

Can Narrow Banking Provide a Substitute for Depository Intermediaries?

William Miles
Department of Economics
Wichita State University
Wichita, KS 67260-0078
Phone: 316-978-7085
Fax: 316-978-3308
E-Mail: miles@twsuvm.uc.twsu.edu

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ABSTRACT

Depository banks perform two functions: extending credit and performing liquidity services. This entails financing loans with demandable deposits. Unfortunately, this leaves the bank vulnerable if depositors decide to quickly withdraw *en masse*. Deposit insurance has been employed as a solution to bank runs, but it entails moral hazard costs of its own. Narrow banking is a system under which the two functions are performed by two different sets of firms, such as finance companies (lending) and money market mutual funds (liquidity). If non-bank lenders (NBFIs) can provide stable credit in the face of adverse credit market shocks, narrow banking may provide an escape from the bank run versus moral hazard dilemma. Analysis indicates that, unfortunately, the lending of NBFIs is quite unstable relative to deposit bank credit.

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I. INTRODUCTION

Narrow banking has been proposed as a method of avoiding panics without the inefficiencies of deposit insurance (for an overview of the topic, see Pennacchi and Gorton, [1992, 1993] and Kashyap, Rajan and Stein, [1999]). With depository banks, loans of both short and long maturity are financed with demandable deposits. If depositors decide to withdraw en masse, due to information true or false about the intermediary or similar institutions, the bank can collapse, resulting in both financial and economic dislocation (see Diamond and Dybvig, [1983] for a theory of such panics). The role of bank failures in the Great Depression (see Bernanke, [1983]) helped convince policymakers to implement deposit insurance in order to avoid the economic dislocation that often comes with financial crisis.

While it can certainly be argued that deposit insurance has led to greater financial stability since its inception, it is not without cost. The major drawback to deposit insurance is that it can, in the absence of countervailing forces, lead to moral hazard. The savings and loan failures of the 1990s, Japan's decade-long struggles with poor loans, and the role of failed banking systems in many East Asian nations leading up to the 1997 currency attacks are presented by many observers as examples of the dangers of insuring bankers and thus encouraging risky lending at eventual taxpayer expense. As a response, proposals to change the banking industry structure (or allow the market to change the structure unimpeded by regulatory burden) have been offered. Narrow banking, one of the most prominent proposals, involves financing loans with longer term borrowing, rather than deposits. This is the practice of finance companies, which are presented as examples of lending institutions under narrow banking. With loans no longer financed

through demandable deposits, the problem of panic is believed to be moot (see Gorton and Pennacchi, [1993], p. 170), and deposit insurance, with its resulting inefficiencies, is no longer necessary to ensure financial stability.

An important question is whether these finance companies, and other non-bank financial institutions (NBFIs) can provide stable lending even in the face of tight credit conditions. If so, narrow banking appears to be a preferable arrangement. However, if finance companies are subject to greater vulnerability to tight credit conditions than commercial banks, narrow banking may not provide a viable alternative to deposit insurance and traditional banks. This is a distinct possibility and follows from the broad credit channel theory on the transmission of monetary shocks. In this literature, an increase in the interest rate lowers collateral values and raises the cost of finance. Smaller companies, with little collateral, are the hardest hit, as empirical work by Gertler and Gilchrist [1994] and others has confirmed. Kashyap and Stein [1995] apply this logic to financial firms, and find small banks are more affected than large fiduciaries in their ability to channel credit when monetary policy is tightened. It is therefore natural to apply the same logic here to deposit insured commercial banks versus non-insured NBFIs. Results will indicate that finance companies do not appear to be as stable providers of credit as banks, casting doubt on the viability of narrow banking as a solution to the bank runs versus deposit insurance dilemma.

II. NARROW BANKING AND CREDIT MARKET IMPERFECTIONS

Narrow banking is an arrangement of the financial system under which one set of institutions provide credit, the financing of which is *not* through demandable deposits, while another set of firms, such as money market mutual funds (MMMFs) provide

liquidity services. Under the current system of depository banking, one firm-a commercial bank-performs both services by making loans financed with short-term deposits. These deposits are a source of liquidity for agents in the economy. Those who advocate narrow banking acknowledge that it is, in all probability, no accident that the two functions came to be performed by one entity. Banks exist, in a world of imperfect information, to gather this information and monitor borrowers (see Diamond, [1981]). Individuals attempting to gather information and monitor debtors would find such activities costly, and would face the prospect of others free-riding on their efforts. Banks therefore act as “delegated monitors” and information specialists.

Since the monitor (bank) must be monitored itself, it is optimal for the intermediary to hold a diversified portfolio of loans (so the only risk is systemic) and issue debt, which only trades at par if agents perceive the bank is carrying out its duties properly. Since there is also a demand for liquidity services, demand deposits perform this role debt well (see Calomiris and Kahn, [1991] for a discussion on the role of deposits in shaping incentives for bank manager behavior). The bank then will finance its lending with these deposits, and perform both the credit and liquidity functions. The main drawback of such an arrangement is that if depositors decide to withdraw their funds suddenly, the bank may be unable to honor its commitment to redeem deposits on demand. Suspension of convertibility, or bankruptcy of the institutions can result. A difficulty with this problem of “runs”, or panics, is that, according to some observers, a particular bank may experience a run despite being fundamentally sound. News of problems at other banks, or unfounded rumors, can lead depositors to panic. The fact that

banks are “illiquid”, in that short term assets are much less than short term liabilities, can lead to self-fulfilling runs (see Diamond and Dybvig [1983]).

To avoid the problem of financial instability caused by deposit banks, governments worldwide have adopted systems of deposit insurance. In the United States, such legislation was passed in the wake of the Great Depression, a recession many believed bank failures played a prominent role in (see Bernanke, [1983]). And given the rarity of runs since the Federal Deposit Insurance Corporation came into being, it can reasonably be inferred that such government action has been relatively successful in supporting a stable supply of credit. However, deposit insurance leads to its own moral hazard problems, in which bankers, insured against runs, seek the riskiest investments. This “reaching for risk” itself leads to episodes in which bank failure is prevalent and government bailouts are necessary to preserve the solvency of intermediaries. Merton [1978] points out that, in the absence of countervailing measures, such as strict regulation, perennial crises should be the norm in the presence of deposit insurance. The Savings and Loan crisis in the United States in the late 1980s is often presented as a prime example of the costs of insurance. Japan has struggled for over a decade with a backlog of bad loans, and many commentators believe implicit or explicit insurance is the root of the troubles faced in Southeast Asia beginning in 1997 (see Dooley [2000]).

Narrow banking, by splitting the credit and liquidity services functions into two separate firms, is believed to avoid the financial instability associated with depository intermediaries as well as the costs of government insurance. In particular, advocates see firms such as finance companies and other NBFIs, which do not obtain funds for lending from deposits, but rather longer-term debt such as commercial paper, taking over the

lending function. At the same time, money market mutual funds could provide liquidity services. While banks had been in a position to provide liquidity services, the advance of technology is believed by narrow banking advocates to allow liquidity services to be provided by MMMFs and certificates of deposit. Since both MMMFs and non-bank lenders have grown in the last several decades, this line of literature sees narrow banking arrangements as the natural outcome of the market process, impeded and slowed only by regulation.

Not all observers agree that narrow banking is necessarily the natural or optimal result of market forces. Kashyap, Stein and Rajan [1999], point out that providing liquidity and credit are actually one function. If loans are taken to be installment credit, such as revolving lines for businesses and home equity loans for individuals, then they are in a sense liquidity provided by banks. Just as with deposits, customers can withdraw such credit on demand, and the occasions on which credit is withdrawn are random from the banks' perspective. In order to fulfill its obligations to honor either deposit withdrawals or loan commitments, the bank must carry liquid assets, which have an opportunity cost of low returns. As long as deposit withdrawals and loan withdrawals are imperfectly correlated, there is a synergy in keeping liquidity and credit services together in the form of lower total opportunity cost of holding liquid assets. Thus it is theoretically ambiguous whether narrow banking is optimal.

Moreover, it is also unclear *a priori* whether narrow banks would in fact be more financially stable than traditional intermediaries. Gorton and Pennacchi [1993] claim that an NBFIs should be immune to panics, since, for a panic to occur, a necessary condition is “the combination of (non-marketable) loan creation with demandable debt financing”,

([1993], p. 170). Later, the authors acknowledge that financial distress could occur in a narrow banking framework, but characterize such an event as a “walk”, rather than a run. Such an event, such as quick withdrawals from an MMMF, or the inability of an NBFII to roll over its own obligations, remain a possibility. With respect to the latter, if customers of non-bank intermediaries are unable to obtain credit from their institution due to the NBFII’s problems, there is a situation similar (though perhaps not usually as severe) as the one described by Bernanke [1983]. Here, since lending institutions are suddenly constrained in credit supply, firms cannot obtain loans, and there are potentially costly effects for the real sector of the economy.

This “credit view” of monetary shocks, as this literature has come to be referred to, is important in assessing the adequacy of any financial system. A sound system, narrow banking or otherwise, should be able to absorb adverse monetary or financial shocks and still allocate lending to its most productive uses. While there is controversy over the existence and importance of different variants of credit channels, concern over the stability of the banking system and its effect on the economy is the reason deposit insurance exists, and it is therefore of the utmost relevance to ask whether narrow banking would be able to provide a supply of credit at least as stable as that currently provided by deposit-insured banks.

There are two major strains of the credit view literature, each with relevance for assessing the viability of narrow banking. In the bank lending view, monetary shocks drain reserves from banks, which cannot easily replace lost reserves with forms of finance such as bond issues or CDs. As a result, bank lending contracts, and some firms, especially small ones, which are dependent on bank loans, must decrease activity as they

cannot obtain credit. This version of the credit view continues to be the subject of much controversy. Another theory, which has gained wide acceptance, is often referred to as the broad credit channel. In this version, a negative monetary shock raises interest rates, which lowers the value of items such as net worth and collateral. This decrease in net worth exacerbates agency costs and information problems such as moral hazard and adverse selection that plague credit markets. That is, the cost of obtaining external finance will increase in response to higher interest rates, and firms will find it more difficult to obtain credit of any kind, bank loans or otherwise. The impact should fall most heavily on small enterprises, which would be more likely than large firms to suffer from high agency and information costs in obtaining external funding.

Kashyap, Stein and Wilcox [1993] have written in defense of the lending channel. Others, such as Oliner and Rudebusch [1995] have questioned its importance. The latter, in particular point out that the observed decrease in loans to smaller firms following a Federal Reserve tightening is likely due to a decrease in demand for credit from these firms, as demand for their products has fallen disproportionately in the economy. Oliner and Rudebusch, as well as others who are skeptical of the bank lending channel do believe, however, that there are broad credit channel effects of a monetary tightening. Firms in general are less able to obtain credit after interest rates rise, and this difficulty falls most heavily on smaller firms, which are most sensitive to information problems, in that they have low liquidity and net worth.

Kashyap and Stein [1995] point out that, like non-financial firms, banks also differ in their abilities to cope with adverse credit market conditions. The authors develop a model in which small banks, in particular, are more likely than large to

decrease lending in response to a monetary tightening. Small intermediaries face a higher adverse selection cost of raising non-depository funds such as CDs in response to a monetary shock than do larger institutions. Thus small bank lending declines by more than that of large banks once interest rates rise. The authors test their model by regressing the changes in bank credit on own lags and differenced Federal Funds rate lags. Upon comparison, results indicate a much larger impact on small bank lending than on large, as theory had predicted.

A similar approach will be employed here to determine the stability of NBFIs credit relative to traditional banks. For both types of institutions, the credit to private borrowers will be modeled as a function of own lags, as well as output to control for credit demand effects and a linear time trend. The trend is particularly important for NBFIs as their growth in the lending business over the last three decades has been much greater than the rate of change of output. If NBFIs are as immune to financial turmoil as some theories suggest, there should be no difference in the effects of interest rates on the two forms of credit.

Another method for gauging the effect of the federal funds rate on the two sources of lending is to examine the mix of bank credit as a portion of NBFIs lending. Again, if NBFIs credit is stable, a shock to the funds rate should have no effect on the ratio of bank to non-bank lending. Finally, it is important to determine whether there are any discernible output effects of the financing mix. If borrowers can easily substitute into other forms of borrowing, then the stability of NBFIs credit may not be of consequence. However, if some borrowers are dependent on particular institutions, unstable NBFIs

credit can have effects on output, and stability relative to banks is a vital issue to consider in bank reform.

III. EMPIRICAL RESULTS

Table one contains results for the regressions on the sensitivity of credit with respect to monetary policy. The data for estimation was taken from the International Financial Statistics Database and runs from 1970 through 1999. Banks include commercial and savings banks, while NBFIs include finance companies, mortgage companies, and other non-depository firms which make loans to the private sector. In the first column of table one, bank credit is specified to be a function of its own past, output and policy changes. All variables are differenced, given the results of ADF unit root tests (available upon request), and expressed in logarithms. A linear trend is employed, as figures one and two were at least suggestive of a positive effect of time on lending for both banks and NBFIs. The specification is thus quite similar to those employed in Kashyap and Stein [1995, 1999] and Kashyap, Stein and Wilcox [1993] in trying to gauge the effect of policy shocks on different intermediaries. Four lags are chosen, as is standard in the literature when the data is quarterly. As in these and other studies, the Federal funds rate is the measure of central bank action. While other, more narrative measures of policy, such as the Romer and Romer, or Boschen and Mills index have been utilized in other papers, our sample starts at 1970, and such narrative indices may not have sufficient variation to reveal the response of credit to policy over this period. Moreover, where these other measures have been used (Kashyap, Stein and Wilcox [1993]) results were not dissimilar to those using the Fed rate. In estimating, Newey-

West standard errors are used. Thus results will be robust to autocorrelation and heteroscedasticity.

As table one indicates, the effect of the lagged FFR difference on commercial bank lending is negative for all four coefficients, as is to be expected given the literature on asymmetric information and credit. However, no t-statistic is significant at anything approaching a conventional level. Thus, traditional depository banks appear to be able to weather tight credit conditions fairly well.

To formally test for an effect of interest rates on changes in commercial bank credit given income, the technique of Kashyap, Stein and Wilcox is employed. Here, the sign of the sum of coefficients on the FFR is noted, and an F-test is conducted on their joint significance. In this case, while the sum of coefficients is negative as expected, it is impossible to reject the null of no effect at any standard significance level.

In table two, the response of NBFIs to the FFR is displayed. The results indicate that NBFi credit is not nearly as stable as bank lending. Three of the four coefficients on the FFR are negative, and these are the only lags which are significant. The sum of the coefficients on the FFR are negative, and an F-test of their exclusion reveals significance at much less than the 0.01 level. Clearly NBFi lending is very sensitive to credit market conditions, whereas bank credit is far more robust. This casts doubt on hopes that a narrow banking system will be able to provide stable credit without the distortions caused by deposit insurance.

It could be argued that the results presented are consistent with a “story” different from the notion of unstable credit supply on the part of NBFIs. In particular, NBFIs often extend credit to more risky customers than banks in some sectors of their activities (see

Ludvigson [1998]). Thus, during a downturn brought on by higher interest rates, risky borrowers decrease demand for credit, thereby leading to the observed fall in NBFIs activity. This explanation is similar to the one offered by Oliner and Rudebusch [1995] in discounting the effect of the “lending view” in generating observed declines in bank lending over the business cycle. However, it is important to note that the effect on NBFIs financing from monetary tightening was found after changes in income were controlled for. This result, similar to one found by Ludvigson ([1998], p. 378), is, as that author noted, not consistent with the notion that a decrease in credit demand is driving the decrease in NBFIs lending. Thus, when comparing commercial banks and NBFIs, results are at a minimum strongly suggestive that the latter are more susceptible in credit supply to a tightening of monetary policy.

Another approach to gauging the effect of high interest rates on the relative stability of bank and NBFIs credit is to look at how the mix of financing between the two forms of credit changes as monetary policy tightens. This is the approach followed in Kashyap, Stein and Wilcox [1993] and Ludvigson [1998]. Figure three shows how this ratio has developed since 1970 (the ratio is bank lending as a fraction of NBFIs credit). If NBFIs are no more sensitive than banks to the moral hazard and adverse selection problems caused by tight money, then the mix should not react to the FFR. On the other hand, if NBFIs supply less credit in response to deteriorating financial conditions, the mix should rise as a result of a funds rate increase, and therefore a *positive* coefficient on the FFR is expected in this circumstance.

The results are shown in table three. The log of the bank to NBFIs credit ratio is regressed on 4 lags of itself, as well as 4 lags of the monetary policy indicator; the FFR.

As before, output, in the form of GDP is included in the specification to control for lower credit demand that would typically occur after a tight money episode. There is also a linear trend to account for the role of time in the credit mix. Newey-West standard errors are once again utilized.

Results indicate that monetary policy has a palpably significant effect on the mix. Three of the four coefficients on the FFR are positive, including the only two significant lags, which both have p-values of less than one-fifth of one percent. The sum of coefficients is positive, and the F-test reveals that they are significant at less than the 0.01 level. Given that the time trend and changes in income were again controlled for, the evidence further indicates that NBFIs lending is more susceptible to credit adversities than that of deposit-insured banks.

As a final piece of analysis, it will be instructive to determine whether the credit mix has any explanatory power for output or its components. Previous papers dealing with bank credit and commercial paper, such as Kashyap, Stein and Wilcox and Ludvigson, have investigated the effect of financing mixes on auto sales, investment, and inventories. If the credit sector was characterized by perfect information and complete markets, potential borrowers would be able to substitute between forms of financing. A decrease in the availability of credit from one particular group of lenders, such as NBFIs, would not, under such circumstances, have an effect on output. However, if some borrowers are dependent on NBFIs, due to being unable to get bank or other financing, then a fall in NBFI credit availability relative to that forthcoming from banks will lead to a decrease in activity, at least for some categories of production.

After examining different categories of national income, results indicated no significant effect of the financing mix on GDP, fixed investment or inventories. However, as demonstrated in table four, personal consumption is significantly affected by the financing mix. The specification entailed regressing personal consumption expenditures on four own lags, as well as four lags of FFR changes to account for monetary policy, and four lags of the mix to pick up the independent effect of financing constraints. As noted, the mix has a negative effect on personal consumption at the first lag. The other lags (two positive, one negative) are all insignificant. The sum of the coefficients is negative, and their effect is significant at the five percent level. Thus the mix has an independent, negative effect on personal consumption, but not other forms of spending. This is quite understandable, as NBFIs are often in the business of providing financing for autos, consumer durables, home improvement and the like. While some might attribute the results to a decrease in credit demand due to lower income, it is important to keep in mind that past personal consumption is controlled for, and that customers in the market for personal consumption loans are under any circumstances prone to being credit constrained.

IV. CONCLUSION

Bank reform is a pressing policy issue in many parts of the world, and some form of proposed legislation is perennially under discussion in the U.S. Preserving financial stability while minimizing government distortions, especially deposit insurance, is often the long-term goal of such proposals. Results here indicate that narrow banking, however forcefully advocated, does not appear to provide a solution. Whether looking at bank and NBFIs credit separately, or the mix of the two, or the effect on personal consumption,

NBFIs appear to suffer from high agency costs and to provide a less stable supply of credit relative to deposit-insured banks. The greater stability of banks doubtless derives from the deposit-insurance subsidy they enjoy. The removal of this subsidy would put banks and NBFIs on a more equal footing in the competition for loans, but, as the results indicate, the supply of lending in the economy would then be less stable, bringing back the question of how to provide stable credit without distorting regulation.

The work here could be extended. While it looks across two sections of financial intermediaries, further disaggregation would be perhaps yield additional information. The data for banks could be retrieved from Federal Reserve call reports, while that for NBFIs would require greater effort to obtain. Perhaps then, in a similar fashion to Kashyap and Stein [1999], the effects of monetary shocks could be estimated, given certain levels of net worth across banks and NBFIs.

None of these results should be taken to imply that narrow banking, in the form of a growing NBFi sector, has no place in financial development. The NBFi industry provides diversity among intermediaries, and, importantly, is not backed by government guarantees. It simply does not look likely, given the results of this paper, that non-banks can replace the commercial banking sector, provide stable credit and avoid the costs of deposit insurance.

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TABLE I
 Bank Credit and the Federal Funds Rate
 Dependent Variable: Difference of Commercial Bank Credit, Billions \$U.S.

Constant	0.009746 (1.53)
Δ Bank Credit _{t-1}	-0.047422 (-0.4826)
Δ Bank Credit _{t-2}	0.057901 (0.9113)
Δ Bank Credit _{t-3}	-0.16345 (-1.8386)
Δ Bank Credit _{t-4}	0.542727 (8.116)
Δ FFR _{t-1}	-0.000454 (-0.2746)
Δ FFR _{t-2}	-0.000447 (-0.311678)
Δ FFR _{t-3}	-0.00000356 (-0.044638)
Δ FFR _{t-4}	-0.0008 (-0.709)
Δ GDP _{t-1}	0.2779 (2.36)
Δ GDP _{t-2}	0.4347 (2.73)
Δ GDP _{t-3}	0.408 (3.83)
Δ GDP _{t-4}	0.207 (1.25)
Time	-0.000447 (-2.44)
R ²	0.585
Sum of Δ FFR Coefficients	-0.00170456
F-Test for Excluding All Δ FFR's	0.19154
Exclusion F-test P-value	0.94232

T-statistics are in parentheses. Newey-West Standard Errors are employed.

TABLE II
NBFI Credit and the Federal Funds Rate
 Dependent Variable: Difference of NBFI Credit, Billions \$U.S.

Constant	-0.000658
	(-0.064557)
Δ NBFI Credit _{t-1}	-0.081376
	(-0.853007)
Δ NBFI Credit _{t-2}	0.027482
	(0.302654)
Δ NBFI Credit _{t-3}	-0.102538
	(-1.0869)
Δ NBFI Credit _{t-4}	0.085155
	(0.83865)
Δ FFR _{t-1}	-0.014756
	(-4.307)
Δ FFR _{t-2}	0.003987
	(1.2815)
Δ FFR _{t-3}	-0.011594
	(-2.742)
Δ FFR _{t-4}	-0.004699
	(-0.982)
Δ GDP _{t-1}	0.2192
	(0.4687)
Δ GDP _{t-2}	-0.2234
	(-0.3612)
Δ GDP _{t-3}	0.5211
	(1.3767)
Δ GDP _{t-4}	0.332
	(0.603)
Time	0.000394
	(3.455)
R ²	0.253
Sum of Δ FFR Coefficients	-0.02706
F-Test for Excluding All Δ FFR's	5.161
Exclusion F-test P-value	0.000798

T-statistics are in parentheses. Newey-West Standard Errors are employed.

TABLE III
 Mix of Bank/NBFI Credit and the Federal Funds Rate
 Dependent Variable: Difference of Bank/NBFI Credit Ratio

Constant	0.038699
	(1.863)
ΔMix_{t-1}	0.9763
	(12.55)
ΔMix_{t-2}	-0.0868
	(-0.6215)
ΔMix_{t-3}	-0.052745
	(-0.3517)
ΔMix_{t-4}	0.1344
	(1.52)
ΔFFR_{t-1}	0.00283
	(4.186)
ΔFFR_{t-2}	-0.00073
	(-1.0628)
ΔFFR_{t-3}	0.002628
	(3.24)
ΔFFR_{t-4}	0.001124
	(1.255)
ΔGDP_{t-1}	-0.05063
	(-0.534)
ΔGDP_{t-2}	0.05365
	(0.539)
ΔGDP_{t-3}	-0.0647
	(-0.973)
ΔGDP_{t-4}	-0.0117
	(-0.112)
Time	-0.000122
	(-4.16)
R^2	0.987
Sum of ΔFFR Coefficients	0.005857
F-Test for Excluding All ΔFFR 's	7.13
Exclusion F-test P-value	0.00042

T-statistics are in parentheses. Newey-West Standard Errors are employed.

Constant	0.02491
	(1.766)
$\Delta PCon_{t-1}$	-0.000287 (-0.0031)
$\Delta PCon_{t-2}$	0.2401 (2.99)
$\Delta PCon_{t-3}$	0.3386 (3.685)
$\Delta PCon_{t-4}$	-0.0444 (-0.442)
ΔFFR_{t-1}	-0.001433 (-2.57)
ΔFFR_{t-2}	-0.0016 (-2.381)
ΔFFR_{t-3}	-0.000715 (-1.26)
ΔFFR_{t-4}	-0.000326 (-0.6306)
ΔMix_{t-1}	-0.21465 (-2.318)
ΔMix_{t-2}	0.14091 (1.106)
ΔMix_{t-3}	0.1011 (0.929)
ΔMix_{t-4}	-0.0448 (-0.67129)
Time	-0.00000366 (-1.4)
R ²	0.462
Sum of ΔMix Coefficients	-0.017362
F-Test for Excluding All ΔFFR 's	2.54
Exclusion F-test P-value	0.043

T-statistics are in parentheses. Newey-West Standard Errors are employed.

Figure 1: Bank Credit 1970-1999

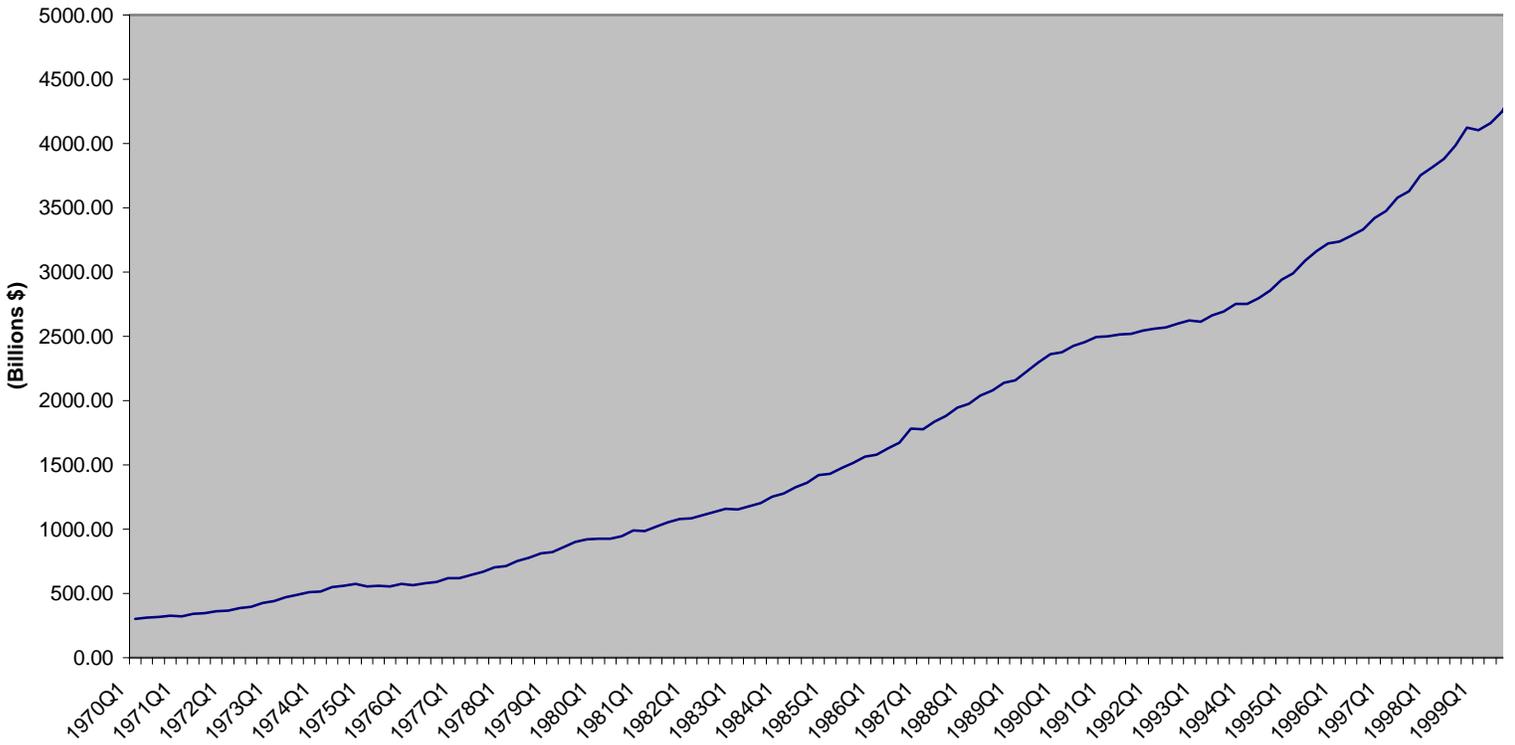


Figure 2: NBF Credit 1970-1999

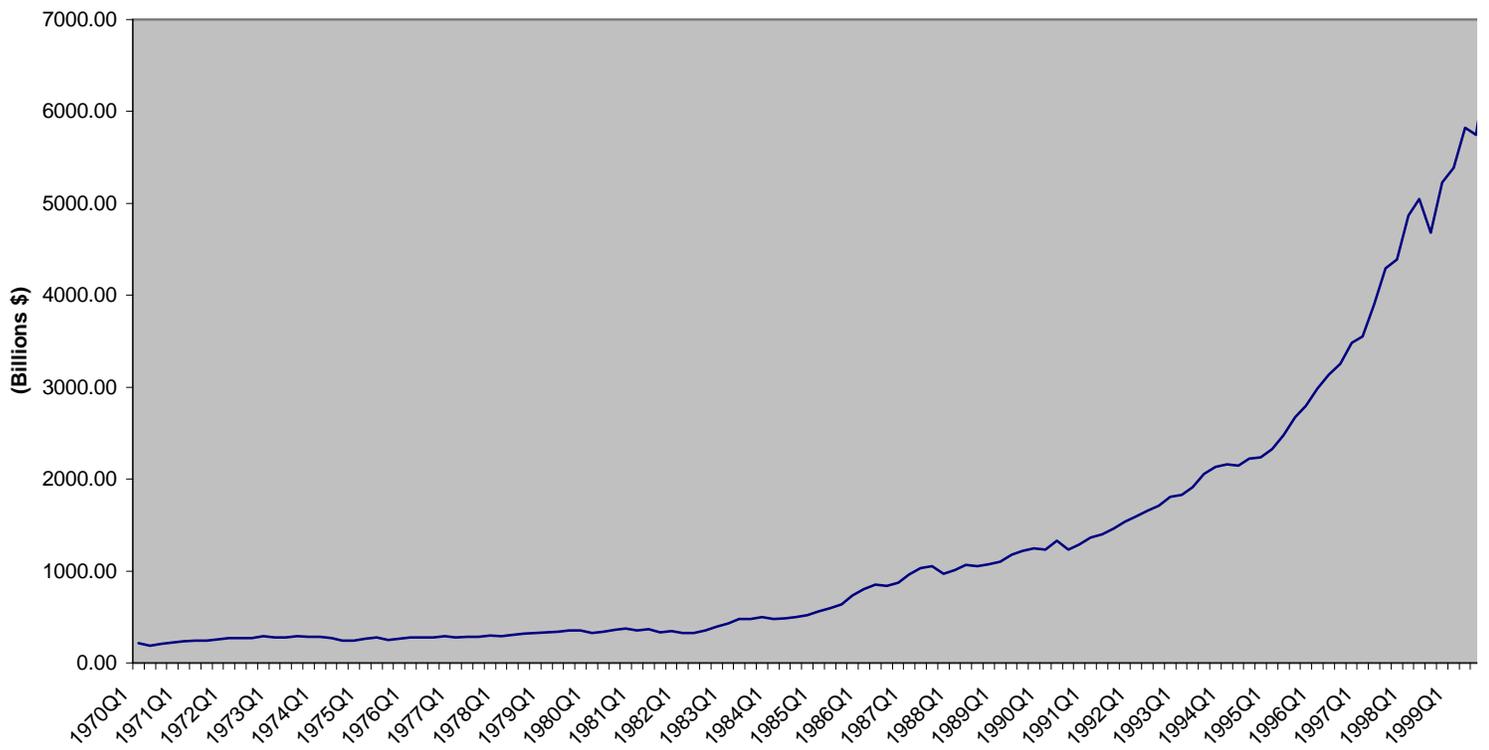


Figure 3: Bank Credit/NBFI Credit

