Working Paper 73-2

MONETARY POLICY, BANK CREDIT, AND TOTAL CREDIT
A PRELIMINARY ANALYSIS

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Presented to the Federal Reserve
System Committee on Banking and
Credit Policy, October 16, 1973

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For the last three years, the Federal Open Market Committee has focused greater attention on certain monetary and credit aggregates in specifying its longer-run targets. Although this attention has been heavily weighted toward M_1, the narrowly defined money supply, the Committee has monitored the behavior of the broader aggregates such as M_2 and the credit proxy with considerable interest. This interest has increased during periods when the behavior of M_2 and bank credit has appeared to frustrate the attainment of the Committee's objectives, most notably when bank credit has expanded rapidly in the face of restrictive policy. In any event, the prompt imposition of regulations of one form or another on each new commercial bank liability introduced in the money markets attests to the Federal Reserve's concern with the behavior of broader aggregate quantities.

It is probably accurate to say that the Committee's new focus on the aggregates reflects at least partly the idea that monetary quantities directly affect such fundamental real sector variables as income and employment. The proponents of this idea usually have in mind as relevant monetary quantities M_1 or M_2 or at most M_3. Why, then, is the Committee interested in an aggregate as broadly defined as the bank credit proxy? Presumably the answer lies in the belief that with the stock of more narrowly defined monetary liabilities given, a larger volume of credit more broadly defined results in more extensive utilization of the monetary stock and therefore greater stimulus to the economy and conversely.

The merits of this belief are, of course, subject to debate. This paper accepts the belief as a valid premise and focuses its attention on the subsidiary implications and questions which then arise. If credit is important, it is reasonable to conclude that not only bank credit but also credit that is transmitted outside of banks and outside of financial institutions altogether is important. Under these circumstances the Federal Reserve needs to know how the structure of monetary regulations and monetary policy as it is presently pursued affect these credit variables. Before one can develop detailed practical answers to these questions that will be useful to policymakers, an analytical framework specifically tailored to these problems is needed. This paper summarizes a very preliminary effort to develop such a framework.

The remainder of the paper is divided into two sections. The first section presents a graphical analysis constructed so as to reflect present institutional and regulatory conditions fairly closely. The model in this section illuminates some of the factors influencing central bank control over M_1 and bank credit, but sheds little light on the effect of policy actions on total credit.[1] The second section contains a more abstract but conceptually broader general equilibrium model designed to indicate how policy actions influence total credit under specific assumptions regarding the structure of the financial sector.

I. Graphical Analysis

The model of this section analyzes the behavior of three markets: (1) the CD market, (2) the market for demand deposits, and (3) the market for short-term credit. For simplicity, currency and bank liabilities other than

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[1]Throughout this paper, the term total credit will refer to the sum of bank intermediated credit and credit channeled directly between nonbank lenders and nonbank borrowers within the private sector.

demand deposits and CDs are ignored. The demand deposit category is a proxy for M_1; the CD category represents the components of the bank credit proxy other than demand deposits. The short-term credit market may be thought of as a consolidated market corresponding to the aggregate of the real world markets for private sector debt instruments such as bank loans and commercial paper. We adopt the following mnemonics.

CD^D = demand of the nonbank public for CDs;

CD^S = supply of CDs by the banking system;

DD^D = demand of the nonbank public for demand deposits;

R = total reserves;

i = the CD rate;

r = the short-term credit rate.

Consider Figure 1. All axes in the figure measure quantities positively from the origin at the center of the diagram. The northeast quadrant depicts the CD market. The nonbank public's demand for CDs is an increasing function of the CD rate, which fluctuates without ceiling restrictions. The banking system's supply of CDs is an inverse function of the rate. As indicated, the short-term credit rate, r, is a shift parameter for both curves. This rate is assumed to incorporate the individual rates on instruments that compete with CDs for funds. An increase in r, <u>ceteris paribus</u>, reduces the demand for CDs, i.e., shifts the demand curve upward and to the left. We assume that the bank loan rate fluctuates directly with the rates incorporated in r. Therefore, an increase in r increases the banking system's willingness to supply CDs at any given CD rate, i.e., shifts the supply curve upward and to the right.

It is assumed that banks must maintain required reserves against both demand deposits and CDs.[2] The southeast quadrant of the diagram determines the

[2] Excess reserves are ignored throughout the analysis.

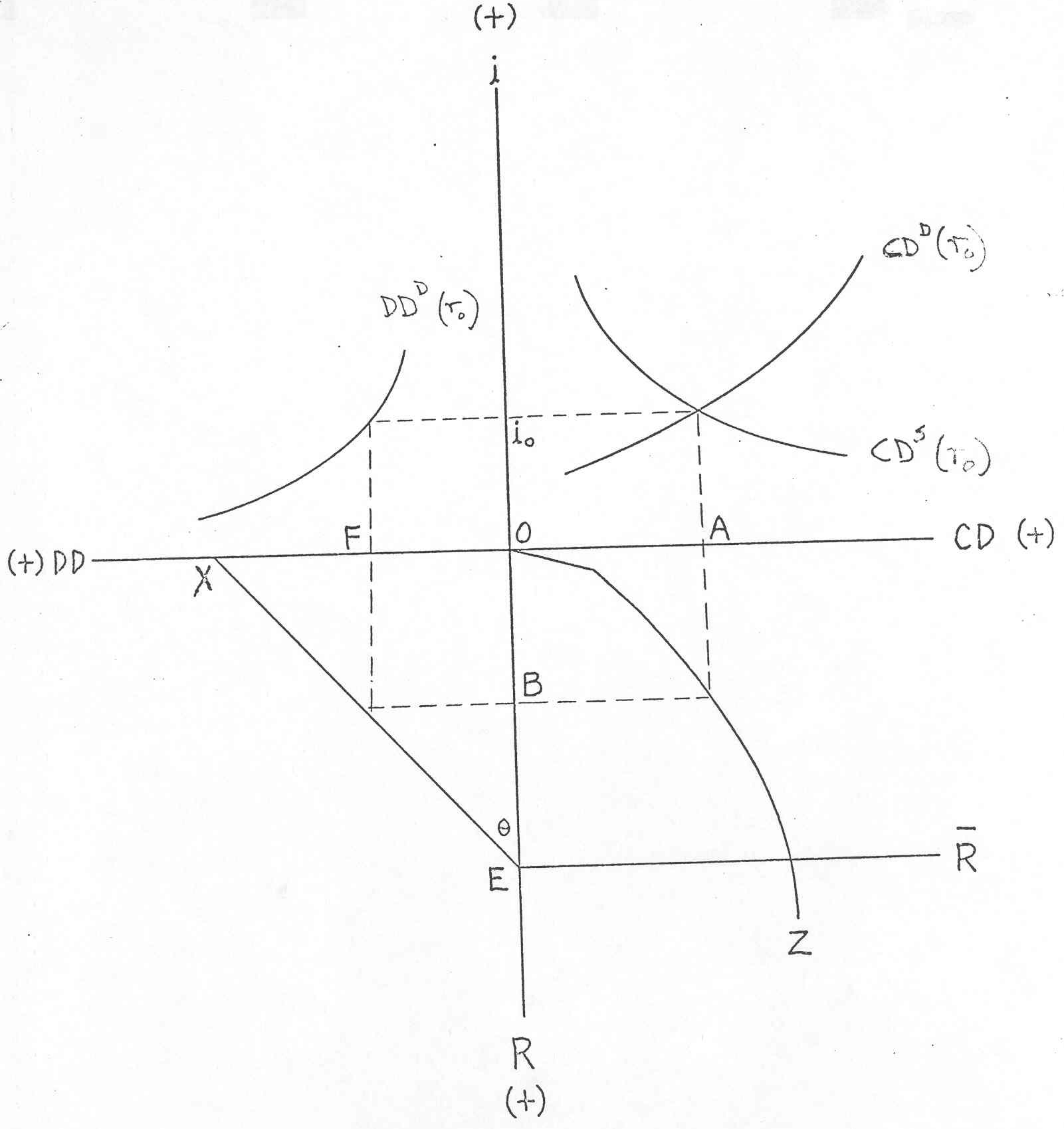

Figure 1

allocation of total available reserves between reserves required to support CDs and reserves required to support demand deposits. Here, quantities of reserves are read downward along the vertical axis from the origin. Total reserves, determined by the central bank, are depicted by the horizontal line labeled R. In Figure 1, then, the supply is OE. The downward sloping curve OZ determines the quantity of reserves required against CDs corresponding to any given volume of CDs. For example, if CD volume is OA, the quantity of reserves required to support these deposits is OB. With total reserves of OE, EB reserves then remain to support demand deposits. The shpae and position of curve OZ reflects the structure of <u>average</u> (per dollar) requirements against CDs. If the average requirement were constant, OZ would be linear. If the structure includes a reserve free base or consists of a system of increasing marginal requirements, OZ will slope downward as in Figure 1. A higher general structure of requirements rotates the curve in a clockwise direction.

The southwest quadrant determines the stock of demand deposits supplied by the banking system given the reserve requirement against demand deposits and reserves available to support these deposits. As Figure 1 is drawn, EB reserves remain after the absorption of reserves by CDs. Here, it is helpful to regard point E as the origin and read the volume of reserves available for demand deposit expansion upward along the vertical axis. The distance leftward from point B to the diagonal line (equivalent to OF in Figure 1) then measures the stock of demand deposits. The angle θ specifies the average reserve requirement against demand deposits.[3] Higher requirements rotate the curve in a clockwise direction about point E.

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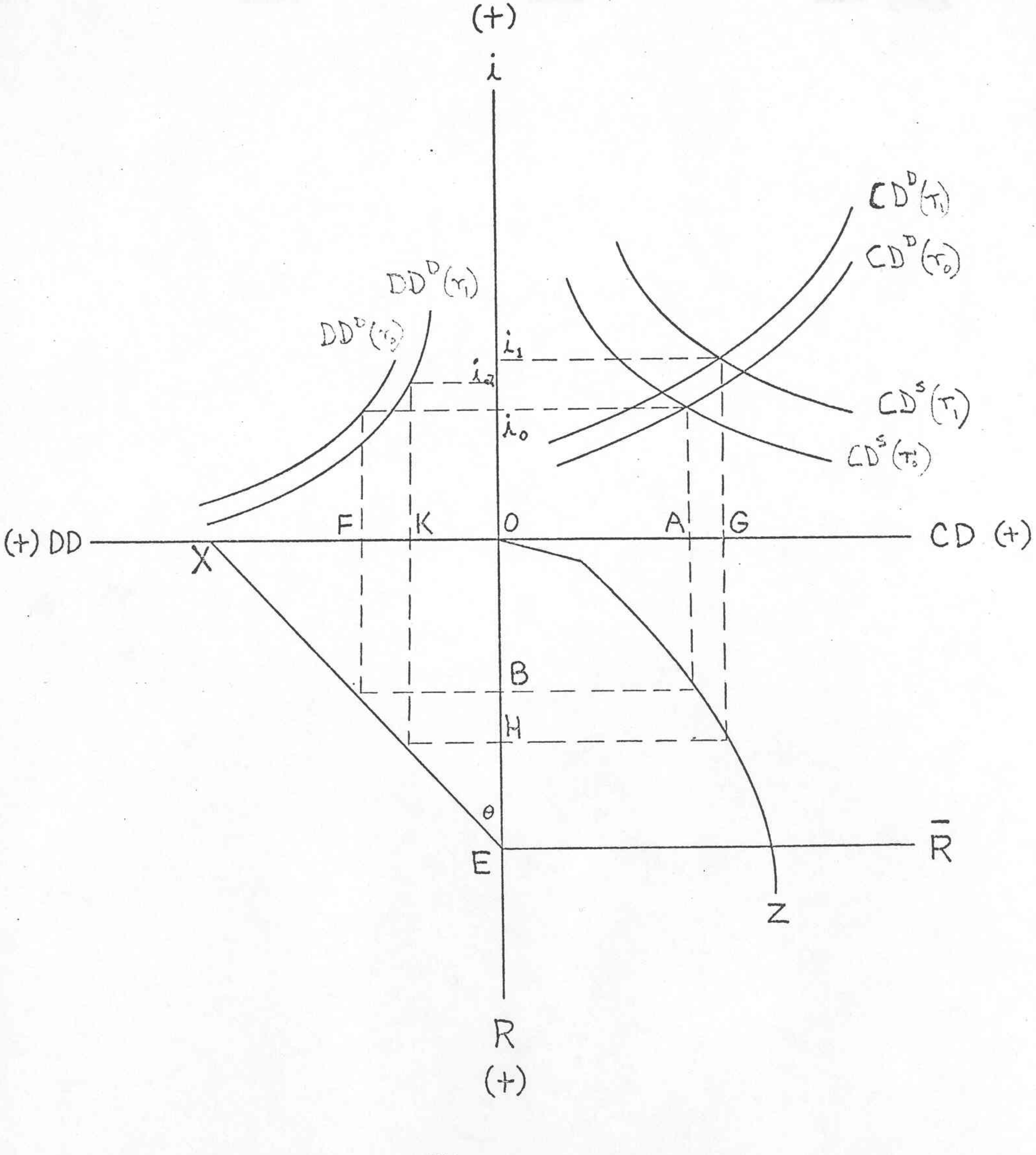
[3] For simplicity, the average reserve requirement against demand deposits is assumed constant, yielding the linear curve in the diagram.

The northwest quadrant depicts the nonbank public's demand for demand deposits. The curve in the quadrant represents a liquidity preference function against the CD rate. The short-term credit rate r is a shift parameter for this function just as it was a shift parameter for CD demand. Here, increases in r shift the curve downward and to the right.

As drawn, Figure 1 depicts a financial sector equilibrium position at CD rate i_0 and short-term credit rate r_0. CD volume is OA; demand deposit volume is OF. With other bank liabilities ignored, total bank credit (as approximated by total deposits) is measured by the distance FA. It is important to recognize that although what we have called the short-term credit market does not appear on the graph, it is an integral part of the system. Autonomous changes in this market affect the deposit markets depicted through r, changes in which cause shifts in the demand and supply curves in the upper half of the figure. At the same time, by disturbing the equilibrium CD rate and deposit stocks, changes in the deposit markets, including movements induced by changes in reserves or reserve requirements, force adjustments in the short-term credit market. These adjustments then cause changes in r that subsequently feed back through the deposit markets.

We can now use the model to analyze how the effects of specific changes in conditions exogenous to the model are transmitted through the financial sector. Consider first an autonomous increase in the demand for short-term credit, initially manifested by an increase in the short-term credit rate from r_0 to r_1, under the assumption that total reserves and the reserve requirement structure remain unchanged. The purpose of this exercise is to analyze how the reserve requirement structure affects the adjustment.

The situation is depicted by Figure 2. The increase in r shifts both the demand and supply curves for CDs upward and shifts the demand curve for demand deposits downward. It is assumed that the upward shift in the CD supply


(+)
i
$CD^D(r_1)$
$CD^D(r_0)$
$DD^D(r_1)$
$DD^D(r_0)$
i_1
i_2
i_0
$CD^S(r_1)$
$CD^S(r_0)$
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(+) DD
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θ
$\bar{R}$
E
Z
R
(+)

Figure 2

curve exceeds the upward shift in the CD demand curve. The CD rate initially rises from i_0 to i_1, and the volume of CDs expands from OA to OG. The increase in CDs increases the reserves required to support CDs from OB to OH and diminishes the reserves available to support demand deposits from EB to EH. Demand deposits therefore decrease from OF to OK. At this point in the adjustment, bank credit has changed from distance FA to distance KG. Whether bank credit has decreased or increased depends on the relative magnitude of the reserve requirements against CDs and demand balances, respectively, i.e., on the relative positions of curves OZ and EX.

If the adjustment to this point were all that were involved, the central bank could adjust OZ and EX so as to control the decline in the money supply associated with any given increase in CDs. In this way, the central bank could control total bank credit in the face of changing conditions in the short-term credit and CD markets if it were willing to forfeit its ability to determine the money supply independently.

But the adjustment is not yet complete because the demand deposit market is not yet in equilibrium. At the new position of the demand curve for demand deposits, the CD rate that clears this market is i_2. At CD rate i_1, which clears the CD market, there is an excess supply of demand deposits. The holders of these deposits will attempt to work off this excess at least in part by increasing their demand for nonbank credit instruments or CDs. Whichever channel is employed, the result is an increased flow of funds to the short-term credit market resulting in downward pressure on r.[4] The downward movement of r shifts the three curves back toward their original positions. It would appear that the system will converge toward equilibrium at a CD rate between i_0 and i_1, a

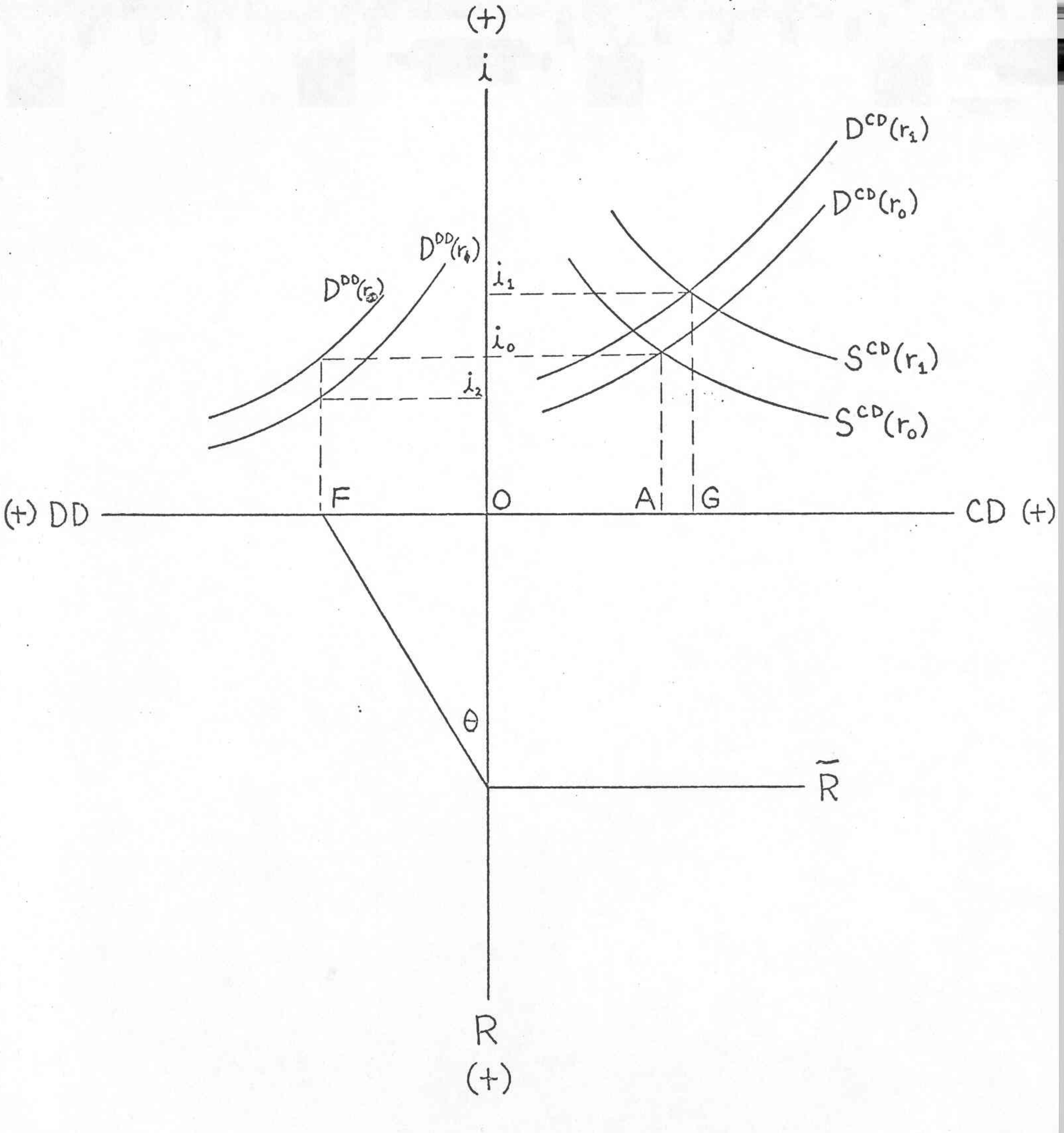
[4]Recall that the funds generated by CDs are ultimately supplied to the short-term credit market via bank loans or investments.

short-term credit rate between r_0 and r_1, a CD stock between OA and OG, and a demand deposit stock between OK and OF.

If the final equilibrium is in the range just given, the direction in which bank credit changes can be specified on the basis of the relationship at the margin between reserve requirements against demand deposits and CDs, respectively. If the CD requirement exceeds the demand deposit requirement, bank credit falls. If the demand deposit requirement exceeds the CD requirement, bank credit rises. It is not possible, however, to say anything even this precise about the behavior of total credit, primarily because it is not clear how the adjustment process will affect the flow of credit outside of the banking system.

A number of economists have recommended that reserve requirements against time deposits, including CDs, be dropped altogether. Figure 3 illustrates this situation, where the line OZ has been dropped from the diagram. The northeast quadrant illustrates an initial shift in the deposit markets identical to that considered in the discussion of Figure 2. This shift again gives rise to excess supply in the demand deposit market. With no change in total reserves and no leakage of reserves into reserves required against CDs, however, the money supply remains fixed at OF. Funds will again flow into the short-term credit market, thereby placing downward pressure on the short-term credit rate and returning the system back toward its original position. Here, the central bank has closer control over the money supply than in the preceding case. The impact on bank credit depends on the final position of interest rates and the associated positions of the demand and supply curves for CDs.

Consider finally the effects of a policy action, specifically a reduction in the supply of reserves. Figure 4 depicts this case. Assume that total reserves decline from level OE to level OE´, thereby shifting XE to X´E´. The immediate



(+)
i
$D^{CD}(r_1)$
$D^{CD}(r_0)$
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$D^{DD}(r_0)$
i_1
i_0
i_2
$S^{CD}(r_1)$
$S^{CD}(r_0)$
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F
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R
(+)

Figure 3

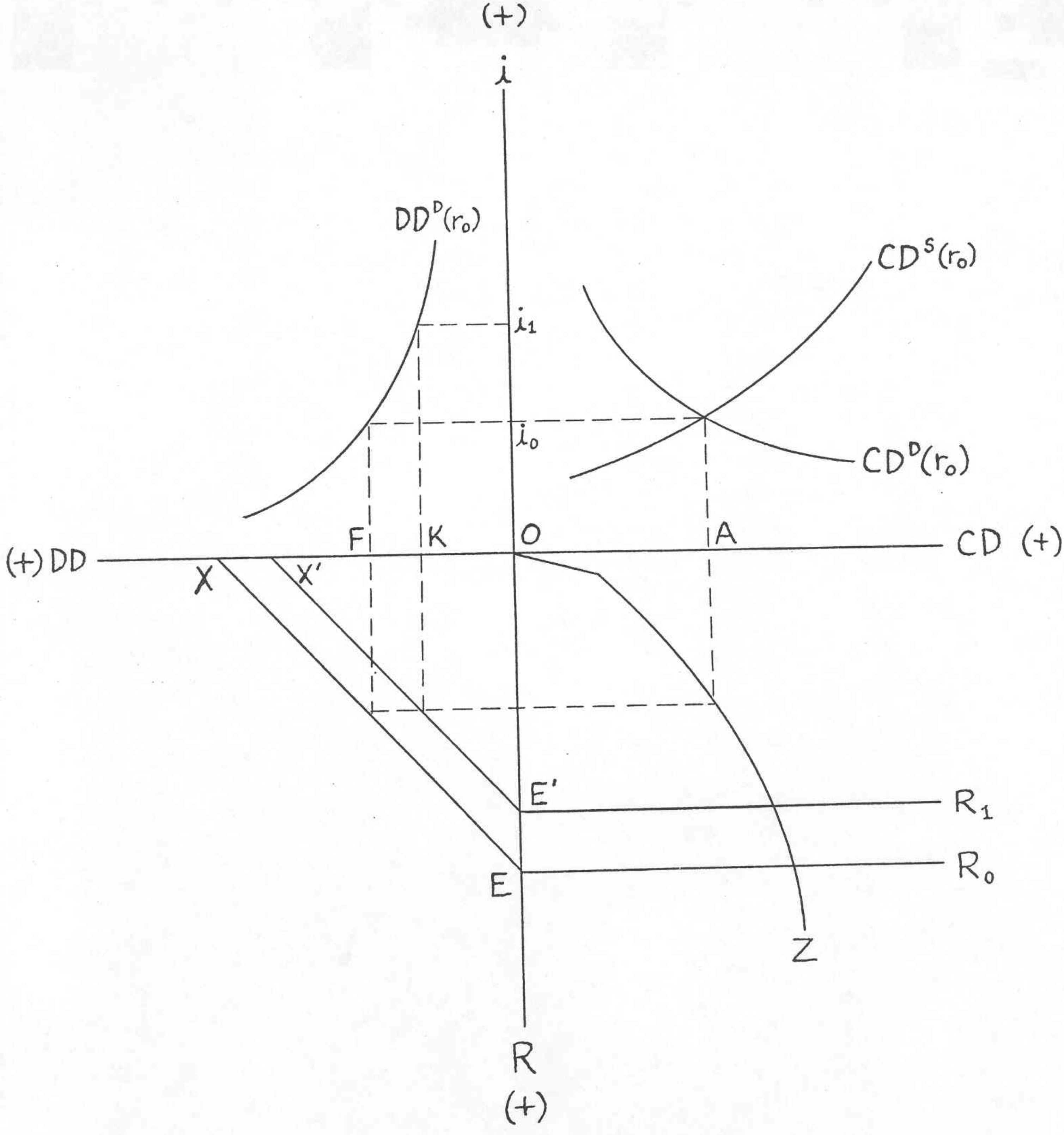

Figure 4

effect, before rates and the CD market adjust, is a reduction in the quantity of demand deposits the banking system can support from OF to OK and a corresponding reduction in maximum bank credit from FA to KA. With these initial conditions, there is an excess demand for demand deposits, forcing interest rates up. The diagram does not attempt to portray the adjustment further because a variety of results are possible. One might reasonably suppose that the final equilibrium position will yield reductions in both deposit categories and a corresponding decline in bank credit. The increase in rates, however, could lead to an expansion of CDs exceeding the decline in demand deposits, causing bank credit to rise. Such an outcome would be particularly likely where the reserve requirement against CDs is considerably below that against demand deposits, a point that tends to support the recent imposition of higher marginal CD requirements. In any event, the impact of the adjustment on total credit is again unclear.

This completes the analysis using the graphical model. The model suggests to some degree the kinds of financial market interactions relevant to a systematic evaluation of the relationship between the structure of monetary regulations and monetary policy actions on the one hand and the behavior of credit variables on the other. The inability of the model to cope with the question of total credit, however, implies a need for a more general analytic framework.

II. Total Credit: A General Equilibrium Model

The model of this section looks beyond the level of bank credit to the level of total credit including both bank credit and credit intermediated outside of the banking system. The model represents a very preliminary attempt to throw light on the relationship between monetary policy, monetary regulations, and the flow of total credit. The assumptions underlying the model's construction are unrealistic in several respects due to the need to hold the scope of the analysis within manageable bounds. Consequently, some of the specific results generated by the model will appear implausible. The model is not intended as a basis for empirical research, however, but rather as a basis for the design of a better and more complete theoretical model.

In terms of its general design, the model resembles the models developed by Brainard and Tobin in the early 1960s.[5] We assume that there are two groups of participants within the financial sector: commercial banks and the nonbank public. The nonbank public is divided further between a group of lenders and a group of borrowers. For analytical convenience these latter groups are assumed to be mutually exclusive. The general price level and the economy's stock of real capital, K, are assumed constant. Hence the analysis is cast in a short-run time frame.

Three types of assets are available to nonbank lenders: (1) bank deposits, D, (2) evidences of credit extended to nonbank borrowers, CP (for commercial paper), and (3) evidences of direct ownership of capital, K_L. There is only one type of bank deposit.[6] All such deposits pay the explicit rate i, and i is not restricted by regulatory constraints. The yield on the debt instruments issued by nonbank borrowers (referred to hereafter as commercial paper) is denoted by r. The rate of return from capital ownership is r_K. More

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[5] See James Tobin and William C. Brainard, "Financial Intermediaries and the Effectiveness of Monetary Controls," American Economic Review, LIII (May, 1963), pp. 383-400. See also William C. Brainard, "Financial Intermediaries and a Theory of Control," Yale Economic Essays, IV (Fall, 1964), pp. 431-482.

[6] Currency is ignored throughout the analysis.

specifically, r_K is, following Tobin and Brainard, the return on capital required to induce the nonbank public to hold the entire capital stock given prevailing rates on other assets. The consolidated balance sheet of nonbank lenders has the following form.

Nonbank Lenders	
D	Public Wealth
CP	
K_L	

The demand of the nonbank lending sector for the assets which comprise its portfolio may be expressed in general functional form as:

(1) Demand of nonbank lenders for deposits: $D^D = D^D(r,i,r_K)$;

(2) Demand of nonbank lenders for commercial paper: $CP^D = CP^D(r,i,r_K)$;

(3) Demand of nonbank lenders for capital: $K^{D,L} = K^{D,L}(r,i,r_K)$.

It is assumed that each of these assets is a substitute for the other two in nonbank lender portfolios. That is:

2) $$\frac{\partial D^D}{\partial r} < 0, \quad \frac{\partial D^D}{\partial i} > 0, \quad \frac{\partial D^D}{\partial r_K} < 0;$$

3) $$\frac{\partial CP^D}{\partial r} > 0, \quad \frac{\partial CP^D}{\partial i} < 0, \quad \frac{\partial CP^D}{\partial r_K} < 0;$$

4) $$\frac{\partial K^{D,L}}{\partial r} < 0, \quad \frac{\partial K^{D,L}}{\partial i} < 0, \quad \frac{\partial K^{D,L}}{\partial r_K} > 0.$$

Further:

5) $$\frac{\partial D^D}{\partial r} + \frac{\partial CP}{\partial r} + \frac{\partial K^{D,L}}{\partial r} = 0;$$

6) $$\frac{\partial D^D}{\partial i} + \frac{\partial CP^D}{\partial i} + \frac{\partial K^{D,L}}{\partial i} = 0;$$

7) $$\frac{\partial D^D}{\partial r_K} + \frac{\partial CP^D}{\partial r_K} + \frac{\partial K^{D,L}}{\partial r_K} = 0.$$

The banking system's assets consist of loans, L, issued to nonbank borrowers, and noninterest bearing reserves, R, distributed by the central bank. Its liabilities are deposits held by nonbank lenders. The banking system's consolidated balance sheet is then:

Banking System	
L	D
R	

The central bank does not hold evidences of private sector debt, and there is no government debt. Hence, reserves are a fiat issue. There is a reserve requirement, rr_D, against deposits, and banks do not hold excess reserves. Consequently, the central bank completely controls both the money stock (D) and the level of bank credit (L) through its control over the level of reserves and the reserve requirement.

Nonbank borrowers borrow funds from nonbank lenders and commercial banks for the purpose of acquiring capital. The consolidated balance sheet for this sector is then:

Nonbank Borrowers	
K_B	CP
	L

It is assumed that borrowers are indifferent between debt to nonbank lenders and debt to the banking system with the result that market forces equate the bank loan rate to the commercial paper rate r. Total credit, the variable on which the analysis focuses its principal attention, is:

8) $CR = CP + L$.

If we write borrower demand for capital as:

9) $K^{D,B} = K^{D,B}(r,r_K)$,

and the total volume of debt instruments supplied by borrowers as:

10) $CR^S = CR^S(r,r_K)$,

the borrower sector balance sheet constraint implies:

11) $CR^S(r,r_K) \equiv K^{D,B}(r,r_K)$.

One final specification is required. It is assumed that competition between banks holds the loan rate, r, at exactly the level required to equate total loan revenue and total deposit interest costs. That is:

12) $r = gi$ where $g = \left(\frac{1}{1 - rr_D}\right)$.

The full model can now be specified in terms of market clearing equations and identities as follows:

13) $$D^D(r,i,r_K) - D = 0 \quad \text{(deposit market)}$$

14) $$CP^D(r,i,r_K) + L - CR^S(r,r_K) = 0 \quad \text{(total credit)}$$

15) $$K^{D,L}(r,i,r_K) + K^{D,B}(r,r_K) - K = 0 \quad \text{(capital market)}$$

16) $$r = gi \quad \text{(relation between rates)}$$

17) $$CR^S(r,r_K) \equiv K^{D,B}(r,r_K)$$

18) $$D \equiv L + R \equiv \left(\frac{1}{rr_D}\right) R$$

Identities 17 and 18 can be used to reduce the system to three equations:

(a) $$D^D(r,i,r_K) - \left(\frac{1}{rr_D}\right)R = 0$$

19)(b) $$K^{D,L}(r,r_K) + CP^D(r,i,r_K) + R\left(\frac{1}{rr_D} - 1\right) - K = 0$$

(c) $$r - gi = 0$$

Equations 19 represent the basic system. Equation 19b states that nonbank lender demand for capital plus the volume of credit extended to nonbank borrowers must equal the capital stock.

System 19 is sufficient to determine r, i, and r_K. One could proceed with ordinary comparative static analysis of the behavior of the system. Such an analysis, however, yields results which are largely ambiguous, particularly with respect to the behavior of total credit. Consequently, we shall employ the following strategy. First, the nonbank lender demand functions appearing in 19 will be specified in linear form. The system will then be solved for the equilibrium values of i, r_K, and total credit in terms of the model's parameters, including the volume of reserves and the reserve requirement. Finally, the conditions for local dynamic stability will be used to restrict the relationships between parameters, thereby permitting inferences regarding the factors that determine the relationship between the policy parameters R and rr_D and the endogenous total credit variable CR.

The linear specifications are as follows:

20) $D^D(r,i,r_K) = a_0 + a_1r + a_2i + a_3r_K$,

21) $CP^D(r,i,r_K) = b_0 + b_1r + b_2i + b_3r_K$,

22) $K^{D,L}(r,i,r_K) = c_0 + c_1r + c_2i + c_3r_K$,

where, from 2-4:

23) $a_1,a_3,b_2,b_3,c_1,c_2 < 0$,

24) $a_2,b_1,c_3 > 0$,

and, from 5-7:

25) $(a_1 + b_1 + c_1) = (a_2 + b_2 + c_2) = (a_3 + b_3 + c_3) = 0$.

If we assume that the time derivatives $\frac{di}{dt}$ and $\frac{dr_K}{dt}$ are functions of excess demand for deposits and capital, respectively, we can use 19 to write:

$$26)\quad \begin{aligned} \frac{di}{dt} &= -V_D\left(a_o + (a_1 g + a_2)i + a_3 r_K - \frac{1}{rr_D}R\right) \\ \frac{dr_K}{dt} &= -V_K\left(b_o + (b_1 g + b_2)i + b_3 r_K + c_o + (c_1 g + c_2)i + c_3 r_K + \left(\frac{1}{rr_D} - 1\right)R - K\right), \end{aligned}$$

where V_D and V_K are speed for adjustment coefficients. For simplicity, we assume:

$$27)\quad V_D = V_K = 1.$$

System 26 is in equilibrium if:

$$28)\quad \frac{di}{dt} = \frac{dr_K}{dt} = 0.$$

We can use 25-28 to solve the system for the equibrium values of i and r_K:[7]

$$29)\quad i^* = \frac{-a_3}{A}R + Z_i\ ;$$

$$30)\quad r_K^* = \frac{(a_1 g + a_2)}{A}R + Z_K\ ,$$

where Z_i and Z_K are complicated constant terms not relevant to subsequent analysis, and:

$$31)\quad A = \begin{vmatrix} -(a_1 g + a_2) & -a_3 \\ -(b_1 g + b_2 + c_1 g + c_2) & -(b_3 + c_3) \end{vmatrix} .$$

Further, 16, 17, and 22 can be used to specify the equilibrium volume of total credit:

$$32)\quad CR^* = \frac{a_3(c_1 g + c_2) - c_3(a_1 g + a_2)}{A}R + Z_{CR}.$$

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[7]All starred variables represent equilibrium quantities.

Finally:

33) $r^* = gi^*$.

Equations 29, 30, and 32 are the fundamental results to be analyzed. We can illustrate the economic content of these results by assuming that the central bank reduces the stock of reserves. It can be shown that the following conditions are necessary and sufficient for system 26 to be locally stable:

34) $A > 0$;

35) $a_1 g + a_2 > 0$;

36) $b_3 + c_3 > 0$.

Consider the interest rate results 29, 30, and 33. The parameter specifications given in 25 along with conditions 34-35 indicate that a decline in reserves causes all three rates to fall. That is:

37) $\frac{\partial r^*}{\partial R} < 0 \; ; \; \frac{\partial i^*}{\partial R} < 0 \; ; \; \frac{\partial r_K^*}{\partial R} < 0$.

These results can be interpreted as follows. The reduction in reserves reduces the volume of deposits the banking system can support. The equilibrium deposit rate must therefore fall in order to bring the demand of the nonbank public for deposits into line with the reduced deposit stock. The resulting reduction in deposit demand makes the nonbank public willing to hold the fixed capital stock at a lower rate of return on capital. That is, r_K^* falls.

Consider now the impact of the decline in reserves on total credit, given by equation 32. Since the decline in reserves automatically reduces bank credit, we are essentially attempting to determine whether the effects of the rate movements on the volume of commercial paper offset or reinforce the restrictive impact on bank credit. With $A > 0$ by 34, the direction in which total credit changes depends on the sign of the numerator of the bracketed term on the right side of 32. In order to interpret this result, it is necessary to focus carefully on each element of this expression. These elements have the following meanings. First, $a_3 < 0$ measures the response of the demand for deposits to a change in r_K^*. Second, $c_3 > 0$ measures the response of the demand of nonbank lenders for capital to a change in r_K^*. Third, the term $(c_1g + c_2)$ measures the composite response of nonbank lender demand for capital to a change in i* and the corresponding change in r*. Finally, the term $(a_1g + a_2)$ measures the composite response of the demand for deposits to changes in i* and r*.

Recall now that the reduction in reserves has caused all three rates to fall. The term $a_3(c_1g + c_2) > 0$ measures the "cross" effects of the declines in i* and r_K^* on the sum of nonbank lender demands for deposits and capital. These effects tend to diminish the reductions in these demands associated with the rate declines. They therefore tend to depress the demand for commercial paper. Consequently, this term enters 32 positively. That is, when reserves and bank credit decline, the influence of this term is toward a reinforcing decline in total credit. The term $c_3(a_1g + a_2) > 0$ measures the "own" effects of the declines in i* and r_K^* on the demand for deposits and capital. These effects tend to increase the reductions in these demands. Hence, this term enters 32 negatively. It contributes, therefore, toward an offsetting increase in total credit. If the absolute value of the own effects exceeds the absolute value of the cross effects, the reduction in reserves will be accompanied by an increase in total credit and conversely. This is the basic result of the analysis.

One further conclusion can be drawn regarding the role of the reserve requirement. Recall that $g > 0$ varies directly with the requirement. With $a_2 > 0$ and a_1, c_1, and $c_2 < 0$, it follows that an increase in the requirement reduces the absolute value of the own effect term and increases the absolute value of the cross effect term. Hence, the higher the reserve requirement, the more likely a decline in reserves will be accompanied by a reduction in total credit.

The mechanism through which this effect occurs is the relationship between r* and i*. A higher reserve requirement implies a greater decline in r*, given the fall in i*. That is, an increase in the reserve requirement, other things equal, tends to reduce the demand for commercial paper.

This completes the analysis. The model is obviously deficient in several important respects. First, the behavior of the model is essentially determined by the behavioral assumptions regarding nonbank lenders. The banking system specifications are greatly oversimplified. Since its balance sheet position is determined completely by the central bank, the banking system's role in the model is limited to the introduction of the reserve requirement into the link between the deposit rate and the credit rate. Second, a much greater degree of realism is needed in the form of a differentiation of bank liabilities, the introduction of noninterest bearing currency into the nonbank public's portfolio, and the explicit inclusion of open market operations. Finally, further attention should be given to the fixed price level assumption since this assumption implies that total real net worth (K + R) varies directly with reserves. Nonetheless, the broader implications of the model's characteristics and its results would appear to be of some interest. Specifically, the analysis suggests that it may be unwise to attempt to predict the effects of this or that policy or regulatory action on credit magnitudes on the basis of (explicit or implicit) models that are restricted in scope. The analysis also suggests that it may be possible to construct more fully specified models, both theoretical and empirical, that can predict the response of credit variables to particular policy actions on the basis of specific quantifiable structural characteristics of the financial sector.

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