TITLE: MONEY, CREDIT AND FEDERAL RESERVE POLICY CHANGES

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INTRODUCTION

In October, 1979, the Federal Reserve Board instituted a sweeping policy change. This change of policy is discussed in this paper, and the possible effectiveness of the new policy is evaluated.

The paper is addressed to an intelligent layman in the insurance industry who may not be familiar with operations of the American banking system. As a result, the operation of the central bank, the definitions of money, the author's definitions of price and monetary inflation, the relationships between measures of money and Gross National Product are all discussed before prospects of the new policy's success is discussed. If the paper appears to be too pedagogical in nature, the author does apologize to the reader. However, the author cannot over emphasize how grave a matter price inflation can be for the insurance industry. An understanding of how the central bank works and what we in fact use as money today can shed light on how price inflation may be controlled.

Inflation is indeed a world-wide problem. At no time in history has there existed a situation when no country is spared the declining purchasing power of its national currency. Even Switzerland, over the past 15 years, has seen prices rise in terms of its currency. We have become victims of a fallacy that price inflation is an inherent part of civilization. This mistaken view

is especially held by young people who have really had no other experience.

Countries affected by high rates of inflation see their middle classes progressively wiped out of their liquid assets. Any semblance of sound credit arrangements is destroyed; and, as a result, additional risk is incurred by business enterprises to finance growth and real productivity increases. In especially severe situations, with the economic voting power of the middle classes destroyed, the void of economic power of the middle classes is substituted with dictators of either leftist or rightist persuasions. Inflation can eventually ruin both individual freedom and democracy.

Keeping in mind the potential gravity of the situation, let us proceed. Please bear with the author through the details. If the paper's conclusions are correct, you will be able to determine from readily available government data if price inflation is being controlled and to what extent.

INFLATION & INSURANCE

The Property & Casualty industry's indemnity contracts are basically promises to reimburse parties with money usually after the payment of premium. The delay between receipt of premium and payment of loss can be quite long. Other services like engineering inspection and risk management more closely resemble the activities of non-financial corporations; services are more nearly rendered at the time of money transaction. The Life Insurance industry to a far greater extreme defers benefits. It's the deferral period between payment of premium and payment of benefit that gives the insurance industry a vital interest in the maintenance of the general population's confidence of the "store of value" function of money. Needless to say, a Reichsbank-type hyperinflation would destroy the insurance industry.

Property and Casualty contracts are usually written for a year; the tail on loss settlements is short for property lines and can be quite long for lines like medical professional. As a rule, the shorter the contract period and shorter the tail on loss payments, the more able a line is to cope with price inflation. With after tax investment income seriously lagging price inflation, long tail lines are increasingly requiring insureds to pay for future loss payments of highly depreciated dollars in present dollars. These dollars absorb a higher portion of the insured's cash flow than

what otherwise would be absorbed if there were no price inflation. There is a limit to this drain on cash flow; and, if inflation continues at progressively higher levels, long tail coverages will become increasingly unmarketable.

Even with present levels of inflation, the reality exists of paying long term medical and chronic care expenses for many individuals suffering permanent injuries in the work place. It is doubtful if any company trends its potential health related payments at a 20% annual rate for 20 years - even when a disabled individual is expected to live 20 years. Such claims, as long as there are 15% - 20% rates of inflation, will continue to haunt future calendar year results. Aggregate Workers' Compensation known claim reserves will be chronically deficient.

Balance sheet implications of inflation are not just limited to deficient loss reserves. Bonds accumulated in less price inflationary periods drop in quotation as creditors seek to reimburse their bonds' depreciating capital value with higher interest rates. The old bonds with the lower coupon yields drop to compete with the new issue market. Even though statutory accounting permits valuation of bonds at the amortized value, it is doubtful such valuations are truly in the spirit of the liquidation concept of accounting. No one in 1980 sells a United States Treasury 30 year

bond issued and acquired in 1960 at the amortized value. Such a bond was probably originally priced to yield 3% to maturity. This old government paper flounders in the present credit market where yields for long term United States Treasury issues often exceed 10%.

Other papers in this call deal in a much more detailed way with the effects of inflation on an insurance operation. The concern of this paper is primarily Federal Reserve Policy and its prospects for success in succeeding to curb or stop price inflation. First, the nature of money and the money equation is discussed.

MONEY AND THE MONEY EQUATION

(1) $MV = G$ is the familiar equation relating money supply M, velocity V and Gross National Product G.

The gross national product is in current dollars. A slightly modified version of the above equation is:

(2) $MV = Gf_G$

where G is defined as real Gross National Product and f_G as the GNP deflator. Note that the instantaneous rate of price change may be defined as $i_G = \frac{1}{f_G}\frac{df_G}{dt}$. If i_G is positive, there is price inflation of G. If i_G is negative, there is price deflation of G.

i_G closely resembles what people mean when they talk about "inflation". This definition, however, is not standard terminology. Historically, inflation has meant the issuance of purchasing media (currency) by a bank or government beyond that bank's or government's acquisition of a physical asset of equal value of the purchasing media issued. "Physical" asset has to be emphasized; letters of credit do not count. One can easily see that such physical assets can only guar-

antee slow growth of paper issue if the rate of deposit is slow. The total quantity of the physical asset must grow very slowly; and, the total quantity over the long haul must grow at the same rate as real production to offer some hope of price stability over a long period of time.

For the purposes of this paper, monetary growth $\frac{dM}{dt}$ will be defined as monetary inflation (deflation) if $\frac{dM}{dt} > 0$ $(\frac{dM}{dt} < 0)$.

The historical meaning of inflation is dated since no major country today has its money supply tied strictly to deposits of a physical asset. Central bank gold is locked away and is almost never used to fulfill any of its traditional functions.

The concept of velocity in the equation relating money M to current Gross National Product is artificial. Intuitively, velocity is the number of times per year the money supply changes hands. Texts, in fact, define V as $\frac{GNP}{M}$. Money changes hands more times than is accounted for by equations (1) and (2), since most transactions are strictly financial transfers of assets. Stock and bond transactions in secondary auction markets, sales of existing real estate and raw and intermediate good production not included by definition in GNP are all bought and sold with money.

A more complete form of equation (2) looks something like this:

$$(3)\quad MV = \sum_i G_i f_i^G + \sum_j F_j f_j^F + \sum_K R_K f_K^R$$

where

G_i = the reference price of some physical good or service

f_i^G = an index bringing the i^{th} good transacted to the current price level

F_j = the reference price of the j^{th} financial instrument not included in M

f_j^F = an index bringing the j^{th} financial instrument transacted to the current price level

R_K = the reference price of real estate K

f_K^R = an index bringing the K^{th} piece of real estate transacted to the present price level.

An instantaneous rate of price change may be defined as $I_K^R = \frac{1}{f_K^R}\frac{df_K^R}{dt}$ for the K^{th} piece of real estate. Similar definitions hold for the G_i's and F_j's.

Equation (3) is an interesting generalization of equation (2), not for what it says about specific price behavior relationships of the G_i's, F_j's and R_K's, but for what it doesn't say about the

relationship of MV to economic activity (approximated by the i number of items in commercial production), the value of financial instruments transacted and the price and liquidity of real estate. For a given MV, theoretically real production and stock prices could be rising along with real estate; yet the cost of items in the GNP could be declining. A number of combinations are theoretically possible, and a number are born out in history.

There is general misconception that monetary deflation $(\frac{dM}{dt} < 0)$ necessarily implies depressed economic activity. Here, history clearly provides a counter example. The U.S. government first issued the present greenback to finance the Civil War; price inflation was significant during that war. After the war ended, the union government undertook a policy to contract the money supply. While price deflation was significant during the 20 years following the Civil War, the economy grew rapidly. In fact, the major portion of the American industrialization took place in the post Civil War period.

History also clearly points out that monetary inflation does not necessarily imply high price inflation for items in the GNP. Monetary inflation was quite significant from 1913 to 1929. In fact, these years are the first 16 years of the Federal Reserve System's existence. Both real estate and stock prices did rise

sharply, but both consumer and wholesale prices steadily declined from 1921 to 1929.

It is clear that other macroscopic and microscopic information is needed to predict price behavior. Controlling money supply is not necessarily an instant key to controlling price inflation.

Monetary Definitions & Velocity Characteristics

Let us now turn to the official definitions of money now used by the Federal Reserve System. These definitions were recently revised in the fourth quarter of 1979; the changes coincided with the major policy shift announced in October of 1979.

M1A = Currency plus Demand Deposits

M1B = M1A plus NOW, ATS (Automatic Transfer from Saving) and credit union share draft balances and demand deposits at thrift institutions.

M2 = M1B, money market mutual fund shares, overnight repurchase (RP) agreements issued by commercial banks, savings deposit at all depositary institutions (less than $100,000), small time deposits at all depositary institutions (less than $100,000)

M3 = M2, large time deposits at all depositary institutions (over $100,000), Term RP's issued by commercial banks and savings and loan associations.

L = M3, Eurodollar deposits of U.S. residents other than banks, bankers acceptances, commercial paper, savings bonds, liquid treasury obligations.

The historical values of these money concepts are given in Exhibit I. Rates of growth are given in Exhibit II.

The various levels of money when related to GNP in the equation MV = GNP yield some interesting empirical observations. You will notice looking at Exhibit III that velocity, except for some short periods of retracement, has steadily risen for M1A and M1B. M2, on the other hand, has had a corresponding velocity that is fairly constant over a long period of time. The implications of this fact are quite interesting when the liquidity of bank assets supporting M1 and M2 is analyzed.

By definition all the measures of money include cold cash (Federal Reserve Notes and coin). These instruments are legal tender and must be accepted by law as settlement of debts. M1 also includes checking account deposits in commercial banks. For banks who are members of the Federal Reserve System, 16 2/3%[1] (reserve requirement) must be kept in a non-interest bearing bank asset account at one of the Federal Reserve Banks. A bank may convert any portion of these reserves to Federal Reserve Notes any time it chooses; these assets are as liquid as cash. But, bear in mind for every $1 reduction in non-interest bearing deposits the commercial bank makes, there has to be a correspond-

[1]Reserve requirement prior to 1980 Monetary Reform Act.

ing $6 reduction in the demand deposit liability of the commercial bank. If everybody all over the United States decided on one day to withdraw all their demand deposits, those individuals would be guaranteed 1/6th of their checking account deposits. We are all completely liquid in such an extreme situation to have the currency and coin in our wallets and 1/6th of our demand deposits held in Federal Reserve member commercial banks. Demand deposits at non-member commercial banks and NOW type accounts at savings banks and savings and loans until recently were not required to maintain non-interest bearing deposits at Federal Reserve Banks. These banks in such an extreme situation would not be able to give their depositors any portion of the bank's NOW account liabilities; they could only offer their depositors the bank's cash on hand, if they had no FRB non-interest bearing deposits.[2]

The major components added to M1B to obtain M2 are savings passbook type deposits and shares in money market funds. Private individuals very much treat these M2 components as money. In recent history, commercial banks or savings and loan associations have not exercised their right of notification by a depositor to withdraw such funds prior to withdrawal. The public, as a result, has more and more thought of such deposits as completely liquid

2 Only true before Monetary Reform Act.

assets. As long as there aren't mass withdrawals, and/or the banks maintain sufficient cash and easily marketable securities, the public is justified in its "good as money" view of savings deposits. Savings banks and savings and loans also have the major portion of their passbook deposits secured by real estate loans. The ability to convert many of these loans to cash quickly, especially in the real estate market prevalent in late 1979 and early 1980, is nil. Ultimately, the use of the passbook component of M2 as money requires that banks maintain a substantial amount of their funds in liquid short term instruments. The critical point to keep in mind is that the liquidity requirements for most of M2 is substantially less than the liquidity requirements for demand deposits.

M2, fortunately, turns over about 1½ times a year as you can see from Exhibit III in contrast to the six times per year for M1B. A truly serious situation could develop for many banks if M2 turned over as quickly as M1B. It is possible that the present turnover rate of M2 is optimal, and that its increased turnover during economic expansions produces liquidity problems. This growing illiquidity induces a break in economic activity. Notice in Exhibit III that the recession periods of 1970 and 1974 are preceded by years of increased M2 velocity. On the other hand, recoveries are preceded by contractions of such velocity. The

recession reduces turnover of M2 and lessens the banking system's liquidity problems.

It is important to keep in mind that we are using as settlement of debts and payment of salary today far more than currency and coin and commercial bank non-interest bearing deposits in Federal Reserve Banks. This high powered money began taking a back seat when the Federal Reserve Bank was created; fractional reserve banking became an officially condoned part of the American banking system. In a fractional reserve system, a large portion of deposited money, which is intended to pay debts immediately, is lent to others so that they can pay off debts.

The use of the demand deposit component as money, however, was only the first departure from "storage receipt for gold" paper money. Since the end of World War II, the majority of people for the first time in history have had enough money to deposit in a savings account. The asset loans securing such deposits are far less liquid than the loans securing demand deposits. M1A and M1B have taken a back seat, since people have become content with the savings account as a secure source of transaction funds.

FEDERAL FUNDS MARKET

& CREATION OF MONEY

Bank assets held as a reserve for deposit liabilities are referred to as Federal Funds. Commercial banks trade their federal funds bank reserves in the Federal Funds Market. The range of interest rates (annualized) is published daily in the financial press, and these key interest rates can be followed easily.

Many banks temporarily will find themselves flush with federal funds by a reduction of some checking account deposits along with a sudden retirement of a large loan. The bank has federal funds in excess of the amount required to support its demand deposits. These excess funds earn no interest. It is in a bank's self-interest then to acquire an asset with the excess federal funds which yields investment income. The bank can purchase treasury bills, make a loan or specifically make such a loan of funds to another bank. Making a car loan takes some time, so lending the money to another bank is a fast way to put the funds to work. Usually the funds rate is higher than the treasury bill rate; and, therefore, the income generated from lending the funds to another bank is more lucrative.

The purchaser or borrower of federal funds is frequently a bank

that needs such funds to support additional checking account deposits. When a loan is made by a bank, the money is deposited immediately in the borrower's checking account at the lending bank. Such an entry must be supported by the lending bank meeting the necessary reserve requirement. This bank becomes the purchaser or borrower of federal funds in the federal funds market.

The Federal Reserve Bank is an active participant in this market. In fact, its participation in this market determines the total amount of federal funds in the banking system. Before October of 1979 the Federal Reserve emphasized maintaining a stable and only gradually changing federal funds rate as its primary objective. Private demand for credit during economic expansions at a given price level creates the need for more demand deposits. Banks then compete in the federal funds market for the additional federal funds to support the additional demand deposits. If there aren't excess reserves in the system, the price of federal funds (the interest rate) rises giving bankers second thoughts about making marginal loans. They cut back on lending activity and supply and demand for funds is brought into balance.

Since the Federal Reserve during the decades of the fifties, sixties and seventies emphasized a stable and slowly changing

federal funds rate as primary policy, in order to meet the banking system's increased demands for federal funds, the Federal Reserve simply created the funds to meet the increased demand. The Federal Reserve creates such funds by purchasing government debt from private banks. The private bank simply takes one of its assets like a government treasury bill and sells it to the Federal Reserve for an increased ledger entry in its non-interest bearing account at the Federal Reserve Bank. Notice that high power money is created first by the Federal Reserve purchasing treasury bills. The combination of the demand for a loan by an individual or non-banking private institution and a bank's increased lending ability by its increase in total federal funds held creates the demand deposit. Additional M1A is determined basically by a private bank's and corporation's willingness to create a loan agreement. Further back in the chain the Federal Reserve must accommodate the system by purchasing a government debt instrument. And, most importantly, the government must go into debt in the first place.

The Federal Reserve, by law, cannot purchase debt other than federal government debt in order to create federal funds. If the federal government didn't have any debt outstanding, the Federal Reserve Bank's federal funds creating ability would be nil, unless Congress permitted the Federal Reserve Bank to create funds

by purchasing real assets like gold or silver or by purchasing private debt.

At present, though, private banks can borrow federal funds from the Federal Reserve Banks by securing such loans with private collateral. The loan is made at the so-called discount rate. The loan is carefully evaluated by the Reserve Bank when non-government collateral is used. Treasury securities can be used as collateral and at certain periods in the past, like July and August of 1974, the discount rate was fixed lower than the treasury bill rate. The situation caused a ballooning of borrowing at the discount window, and the banks without any risk pocketed the interest rate differential as earnings!

It is important to note that federal funds can be created with practically no constraint. At present, the federal government has a debt in excess of 900 billion dollars; and the Federal Reserve Banks can buy all of it. The Federal Reserve Banks' only constraint in creating federal fund bank reserves is theoretically limited to the amount of government debt outstanding. Note that all of M1A is about 400 billion dollars. However, even though the purchase of all government debt in the federal funds market would drive federal fund interest rates to near 0%, this does not necessarily imply that M1A would increase. The bank

deposit components of M1A can only be created by a conscious decision of both a bank and a non-bank party to borrow money.

It isn't unusual for the banking system to have excess reserves. Theoretically, the government, by its issuance of government debt in combination with massive purchases of such debt by the Fed., could forestall any conceivable run on the banks. Even while this massive monetization of government debt is going on, the situation doesn't dictate monetary inflation of M1A, M1B or M2 or corresponding price inflation. During the 1973 - 1975 recession, the federal government increased its total debt at annual rates of close to 80 billion dollars. The Federal Reserve did monetize a portion of this debt to prevent excessively high short term interest rates that would otherwise have been induced by the massive government borrowing. The higher short term interest rates resulting from the government debt expansion would have prolonged the recession into late 1975 and the 1976 election year. But even though there were significant increases in bank reserves resulting from Fed activity in 1975, virtually all measures of price inflation were below the 5% level in late 1975 and 1976. In fact, for the first three months of 1976, the CPI rose at a amall 2.5% annual rate.

When the economy began to recover from the recession in the second

quarter of 1975, the combination of the initially lower monetary velocity of M2 following a recession and slow deposit creation resulted in a moderately increasing price level through early 1978. When full business and consumer confidence was restored, a borrowing spree and resulting M2 growth and M2 velocity growth took hold well beyond any real output potential of the economy. The Federal Reserve and the federal government had planted the seeds of the wild 1978 - 1980 price inflation in 1975.

It is most important to remember that the lag time between Fed purchase of government debt (monetization of that debt) and the resulting price inflation is very long indeed.

FEDERAL RESERVE POLICIES - POST 1940

The depression during the 1930's produced a precipitous decline in price level by almost any measure. The CPI was cut in half, while stock prices and real estate prices fell 90% from 1929 to 1932. The fiscal and monetary stimuli associated with the New Deal caused modest price recovery in the 1933 to 1940 period. If the people had confidence in nothing else during the depression, they certainly had confidence in the American currency.

The Federal Reserve Banks and the Treasury formed a pact to finance the preparations for World War II and the war itself. A few years of high monetary and price inflation were acceptable to the public especially considering the financial devastation of the preceding ten years. The Federal Reserve Banks agreed to purchase all government debt necessary to keep short term Treasury Bills selling at 3/8% annual discount and long term government securities selling at 2½% interest. A policy of blanket monetization of government debt was assumed. M1A rose at 30% annual rates, and prices rose at over a 10% per year clip. Prices did not rise nearly as rapidly as money supply, since there was considerable slack in the economy; and money could only be spent on many items, if the money were accompanied by appropriate ration coupons. Black markets were rampant, so that the official price indices probably understated the actual rise in price level.

The official policy of freezing interest rates on long term government bonds continued after the second world war, but government expenditures sharply dropped so that growth in total bank reserves grew very solwly. Monetary and price inflation retreated to low levels. To many people's surprise at the time, the 1946 recession did not mark the beginning of a new depression. The economy grew rapidly with modest price inflation with only minor economic setbacks from 1946 to 1965.

The Korean War marked a two year period of high inflation. When the military action ended a new Federal Reserve policy was instituted. The freezing of government interest rates ended, and a policy to prevent gyrations in the banking industry's federal funds market was assumed. The fear of a return to the depression had subsided; the new policy worked well even though policymakers never made control of overall money supply a primary concern. Government deficits were negligible for most of the late 40's, 50's and early 60's. The private economy worked well in an era where money supply grew slowly.

The demand of the Vietnam conflict and the promises of the New Frontier and Great Society pressed the country's productive capacity to the limit. There was never any serious belief that you could have more than the production possibility curve's

frontier would permit. Income generated by the private economy and resulting tax revenues could not finance both guns and butter. The federal deficit began to grow significantly, and the private banking industry via its Federal Reserve Banks wanted to maintain slowly changing federal fund rates. The policy that had worked well for 15 years began to fall apart.

The sum total of private and federal government liabilities held by the Federal Reserve Banks, which is known as Federal Reserve Bank Credit Outstanding[3], grew from $27.3 billion to $31.2 billion from 1952 to the end of 1961. Not much government debt had been monetized. The New Frontier saw total reserve bank credit grow to $40 billion by the end of 1964 - 28.2% in just three years.

Foreign reaction to the monetization of debt was predictable. Since 1934 the United States pledged to surrender to foreign bearers of Federal Reserve Notes one troy ounce of gold for $35. The French government was not unique in noticing the mass monetization of the United States Government debt, but the French government was the first to act by exchanging substantial amounts of dollars for American gold. The West Germans followed suit but without Charles DeGaulle's fanfare.

3 See Exhibit V

In retrospect, both countries have done well seeing the dollars they sold lose more than 60% of their purchasing power and the gold purchases appreciate almost twenty fold in the same period. DeGaulle in the early sixties was characterized as an anachronism by the "modern" Keynsian economists. The old man had seen many European currencies destroyed through war and political expediency. His suspicions about America's monetary future so far have been prophetic.

The first three years of the Vietnam War, 1965-1968, saw total Federal Reserve Credit rise to over $56 billion. Foreigners very quickly got gold fever in the winter and spring of 1968. The Viet Cong Tet offensive of February of that year had shown that for the American venture to be a success, light at the end of the tunnel would not appear for years. The American military were talking about adding another 200,000 troops to the 500,000 troops already there. There was no way the United States could afford the additional expenditures without a massive domestic tax increase in an election year. Foreign dollar holders became very nervous and cashed in their dollars en masse. By May of 1968 the United States had sold over 56 million ounces of gold to keep the price at $35/ounce. The net result was for the United States to refuse sales of gold to private foreign holders of dollars other than foreign central banks. Foreign central banks could still

buy directly from the Treasury at the official $35 price; a two tier price level was then established.

With the number of foreign dollar bearers who could trade in dollars for gold sharply reduced, the temptation of the American government to promise the world to the electorate became more and more a reality. The constraints that the gold exchange standard had imposed on Federal Reserve Bank Credit creation were evaporating quite rapidly. Heavy deficit spending continued even with the Vietnam War winding down. Finally on August 15, 1971, the United States defaulted on its gold exchange agreements with foreign central banks, There was now no longer any restraint on deficit spending and the corresponding monetization of a portion of that government debt.

The, gold exchange requirement for foreign holders of American dollars acted as a strict control on both government deficits and corresponding monetary inflation. With a steady diet of government deficits, the Federal Reserve was forced to monetize more than a prudent amount of the debt to maintain stable federal funds interest rates. The policy of controlling such interest rates came to an abrupt halt in October of 1979.

OCTOBER, 1979 - AND SOME IMPLICATIONS ON INSURANCE TRENDING

The main thrust of the decisions of October, 1979 is to control the quantity of money. The enormous increase in government debt in the last 15 years had presented a serious dilemma to monetary authorities. Stability in the banking industry's federal funds market could only be maintained with increased monetization of government debt. The underlying base for money supply was increasing at levels well beyond the economy's ability to increase real output. The initial decision was to specifically restrict M2 to an annualized growth target of a maximum of 8%. Given an underlying long term growth potential of 3% per year, a 5% long term rise in prices would be achieved.

The latter parts of 1978 and all of 1979 had seen the CPI marching ahead in the double digit area. The public saw its savings shrinking rapidly, and a classic "buy now to hedge future price increase" mentality was taking hold. The legal restrictions on small deposit interest rates were partly to blame for this situation; 5-8% returns on savings just could not protect financial capital from the double digit gallop in prices. The hedge buying was not only financed with current income but also with debt burdens expanding rapidly. Both business, consumer and mortgage loans were expanding at a 20% annual clip in most of 1979. With new Federal Reserve Bank policy of limiting M2 growth, the public's demand for money

collided with a stone wall.

The free market price of money (interest rates) rose on all fronts. Government T-Bills were selling at a 15% discount. Mortgage rates hit 17% in some areas; long term bond prices fell through the floor with triple A issues yielding 14%. Demand for money was being brought in line with the new supply policy. The previous policy of the Federal Reserve Bank to maintain stable but slowly changing federal fund interest rates would actually have further fed inflationary psychology. Demand for credit was so strong that depressed interest rates resulting from Fed T-Bill purchases would have further induced the buy now and pay later with cheaper dollars mentality. The initial confrontation of the new policy with the inflationary psychology was a great success. Price inflation began to decelerate by mid-1980.

The GNP deflator hit a peak of 11% annual rate of change in the second quarter of 1980. M2 was controlled within targets for the 1st quarter of 1980. The tight money policy initially resulted in a sharp drop in real production and the policy can be partly blamed for the 1980 recession. It is apparent that in order for real growth to return to the economy, businessmen and wage earners must lower their objectives on wage and price increases.

For the insurance industry in particular, assuming the country returns to a 3% long term annual rate of growth, an 8% M2 growth will simply translate into a 5% long term price inflation. For long term planning, Federal Reserve targets on M2 and achievements of monetary growth goals should be watched carefully.

THE MONETARY CONTROL ACT OF 1980

"The Depository Institution's De-regulation and Monetary Control Act of 1980" was approved by President Carter on March 31, 1980. It has been described by Senator William Proxmire, Chairman of the Senate Committee on Banking, Housing and Urban Affairs, as the most significant legislation since the passage of the Federal Reserve Act of 1913.

As the name implies, there are really two main aspects to the act. The first is to deregulate; the second is to somehow control money. The spirit of deregulation appears to be negated by an implication of further control in the title of the act. My main concern is actually the control portion of the act. Suffice it to say that the act only deregulates over a period of time the interest rates that banks can pay depositors. Having banks pay depositors interest rates that keep pace with price inflation will indeed go a long way in sharply reducing hedge buying. The act eventually phases out Regulation Q (regulation that controls interest that banks pay depositors).

Before the passage of the act, the Federal Reserve Bank only had direct control over its own members. Savings banks and savings and loan associations were never members of the Federal Reserve System. Many commercial banks also were not members. Banks

outside the system were subject to a set of regulations from other state and/or national authorities. The requirement of federal reserve member banks to deposit 16 2/3% of their checking account liabilities presented the Federal Reserve System with a major dilemma. As interest rates rose with the progressively higher price inflation from 1965 onward, member banks were put at a competitive earnings disadvantage relative to non-member banks. Most of the non-member banks only had to maintain a small portion of their assets in interest earning treasury bills to support their checking or savings account deposits. As the decade of the 70's progressed, more and more member banks opted to leave the Federal Reserve System. The Federal Reserve Board's ability to control bank deposits, the major component of any measure of money, had been shrinking rapidly.

A good example of the Federal Reserve Board progressively losing control on deposit creation is exemplified by the contradictory behavior of the Federal Home Loan Bank Board.[4] While the Federal Reserve imposed its monetarist policy in October of 1979, the FHLB Board reduced the treasury bill reserve requirement that supports savings account balances. The FHLB Board reduced the reserve

4 Federal Home Loan Bank Board is the main regulatory body for the Federal Savings and Loan industry.

requirement from 6% to 5%. The Monetary Control Act changes this situation and subjects classes of deposits (i.e., checking, savings) to uniform reserve requirements irregardless of membership in the Federal Reserve System.

The success of the Federal Reserve Bank's new monetarist thrust depends on uniform reserve regulation. The Depository Institution's Deregulation and Monetary Control Act of 1980 does, in fact, provide the necessary control.

LONG TERM REFORM AND PRICE STABILITY

Assuming a long term growth potential of the United States of 3% per year, a policy that gradually brought M2 growth down to that same level would wring price inflation out of the economic system. Theoretically, the Federal Reserve Board could set such a 3% limit target on M2 growth immediately. But given individuals' and companies' belief in perpetual price inflation, the effect of such a strict policy would initially induce a depression level decline in production. Prices take a while to give. The present policy is to gradually reduce monetary growth targets and to eventually induce price stability.

The theory is easily understandable. Price stability, however, will require considerable cooperation from the Federal government. Massive deficit spending during periods of economic expansion will only force the Federal Reserve Board to throw in the towel. The effects of massive deficit spending along with a strict monetary policy would only lead to a crowding out of private borrowers from the credit markets. Possibly the only hope is to take the money creation power away from the Federal Reserve Board and the Federal Government.

A return to some sort of gold exchange standard is a real possibility to insure long term monetary reform and price stability. Modern monetarists like Milton Friedmann don't believe in tying the money supply to government gold reserves. If one believes in the selflessness of the seven individuals on the Federal Reserve Board and the politicians in Congress, a magic 3% M2 target will be adhered to; and there will be price stability without a gold reserve requirement. A more realistic evaluation of human nature necessarily implies some tie of money supply to a physical asset.

CONCLUSION

The paper has presented some of the details of the money creation process and the Federal Reserve System as it exists in the United States. Historical information was incorporated to give the reader a sense of perspective for the events transpiring in the nation's economy today. When the historical origins of a situation are not understood, frequently an unnatural and crippling reverence for the status quo arises in many observers' eyes.

Money as we know it in America today, the Federal Reserve System and high price inflation are not laws of nature to which we must resign our fate. The rules of modern banking and money can be changed and are being changed. An understanding of the actual process of money and banking today along with their historical origins can only aid us in understanding the economic climate in which the insurance industry operates. In a small way, we may also influence economic change so that our industry will survive and even flourish.

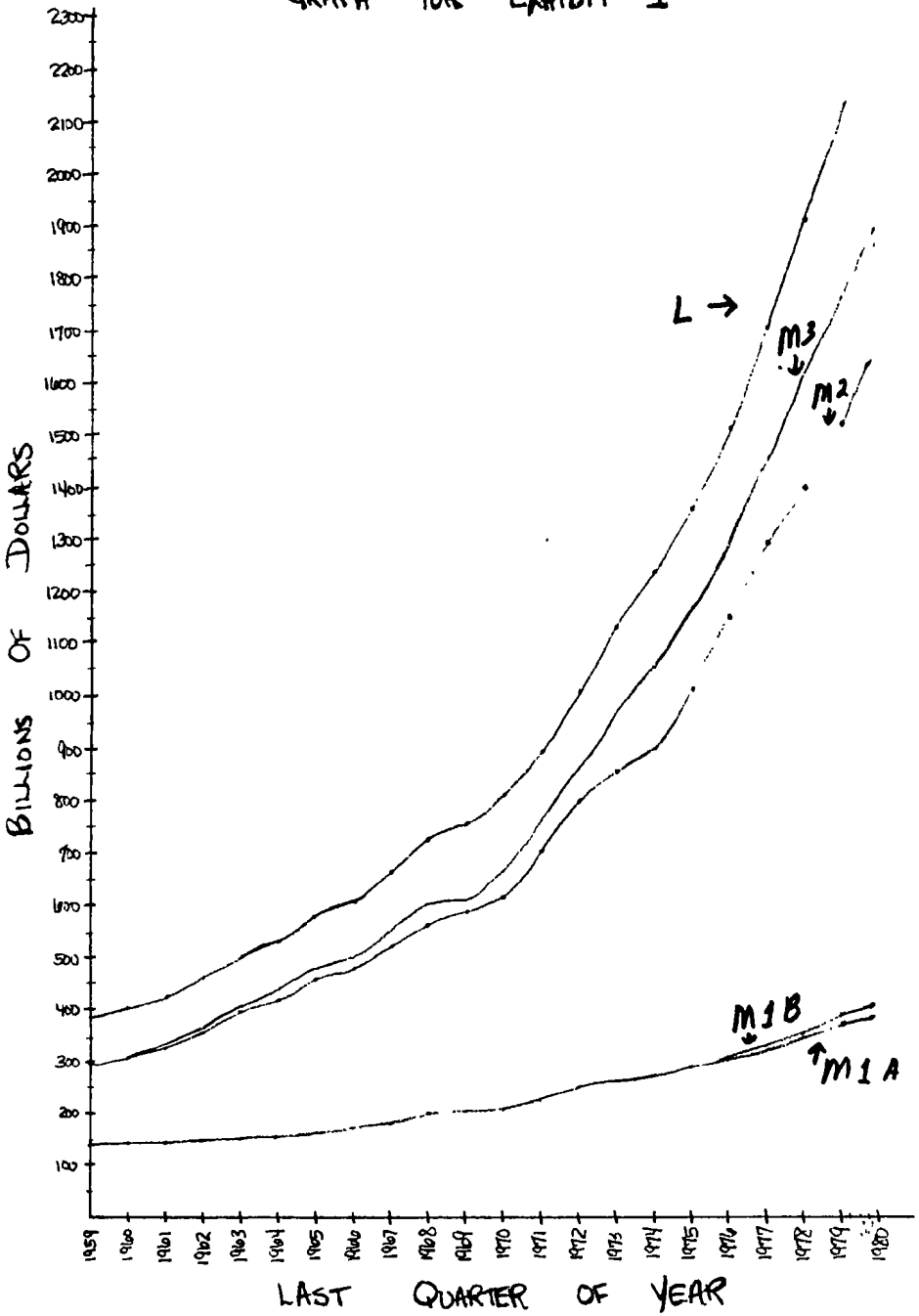
IN BILLIONS OF DOLLARS

SEASONALLY ADJUSTED

Last Quarter Of Year	GNP	New Series M1A	M1B	M2	M3	L
1959	493.5	140.9	140.9	296.1	297.3	387.5
1960	504.6	141.7	141.7	309.8	311.7	401.4
1961	540.7	145.6	145.6	331.8	335.7	426.3
1962	572.3	148.2	148.2	358.4	365.1	460.2
1963	610.4	154.1	154.1	389.3	399.7	498.9
1964	646.0	160.8	160.9	420.2	435.1	535.5
1965	713.3	167.8	167.9	454.0	475.0	578.5
1966	771.7	172.4	172.5	476.2	499.9	610.4
1967	818.7	183.4	183.4	520.3	551.9	662.3
1968	894.7	196.9	197.0	561.8	599.7	725.3
1969	953.3	204.4	204.5	585.2	608.8	757.4
1970	996.3	214.3	214.4	619.0	663.2	807.0
1971	1,091.2	228.5	228.6	702.9	761.3	890.9
1972	1,219.4	248.0	248.1	793.4	867.8	1,005.6
1973	1,355.1	262.1	262.4	851.6	969.6	1,129.4
1974	1,452.4	274.3	274.7	902.4	1,054.0	1,237.7
1975	1,598.0	287.2	288.2	1,013.5	1,153.3	1,358.7
1976	1,756.1	303.0	305.5	1,152.1	1,284.3	1,507.6
1977	1,971.3	326.3	330.2	1,284.8	1,445.8	1,698.1
1978	2,235.2	350.5	357.2	1,392.8	1,608.9	1,905.8
1979	2,456.9	368.1	384.5	1,517.3	1,766.2	2,129.3
3rd Qtr.1980	2,583.0	379.0	400.9	1,626.4	1,884.3	N/A

Source: Data Resources, Inc. - an independent econometric forecasting and consulting firm.

GRAPH FOR EXHIBIT I



RATE OF GROWTH %

(From Last Quarter of Preceeding
Year to Last Quarter of Present Year)

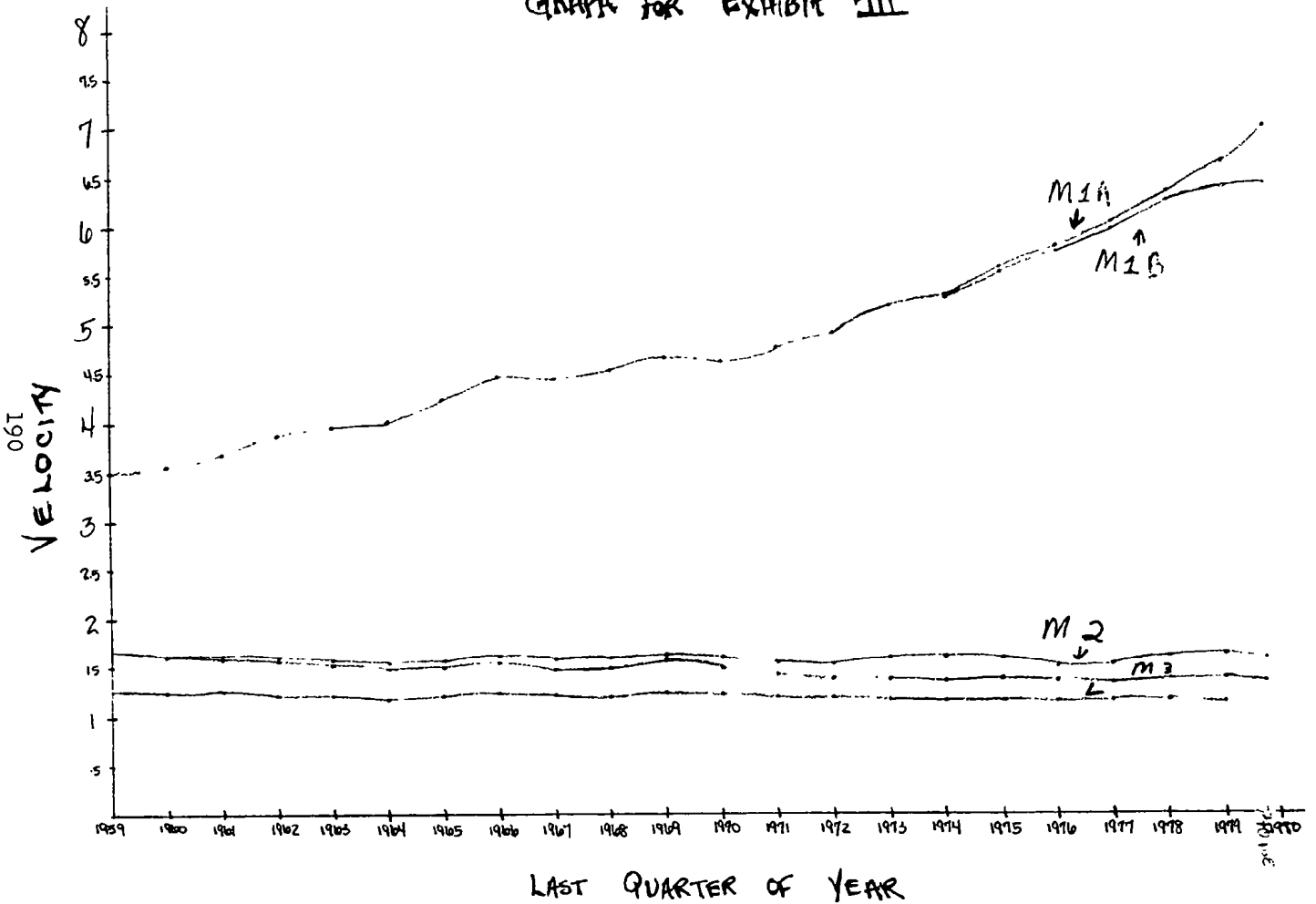
Year	GNP	M1A	M1B	M2	M3	L
1960	2.2	.6	.6	4.6	4.8	3.6
1961	7.2	2.8	2.8	7.1	7.7	6.2
1962	5.8	1.8	1.8	8.0	8.8	8.0
1963	6.7	4.0	4.0	8.6	9.5	8.4
1964	5.8	4.3	4.4	7.9	8.9	7.3
1965	10.4	4.4	4.4	8.0	9.2	8.0
1966	8.2	2.7	2.7	4.9	5.2	5.5
1967	6.1	6.4	6.3	9.3	10.4	8.5
1968	9.3	7.4	7.4	8.0	8.7	9.5
1969	6.5	3.8	3.8	4.2	1.5	4.4
1970	4.5	4.8	4.8	5.8	8.9	6.5
1971	9.5	6.6	6.6	13.6	14.8	10.4
1972	11.7	8.5	8.5	12.9	14.0	12.9
1973	11.1	5.7	5.8	7.3	11.7	12.3
1974	7.2	4.7	4.7	6.0	8.7	9.6
1975	10.0	4.7	4.9	12.3	9.4	9.8
1976	9.9	5.5	6.0	13.7	11.4	11.0
1977	12.3	7.7	8.1	11.5	12.6	12.6
1978	13.4	7.4	8.2	8.4	11.3	12.2
1979	9.9	5.0	7.6	8.9	9.8	11.7
3rd Qtr. 1980*	6.9	4.0	5.7	9.7	9.0	N/A

*Rate of growth from 4th quarter 1979 to 3rd quarter 1980 annualized.

VELOCITY

Last Quarter Of Year	VM1A	VM1B	VM2	VM3	VL
1959	3.502	3.502	1.667	1.660	1.274
1960	3.561	3.561	1.629	1.619	1.257
1961	3.714	3.714	1.630	1.611	1.268
1962	3.862	3.862	1.597	1.568	1.243
1963	3.961	3.961	1.568	1.527	1.224
1964	4.017	4.015	1.537	1.485	1.206
1965	4.251	4.248	1.571	1.502	1.233
1966	4.476	4.474	1.621	1.544	1.264
1967	4.464	4.464	1.574	1.483	1.236
1968	4.544	4.542	1.593	1.492	1.234
1969	4.664	4.662	1.629	1.566	1.259
1970	4.649	4.647	1.610	1.502	1.235
1971	4.775	4.773	1.552	1.433	1.225
1972	4.917	4.915	1.537	1.405	1.213
1973	5.171	5.164	1.591	1.398	1.200
1974	5.295	5.287	1.609	1.378	1.173
1975	5.564	5.545	1.577	1.386	1.176
1976	5.796	5.748	1.524	1.367	1.165
1977	6.041	5.990	1.534	1.363	1.161
1978	6.377	6.258	1.605	1.389	1.173
1979	6.675	6.390	1.619	1.391	1.154
3rd Qtr. 1980	7.017	6.443	1.588	1.371	N/A

GRAPH FOR EXHIBIT III



Trend and cyclical behavior of velocities of new measures of money

Average annual rates of growth in percent

Period	New M-1A	New M-1B	New M-2	New M-3
1960-79.	3.2	3.0	- .1	- .8
1960-69.	2.9	2.9	- .2	- .6
1970-79.	3.6	3.1	0	-1.1
[1]				
Peak to trough				
1960 Q2-1961 Q1. . .	-1.7	-1.7	-6.3	-6.7
1969 Q4-1970 Q4. . .	- .3	- .3	-1.2	-4.1
1973 Q4-1975 Q1. . .	1.5	1.4	- .5	-2.4
[2]				
Trough to peak				
1961 Q1-1969 Q4. . .	3.1	3.1	.1	- .2
1970 Q4-1973 Q4. . .	3.6	3.5	- .4	-2.4
[3]				
1975 Q1-1979 Q4. . .	4.9	4.1	.6	.6

1. Averages of annualized quarter-to-quarter rates of growth. The base quarter for each calculation is the quarter following the peak (peak is first quarter shown).
2. Averages of annualized quarter-to-quarter rates of growth. The base quarter for each calculation is the quarter following the trough (trough is first quarter shown).
3. Data for 1979 Q4 are most recent quarterly data available, and this quarter may not be a cyclical peak.

Source: Federal Reserve Bulletin February, 1980

FEDERAL RESERVE CREDIT OUTSTANDING

Year	Avgs. Of Daily Figures For December	Rate Of Growth
1980		
1979	140.0	6.6%
1978	131.3	10.6%
1977	118.7	10.3%
1976	107.6	7.9%
1975	99.7	6.1%
1974	94.0	9.8%
1973	85.6	11.3%
1972	76.9	3.5%
1971	74.3	11.4%
1970	66.7	4.1%
1969	64.1	13.3%
1968	56.6	10.3%
1967	51.3	9.4%
1966	46.9	6.8%
1965	43.9	10.0%
1964	39.9	9.0%
1963	36.6	10.2%
1962	33.2	6.4%
1961	31.2	7.2%
1960	29.1	-1.0%
1959	29.4	3.5%
1958	28.4	7.6%
1957	26.4	-2.9%
1956	27.2	1.1%
1955	26.9	2.3%
1954	26.3	-3.0%
1953	27.1	-0.7%
1952	27.3	7.5%
1951	25.4	17.6%
1950	21.6	

Source: Federal Reserve Bulletins

GRAPH FOR EXHIBIT V

Federal Reserve Credit Outstanding