

Had an investor bought at each "Two Tumbles And A Jump" signal date and sold the position one year later, he would have realized a handsome return. Although he would have been invested for only 17 of the last 69 years, his initial \$10,000 investment would have grown to \$542,304 by year-end 1983. Alternatively, an investor who disdained the market during those 17 years and held stocks only through the remaining 52 years would have seen an original \$10,000 investment shrink to just \$6,450. The "Two Tumbles" rule more than captured the entire market rise since World War II.

The great bull markets of every decade have been accompanied by "Two Tumbles And A Jump" signals. Even the November 15, 1929, signal was propitious, for it precisely caught a 28% six month rally between the quick, panicky crash in the fall of 1929 and the real crash of mid-1930 to mid-1932. The December 3, 1981, signal was early, but it preceded the largest market breakout in half a century.

Furthermore, as noted in Table 16, on average the 17 "Two Tumbles" signals have yielded impressive gains across

TABLE 16

"TWO TUMBLES AND A JUMP" AND MARKET PERFORMANCE

Time Period	S&P 500 Index Percent Change	Number of Times Market Advanced
5 Days	+ 0.8%	10 out of 17
10 Days:	+ 1.7%	12 out of 17
15 Days:	+ 3.5%	14 out of 17
20 Days:	+ 3.6%	13 out of 17
3 Months:	+11.3%	14 out of 17
6 Months:	+16.1%	16 out of 17
9 Months:	+21.5%	16 out of 17
12 Months:	+30.5%	16 out of 17
15 Months:	+34.4%	16 out of 17
18 Months:	+34.4%	16 out of 17

all holding periods. In fact, it is one of the very, very few indicators in existence with a near perfect half-century record.

Economic theory holds that the Federal Reserve System can snap an economic or stock market expansion quite easily

by taking restrictive monetary action, but that it has a much more difficult time reversing a contraction. The theory is often described in terms of "pulling or pushing on a string." (It is obviously easier to pull a string than to push one.) According to the theory, when the economy is operating at or near full capacity or when the market is straining toward new heights, the strings are tight and the Fed can pull them around at will. When the economy is depressed, the strings are slack, and the Fed has great difficulty pushing them in the direction and with the force it desires.

Although this theory seems plausible, it is not supported by the "Stumbles" and "Tumbles" rules. While the expansionary "Two Tumbles And A Jump" rule has a truly superlative record of forecasting market and economic upturns, the restrictive "Three Steps And A Stumble" rule has only a moderately good record of forecasting downturns.

Strangely enough, it is the latter which has gained a relatively wide following in the investment community, while the former has escaped "discovery" until relatively recently. Even technical analyst Edson Gould, one of the most vocal supporters of the "Three Steps" rule, has pointedly remarked that restrictive Fed actions are more significant than actions of moderation. The evidence casts considerable doubt on that hypothesis.

12 Bills, Funds, and Discounts

The interrelationships between three key interest rates — federal funds, treasury bill, and discount — provide important clues to future stock market performance.

Each of these rates is related to the process by which Federal Reserve System member commercial banks adjust their cash reserves to the levels mandated by the Fed. Three basic reserve adjustment alternatives are available to the

banks: (1) They may buy or sell U. S. Treasury Bills. They may borrow or lend money to other banks in the overnight federal funds market. (Although these "loans" involve only bookkeeping entries with no cash changing hands, interest is still paid.) (3) Banks needing more reserves may, as a last resort, borrow money from the Federal Reserve System at the discount rate.

The respective levels of the three interest rates dictate which alternatives a bank chooses. When the treasury bill and federal funds rates are below the discount rate, banks in need of additional cash reserves liquidate T-Bills from their portfolios or borrow from one another — and Federal Reserve loans to member banks are nil.

Alternatively, when the federal funds rate is bid above the discount rate, it means that some banks are willing to pay a premium to obtain reserves. They may have one of two motives for paying such a premium. The first is to avoid the Fed's scrutiny of their lending policies that is a normal part of the discount process. The second is that the banking system as a whole is so illiquid (strapped for cash) that the few banks with extra reserves demand a generous return to induce them to loan funds to the banks which are squeezed by a reserve deficiency. Either situation symbolizes tight monetary conditions and is bearish for the stock market. Historically, the federal funds and treasury bill rates have usually held below the discount rate. When the reverse has occurred, the stock market has been exceptionally vulnerable.

Figure 4 presents a graphic illustration of the relationship between the federal funds and discount rates during the critical five-year period 1928-1932. Although historians now realize that the nation's monetary and economic situation was inherently unsound in the late 1920s, the stock market, oblivious to all adverse signs, spurted upward to seemingly ever higher highs before the bubble finally burst. Note that in early 1928 the federal funds rate moved above the discount rate, a condition that persisted into the fall of 1929. This was dramatic warning that the banking and financial systems

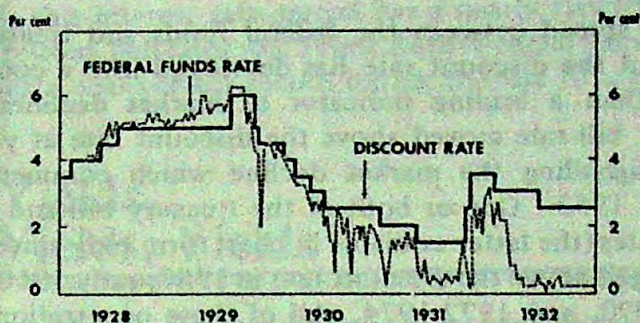


FIGURE 4. Federal Funds Rate (weekly) and Discount Rate (effective dates); 1928 - 1932.

were in severe trouble. In retrospect no other single indicator so dramatically predicted the ensuing crash.

More recently investors have disciplined themselves to watch monetary and economic conditions with greater care. To some degree the result has been a reduction in the lead time of many key indicators. As a close examination of the 45 year interest rate chart contained in Figure 5 reveals, a

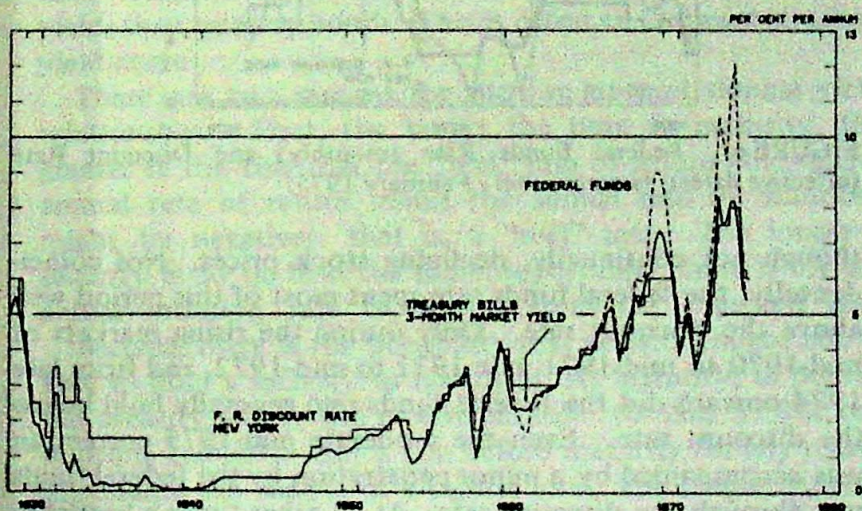


FIGURE 5. Federal Funds Rate (quarterly), Treasury Bill Rate (quarterly), and Discount Rate (effective dates); 1930 - 1974.

positive spread between the federal funds and treasury rates and the discount rate has developed into a coincidence rather than a leading indicator of market declines. The treasury bill rate moved above the discount rate at year-end 1952, signalling the market decline which commenced in January 1953. One or both of the treasury bill and federal funds rates (the latter available in chart form only since 1954) also surged above the discount rate in 1957, early 1960, 1969-1970, and 1972-1974. All of these penetrations coincided with periods of sharply declining stock prices.

Figure 6 magnifies the federal funds - discount rate relationship between 1968 and 1975, eight years of generally

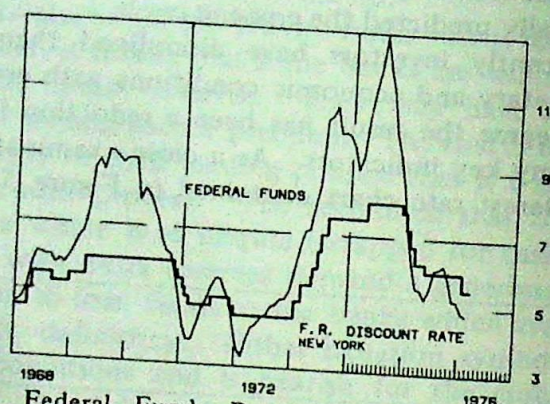


FIGURE 6. Federal Funds Rate (monthly) and Discount Rate (effective dates); January 1968 - February 1975.

though not continually, declining stock prices. Not coincidentally, the federal funds rate spent most of this period well above the discount rate. Only during the rising markets of mid-1970 to mid-1971, late 1971 to mid-1972, and from late 1974 onward did the federal funds rate generally hold below the discount rate. Even the moderate mid-1975 correction was accompanied by a minor penetration by the federal funds rate through the discount rate. At all other times a bearishly positive federal funds - discount rate spread prevailed and stock prices usually fell. In this entire critical eight year

period, this interest rate spread has a nearly flawless record.

(A related indicator, the Prime Rate - Federal Funds Index, also has a near-perfect record during the last fifty years.)

13 Yields, Yields, Yields

Yield Curve. A yield curve is a relationship between market yields of interest bearing securities of different maturity lengths. (The maturity is the date on which the issuer of the security must pay back its face amount to the security holders.) The most representative yield curve construction is based upon securities issued by the U. S. government: treasury bills which mature in less than one year, treasury notes with one to five year maturities, and long term treasury bonds which mature in over five years.

Normally, the longer the time to the maturity of a security, the higher its yield. Thus, treasury bills usually yield less than treasury notes, which in turn generally provide lower yields than treasury bonds. This is called an "upward sloping" yield curve.

There are two reasons for such an upward sloping yield relationship. First, the longer the time to maturity, the greater is the risk that the "real" rate of return (the simple annual rate of return minus the annual rate of inflation) might be negative; that is, a "real" loss. The longer a security is to be held the more opportunity there is for the actual inflation rate to diverge from the expected rate.

Second, there is the possibility that investors might not be able to hold a security to maturity. At maturity, of course, the security holder will receive par value (usually \$1,000 or a multiple thereof). But a sale before maturity for any reason introduces the chance of a capital loss. The longer the time to maturity, the greater is the possibility that a sale might be required and that a capital loss on the security might neces-

sarily be incurred.

In summary, the possibility of incurring losses in nominal or real dollars entitles holders of longer maturing securities to higher yields than those received by holders of short maturing securities. Thus an upward sloping yield curve is normal and is bullish for the stock market.

Any deviation from an upward sloping yield curve is bearish. If treasury bills yield more than notes or bonds, or if notes yield more than bonds, something is amiss. The phenomenon may indicate an abnormal need for short term funds by the government or private enterprise to cope with near-term liquidity problems. Or it may reflect an exacerbation of short term inflationary pressures. Or, in yet a third case, it may reflect a policy of monetary tightness by the Federal Reserve System.

All of these situations have bearish implications for stock prices, because liquidity problems, inflationary pressures, and monetary stringency upset the normal day to day course of business, harming companies, workers and consumers in the process, and ultimately penalizing profits and dividends, the cornerstones of a fundamentally strong stock market. Consequently, while a normal upward sloping yield curve usually precedes and accompanies rising stock prices, deviations from the normal curve more frequently precede and accompany falling prices.

Strictly speaking, a yield curve of government securities should be calculated using all available government bills, notes, and bonds (there are dozens of each on the market). While such an indicator can fairly easily be developed with econometric techniques, an excellent weekly approximation of the full yield curve can be derived by relating yield indexes of just three types of government securities: three month (90 day) treasury bills, three to five year treasury notes, and ten year or greater treasury bonds (see end of discussion for data sources).

During the last 35 years, a normal upward sloping yield curve based on these three yield indexes has been accompanied

primary bull markets nearly 80% of the time. An abnormal yield curve has been accompanied by sustained uptrends only 45% of the time and by major downtrends 55% of the time.

As noted in Table 17, the implications for actual future market changes have been just as profound. Market performances over subsequent three, six, and twelve month periods

TABLE 17

YIELD CURVE AND FUTURE STOCK PRICES (1941-1975)

Yield Curve	S&P 500 Index 3 Months Later	S&P 500 Index 6 Months Later	S&P 500 Index One Year Later
Normal	+ 3.0%	+6.0%	+ 11.5%
Abnormal	- 0.5%	-0.8%	- 0.7%
35-Year Average	+ 1.9%	+3.8%	+ 7.7%

are clearly superior when the yield curve is normal and upward sloping than when it is abnormal and downward sloping. The yield curve is one of the very few indicators equally adept at predicting the market for each of these periods, a valuable supplement to its excellent mapping of major bull and bear market trends.

The best source of weekly yield statistics is the *free* Federal Reserve Bank of St. Louis publication, "U. S. Financial Data." Their treasury bond yield series is particularly useful because it eliminates so-called "flower bonds" which may be used at par in payment of estate taxes. A flower bond purchased prior to death for, say, \$850 may be used just as though it were \$1,000 cash when estate taxes are paid. Due to this added reward potential, flower bonds carry a lower than average yield, a feature which biases the yield curve relationship if they are included in an index of long term treasury bond yields.

Dealer Loan Rate. One little known but extremely useful guide to money market conditions is the Dealer Loan Rate — the interest rate charged by money center banks for overnight loans to major bond dealers on the riskless collateral of U. S. government bonds. No one indicator can ever tell the