

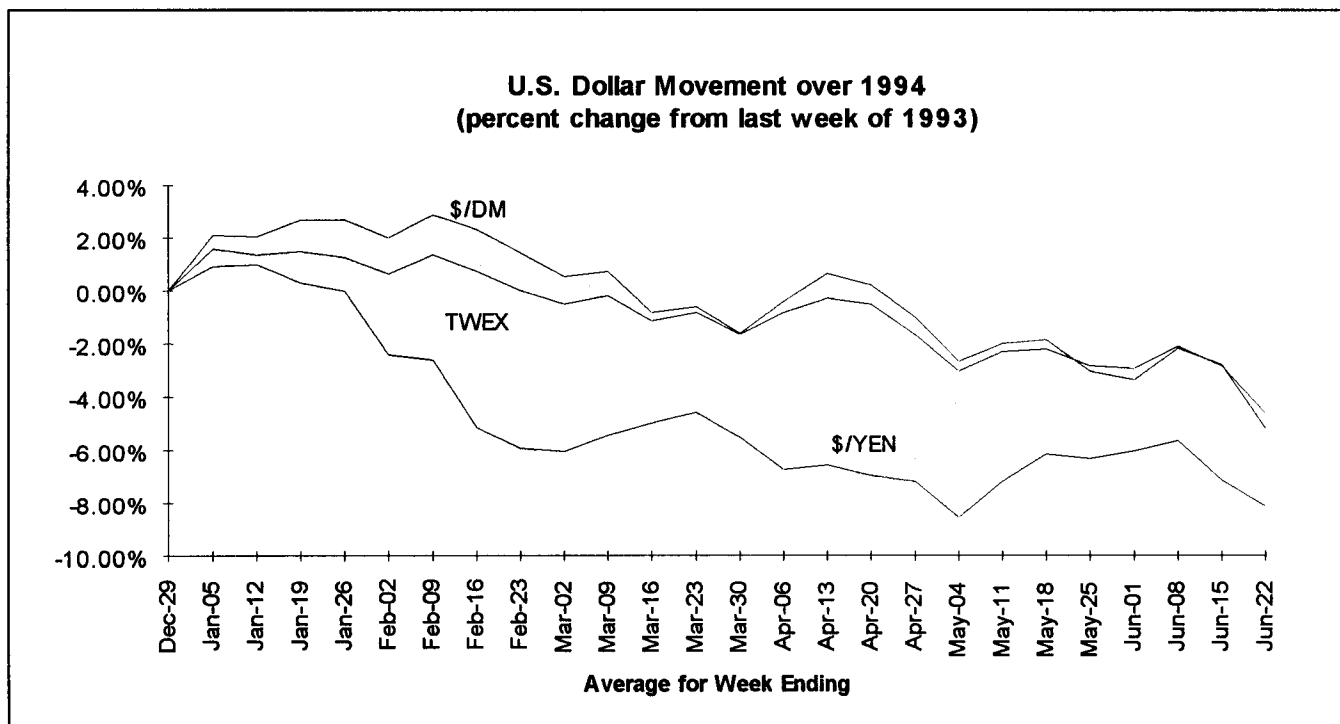


I. D. E. A.

## TRADING PATTERNS IN THE YIELD CURVE FOLLOWING LARGE U.S. DOLLAR DECLINES

**BACKGROUND:** With so much attention being paid to the collapse of the dollar in recent sessions, particularly against the Yen, we sought to investigate the behavior of the U.S. yield curve in the period following "significant" losses in the dollar. Federal Reserve officials have sought to downplay current dollar losses, letting it be known in a *New York Times* article today that they favor following their own less volatile trade-weighted dollar index rather than the more volatile \$/Yen and \$/DM rates.

By downplaying the significance of the drop in the dollar, the Fed is trying to give the impression that they do not need to respond to the dollar's fall. Even on a trade-weighted basis, however, the dollar's loss has been significant. The following chart compares, on a weekly average basis, the Fed's trade-weighted dollar index (TWEX) to the \$/Yen and the \$/DM. The chart anchors all three measures to begin at the end of 1993 at the same level, and ends with the most recently available data for the week ending June 22. As of the latest available week, TWEX was off 4.6%, while the \$/DM was off 5.9% and the \$/Yen was off 8.9%.



120 BROADWAY  
NEW YORK, N.Y. 10271

TEL: 212 571 4332  
FAX: 212 571 4334

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**RESULTS:** We examined the reaction of the U.S. yield curve to initial sharp declines in the U.S. dollar. We define an "initial sharp decline" in the dollar as the first instance in which the value of the trade-weighted dollar falls 4% or more from its value 6 months before. The 4.6% decline in the TWEX as of the week of June 22, 1994 was the first time this year that a 6 month decline in the TWEX breached this 4% band, giving a degree of similarity to our historical comparison. Starting with the original free-float of the dollar in 1971, there have been 13 such "initial sharp declines," not counting this current move.

We took as our point of analysis for the yield curve a variety of measures that occurred 13 weeks after the TWEX first fell 4% or more. These measures include absolute directional moves all across the yield curve, as well as various shifts in the yield curve. The results for the 13 episodes of initial sharp decline are presented in the table on the following page. The table gives full detail as to the date of the initial sharp decline, the size of the maximum decline that followed, the length of the decline, and various yield curve measures. Some of the more salient points that can be noted from the table include:

(1) *Dollar drops are highly cyclical.* In only 1 incident of the 13 was a 4% TWEX decline not followed by even more significant TWEX declines, as the Maximum Decline column shows. Also, in 9 of the 13 cases, the TWEX decline through 4% presaged not only further TWEX declines, but a long follow-on period of TWEX decline - in each of these 9 cases the 4% decline came before, usually well before, the fall in the TWEX was even 50% completed.

(2) *Long bond yields rise after the dollar falls.* The U.S. Treasury 10 year note rose in yield in the 13 week period following an initial sharp TWEX decline on 9 of 13 occasions. The overall median rise of the 10 year note was 26 basis points. While economists may downplay the connection between a decline in the TWEX and inflation, it is clear that the long end of the yield curve takes the possibility much more seriously.

(3) *Fed Funds rate tends to fall* - While it might be expected that the Fed would tighten once they have observed a sharp decline in the dollar, indications are that the Fed actually continues to ease, perhaps due to the weakness in the economy that the dollar decline is signaling. According to the table, the Fed funds rate only rose in 5 of the 13 episodes following the initial sharp decline in the TWEX. 3 of these 5 hikes came exclusively during the Fed's experiment in monetarism from 1979-82, the only time the Fed has operated under a floating interest rate regime; since that experiment was discontinued, the Fed allowed the funds rate to drop in all 5 of the most recent declining dollar episodes. Some of the easings have occurred even during tightening periods, which may suggest the Fed has deliberately overridden existing policy implementation in reaction to the dollar's decline.

(4) *Yield spreads tend to narrow* - Despite the fact that the Fed has a tendency to let the funds rate drift lower when the dollar weakens, the entire yield curve appears to ratchet higher, with the curve flattening in the process. This may simply be an immediate reaction of the market in its belief that, despite the Fed's initially easier status, eventually the Fed will be forced to raise rates to support the dollar and fight any potential inflationary impact. As the table shows, the 3yr/10yr spread was flat or narrower 9 of 13 times.

**TRADING RECOMMENDATION:** The safest bet at this point would be to play the bond from the short side. With yields currently at 7.50%, we would anticipate a move to 7.75% is likely, and we would probably remain short until 8.00%. The dollar's weakness may cause the Fed to pause in its push for higher rates, but we do not believe that will sidetrack them from further tightening, as it has in the past. We would also most certainly continue to play the dollar from the short side, particularly against the Yen but also on a trade-weighted basis.

## YIELD CURVE REACTIONS TO SHARP DOLLAR DECLINES (Trade-Weighted Dollar, 1971-94)

| DATE of<br>first 4%<br>dollar drop | SIZE of<br>first sharp<br>4% break | WEEKS<br>before 4%<br>breached | WEEKS TI<br>dollar is<br>positive | MAXIMU<br>Decline<br>after 4% | MARKET REACTION |              |                |                |                |                 |                         |                 |                  |                  |
|------------------------------------|------------------------------------|--------------------------------|-----------------------------------|-------------------------------|-----------------|--------------|----------------|----------------|----------------|-----------------|-------------------------|-----------------|------------------|------------------|
|                                    |                                    |                                |                                   |                               | Fed<br>Funds    | 3Mth<br>Bill | 1 Year<br>Bill | 3 Year<br>Note | 5 Year<br>Note | 10 Year<br>Note | Long Term<br>Bond Index | 30 Year<br>Bond | 3Y/10Y<br>Spread | 3M/12M<br>Spread |
| 09/29/71                           | -4.16%                             | 14                             | 45                                | -7.56%                        | -1.35           | N/A          | N/A            | -0.68          | -0.60          | -0.18           | N/A                     | N/A             | 0.50             | N/A              |
| 02/21/73                           | -5.96%                             | 2                              | 38                                | -16.06%                       | 1.27            | 0.98         | N/A            | 0.21           | 0.19           | 0.26            | 0.24                    | N/A             | 0.05             | N/A              |
| 07/03/74                           | -5.47%                             | 9                              | 8                                 | -7.68%                        | -2.51           | -0.89        | -0.41          | -0.31          | -0.32          | 0.31            | 0.35                    | N/A             | 0.62             | 0.48             |
| 01/29/75                           | -5.56%                             | 8                              | 23                                | -9.97%                        | -1.28           | -0.17        | 0.49           | 0.78           | 0.69           | 0.70            | 0.56                    | N/A             | -0.08            | 0.66             |
| 11/30/77                           | -4.02%                             | 62                             | 69                                | -12.53%                       | 0.25            | 0.35         | 0.35           | 0.49           | 0.52           | 0.48            | 0.45                    | 0.41            | -0.01            | 0.00             |
| 12/05/79                           | -4.30%                             | 22                             | 12                                | -3.46%                        | 2.40            | 3.62         | 3.08           | 3.66           | 3.31           | 2.65            | 2.44                    | 2.41            | -1.01            | -0.54            |
| 09/10/80                           | -5.85%                             | 20                             | 7                                 | -8.42%                        | 8.60            | 6.67         | 3.60           | 2.92           | 2.37           | 1.93            | 1.60                    | 1.67            | -0.99            | -3.07            |
| 01/06/82                           | -4.20%                             | 8                              | 5                                 | -4.26%                        | 2.17            | 1.51         | 0.35           | 0.04           | -0.21          | -0.34           | -0.57                   | -0.49           | -0.38            | -1.16            |
| 07/10/85                           | -6.34%                             | 6                              | 105                               | -19.52%                       | -0.23           | 0.18         | 0.30           | 0.39           | 0.32           | 0.25            | 0.35                    | 0.03            | -0.14            | 0.12             |
| 11/11/87                           | -4.92%                             | 2                              | 27                                | -11.93%                       | -0.30           | -0.13        | -0.33          | -0.62          | -0.63          | -0.62           | -0.58                   | -0.48           | 0.00             | -0.20            |
| 11/15/89                           | -4.46%                             | 3                              | 68                                | -11.73%                       | -0.25           | -0.01        | 0.29           | 0.56           | 0.57           | 0.53            | 0.59                    | 0.54            | -0.03            | 0.30             |
| 11/20/91                           | -4.36%                             | 9                              | 22                                | -13.26%                       | -0.69           | -0.62        | -0.41          | -0.02          | 0.14           | 0.06            | 0.04                    | 0.02            | 0.08             | 0.21             |
| 07/15/92                           | -4.95%                             | 2                              | 16                                | -12.91%                       | -0.08           | -0.29        | -0.26          | -0.31          | -0.33          | -0.38           | -0.24                   | -0.14           | -0.07            | 0.03             |
| 06/22/94                           | -4.62%                             | 9                              | N/A                               | N/A                           | N/A             | N/A          | N/A            | N/A            | N/A            | N/A             | N/A                     | N/A             | N/A              | N/A              |
| <b>MEDIAN:</b>                     | -4.77%                             | 9                              | 23                                | -11.73%                       | -0.23           | 0.09         | 0.30           | 0.21           | 0.19           | 0.26            | 0.35                    | 0.03            | -0.03            | 0.03             |

### NOTES:

1. Data on the left calculated using weekly average values of the Fed's Trade-Weighted Dollar Index, an index of the dollar against the currencies of 10 industrialized countries, weighted by their percentage of trade with the U.S.
2. DATE refers to the first time that the weekly average dollar index fell more than 4% below its level of 6 months prior. SIZE refers to the size of that first breach of the 4% band. WEEKS refers to the number of weeks the index had been declining before it first fell 4%. WEEKS TIL refers to the number of weeks following the 4% breach until the index started to rise again. MAXIMUM refers to the maximum 6 month decline the trade-weighted dollar experienced following its first breach of 4%.
3. All MARKET REACTIONS are measured in percentage points of yield. Long Term Bond Index is the Treasury's index of all U.S. Treasury securities with 10 years or more to maturity.