Macro, Current

30 March 81

What will wars do for you?

1. Areas of intense emotional interest
~~Poverty~~; Social problems; distribn.

2. Bus. forecasting

3. Analytical method – will improve your mind. Take these ~~this~~ human problems, try to solve them nobly, analytically.

Some enjoy analysis for own sake – just as a musician studies harmony; an artist, geometry.

For others, it is a tool to solve human problems.

Ideally, make it both.

4. Meets a requmt.

Why is it a requmt? Background + prereq. to other courses. Experience has shown that the tools & skills you learn here are needed in advanced courses.

Will alternate between analysis & humanistic topics.

Begin w. analysis — something to check on. Ch 1-2 for Wed.

1st Mid: Wed. Apr. 22
Fri. May 15

	M	W	F
	30	1	3
Apr.	6		
	13		
	20	(22)	
	27	29	1
May	4	6	8
	11		(15)
	18		
	25	27	29
June	1	3	5

Basis of Grades

Class — Geom. Mean

Section

1st

2nd

Final A, Final B.

Most of you don't need this, but some always do.
Grades based on performance, not on need.

Economics 100B
Macroeconomic Theory

Winter Quarter 1981
Mason Gaffney

L. Data on some important macro factors

1. Annual % growth, U.S. real private capital stock (non-residential). Excludes "capital gains," i.e. growth of land values, using methods whose accuracy is so-so.

1949-59	4.0%
1959-69	4.6
1969-74	4.2
1974-79	3.0

Growth of real capital shifts AK curve to right, but not fast enough to keep up with growth of population; and growing need to offset diminishing returns to land; plus needs of rising real income, and increased "otiosity" (look it up) caused by the combination of progressive taxes on work and various subsidies for not working; plus knee-jerk engineering dream of raising capital/output ratios in many industries, utilities, etc.

The recent decline calls for reduced capital/output ratios. The pattern of response is that many industries are scrimping on capital--e.g. broilers, reducing period from 13 weeks to 7. But others are sheltered from interest rates, the price that rations capital, and continue to lavish capital wastefully.

2. % growth in money stock (M). 1976-80, ca. 7%/year, compound.

This would shift LM curve to right, but prices (P) have risen at a higher rate, so $\underline{\underline{m}}$ (= m/p) has fallen.

What is driving up prices faster than M? A rapid rise in velocity, or deposit turnover at about 12% a year, although figures are fuzzy. Each $ does more work.

3. Commercial bank holdings of various investments, in G$ (Gigabucks, or billions of $)

Year	All loans & investments	Fed. Debt Am't	Fed. Debt %	Mortgage Debt Am't	Mortgage Debt %	Securities (pvt.) Am't	Securities (pvt.) %
1967	352	55	16	59	17	61	17
1970	435	53	12	73	17	86 816	20
1975	745	69	9	136	18	146	20
1980 III	1221	101	8	258	21	212	17

When commercial banks lend, they "buy securities." This "monetizes" the securities, which become the asset backing the banks deposits (Ch. 13). There is a belief that federal deficits play an increasing role in this deposit expansion. The data show, however, a sharply decreasing role, 16% down to 8%. Commercial banks are going private.

Much of the increased private lending is based on increased private "credit worthiness," i.e. values of collateral. The big rise of mortgage debt exemplifies this.

It is dangerous for banks to lend on mortgages. These are long-term loans, 30 years long, at fixed r. When market r rises, banks are squeezed. S&Ls are in big trouble currently because all their assets are mortgages. Their troubles are mainly theirs alone. Bank troubles are everyone's troubles, because banks create our money supply.

3. [cont.]

We have perhaps come full circle to the conditions of 1925-30, when banks were heavily invested in mortgages. Then came a shortage of disposable liquid capital, a sharp rise of r, and efforts to unload. But when everyone is unloading at once, no one succeeds. There was a liquidity panic, stifling the flow of new investment, gross as well as net. This in turn reduced consumer spending, causing many to see the source of trouble in underconsumption, even though this is contra-indicated by the escalation of r that triggered the panic. Too low a rate of capital recovery is the explanation that seems to fit the facts.

Liquidity pains led to bank pains, a loss of faith in bank deposits. Depositors demanded currency, and got none. Half the banks failed.

It was after this calamity that the U.S. government began to practise the idea of running deficits, borrowing from banks. It made some sense at the time. Private collateral had collapsed; federal debt was a substitute base for the money supply. In the circumstances it seemed more restorative than disruptive, by obviating the alternative solution of a deeper drop in prices, which had already dropped so much. The unfortunate long-term side-effect, however, was to create a mechanism for financing wars without the Congressional and popular approval required to raise taxes; and to validate inflationary price hikes later on.

4. The federal role.

Federal Rec'ts, $G

	Total	Psnl. Inc. Tax		Corp. Inc. Tax		Indirect		Soc. Sec	
		Am't	%	Am't	%	Am't	%	Am't	%
Year									
1958	78.1	36.3	46	17.9	23	11.6	15	12.3	16
1980	527.3	249.7	47	70.6	13	35.7	7	171.3	32

Federal Spending (on budget)

	Total	Goods & Services		Tsfr. Pmts.		To St. & Local		Interest	
		Am't	%	Am't	%	Am't	%	Am't	%
Year									
1958	83	51	61	18	22	4.7	5.7	5.4	6.5
1980	578	190	33	235	41	87.0	15.0	51.0	8.8

In 1958, you could broadly say the feds taxed business and workers to provide "goods & services" (much of it military, to be sure).

In 1980 you see an enormous change. The feds tax workers more, and "business" (property) less, to provide welfare, pay interest, and subventions to state and local governments, largely to reduce property taxes. Part of the welfare is social security for retirees, which can be construed in part as interest on their earlier tax payments. As far as current work incentives go, the effect is the same, as welfare

4. [cont.]

The whole thing adds up to a huge machine for reducing work incentives. Old folks waste their breath moralizing against the decline of the work ethic, but the cause is more objective than spiritual. The federal budget mandates it, taxing the young and middle-aged to support the idle old, and inflate the value of their property.

Remember, it is not the level of wages, but the structure, that creates incentives to work. We tax work to subsidize leisure, and reap the results you would predict.

5. Federal Deficits.

Large deficits occurred in World War II, 1940-45. The Korean and Vietnam wars had no such effect, however.

Deficits began running wild from 1975, especially in election years. That this pattern did not occur earlier is some indicator of a serious decline of public rationality and responsibility.

6. The federal "capital budget"

The early rationale for public debt emphasized public works. In recessions, the feds would finance more roads, dams, harbors, etc., taking up the slack and creating useful capital.

The federal budget today, however, shows capital spending swamped by consumption. Here are the top 12 outlays, 1980:

1.	Income Security, G$	193	7.	~~Vietnam~~ Veterans	21
2.	Defense	136	8.	Natural Resources, Env.	14
3.	Interest*	65	9.	Intl. Affairs	11
4.	Health	58	10.	Regional Dev.	10
5.	Educ., trng., empl., soc. svcs.	31	11.	Fiscal Assistance	9
			12.	Commerce & Housing	8
6.	Transportation	21			

There is little capital formation evident there until #6, Transportation. There is a large capital wastage, however, because annual deficits of G$ 40-70 draw capital from private lenders and crowd out real capital formation by private borrowers

7. Funds raised in credit markets by "non-financial sectors," 1979, ranked by size, in G$.

1.	Mortgages	160.0	
	a. Residl., "home"		109
	b. Commercial		26
	c. Farm		16
	d. Multi-family residl.		9
2.	"Other" (Consumer loans, bank loans n.e.c., open market paper, other)	133.0	

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*Why is this figure different from the G$ 51 in #4? They came from different pages of the same report. Gives you an idea of how numbers vary, depending on details of inclusion/definition.

7. [cont.]

3.	U.S. Govt.	37.4
4.	"Foreign"	21.2
5.	Corporate bonds**	21.2
6.	State & local govt. bonds**	19.0
7.	Corporate equity (new stocks)	3.5

Private debt is rising much faster than federal debt, currently. Individuals borrowing on homes make the largest single component.

The stock market no longer raises enough new capital to spit at. It is all to make a market in old assets, and prove equity values on which to sell bonds (i.e., to mortgage).

A lot of our capital is leaking abroad.

Capital gains are turned into cash, tax-free, by borrowing on them. Loans secured by mortgage notes ("deeds of trust" in Calif.) are usually long term. Long-term loans let borrowers finance hard capital, with long payback periods. This hardens up part of our capital stock, raising capital/output ratios. Could this create any problems?

8. Mortgage debt outstanding, 1980 II

"All" mortgage debt***	G$ 1386 (= ca. 1.4 trillion $)
Farm	101
1-4 family houses	904
Multi-family houses	134
Commercial	247

Federal debt held by other than federal agencies and the Federal Reserve System is G$ 595, or about half the mortgage debt.

** Corporate bonds and local govt. debts are technically mortgages, too, being secured by real property.

*** But excluding bonds of corporation and local govts.

$$RR = \frac{a\left(\left(-I^{-n}\right)\right.}{P - FI^{-n}} \geq \frac{a}{P} \quad \text{for "rent-goods".}$$

But if a is rising:

$$P_i - P_g = a$$

$$i - g = \frac{a}{P}$$

$$i = \frac{a}{P} + g$$

$V_i - V_g = a$ $\therefore$ $a < V_i$ by amt V_g

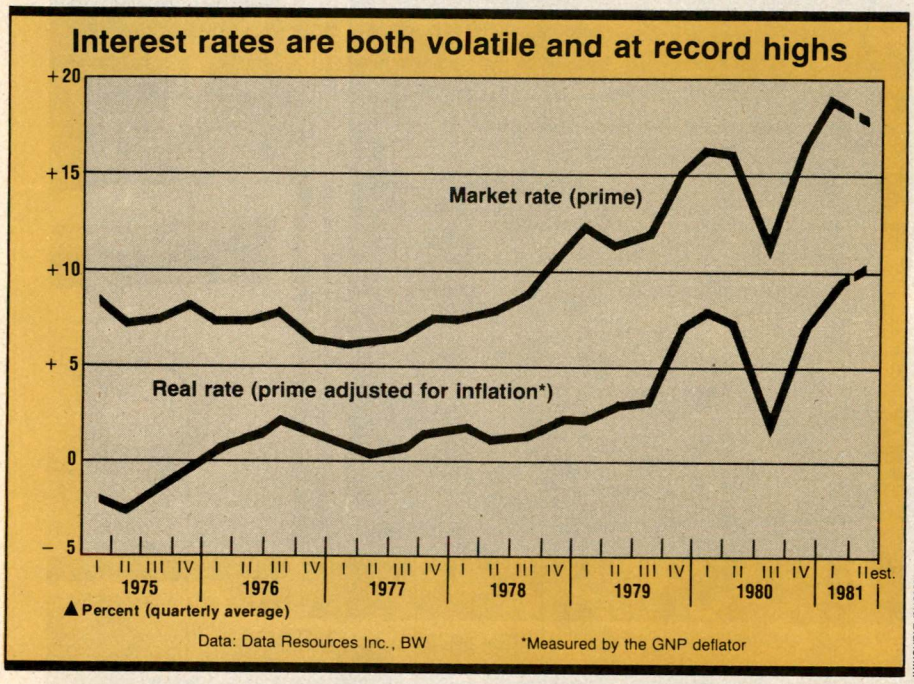
Opp. $cf = a$; $cf = a - xV_i$, where x is % borrowed.

If 70% fncd, $cf = a - .7V_i$

The great new monetary experiment

With President Reagan's victory last week in pushing his $38 billion spending-cut program through the Democratic House of Representatives, it now seems certain that the President has the momentum to get most of his three-year, $270 billion tax cut through Congress. But while the headlines have focused largely on the supply-side spending and tax-cut program, the success of that program hangs on what happens in the great new money experiment.

The Federal Reserve, with the strong support of the Administration, is now embarked on an experiment in monetary policy—one that will not only determine the rates that businessmen and consumers will be paying for money but that also will set the course for inflation, capital spending, and economic growth for years to come. The object of the experiment: to squeeze inflation totally out of the system by clamping a vise on the amount of money in the economy.



Economists are split over what impact the new money experiment will have on the economy. And most of that disagreement is over what will happen to interest rates in coming months. Although supporters, including monetarists in and out of the Administration, have been unable to explain why interest rates remain so high even though inflation has been decelerating, they steadfastly maintain that rates soon will be coming down sharply and that they will stay down. Critics argue that a tight-money policy, particularly if fiscal policy proves to be as stimulative as many believe, means that interest rates will remain high and volatile for months—or even years.

Bankruptcies. The stakes go beyond interest rates, however. If the critics are correct, the economy could face some very tough times, including many corporate bankruptcies, a financial crisis, weak capital investment, and a period of slow growth. If the Fed is right, inflation will subside, and even though the economy may have to endure a couple of quarters of recession, the foundation will have been laid for a sustained period of solid, noninflationary growth.

The Federal Reserve has paid lip service in the past to the importance of controlling the money supply. The beginnings of the new money experiment go back to October, 1979, when Chairman Paul Volcker announced that the Fed would concentrate on controlling money-supply growth rather than shooting for an interest rate target, its traditional policy.

But it has only been since the Reagan Administration took office and installed in powerful positions monetarists such as Treasury Under Secretary for Monetary Affairs Beryl Sprinkel, former chief economist at Harris Trust & Savings Bank, that the new Fed experiment really began. In the first five months of the current Administration, the growth of the money supply has slowed from an annual rate of 7.3% to 4.6%. And since April it has declined at an annual rate of 1%. The Fed is now within its money growth target of 6% to 8.5% for M1-B, a broadly defined measure of money.

Monetarists believe the steady reduction in money growth will produce a sharp break in people's expectations of inflation and this will sharply reduce interest rates. As Sprinkel says: "I've ceased giving forecasts, and I no longer work with models. But if we are right, and we continue to get diminished money growth, rates have to come down. I still think the prime could go to 10% to 13% this year."

Credit crunch. To many economists, particularly those on Wall Street and those of Keynesian persuasion, a sharp drop in interest rates anytime soon is out of the question. They argue that the budget will show large deficits for the next few years. According to most estimates, the government deficit will amount to $60 billion in both fiscal 1981 and fiscal 1982. "I know of no economic theory that says you can suppress monetary growth to fight inflation and simultaneously use fiscal policy to spur growth," says Yale

The big question: Will tight money collide with Reagan's tax cuts?

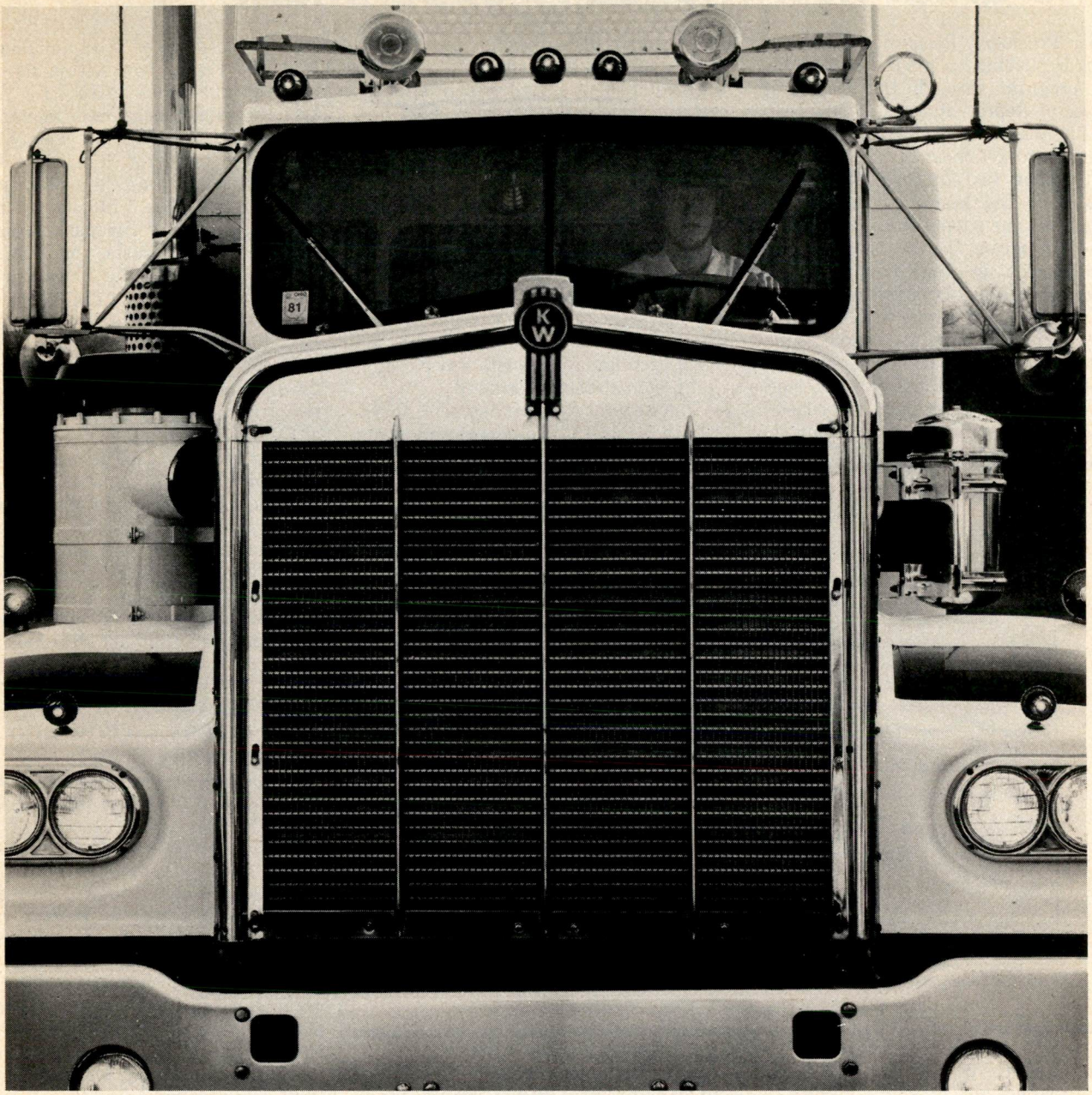
University economist William Nordhaus.

To some Fed critics, an outright credit crunch is in the cards. "If the tax cut is in place by Oct. 1, we will face a new significant increase in interest rates," predicts Henry Kaufman, chief economist and partner at Salomon Bros. "With a tax cut it will be difficult to exclude consumers from the financial markets, and you cannot take the government out of the markets. That means many corporations, as well as state and local governments, will be leveled out of the markets."

The great mystery to monetarists and, indeed, to most forecasters is why interest rates have not already declined in light of the obvious deceleration of inflation. With energy prices and food prices falling in recent months, the inflation rate, as measured by the consumer price index, has declined to 8% annually, compared with last year's 12.4% rate of gain and the 18% rate in the first quarter of 1980. Yet interest rates are as high now as they were in last year's first quarter. "It's a real puzzle," concedes monetarist Thomas Mayer of the University of California.

In the 1970s, explains Mayer, it ap-

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turities. . . . Based on data from which cyclical movements were removed, the variability in Treasury bill yields measured on a weekly average basis has been at least twice as large as before October, 1979." Some Fed officials believe that the volatility in rates has already calmed down. Board member Lyle E. Gramley argues that in recent months, fluctuations in long-term rates have been less severe than in short-term rates.

Quarter-to-quarter control. The issue of interest rate volatility goes to the heart of the long debate between the monetarists and their critics, which is whether the Fed can, in fact, control the growth of money, especially over a short period. Most economists believe that the Fed can control money growth over the longer run, say from year to year. But most disagree with monetarists, such as Sprinkel, who argue that the Fed can and should control growth quarter to quarter.

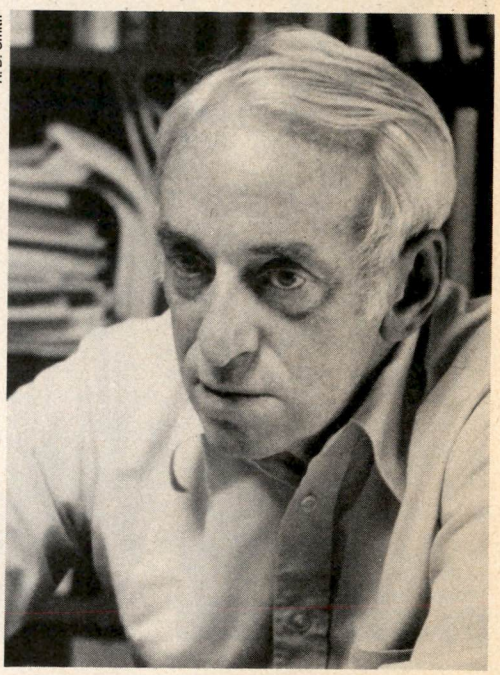
The reason it is so difficult to control the growth of money, say the critics of the Fed's new money experiment, is that the U. S. financial system is so large and changes so rapidly. During the last few years, interest rate ceilings were lifted on most bank deposits, money market funds were created, and a number of other new financial instruments were introduced. To control money growth adequately, the Fed may have to cast its net of regulation ever wider. Last year, for example, the Fed won a major victory when it persuaded Congress to enact a law giving it the power to require all depository institutions to keep reserves against their deposits. Increasing numbers of banks and other deposit institutions had been leaving the Fed system during the last decade because the cost of carrying reserves against deposits was so high, and because the Fed prevented them from making loans as freely as they wanted.

Now the Fed is asking Congress to give it the power to put reserve requirements on the fast-growing money market funds. "I don't want to suggest that we are in a state of crisis in regard to money market funds and monetary policy," Volcker recently told a House Banking subcommittee. "But I think the potential there is quite considerable."

High velocity. Even without the inventiveness of the financial markets, controlling the money supply and its impact on the economy also depends on how rapidly people use the money at hand. The faster money circulates, the more it can stimulate economic activity. Monetarists have long argued that this "velocity" of money is relatively stable, growing, on average, about 3% a year. Recently, however, the rate of growth of velocity seems to be increasing and becoming more erratic. In the first quarter, velocity rose by a stunning 18%.

Monetarists maintain that the first-quarter numbers are an aberration and that velocity will settle back to a steady growth path. They also argue that the new financial instruments are not a problem as long as the Fed sticks doggedly to controlling bank reserves.

Even if the monetarists prove right, and interest rates drop substantially in the next two quarters, rates may not stay down. Many economists believe that the Administration's program of tax cuts and increased military spending will more than offset the big cuts in social programs and will prove to be highly stimulative. According to Michael Levy of the Conference Board, any delay in passing the President's tax cuts will only mean that the stimulus will be com-



R. D. Smith

Yale's Tobin: "Inflation premiums [don't] get into [market] rates automatically."

ing in 1982. In a recent analysis, he concludes: "In light of the strong economic stimulation of the revised 1982 budget, unless the real economy remains unusually weak or the Federal Reserve relents on its policy of money-growth restraint, fiscal and monetary policies appear to be heading again into a head-on collision."

Many experts maintain that Levy is dead wrong and that the budget may actually be restrictive. Yet, even if Levy proves correct, and the dire predictions of Kaufman and the Keynesians are accurate, the Fed may well stick to its guns. For monetarists, a tough Fed stance on money growth, regardless of what happens to interest rates and the economy, is the only way to beat down inflation. Says Mayer: "It may be the dim-sighted leading the blind, but it is the only alternative we have." ■

peared that changes in the inflation rate were quickly reflected in interest rates. The expectation of higher inflation seemed to push up rates because lenders would be receiving payment in cheaper dollars and thus demanded higher interest rates to offset the loss in purchasing power. Conversely, as inflation and expectations of inflation slowed, interest rates declined. "That relationship doesn't seem to work well right now," says Mayer. And as a result, real interest rates—the market rate adjusted for the rate of inflation—are at historic highs (chart). Says Michael Hamburger, a New York University economist who has been advising the Office of Management & Budget: "We lost our credibility somewhat by forecasting that inflationary expectations would change quickly and that interest rates would decline."



Gwendolyn Stewart

Sprinkel: "Rates have to come down. I think the prime could go to 10% to 13% this year."

An old idea. The idea that inflation premiums are almost immediately incorporated into market rates was developed by Irving Fisher (1867-1947), perhaps America's greatest monetary economist. Fisher argued back in 1896 that the going interest rate contained a real component, which hardly budged, and an inflation component that jumped around. Thus, rates moved largely because of changes in inflationary expectations, rather than from changes in the real rate, which was influenced by fundamental trends in productivity and savings, according to Fisher.

Keynesians have always argued that Fisher was wrong—that the real rate did, in fact, fluctuate—and the evidence from the great experiment in tight money policy seems to bear them out. When the new monetary policy began in October, 1979, the prime rate after adjustment for inflation was about 4%. It moved up sharply to 8% by the first quarter of 1980 and then plunged to 2% by the third quarter in the wake of recession. By the second quarter of 1981, it had climbed to 10%. James Tobin of Yale University, a leading Keynesian, explains it this way: "Inflationary expectations get built into market rates, but only in a very rough way. Just compare nominal rates now with those of 15 years ago. But that doesn't mean that the inflation premiums get into rates automatically. The real rate moves around, and the Federal Reserve is one of the things that helps move it around."

Why are inflation premiums not automatically put into market rates, as Fisher and his monetarist descendants have argued? To be sure, if the public believes that inflation is speeding up and will exceed the going interest rate, it could refuse to lend its money and instead buy physical assets, such as real estate, thus forcing up rates. But many people have no such choice. Says monetarist Mayer: "The mechanism by which inflation premiums are transmitted into the interest rate is not clearly defined. A lot of people just have no choice but to lend." Yale's Nordhaus puts it this way: "What should they do, buy watermelons?"

Real interest rates. But whatever the reason, says Jeremy J. Siegel of the University of Pennsylvania, "we are in a period of major divergence between inflation and interest rates." Economic forecaster Lawrence Chimerine, president of Chase Econometrics, agrees. "Real rates are higher than they have ever been, and even though market rates may improve, real rates will remain two percentage points higher than they have been historically for the next several years," he says.

Chimerine maintains that rates will stay high because of big budget deficits and a huge backlog of corporate financing. The effect of high real rates on the economy, he calculates, will be to cut the growth rate of the real gross national product by ¾% a year, or about $20 billion, offsetting, in part, the stimulative effects of the tax cuts and defense spending increases. "We are already seeing investment projects being stretched out or postponed, because corporations are having a hard time raising money at these high rates," says Chimerine. And Siegel adds that a lot of companies are "not going to be able to finance inventories at 20% when the prices that they will get for their goods are going up at only 4% to 6%." He is forecasting "some pretty bad surprises in the way of corporate profits."

It is not just the record level of interest rates that is playing hob with corporations and the financial markets. Unprecedented volatility of interest rates is also a major problem. Fed officials and monetarists accept that efforts to control the rate of money growth will result in volatile interest rates, at least for a while. The questions are how long rates will be volatile and how severe the swings will be.



Kaufman: He sees a "significant increase in interest rates," with an Oct. 1 tax cut.

For the monetarists, the answer is simple: Rates should swing as long as it takes to get money growth under control, and the degree of volatility is not important. "If we achieve stable growth in money at a lower level, I expect to see less volatility in rates," says Sprinkel. "I can't prove it. But you can't prove the contrary."

But Kaufman disagrees. "If the Fed persists with this policy, we will see continued interest rate volatility far greater than at anytime in the postwar period," he says.

Fed officials admit that they have been surprised by how much rates have swung. A Fed study of the first year of the new money experiment concludes that "there has also been heightened volatility on Treasury securities of all ma-