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Bank Portfolio Determination

Hyman P. Minsky Ph.D.

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III Bank Portfolio Determination

A commercial bank is a business enterprise. The aim of its management is similar to the aim of the management of any other business: to maximize profits while paying due attention to the various constraints within which the firm operates. In banking the firms business constraints deal with the maintenance of liquidity(the ability to pay debts when due) and solvency(the continual existence of a positive net worth). In addition to these constraints, a bank is subject to legal restrictions and controls. Hence, given the legal restrictions, a bank will maximize profits under liquidity and solvency constraints.

Bankers have existed and functioned well without special legal controls. It is desirable to examine how a banker not subject to regulation by the government or by the central bank would operate. To do this we use a theoretical construct, a prudent banker. A prudent banker is a banker who is fully aware of the fact that the continued existence and profitability of his business depends upon his ability to meet his obligations. He therefore plays it safe with respect to the liquidity and solvency constraints. Obviously differences in judgment among bankers as to what constitutes

playing it safe exist, and these differences make it possible for the actual behavior of different prudent bankers to differ.

In particular a prudent banker is not swayed by the unwarranted optimism of good times and the equally unwarranted pessimism of bad times. With these specifications it would be difficult to point to any particular banker and say that he is truly prudent. However in one respect we allow the banker to deviate from virtue and still remain prudent. The prudent banker can and expects to make mistakes in evaluating loans and securities which he must acquire in order to make profits. He knows that he will make errors of judgment as to what is a desirable loan and security to acquire. He knows that some of his loans will be defaulted and the market price of some of his securities will depreciate. He uses an insurance principle to make allowances for such defaults and depreciations. That is each loan will carry some, albeit estimated, charge to compensate for possible losses due to default so that even if particular loans and investments do not turn out well, on the whole the loans and investments will be profitable. In addition to the risk premimm charged the issuer of the loans and securities the banker acquires, the prudent banker will insist that his loans and securities be properly secured so as to

minimuze the number and amount of default and depreciation losses. That is the assets that the banker acquires will be protected to serve extent against losses due to market prices. As a result of these specified attributes the prudent banker is a theoretical construct and existing practicing bankers deviate to a greater or smaller extent from this ideal.

The liquidity obligation of a banker is peculiar. Whereas an ordinary business has dated debts, debts which are not due until a specified date, the essential attribute of a bank is that itsliabilities , aside from the owners investment, are demand liabilities. The initiative in making a bank's liabilities current lies with the depositor, the owner of the bank's liabilities. As a result the banker must always keep sufficient bankers cash on hand to meet whatener clearing losses result from depositors actions and in case of unexpectedly large clearing losses a banker must be able to replenish his stock of bankers cash.

The solvency sonstraint on a banker is more demanding than is true for nonfinancial businesses. A bank has a much greater ratio of assets and hence liabilities to net worth than is true for a nonfinancial business. As the acquisition of most of the bankers assets is financed by the issuance of the banks own

debt, demand deposits, a relatively small drop in the value of the bank's assets will result in the value of the bank's assets being less than the value of the bank's demand deposits. This means that banks cannot survive as large a fall in the value of its asset as ordinary business firms can. The only assets a banker will willingly acquire are those that he believes will not fall in market value. A banker's business makes him conservative. He is willing to give up possible gains from the appreciation of the assets he owns to avoid the losses that would occur if his assets fell in value. As a result banks, a thin equity business, will hold only assets which are believed to be well protected against declines in their value.

From the perspective of the liquidity and solvency constraint, a perfect asset for a banker to hold is banker's cash, reserves. Reserves cannot depreciate in value and are of course that which the banker is obligated to pay upon demand. With banker's cash equal to demand deposits thereis no possibility for the banker not to be able to meet his obligations. In these circumstances the bank's earining assets would be equal to the value of the banker's net worth. As the bank owners would have a portfolio equal to their

investment in the bank, there would be no need to accept and service deposits in order to hold this portfolio. As deposits would not yield any revenue, the banker would not handle deposits unless the service charges fully paid the costs involved in handling deposits and checks.

Holding reserves equal to demand liabilities is not profitable unless service charges are large. Prudent bankers have operated with small or no service charges in fact in the past prudent bankers paid interest on demand deposits. This is because of what is known as the "Goldsmith's principal". This principal states that except for unusual circumstances not all of the depositors of a bank will either draw checks payable at another bank or withdraw their deposits in the form of currency at the same time. A banker therefore does not need all of the liquidity that 100% reserves (reserves equal to deposits) provides. He can substitute assets not as liquid as reserves for reserves in his portfolio. These assets will be inter est earning assets and hence they would make the business of deposit and check banking profitable even if service charges are not sufficient to compensate for the costs involved in handling deposits and checks.

However these interest earning assets cannot be such

that there exists a significant probability that their value will decline. This solvency constraint rules out the ownership of businesses and of property, hence banks will not willingly substitute common stock or property for reserves in their portfolio. The only property banks willingly own is the property required for their activities such as their premises. Such property is a small part of the total assets of the banks and the acquisition of this property is not financed by deposits. It is financed by the owners investment, the bank's net worth, of which the value of such property is but a small fraction. In addition to the ownership of their premises banks unwillingly acquire titles to property or stock as the result of foreclosures on loans. Such unwilling acquisitions of property are indicative of something having gone wrong in the bankers lending and investing operations.

Assets which are well protected against having their value decline are properly secured debts. The phrase "properly secured debts" means t at the market value of the assets woned by the debt issuer are significantly larger than the value of the debts of the issuer. The protection against loss on such debts is the excess of the market value of the assets over the value of the debts. If the market value of the assets owned by the

issuer falls so far that the value of the debts are greater than the value of the assets, then the bank will have to take some losses for the debt issuer is then insolvent. As the probability of large declines in the value of assets increases with time, to minimize the chances of such losses occuring the banker will not only desire debts which are will protected by an excess of value of assets to value of the debt, it will also desire short dated debt.

A banker therefore is ready to make properly secured relatively short term loans. Ordinary nonfinancial businesses need funds to finance seasonal variations in their activities. The banker isthe obvious source of such business financing, and relatively short dated business loan is the traditional core of the banking business. Collateral for such loans may be some evidence that the borrower has assets which are marketable or that he has some debts which are or will be due to him. However more often business loans do not have specific assets as security, rather they are based upon the fact that the borrower's total assets are sufficiently in excess of his debts to protect the prudent banker. These loans without specific collateral are called one-signature paper (the borrower's signature). In addition two signature paper exists. In this case the

borrower has the debt endorsed by another person. This other person by endorsing the note accepts a contingent liability, that is the endorsement signifies that if the borrower is unable to pay the endorser will pay. For the bank to make a loan to a person whose own net worth is not large enough to satisfy the banks security requirement as a result of such an endorsement, the endorser must have sufficient net worth to satisfy the banker that the debt will be paid.

The borrowing business firm is the source of the banker's income. The banker considers these firms as its customers. The loans to these customers are dated. Presumably the banker is convinced before making this loan that the customer will receive enough money prior to the due date to pay off the debt. It is not enough for the banker to be convinced that the borrower has sufficient assets to protect the banker against losses of value, the borrower must also have a sufficient flow of funds to pay his debt when due and hence protect the banker against loss of liquidity. Hence the banker traditionally favors loans for production and trade rather than loans for either consumption by households or the purchase of durable long lasting capital goods by business.

The banker customer relation is one of mutual

trust and confidence. The trade connection that a good customer represents is valuable to the bankand the bank is the recipient of confidential information about the operation of the business. Due to the value of the connection, a banker hesitates to refuse to accommodate an established customer when he desires a loan that falls within agreed upon limits. A banker is also reluctant to use these customers loans in order to obtain liquidity unless there is a grave emergency. This is true because he would have to beveal information about the customer to whomever supplies him with bankers cash in exchange for their customer loan and the information he has received in confidence. Such a violation of confidence could result in the loss of the customer as the customer could object to having his financial condition make public. In addition, the banker has exercised his own judgment as to the capabilities of the customer. Whoever is willing to adquire such a customer's loan from the banker would expect the banker to back up his judgement by endorsing the note and hence accepting a contigent liability. In times when a banker is sorely pressef for banker's cash, his endorsement may be relatively worthless. Hence a banker cannot depend upon the sale of customersloans to provide for the cash flows needed to offset an unusually large clearing loss.

Customers loans are dated. As they become due the customer has to deposit sufficient funds in the bank to meet the debt. At the due date, the customers debt is paid by running down the customers deposit. Outstanding customer loans therefore will yield a flow of banker's cash to the bank as their due date approaches. By the mutual cancellation of a deposit and the customer's debt, the banks need for bankers cash is lowered. However there is no way the bank by its own actions can accelerate this flow of bankers cash and the reduction in its liabilities that results when customer loans are repayed. As a result, if customer loans were the only asset aside from bankers cash that is available for a bank's portfolio, banks would have to keep a large enough cash reserve to meet any possible withdrawals by its depositors. On the other hand if a banker can acquire earning assets which are either marketable or which he can obtain repayment of on call or short notice, he will be able to get along with a smaller cash reserve in proportion to his deposits.

Another aspect of banking business will also make a banker look for earning assets other than customer loans. Today there are many giant banks, both single banks and branch banking systems, whose customers are national or state wide in scope. However there are also many local

banks whose customers are restricted to the area where the bank is located. As agriculture, industry and trade are all somewhat specialized as to location the portfolio's of these local banks would be heavily weighed by the debts of firms in the local industry. This means that the banks business would depend upon how the local industry fares; and any adverse shocks to the dormant local business would adversely affect the banks fortunes. One way a prudent banker can escape from this dependence upon the business that relatively few industries generate, is to diversify his portfolio. Although possibilities of sharing loans with other banks (through correspondent relations) exists and obviously branch banking does eliminate the dependence upon the business of a particular licality, the prudent banker really desires some assets which are not basically customer loans.

The desire for impersonal and hence marketable earning assets takes two directions: one is the purchase of securities the other is the making of impersonal loans. As both securities and impersonal loans make it possible for the prudent banker to have a smaller ratio of bankers cash to deposits then if he had only customers loans as his assets, he is willing to acquire such assets at a lower interest rate than he receives from his customers loans.

The actual type of securities and impersonal loans that bankers acquire at any time and place will depend upon the usages and institutions. However two assets which bankers have usually acquired are short dated government devt and if an appropiate market exists, call loans.

Government securities are typical widely held. As the government has the sovereign right to issue fiat money, government debt is safe from danger of default of either interest or principal when due. If short dated they will not fluctuate much in market values whereas if ~~short-dated-they-will-not-fluctuate~~ longer dated they woll fluctuate in market value as the current market interest rate varies. Hence government debt serves as an interest earning asset which is marketable. Being marketable they can be used to replenish the banks reserve position when there is an unusual loss of reserves.

In addition to government debt, other markets may exist which are willing to finance their operations on the basis of loans from bankers which are either of short term or callable. To be willing to borrow on call, the borrower must either have assets which are quickly saleable or have alternative sources which he can use to finance his activities if the banks withdraw from the market. Given th t the borrower has sufficient alternative financing sources or has assets which are

readily marketable without any appreciable possibilities of these assets depreciating in value, call loans are an ideal asset for bankers to have in their portfolio. They are income earning and being call assets that can be used to offset any unusual loss of bankers cash. Call assets enable a prudent banker to get along with a smaller amount of bankers cash than he otherwise would require.

As a result of this ability to economize on banker's cash, banks have a large ratio of deposits to banker's cash and a large ratio of earning assets to owners investment. The existence of marketable and callable assets are a necessary consition for the existing stringent liquidity and solvency constraints on bankers to exist. On the other hand, the willingness of bankers to lend at favorable terms against such call or marketable assets is an important determinant of the growth and development of such assets.