and from those who previously held foreign currency. In both cases the substitution frees resources for investment.

The holders of foreign currency free resources for use by the country which supplies the currency, the holders of an increased supply of domestic currency free resources for domestic investment. The simplest way of making domestic currency more attractive is to cause it to appreciate vis-a-vis foreign currencies. A minimum condition for this is holding the rate of domestic inflation below that of the rest of the world. It has already been argued that this would also increase the demand for money by those who previously held tangible assets.

The aim of financial development is to persuade people both to increase their saving and to hold their assets in financial claims rather than in unproductive tangible assets, such as gold and jewellery. Resources are thereby freed to finance expenditure by those whose liabilities constitute the assets of the financial system.

One of the striking visual differences between the cities of Afghanistan and those of neighbouring Iran, Pakistan and Turkey is the total absence of bank advertisements in the former. The Afghan financial system appears to be completely passive in outlook; there is no active competition whatsoever amongst the banks for

deposits. Perhaps the most important device open to the Afghan authorities for increasing demand for money is the instigation of a positive government policy for the encouragement of banking and the banking habit. The most obvious way in which such a policy might be implemented would be to pass a general banking law which would create negotiable financial instruments, facilitate debt collection and credit standing enquiries and break the existing three-bank cartel.

The more bank branches for a given population, ceteris paribus, the greater the demand for money and hence the lower velocity of circulation. Banks can be forced to establish branches in unprofitable areas by making this a condition for a licence to establish a branch in a profitable area, thus creating a branch bank network throughout the country. This policy has been pursued with great success in Turkey.

The present structure of the banking system in Afghanistan can be largely explained by financial and political history of the past forty years. The manoeuvres of the players on this stage to protect their interests make a fascinating study but this paper is not the place for an historical analysis. Advice on financial reform has rained down upon successive Ministers of Finance from almost all conceivable directions. Most measures recommended would not be of immediate benefit to the existing institutions. None of these need be repeated here. The Ministry's files for 1966-68 are bulging with drafts of central bank legislation, banking codes and suggestions for developing the financial system. Since then, however, it appears

that, in the field of foreign trade finance at least, the banks have actually lost a large part of their former business to the Kabul money bazaar. The remedies are obvious, the potential benefits have been outlined in the preceding section. Encouraging banking in Afghanistan is a matter of a political decision and it must be realised that the interests of the economy as a whole are not necessarily identical to the interests of the banking fraternity. If or when the time comes for the basic measures to be taken, additional measures may be considered. Their efficacy depends very markedly on the size of the financial system. They are irrelevant until general financial development is inaugurated.

Assuming then that a programme of financial development has started, the government will doubtless still be in financial difficulties and desire as large a financial deficit as possible within a non-inflationary framework. The aim, therefore, may be to encourage primarily financial channels providing a seignorage to the public sector. Banks can be tapped through cash and liquid asset reserve requirements; credit ceilings on the supply of credit to the private sector can also be enforced. Reserve ratios, etc., can be established for other financial institutions, e.g. insurance companies. Setting maximum interest rates on private debt might be considered for two reasons, namely, the suppression of borrowing for unproductive purposes and the raising of the attractiveness of government interest-bearing debt. The latter should take a form which provides a poor substitute for currency and a good substitute for other assets. Where other assets

are held primarily against old age and disability, good substitutes which can be issued by the government can take the form of life and sickness insurance-linked bonds. One of their attributes should be non-negotiability to ensure their non-substitutability for currency holdings. Further consideration of public sector finance is provided in the following section.

5. FINANCING DEVELOPMENT EXPENDITURE DURING THE FOURTH FIVE-YEAR PLAN

The maximum "safe" level of public sector borrowing or deficit finance will equal the maximum "safe" increase in the money supply. However, not all resources released by increased money holdings need be absorbed by the public sector. It may be deemed desirable to channel part of these resources into private sector investment through increased credit. Indeed, with private fractional reserve banking systems it may be impossible to stop the private sector from sharing the increased credit generated by money creation. In such cases, the increase in private sector credit may be limited to some extent through reserve requirements, maximum interest rates on private sector debt, and the other measures outlined in the previous section.

It is therefore of some importance to examine the division of increased bank credit resulting from the increase in the money supply which is likely to take place in practice, even in a situation where the primary aim of monetary management is to maximise the proportion allocated to the public sector.

Higher proportions of public sector investment in total investment tend to be associated with higher proportions of domestic credit allocated to the public sector. In Afghanistan, Iran, Pakistan and Turkey public sectors obtained 66.8, 41.4, 50.6 and 31.4 per cent of total domestic credit, respectively, in 1971 [67]. Data

presented in Table 2 show that public investment as a proportion of total investment has been considerably higher in Afghanistan than in the other three countries. Furthermore, public savings have been considerably lower. Hence, it is not surprising to find a large proportion of domestic credit being taken by Afghanistan's public sector.

Given the importance of public sector investment in Afghanistan it might be assumed that a somewhat larger proportion of new bank credit could be allocated to the public sector without starving the private sector than the comparative data on distribution of domestic credit in Iran, Pakistan and Turkey might suggest.

The draft Fourth Plan has private investment increasing from 8.0 to 10.4 per cent of total development expenditure [11]. Therefore a 60 per cent allocation of additional bank credit to the public sector over this period might be accepted as a first approximation.

The target of 27.5b afs. to be spent by the public sector on economic development during the Fourth Five-Year Plan is 8.5b afs. higher than development expenditure during the Third Five-Year Plan. Unfortunately, the Fourth Plan's assumptions regarding sources of additional revenue are wildly optimistic. It is therefore of critical importance to examine carefully all possible sources of extra revenue if such an ambitious target is to be achieved. It will be suggested here that deficit finance could cover 30 per cent of the planned public sector

TABLE 2

Investment, Savings and Domestic Credit in Afghanistan, Iran, Pakistan and Turkey

AFGHANISTAN (Millions of afghanis, 1967 prices) 1967 + 1969

	Investment		Savings		Financial Savings	Domestic Credit (centred annual average	
	m. afs	per cent	m. afs	per cent	m. afs	m. afs	per cent
Public	9,675	62.7	2,045	13.2	- 7,630	4,566	64.0
Private	5,754	37.3	7,617	49.4	1,863	2,565	36.0
Foreign	0	0	5,767	37.4	5,767	0	0
Total	15,429	100.0	15,429	100.0	0	7,131	100.0

IRAN (Billions of rials, current prices) 1963 - 1969

	Investment		Savings		Financial Savings	Domestic Credit (centred annual average	
	b. rls	per cent	b. rls	per cent	b. rls	m. rls	per cent
Public	316	45.8	164	23.8	- 152	21	15.9
Private	374	54.2	428	62.0	54	111	84.1
Foreign	0	0	98	14.2	98	0	0
Total	690	100.0	690	100.0	0	132	100.0

TABLE 2 (Continued)

PAKISTAN (Billions of rupees, current prices) 1960 - 1967

	Investment		Savings		Financial Savings	Domestic Credit (centred annual average)	
	b. rs	per cent	b. rs	per cent	b. rs	b. rs	per cent
Public	26.2	47.0	10.2	13.3	- 16.0	4.8	53.4
Private	29.6	53.0	24.2	43.4	- 5.4	4.2	46.6
Foreign	0	0	21.4	38.3	21.4	0	0
Total	55.8	100.0	55.8	100.0	0	9.0	100.0

TURKEY (Billions of Turkish Liras, 1965 prices) 1960 - 1968

	Investment		Savings		Financial Savings	Domestic Credit (centred annual average)	
	b. TL	per cent	b. TL	per cent	b. TL	b. TL	per cent
Public	57.2	52.3	45.6	41.7	- 11.6	8.1	31.6
Private	52.2	47.7	54.4	49.7	2.2	17.5	68.4
Foreign	0	0	9.4	8.6	9.4	0	0
Total	109.4	100.0	109.4	100.0	0	25.6	100.0

TABLE 2 (Continued)

SOURCE: Investment and Savings Data

Afghanistan - International Bank for Reconstruction and Development, Current Economic Position and Prospects of Afghanistan (Washington, D.C.: International Bank for Reconstruction and Development, January 1971), Annex, Table A, p. 6.

Iran - Unpublished data provided by Bank Markazi Iran.

Pakistan - M.A. Rahman, "The Role of the Public Sector in the Economic Development of Pakistan" and A.H.M.N. Chowdhury, "Financing Economic Development in Pakistan" in Economic Development in South Asia edited by E.A.G. Robinson and M. Kidron (London: Macmillan, 1970), Table 5.1, p. 70 and Table 16.1, p. 305.

Turkey - B.S. Yaşer, Türk Malî Sistemi Üzerine bir Inceleme (Ankara: State Institute of Statistics, 1969), Appendix 5 and M.J. Fry, Finance and Development Planning in Turkey (Leiden: Brill, 1972), Table 3, p. 150.

Domestic Credit Data

All Countries - International Monetary Fund, International Financial Statistics, 25 (9), September 1972 and International Monetary Fund, International Financial Statistics: 1971 Supplement.

development expenditure under favourable conditions of active financial development. The Plan implicitly assumes that there will be further deterioration of the financial system, i.e. that velocity will rise, and hence that less than 3 per cent of the planned development expenditure can be financed through government borrowing from Da Afghanistan Bank.

Table 3 presents movements in currency/money ratios and velocities in Afghanistan, Iran, Pakistan and Turkey. Distinctive trends can be seen in the movements of both in Iran, Pakistan and Turkey, indicating reasonable financial development over the period in these three countries, most especially so in Iran. In fact, banking has developed extremely rapidly since 1960 in all three countries. Afghanistan's recent financial history provides no similarities. However, neither does there appear any fundamental barriers to achieving financial development; numerous foreign banks are interested in establishing branches in Afghanistan after minimal financial reforms enable them to do so. It might be assumed therefore that under a programme of financial reform, Afghanistan could achieve a falling velocity such that the velocity predicted in Section 3 for a country with a per capita income of $88 would be achieved by the end of the Plan period. That other countries have experienced rapidly falling velocities is illustrated by the figures provided in Table 4.

The implications of these assumptions for "safe" levels of deficit finance for the period of Afghanistan's Fourth Plan can now be calculated. The results are

TABLE 3

Currency/Money (M2) Ratios and Velocities in

Afghanistan, Iran, Pakistan and Turkey, 1962 - 1970

DATE	Afghanistan		Iran		Pakistan		Turkey	
	C/M2	V2	C/M2	V2	C/M2	V2	C/M2	V2
1962	.85	7.9	.28	5.7	.48	4.7	.38	5.2
1963	.85	8.9	.27	5.1	.45	4.4	.37	5.4
1964	.80	8.9	.25	4.8	.43	4.1	.38	5.2
1965	.72	8.8	.24	4.7	.40	4.0	.36	4.7
1966	.74	9.6	.22	4.4	.40	4.0	.33	4.6
1967	.76	10.0	.21	4.2	.37	3.9	.32	4.3
1968	.77	10.1	.19	3.9	.35	3.9	.30	4.1
1969	.78	9.4	.18	3.8	.35	3.8	.27	4.0
1970	.77	8.8	.17	3.6	.34	3.6	.27	4.0

TABLE 3 (Continued)

NOTE: Currency and money supply data are centred annual averages.

SOURCE: Afghanistan - Money supply data from International Bank for Reconstruction and Development, Current Economic Position and Prospects of Afghanistan (Washington, D.C.: International Bank for Reconstruction and Development, May 1969 and February 1972), Statistical Annexes, Tables 14 and 6.1; G.N.P. data from World Bank sources cited in J. Bharier, Vicious Circles of Poverty (London: Oxford University Press, forthcoming), Table 3, Ch. 4.

Iran - Money supply data from Bank Markazi Iran Bulletins, 3 - 10, 1962 - 1971; G.N.P. data from Bank Markazi Iran, Annual Report and Balance Sheet, 1971 (Tehran: Bank Markazi Iran, 1971), Table 2, p. 116.

Pakistan - Money supply and G.N.P. data from Central Statistical Office, Government of Pakistan, Monthly Statistical Bulletin, 1962 - 1971.

Turkey - Money supply data from Turkiye Cumhuriyet Merkez Bankasi Aylik Bulteni, 1962 - 1971; G.N.P. data from State Institute of Statistics, National Income, Total Expenditure and Investment of Turkey, 1938, 1948 - 1970 (Ankara: State Institute of Statistics, 1971), Table 1, pp. 10 - 11.

TABLE 4

Changes in Currency/Money (M2) Ratios and Velocities

in 10 Countries, 1964-1969

	C/M2		V2		Average Annual Percentage Fall in Velocity, 1964-1969
	1964	1969	1964	1969	
South Korea	.365	.178	11.771	3.780	22.72
Jordan	.428	.502	3.161	2.034	8.82
Honduras	.365	.263	7.629	5.043	8.28
Paraguay	.421	.316	9.050	6.434	6.82
Israel	.205	.166	3.326	2.413	6.42
China (Taiwan)	.189	.160	3.936	2.974	5.60
Turkey	.357	.250	4.993	3.786	5.53
Jamaica	.141	.114	3.920	2.976	5.51
Sudan	.492	.496	7.059	5.408	5.33
Thailand	.370	.282	3.898	2.999	5.24

NOTE: A continuously compounded growth rate is used in the final column. The ratios in this table for Turkey differ from those given in Table 3 because of different data sources used. However, the average annual percentage change in velocity using either set are identical.

SOURCE: International Monetary Fund, International Financial Statistics, 25 (9), September 1972 and International Monetary Fund, International Financial Statistics: 1971 Supplement.

presented in Table 5. Case A uses the draft Plan figures for deficit finance and calculates the implied increase in velocity. Case B assumes no financial development but that the existing financial conditions are maintained, i. e. constant velocity. Case C uses a 15 per cent annual fall in velocity which would bring it down to the predicted 4.513 by 1355.

One of the simplifying assumptions which has been used is highly misleading. It is that G. N. P. will grow at the same rate regardless of the degree of financial development. All the available empirical evidence refutes this and it can be expected that the achievable growth rate under active financial development, where more resources are available for development expenditure, will be considerably higher than would be possible under Case A financial conditions. In fact, the 4.4 per cent annual average growth target might be considered unrealistically optimistic under existing or deteriorating financial conditions. If the incremental capital-output ratio (ICOR) for the Fourth Plan period were assumed to be 2.5, generally regarded as an extremely low figure, the planned investment of 30.7b afs would achieve a growth rate of under 2.2 per cent per annum. If the resources made available from aggressive financial development were added to those already allocated, the growth rate would increase under these assumptions to 3.7 per cent.

Another important assumption made was that Afghanistan is a closed economy. Balance of payments disequilibria disturb the results produced above. However, so long as there is no attempt to increase foreign exchange reserves,

TABLE 5

Velocity and Deficit Finance during the Fourth Five-Year Plan
(Millions of afghanis)

	1350	1351	1352	1353	1354	1355
G.N.P.	89,500	93,445	97,564	101,865	106,355	111,043
A Plan Estimates						
Velocity	10.068	9.701	10.129	10.575	11.041	11.528
Increase in Money Supply		743	0	0	0	0
Deficit Finance		446	0	0	0	0
B No Financial Development						
Velocity	10.068	10.068	10.068	10.068	10.068	10.068
Increase in Money Supply		392	409	427	446	466
"Safe" Level of Deficit Finance		235	245	256	268	280
C Active Financial Development						
Velocity	10.068	8.575	7.304	6.221	5.299	4.513
Increase in Money Supply		2,008	2,460	3,017	3,696	4,534
"Safe" Level of Deficit Finance		1,205	1,476	1,810	2,218	2,720

the "safe" levels of domestic credit expansion and deficit finance will if anything be under rather than overestimated. Similarly with "other items" in the domestic credit accounts, a continuation of its trend over the past five years would allow a greater "safe" level of deficit finance than estimated.

6. CONCLUSION

A deliberate policy of financial development in Afghanistan could be expected to accelerate the rate of economic growth and provide much needed additional funds for development expenditure. If financial development slightly more than halved velocity of circulation, i.e. more than doubled the demand for money at every level of income, over the next five years, and if the rate of economic growth were partly thereby raised to target 4.4 per cent per annum, the "safe" annual levels of deficit finance would be those given in Table 5. Thus a total of 9,429m afs. would be made available over the period of the Fourth Five-Year Plan which would finance 30 per cent of planned public sector investment.

Some forms of investment are likely to accelerate monetisation, i.e. increase demand for money, more rapidly than others. For example, the better communications are, the faster monetisation will occur. Investment in roads can be particularly effective in causing the demand for money to increase. To the extent that they lead to this increase in the demand for money, such investments can be regarded as self-financing and, therefore, particularly attractive.

Without an active policy of financial development the total "safe" level of deficit finance would be 1,284m afs. on the assumptions given in Table 5. It could be argued that the growth rate would not be the same in both cases and therefore that the difference in the "safe" levels of deficit finance under active financial

development and under the status quo would be considerably greater.

There are other considerations which have to be taken into account in practice when calculating "safe" levels of deficit finance, particularly with regard to expected movements in the balance of payments. These factors, however, will be of second order magnitudes. In outline, this paper has given an indication of the relative undeveloped state of Afghanistan's financial system, the potential development which might be promoted and some possible results, particularly in terms of public finance, of such efforts.

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November, 1972

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