The 1966 Financial Crisis: A Case of Minskian Instability?

by

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Abstract

The so-called credit crunch of 1966 has long been recognized as the first significant postwar financial crisis, and one that required the first important intervention by the Federal Reserve Bank. In the midst of the robust postwar expansion, the Fed began to fear inflation and tightened monetary policy to the point at which profitability of financial institutions was threatened. As Minsky argued "By the end of August, the disorganization in the municipals market, rumors about the solvency and liquidity of savings institutions, and the frantic position-making efforts by money-market banks generated what can be characterized as a controlled panic. The situation clearly called for Federal Reserve action." The Fed was forced to enter as a lender of last resort to save the muni bond market, which in effect validated practices that were stretching liquidity. As a result of Fed intervention, the economy continued to expand, new financial practices emerged and were validated, leverage ratios increased, memories of the Great Depression faded, and markets came to expect that big government and the Fed would come to the rescue as needed. That 1966 crisis was only a minor speed bump on the road to Minskian fragility. To some extent, 1966 proved to be the first verification of the "financial instability hypothesis" that Minsky had been developing since the late 1950s, and the events of that year would stimulate further development of his analysis of the early postwar transition from a "robust" financial system toward a "fragile" financial system.

The so-called credit crunch of 1966 has long been recognized as the first significant postwar financial crisis, and one that required the first important intervention by the Federal Reserve Bank to prevent spread of a crisis. Thus, the events of 1966 play a significant role in Hyman P. Minsky's analysis of the early postwar transition from a "robust" financial system toward a "fragile" financial system. To some extent, 1966 proved to be the first verification of the "financial instability hypothesis" that Minsky had been developing since the late 1950s, and the events of that year would stimulate further development of his thinking. Similarly, Martin Wolfson begins his analysis of US financial crises with an examination of the 1966 crisis.

However, in a recent paper, Professor Dickens argues rather persuasively that during the three-quarters of a year that preceded the "credit crunch" of 1966, there was an "intra-class" conflict over the direction of monetary policy, with the large New York banks favoring a coordinated policy of higher interest rates but lower interest rate ceilings on time deposits, while large regional banks preferred to retain the ceilings out of fear they would otherwise lose deposits to the New York banks. (Dickens 1998) Professor Dickens goes on to argue that the tight money policy was adopted as an alternative to incomes policy as a means of fighting inflation, representing a victory of Wall Street over the Administration (and, by implication, of "capital" over "labor") by confirming the independence of the Federal Reserve Bank to place price stability over full employment as the top priority. He concludes that the 1966 financial crisis did not result from rising financial fragility that increased susceptibility to "shocks" such as higher interest rates, but rather from divergent class interests. Thus, according to Dickens, the 1966 crisis cannot be used as evidence in support of Minsky's financial instability hypothesis (FIH).

While some readers may not be convinced by Dickens's frequent and easy resort to attribution of beliefs, desires, motivations, and conspiracies to "Wall Street", "New York Banks", "Regional Banks", and other loosely defined characters involved in the story, I do not intend to critique his analysis of the events surrounding August 17, 1966. However, I am troubled by the belief that this political economy story is somehow inconsistent with Minsky's financial instability hypothesis, or, more importantly, that Minsky's analysis cannot be applied to the 1966 credit crunch. After all, Minsky had argued that "The crunch of 1966 was the first

serious financial disruption of the postwar era". (Minsky 1986, p. 91) Thus, while I am reluctant to get into debates about what Minsky really said or meant, I will use this opportunity to show that the events surrounding the credit crunch of 1966 are indeed consistent with Minsky's analysis. I will also correct what I take to be some errors regarding monetary theory and policy, in general, that are frequently made in analyses of the financial events of the early postwar period.

The Credit Crunch of 1966

Minsky argued that the "credit crunch" of 1966 was the first financial trauma since the 1930s that involved a run on a financial instrument or institution without a specific case of a failure or fraud. (Minsky 1986, p. 87) According to Minsky, the long expansion of the 1960s progressed as spending by nonfinancial corporations grew rapidly, fueled in part by external funds provided by banks. As he shows, net external funds as a percent of purchased physical assets grew from less than 4% in 1961 to more than 20% by 1966. (Minsky 1986, p. 88) Worried about inflation, the Fed began to raise interest rates. The discount rate was raised from 4 percent to 4.5 percent in December 1965 where it remained for the rest of 1966, however, the fed funds rate was raised rapidly throughout the year, as Figure 1 shows. In addition, the Fed raised reserve requirements on time deposits and lowered ceiling interest rates on small time deposits in July.[1] The higher reserve requirements would effectively raise the cost of making loans (since reserves are a non-earning asset), while the lower ceiling rates would force banks to turn to higher-cost, non-regulated sources of funds (by inducing "disintermediation"—see below). Finally, after April the Fed directed that reserve growth should be restricted and tried to discourage discount window borrowing; Minsky reports that by July and August, the "window was so tightly administered that there was no increase in borrowing by member banks, and the money-market

[1] On July 20, 1966, the Fed lowered ceiling interest rates on multiple maturity time deposits from 5.5% to 5% in the case of maturities longer than 90 days and to 4% for those with maturity from 30-89 days. Ceiling rates for single maturity time deposits remained at 5.5%. Reserve requirements for time deposits were raised from 4% to 5% on July 14 and to 6% on September 8 for all but the smallest of banks. Source: Federal Reserve Bulletin, January 1970.

banks believed that the discount window was effectively closed to them." (Minsky 1986, p. 90) Leaving aside the political economy analysis of the class conflicts, there appears to be no dispute over these matters: monetary policy was tightened significantly on the belief that banks could be pressured to reduce lending that was fueling the expansion.

The controversy is over the nature of the crisis. According to Dickens, the crisis was not caused by financial instability. A very simple explanation of the financial instability approach to the 1966 crisis runs as follows. The tight money policy raised market interest rates above regulated deposit rates so that banks could not retain deposits; in order to continue to provide loans to nonfinancial firms, banks were forced to sell-off government bonds, disrupting bond markets. The Fed was then forced to intervene, opening the discount window to banks and easing monetary policy to save bond markets. Dickens disputes this account because, first, while the large New York banks did lose time deposits, they were able to borrow in Eurodollar markets to offset the loss; second, there was really no danger of a forced sell-off of bonds since banks had access to Eurodollars; and third, Fed easing occurred after the crisis had abated. Thus, the 1966 crisis did not unfold in a manner consistent with Minsky's FIH.

However, this simple account of the crisis is not Minsky's. But before turning to Minsky's explanation, we need to examine some monetary theory and policy issues.

Disintermediation, Asset Management, And Horizontal Leveraging

Far too much ink has already been spilled on disintermediation and the supposed move from asset management to liability management in the early 1960s, which plays a role in the accounts of the 1966 crisis provided by Dickens, Minsky, and Wolfson. It is worth the effort to try to dispel some myths.

First, it is critical to understand that bank deposits are liabilities; while this may seem too obvious to warrant mention, casual discussion of bank operations often neglects to consider that a deposit makes a bank liable for something. For what is the bank liable? High powered money (HPM—reserves or cash). Deposits are simply a "horizontal" leveraging of HPM—a promise to deliver high powered money according to the contractual agreement (on demand in the case of

demand deposits, on a specific future date in the case of a time deposit). Effectively, the bank is short HPM, betting it will be able to obtain the necessary HPM in a timely manner at a not-too-prohibitive cost.[2] Reserve requirements are simply minimum HPM balance requirements, much as many readers are forced to maintain a thousand dollars in their checking accounts.[3] These in no direct way constrain the bank's ability to "make loans", although they raise the bank cost of shorting HPM (much as compensating balance requirements raise the cost to a firm of taking out a bank loan—shorting bank money), thus, may increase the return that must be obtained on assets to make them desirable. When a bank fails to meet the minimum HPM balance required, the Fed automatically books the "fail" as a loan of reserves (much as "overdraft" facilities routinely protect depositors of UK banks; American depositors can usually purchase overdraft insurance). In any case, a bank "makes a loan", that is, purchases an asset, by "creating a deposit", that is, shorting HPM.

As deposits are liabilities, banks could care less about retaining them. However, when a check is written on a demand deposit, or when a maturing time deposit is not rolled-over, the bank is subject to a reserve, HPM, clearing drain. Since banks do not keep significant excess HPM balances, a clearing drain will cause a bank to fall below minimum HPM balance requirements.[4] An individual bank will thus try to "purchase" HPM balances from the Fed, "borrow" fed funds, "sell" certificates of deposit, or "repo" government bonds to meet minimum balance requirements. In the aggregate, the only "net" source of HPM is the government, either the treasury or the central bank. When the treasury buys goods or services or provides transfer

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[2] One could also look at it from the perspective of borrowers and depositors: the depositor has a long position in bank money, while the borrower is short bank money. The bank "intermediates" between the longs and shorts, but one must remember that "loans make deposits"—in other words, it is only because the bank is willing to take its own long position in the IOU of the borrower that the long position of the depositor is created.

[3] Bank HPM deposits at the Fed can be thought of as clearing balances—deposits held to facilitate clearing among banks as well as clearing with the Fed (for example, when tax payments are made). Even if legally required reserve ratios are removed, banks will still demand HPM for clearing purposes (as in Canada, which now operates with a target of zero net clearing balances), which changes nothing of substance. See Wray 1999.

[4] Some might believe that it is only recently that banks have discovered methods to ensure that excess reserves are kept to a minimum. However, for the four weeks ending May 25, 1966, commercial banks held $22.512 billion of reserves, of which $22.197 billion were required and $315 million (little over 1%) were excess. Source: Federal Reserve Bulletin, August 1966, p. 1184.

payments, it writes a check on the Fed, which ends up as a bank deposit of HPM at the Fed; when the Fed buys assets (government bonds, foreign currency, or commercial bank IOUs) it credits a bank deposit of HPM. In other words, any time the treasury or central bank spends, HPM is created. On the other hand, tax payments destroy HPM as bank deposits at the Fed are debited. Furthermore, treasury or central bank sales of government bonds also drain HPM, thus, reduce bank deposits at the Fed. The excess of government purchases over tax receipts (or "deficit spending") generates an equivalent net injection of HPM.[5]

All else equal, government deficit spending generates excess reserves (or, HPM deposits in excess of minimum balance requirements); bond sales by the government thus are required to offer an interest-earning alternative to non-interest-earning excess reserves. Over the very short run (e.g. a day or two), the central bank ensures that the banking system as a whole has just the right amount of HPM to meet minimum balance requirements—mainly through open market sales and purchases of government bonds, although the discount window is also used—in order to maintain orderly overnight (fed funds) markets. In other words, regardless of its announced policy, the central bank always chooses a short-term (overnight) interest rate target and then ensures that the quantity of reserves is just sufficient to allow banks to meet minimum balance requirements. Over the longer run, it is primarily the treasury that supplies the right amount of bonds to drain excess reserves from the system. The treasury and central bank develop complex, coordinated operating procedures to ensure that the banking system is continuously supplied with the correct quantity of reserves. (See Bell 1998 and Wray 1999.)

Previous to the development of the fed funds market (created in the mid 1950s, but maturing in the early 1960s), individual banks used government bond sales or purchases to adjust HPM balances. A sale of a bond by a bank to a bond dealer would result in an HPM debit of the dealer's bank's reserves and a credit to the HPM reserves of the selling bank. Purchase of a bond would debit the bank's HPM reserves and lead to a credit of HPM to the bond dealer's bank. Thus, banks effectively used the bond dealers as "middlemen" to shift bank reserves from

[5] Fed purchases of gold or foreign currencies, as well as Fed open market purchases or loans at the discount window also inject reserves into the system—these injections need to be added to deficit spending by the treasury to obtain total net injections of HPM. See Wray 1999.

those with excessive balances to those who were deficient. Apparently this is what has led to the widespread belief that banks "operated on assets", selling out bond positions in order to make loans. With the development of the fed funds market, banks cut out the middlemen to market excess reserves, or, HPM balances, directly. This transparency led many economists to believe that something of fundamental importance had changed—that banks had "discovered" liability management, so that they would no longer need to sell bonds before making loans. While it is possible that many bankers may have believed themselves to be subject to reserve constraints such that they would, indeed, need to sell assets to obtain the reserves supposedly required to make loans, it is clear from balance sheet analysis that this was an imaginary constraint.[6] Banks always "operated on liabilities".

From the perspective of the bank, loans to customers generate long positions in IOUs; similarly, its holdings of government bonds are long positions in securities. A bank is not forced to liquidate its long position in bonds in order to obtain a long position in IOUs. Rather, it simply needs to short HPM to go long in IOUs. There are many factors which may go into determining the willingness of a bank to take long positions in IOUs and short positions in HPM. Obviously, one of the most important factors is the existing differential between the interest rate it expects to earn on the IOUs and the rate it must pay to short HPM (or, equivalently, to get depositors to go long in "bank money"). However, the bank must also factor into the analysis other costs (minimum HPM balances that have to be maintained against some of its short positions; capital requirements against its long positions—which reduces the return on capital). More importantly, because the short positions commit the bank to delivering HPM in the future (for the most part, on uncertain dates), it must be concerned with the future terms on which HPM can be obtained. This is why the expected course of interest rates will be (perhaps imperfectly) reflected in today's quotes. A "panic" or market break can occur when it is feared that HPM may not be obtainable on reasonable terms in the future—in which case banks won't go short to take long positions.

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[6] The Fed may have played a role in promulgating the belief that banks sell government bonds to raise the funds required to make loans. For example, the Fed argued "Government securities—because of their greater liquidity and lower yield compared with most other banking assets—traditionally provide banks with an important source of funds for balancing available resources with demands for credit." (Federal Reserve Bulletin, July 1966, pp. 942-3)

None of this should be interpreted to mean that the quantity of HPM acts as a constraint on bank ability to lend. When all is said and done, the Fed will supply exactly the quantity of reserves it requires banks to hold.[7] The question is over the conditions that will be placed on obtaining HPM: what will be the cost of "purchasing" HPM when reserves are needed, and what sorts of hoops will the Fed require a bank to jump through to obtain them?

When the Fed began to raise interest rates in 1966, market rates were quickly pushed above Regulation Q ceilings. Market savvy "depositors" liquidated their long positions in regulated deposits and searched for better returns. This hurt the large New York banks relatively more than it would hurt, say, mid-western thrifts that relied on small share accounts of mom-and-pop depositors. Deposits tended to "flow out" of New York banks and into "Eurodollar" accounts of foreign banks, or, more simply, into accounts of foreign branches of US banks.[8] Note that the deposits do not really flow anywhere. At most, the nominal holder of the US bank deposit merely shifts from a US household to a foreign commercial bank.[9] In other words, there is no "disintermediation"—only the name of the account holder is changed from John Q. Public to Eurobank (and, in the case of a transfer to a foreign branch of a US bank, not even the name changes). The foreign commercial bank then holds a long position in dollar deposits which is leveraged as the bank takes long positions in dollar IOUs, matched by short positions in created dollar deposits.

The problem, then, was not that banks "lost" deposits, but that costs rose. Eurodollar deposits were not covered by Reg Q (thus, raised costs) but did not require minimum HPM balance requirements (legally required reserves) until 1969 (which offset some of the increased cost). In addition, banks innovated to provide Americans with deposit accounts that

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[7] Or, more generally, the quantity of settlement balances banks wish to hold (as in a system without legally required reserve ratios). Even in the case of the US, it is possible that required reserve ratios could be reduced so low that they are not effective, that is, so low that banks would desire to hold more reserves than legally required. Still, the Fed would have to ensure that the banking system had the desired level of reserves for otherwise overnight (fed funds) rates would rise above targets.

[8] Between January 26, 1966 and September 28, 1966, liabilities of US banks to their foreign branches doubled from $1.7 billion to $3.4 billion. Source: Federal Reserve Bulletin, January 1970, p. A86.

[9] Between March and November 1966, short term liabilities ("HPM shorts") of US commercial banks to European commercial banks increased by $3.2 billion. (Ranlett 1977, p. 93)

circumvented Reg Q, but these, too, promised higher interest rates—especially in comparison with zero-interest-earning checking accounts.[10] Not only were costs higher, but there was no way to know how high the Fed was going to push interest rates, and there was every indication that the Fed was going to erect more hoops for the banks to jump through. As Dickens indicates, fiscal policy remained expansive and the administration's success at informal wage and price controls was questionable at best. As a result, it was reasonable for "the market" to conclude that monetary policy, alone, would be responsible for inflation-fighting, and that meant that interest rates could rise sharply higher. In such an expectational environment, banks were reluctant to "short" HPM to go long in IOUs and securities. Some might even have tried to liquidate some long positions in securities to continue to service valued customers (providing additional loans) without increasing short positions. However, while sales of bonds by an individual bank could increase its own deposits of HPM, this could not increase system-wide HPM deposits unless the sales were to the Fed.

Figure 2 shows that commercial bank holdings of US government securities remained at a level of approximately $60 billion from 1955 through 1969. In other words, there is no evidence of a general trend for banks to "operate on assets", selling securities in order to make loans. There is a small cyclical component, however: banks tended to buy government securities around the 1958 and 1960 recessions (shaded in the figure)—probably because the demand for loans falls (and bank willingness to lend to the private sector probably falls as well)—although the effect is not large (and in the case of the 1960 recession, is evident only after the midpoint). Figure 2 also shows that there was a strong, long-term increase of bank holdings of state

[10] Note that Professor Dickens is right to emphasize "intra-class" differences. Even as late as May 11, 1966, the vast majority of banks had not raised interest rates on savings deposits since December 3, 1965—in other words, the Fed's tightening had not increased rates actually paid on savings deposits to the ceiling rates permitted. Indeed, according to the Fed's survey, the "bulk of all member banks as of May 11, 1966, were still paying a maximum rate no higher than 4 1/2 per cent on most types of time deposits" even though they could pay the ceiling rate of 5.5%. On the other hand, 79% of banks which issued negotiable CDs with denominations of $100,000 or more reported that they had raised interest rates paid. (Federal Reserve Bulletin, August 1966, p. 1104) However, as the tight money policy continued in the third quarter, the percentage of banks that raised interest rates between May 11, 1966 and January 31, 1967 climbed to 54% for consumer-type time deposits and to 71% for business-type time deposits. (Federal Reserve Bulletin, April 1967, p. 520)

government and municipal securities from 1961 through 1968.[11] The only break of that trend occurs between the third and fourth quarters of 1966—when bank holdings actually fell by almost half a billion dollars (see Table 1 for details). Note that bank holdings of US government securities also declined in 1966, falling rather sharply from the first through the third quarters (see Table 1 for details).

This certainly seems consistent with the Wolfson (1994) story, according to which banks chose to continue to service their customers rather than to buy government securities. As Table 1 shows, between the fourth quarter of 1965 and the third quarter of 1966, banks sold $6 billion of US government securities, in addition to the $440 million municipal securities sold between the third and fourth quarters of 1966. Banks also sold off $340 million of corporate and foreign bonds between mid 1965 and midyear 1966, adding further support to the view that banks were trying to reduce securities while maintaining lending to customers. However, Dickens is quite correct to argue that banks were not forced by disintermediation to sell bonds—banks did not lose any deposits to disintermediation. In Figure 3, it is clear that commercial bank loans grew strongly over the entire period, regardless of the relatively constant holdings of government bonds—there is no evidence that banks sold-off bonds in order to make loans. Figure 4 adds the fed funds rate to the same picture, which indicates that tight money episodes reduce bank willingness to buy bonds—the fed funds rate spiked in 1957, 1960, 1966 and 1969, and in every case bank holdings of US government securities fell sharply. This probably has more to do with the uncertainty generated by tight policy over the terms on which HPM can be obtained, as well as with the unexpected capital losses that might accrue to bonds if the Fed should persist in interest rate hikes. Thus, while banks do not have to sell bonds to make loans, during tight money periods they choose not to increase bond holdings, and, indeed, reduce bond holdings by several billion dollars in such periods. In 1966, this led to a disorganized municipal market that forced the Fed to intervene.

[11] Between 1962 and 1965, banks took up an average of more than 72% of all state and local government bond issues. (Federal Reserve Bulletin, December 1966, p. 1745)

Minsky's FIH and the 1966 Crisis

According to Minsky, the US economy emerged from WWII with a "robust" financial system with a predominance of "hedge" financing. As Charts 1-3 show, bank balance sheets were flush with US government securities—about 40% of total banking credit in 1955. This was a consequence of conservative financial practices (due in part to supervision and regulation, but also to memories of the Great Depression and to "evolutionary" forces that had eliminated risk-lovers during the 1930s), of the tremendous government deficits of WWII (and the consequent issue of government bonds), and of the lack of opportunity to lend to the private sector (due to war-time controls, temporary nationalization of industry, and large household savings). Gradually, as the private sector began to grow and as memories of the Great Crash receded, balance sheet leveraging increased. Nonfinancial firms increased borrowing, committing larger portions of expected income flows to debt service; financial firms, including banks, financed this activity by increasing the ratio of loans (and other riskier assets) to government securities. As is obvious from Chart 1, the major change to the composition of bank credit was the rapid, sustained decrease of the importance of US government securities and the similarly rapid and sustained increase of the importance of loans. As Chart 3 shows, US government securities fell to less than a fifth of bank credit by 1966; in contrast, bank loans (excluding mortgages and consumer credit) rose rapidly from 24% of bank credit in 1955 to 33% by 1966.[12] Financial innovations allowed banks to increase HPM leverage ratios—that is, to issue more liabilities without increasing reserve requirements. Furthermore, banks, especially, moved from reliance on relatively stable demand deposits (which, while payable on demand are actually quite predictable) to greater reliance on time deposits (which, except for passbook savings accounts, are unstable)—as Minsky shows, demand deposits made up approximately 70% of total bank liabilities in 1952, but this had already fallen to about 40% by 1966.

As discussed, fear of inflation led the Fed to increase interest rates over the course of the expansion; the fed funds rate rose from less than 2% in 1961 to 5.75% in 1966, causing market

[12] In the chart, loans to business are included as "loans not elsewhere classified" (nec), of which most are commercial and industrial loans.

rates to rise sharply (the six month CD rate peaked at nearly 6.15% in mid 1966). While banks can always eventually adjust to higher rates, rising rates reduce profitability because assets are generally longer-term than liabilities. This is particularly true of thrifts—whose problem in 1966 was not so much that Reg Q limited the interest rate they could pay on deposits but rather that they could not "afford" to pay market rates given their return on mortgage assets.[13] Similarly, as noted above, the problem faced by commercial banks was not "disintermediation" but rising costs of issuing liabilities and uncertainty regarding the future course of interest rates. Finally, while banks could continue to provide loans to their customers, the loans required higher interest rates and thus required that borrowers would devote ever-higher portions of expected income flows to debt service. Given all these factors, but especially uncertainty over exactly how high the Fed would push interest rates, banks reduced their demand for government bonds—including US treasuries as well as municipal bonds. By late August, the large New York banks had withdrawn altogether from the municipal new issues market. (Minsky 1986, p. 89)

As Minsky argues "By the end of August, the disorganization in the municipals market, rumors about the solvency and liquidity of savings institutions, and the frantic position-making efforts by money-market banks generated what can be characterized as a controlled panic. The situation clearly called for Federal Reserve action." (Minsky 1986, p. 90) There is no doubt that the Fed was concerned about a potential mass bank withdrawal from the muni market. As Dickens, Minsky and Wolfson all note, the Fed sent a letter on September 1 to all member banks emphasizing that "[f]urther substantial adjustment through bank liquidation of municipal securities or other investments would add to pressures on financial markets". (Quoted in Wolfson 1994, p. 38) Effectively, the Fed announced it would open the discount window to all banks that would continue to hold muni bonds so long as they could show they were constraining business lending. As Dickens notes, the muni market had begun to recover a day or two before this letter was sent, indicating to him that the letter was superfluous. However, this in no way proves that Fed intentions had nothing to do with the willingness of bond dealers to take inventories of munis before the letter was sent. While we don't have the Smoking Guns to

[13] However, rate hikes affected New York and large regional banks first, while only gradually spreading to smaller, country banks that generally did not rely on negotiable CDs in any case. (See note 10.)

indicate exactly what the Fed did in the days prior to posting the letter, Dickens's political economy approach should suggest that it is highly unlikely that the Fed would have sent the letter without first consulting with the large New York banks (who would have informed their bond dealers).

What we have, then, is a robust post-war expansion during which liquidity is stretched. Fearing inflation, the Fed tightens monetary policy to the point at which profitability of at least some financial institutions is threatened. Growing uncertainty causes a run out of a portion of the securities market. The Fed enters as lender of last resort to stop the run, and within a few months, it is forced to loosen money policy. The financial crisis is quickly relieved, although the conditions placed on the lender of last resort intervention (that is, that borrowing banks must show they are attempting to reduce loans to private business) cause a sharp reduction of investment ("gross private domestic investment decreased at an annual rate of 26 percent between the fourth quarter of 1966 and the second quarter of 1967" (Minsky 1986, p. 90)). This was accompanied by a large decline of the rate of growth of bank credit, which had been growing at about 8% per year from December 1965 through July 1966, but the rate of growth fell to 1.5% per year between July and December 1966. (Minsky 1966, p. 89) However, a recession did not result because government spending more than compensated for the fall of investment; "big government" maintained aggregate demand. Thus, as Minsky always argued, the two most important roles for government ("big bank" intervention as lender of last resort, and "big government" spending to provide a floor to aggregate demand) came into play to stop the 1966 "crunch" from generating a recession. The economy continued to expand, new financial practices emerged and were validated, leverage ratios increased, memories of the Great Depression faded, and markets came to expect that big government and the Fed would come to the rescue as needed. The 1966 credit crunch was followed by extremely tight money policy at the end of the 1960s, then by the "liquidity squeeze" and commercial paper run of 1970, the bank failures of 1973-5, the silver crisis of 1980, the LDC debt crisis of 1982, the saving and loan fiasco of the mid 1980s (and similar banking problems throughout the world), the 1987 stock market crash, the bond market crash of 1994, the Asian meltdown of 1997-?, the stock market crash (?) of 1998-9, the Russian default and hedge fund crisis of 1998, and the coming

Great Crash of 1999 (or 2000?). Sounds downright Minskian. That 1966 crisis was only a minor speedbump on the road to Minskian fragility.

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Figure 1 : Federal Funds Rate and Interest Rates on Certificates of Deposit

Source: Federal Reserve Board

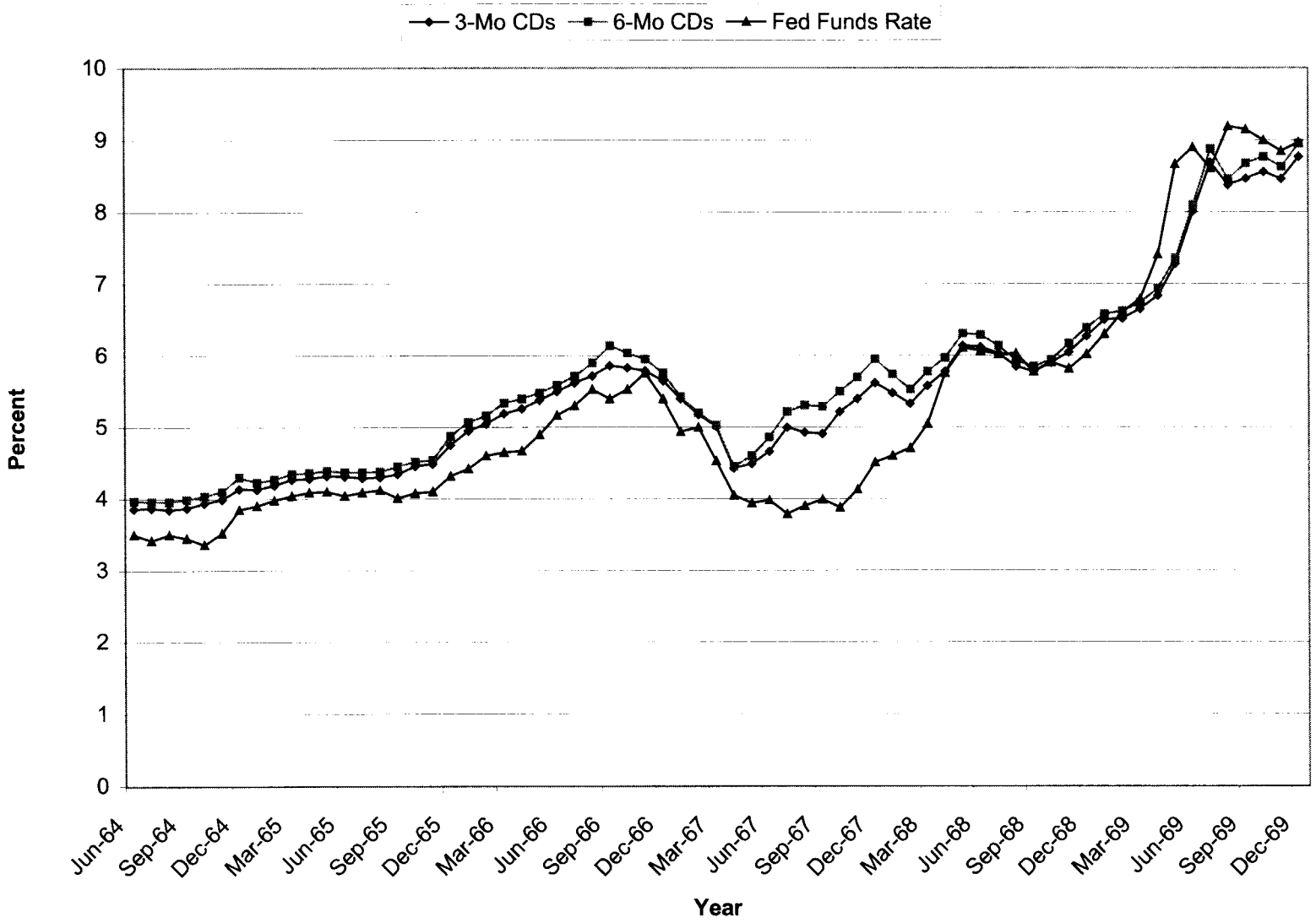

Figure 2 : U.S. Commercial Bank Government Debt : 1955 - 1970

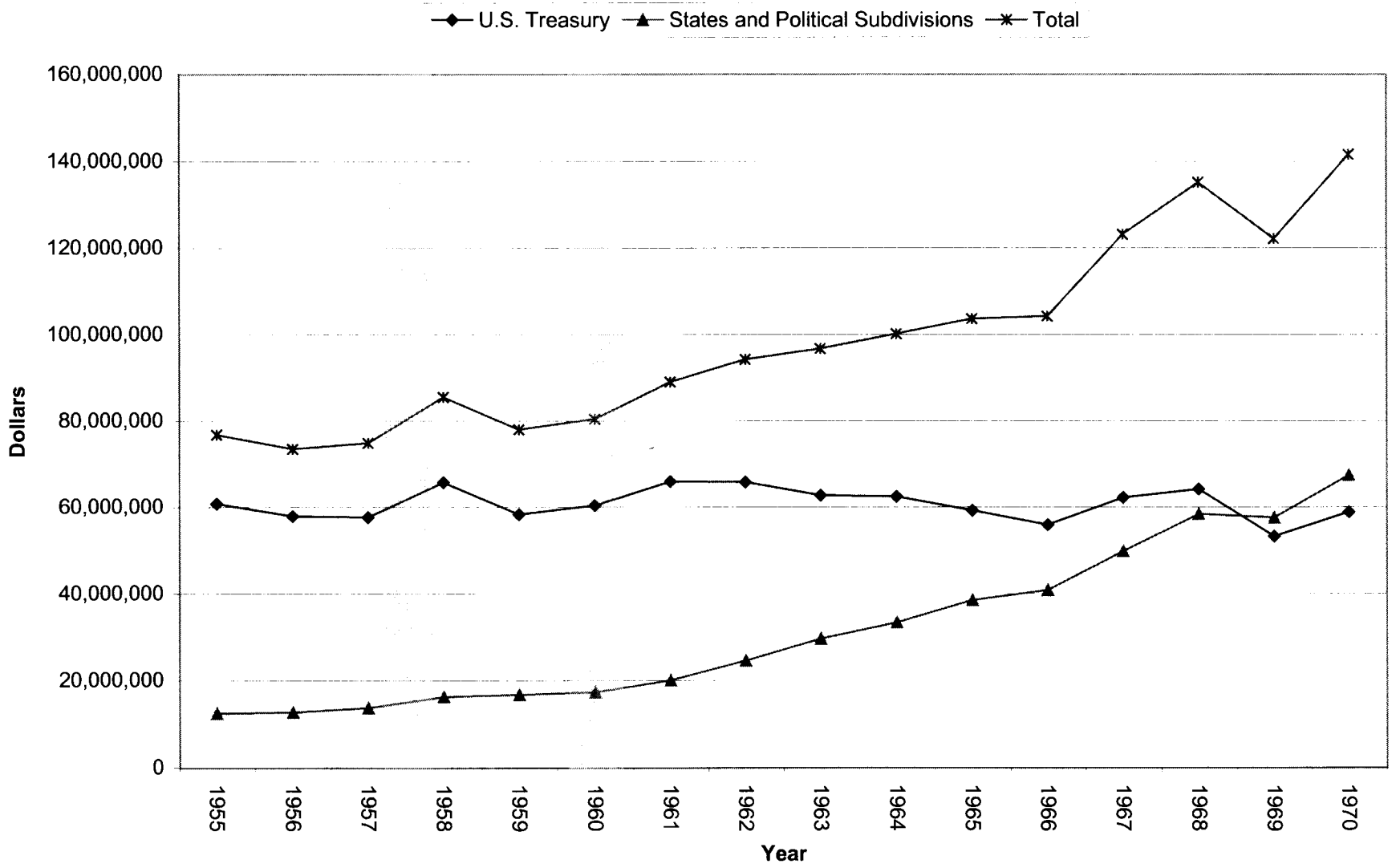

Figure 3: Commercial Bank Loans and Holdings of Government Debt

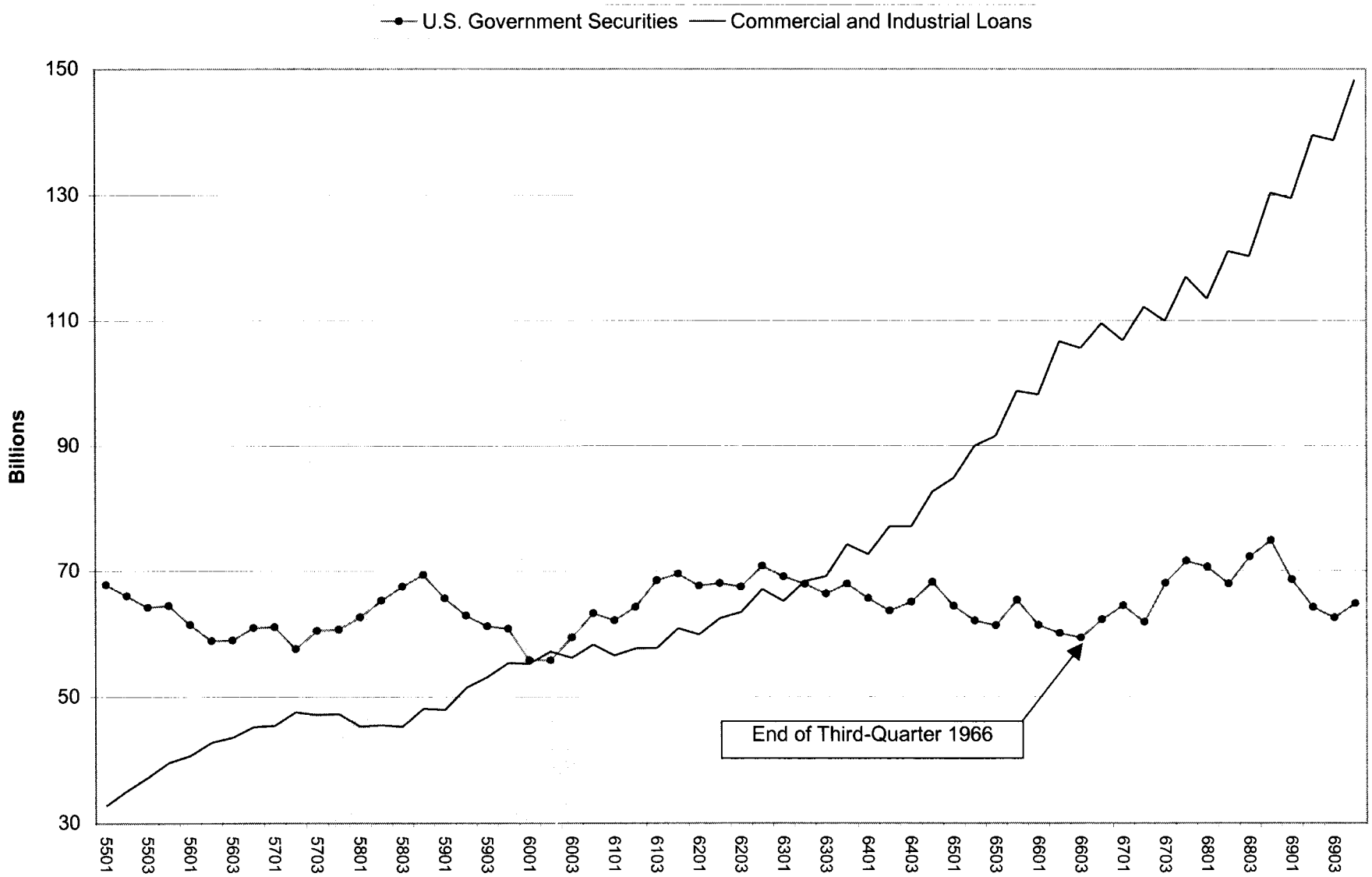

Figure 4: Commercial Bank Holdings of Government Debt and the Federal Funds Rate

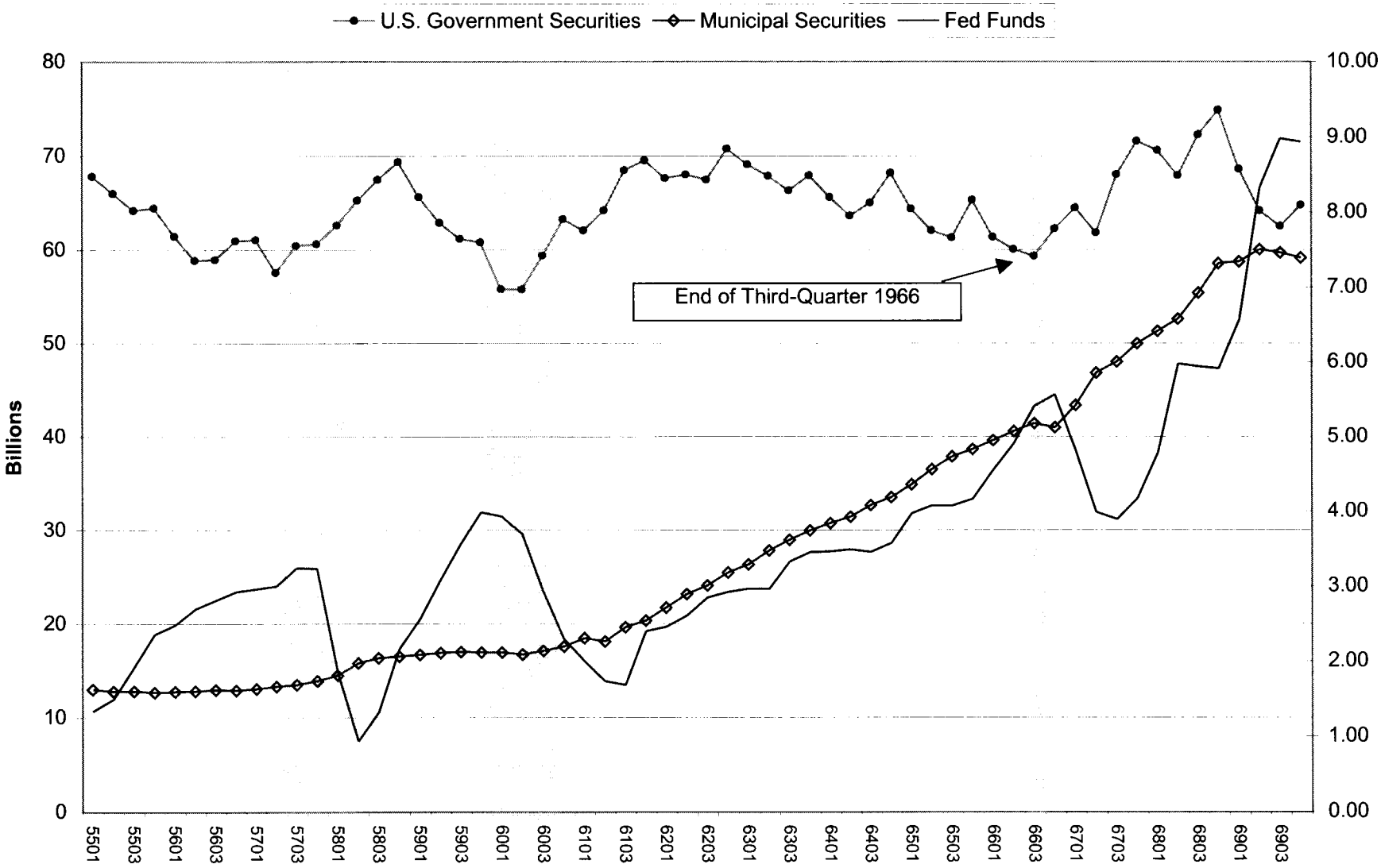

Table 1 : Federal Reserve Flow of Funds Data

DATE (yr/qtr)	U.S. Government Securities	Treasury	Agency	Other Agency Securities	Municipal Securities	Corporate and foreign bonds	Other bonds	Total
6401	65.64	61.5	4.14	4.14	30.76	1.22	1.22	168.62
6402	63.66	59.32	4.34	4.34	31.42	1.3	1.3	165.68
6403	65.02	60.71	4.31	4.31	32.68	1.28	1.28	169.59
6404	68.2	62.99	5.21	5.21	33.53	1.26	1.26	177.66
6501	64.38	59.04	5.34	5.34	34.89	1.32	1.32	171.63
6502	62.07	56.85	5.22	5.22	36.54	1.37	1.37	168.64
6503	61.31	55.93	5.38	5.38	37.89	1.24	1.24	168.37
6504	65.34	59.55	5.79	5.79	38.66	1.12	1.12	177.37
6601	61.36	55.43	5.93	5.93	39.61	1.03	1.03	170.32
6602	60.06	53.5	6.55	6.55	40.61	1.03	1.03	169.33
6603	59.34	53.61	5.73	5.73	41.44	1.08	1.08	168.01
6604	62.26	56.16	6.09	6.09	41	1.13	1.13	173.86
6701	64.48	57.83	6.65	6.65	43.4	1.41	1.41	181.83
6702	61.84	54.23	7.61	7.61	46.87	1.68	1.68	181.52
6703	68.04	60.09	7.95	7.95	48.05	1.78	1.78	195.64
6704	71.6	62.47	9.13	9.13	50.01	1.87	1.87	206.08
6801	70.63	61.2	9.43	9.43	51.33	1.92	1.92	205.86
6802	67.93	58.6	9.33	9.33	52.63	1.98	1.98	201.78
6803	72.27	62.54	9.73	9.73	55.44	2.03	2.03	213.77
6804	74.89	64.47	10.43	10.43	58.57	2.13	2.13	223.05
6901	68.61	58.51	10.1	10.1	58.76	2.15	2.15	210.38
6902	64.19	54.04	10.14	10.14	60.08	1.72	1.72	202.03
6903	62.53	53.2	9.33	9.33	59.72	1.65	1.65	197.41
6904	64.8	54.71	10.09	10.09	59.18	1.59	1.59	202.05

Chart 1 : The Composition of Commercial Banking Credit

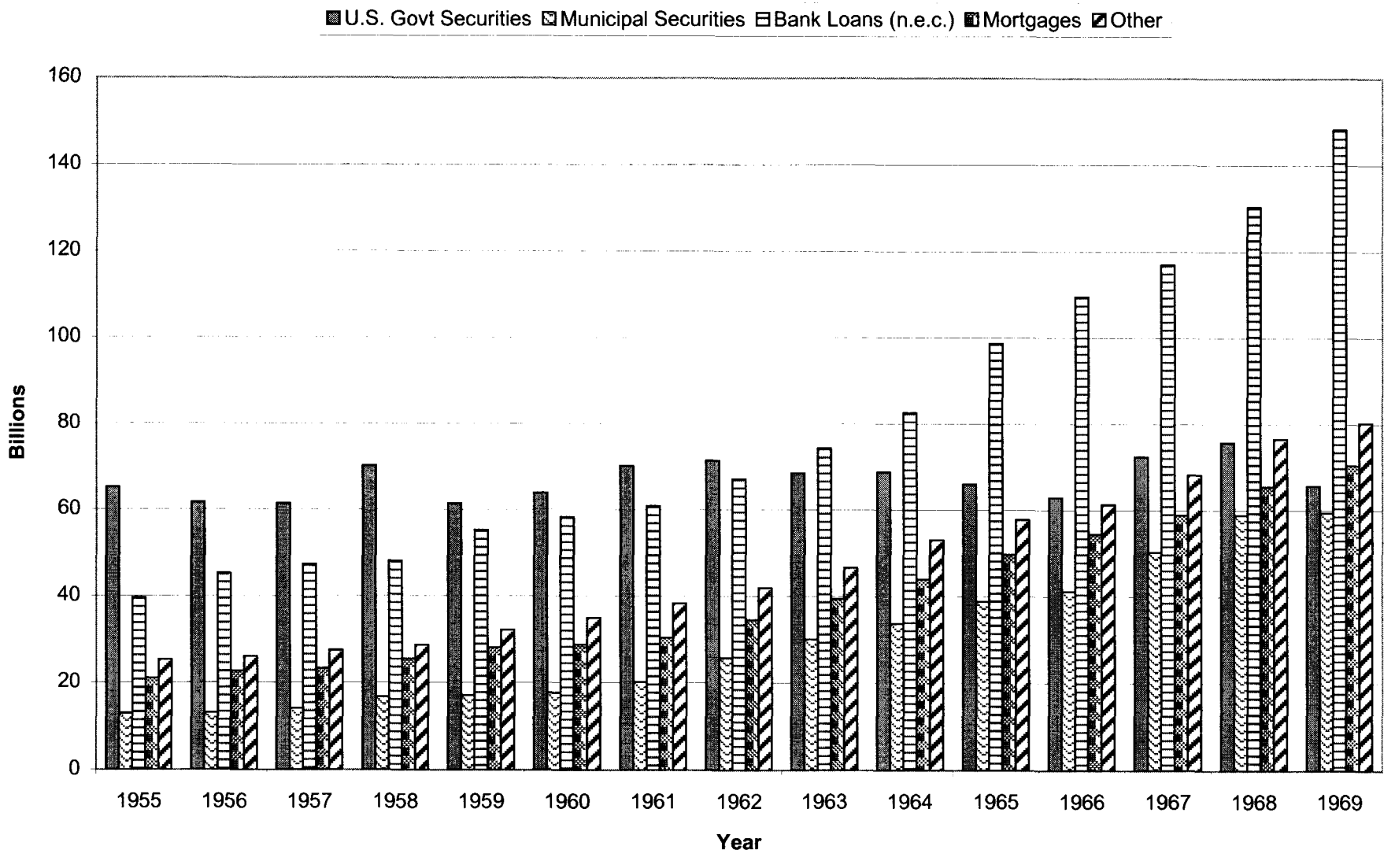

Chart 2 : The Composition of Commercial Banking Credit

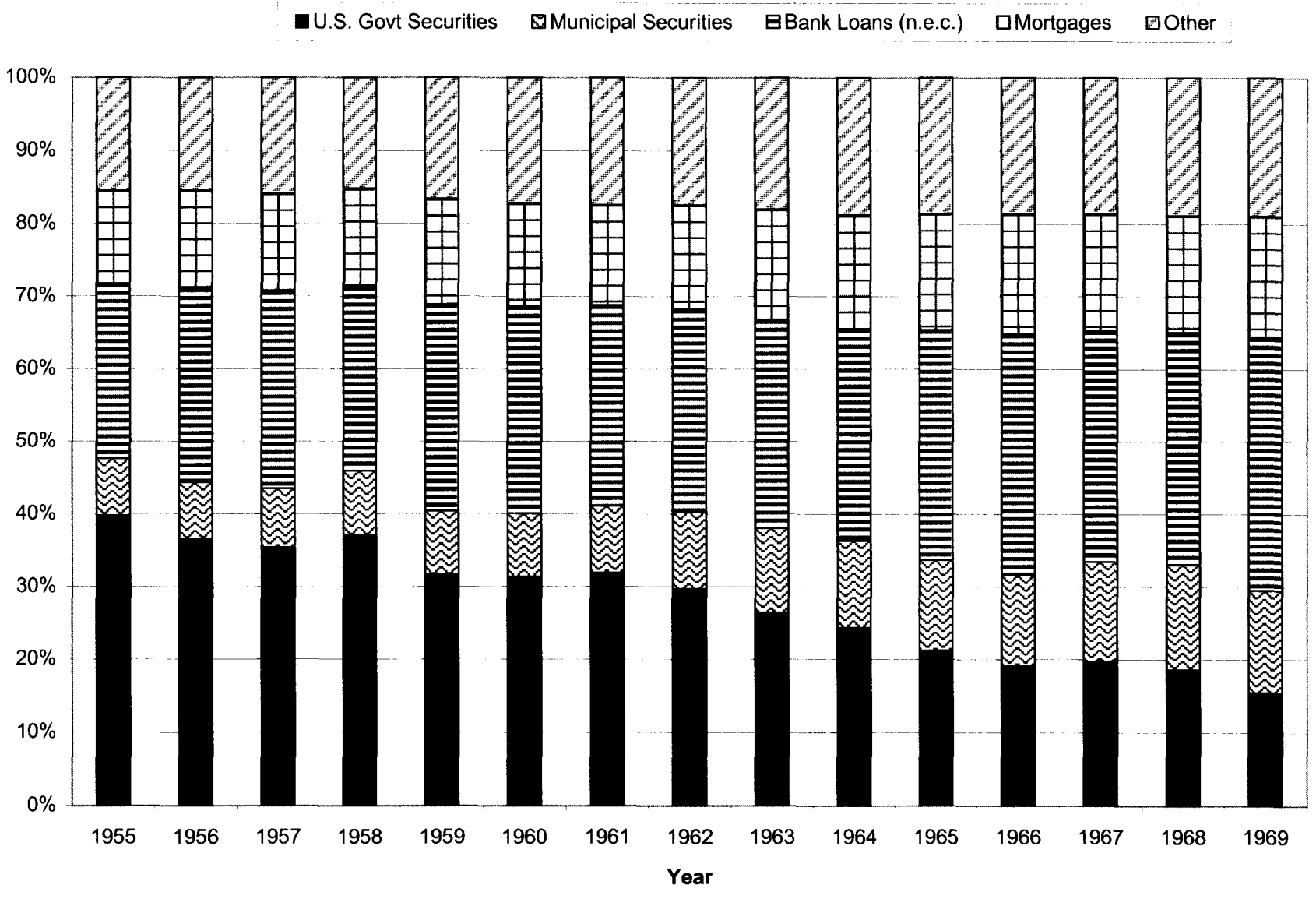

Chart 3: The Composition of Commercial Banking Credit