# The Effect of Stock Prices on the Demand for Money Market Mutual Funds

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## Abstract

During the 1990s households have sharply increased the share of their portfolios held in equities and mutual funds and sharply reduced the share held in bank accounts. We show that this reallocation has substantially increased the impact of financial-market developments on the demand for money. Specifically, both increases and decreases in the Wilshire 5000 have boosted the demand for money funds during the 1990s, although they had little effect on money funds during the 1980s. The estimated effects in the 1990s are generally statistically significant and economically important.

## Introduction

The monetary aggregates may provide useful information about nominal economic activity. Indeed, Estrella and Mishkin (1997) argued that providing such information is a necessary condition for the aggregates to serve any more ambitious role in the conduct of monetary policy. Our ability to use the monetary aggregates as indicators of nominal income or spending depends on our proficiency in separating changes in money demand related to income from changes in money demand related to other factors. These other factors generate shifts in the income velocity of money; identifying and quantifying these shifts on a timely basis would enable policymakers to extract more information from the behavior of the monetary aggregates.

Money demand has been represented traditionally as a stable function of nominal income and a narrowly defined opportunity cost, usually calculated as the yield on a short-term risk-free bond or the difference between that yield and the yields on the components of the monetary aggregate (Laidler, 1985). In recent years, however, households have sharply increased their holdings of other investment vehicles. For example, the Survey of Consumer Finances conducted by the Federal Reserve Board shows that the share of financial assets held in transactions accounts and certificates of deposit declined from 30 percent in 1989 to 19 percent in 1995, while the share of financial assets held in publicly traded stocks and mutual funds (excluding money market funds) rose from 20 percent to 31 percent over the same period (Kennickell, Starr-McCluer, and Sunden, 1997). As a result, money demand probably depends more today than in the past on developments in a wide range of financial markets.

Estimating a money demand function that incorporates interactions with a variety of other assets is an important topic for future research. For example, Collins and Edwards (1994) and Orphanides, Reid and Small (1994) investigate the substitutability of money with stock and bond mutual funds. This paper has the more modest objective of examining the effect on money demand of price changes in one alternative asset, equities. We focus on the demand for money market mutual funds, the component of M2 that we expected to be most closely related to stock prices. This prior belief--which is confirmed by the data--stemmed from the role of money funds as part of a balanced portfolio and from the "gateway" character of money funds as a way of shifting wealth among assets.

We find that both increases and decreases in the Wilshire 5000 index of stock prices boost money fund growth, although the timing and magnitude of the responses differ. Estimates from a baseline regression suggest that a one percent *increase* in the Wilshire generally increases the demand for money funds by about two-thirds percent over the following four months. A one percent *decrease* in the Wilshire has a stronger initial effect and ends up increasing the demand for money funds by about two-thirds percent in one specification and about half as much in another. One might have expected that increases and decreases in stock prices would have opposing effects on the demand for money funds. We believe that our results reflect the gateway property of money funds and the fact that portfolio readjustments are triggered by both increases and decreases in stock prices. We find no effect of stock-price changes on M2 excluding money funds.

## 1. Previous Literature

Surprisingly little research has investigated the influence of asset price movements on the demand for money. Friedman (1988) noted that previous research on money demand had accounted for the possible role of the stock market by including one of two explanatory variables: the volume of financial transactions (as a use for money) or the yield on securities (as the return to an alternative asset). But Friedman wrote that he knew of "no econometric attempt to relate the level of stock prices to the demand for money" (p. 222) except indirectly through total wealth. Using quarterly data on M2 from 1951 to 1986, Friedman found that higher stock prices depress money demand in the short run but raise money demand over several quarters. Using annual data from 1886, he found that higher stock prices reduce money demand. Friedman concluded that the experience of the postwar period was atypical by historical standards and reflected a wealth effect on money demand.

Two other papers that explore the effect of stock prices on money demand are Allen and Connolly (1989) and Choudhry (1996). Allen and Connolly use Bayesian analysis to systematically compare alternative specifications of money demand. Using quarterly data from 1961 to 1984, they found that the rate of return on equity has an insignificant effect on money demand, while household wealth has a significant positive effect. Choudhry estimated money demand functions for the U.S. and Canada using quarterly data from 1955 to 1989. He found that higher stock prices increase demand in the long run for U.S. M1, U.S. M2, and Canadian M1, but decrease long-run demand for Canadian M2.

We are aware of no research that examines the effect of stock prices on money demand at the monthly frequency, or that allows increases and decreases in stock prices to have asymmetric effects on money demand. Moreover, we are aware of no research that examines the experience of the 1990s, when changes in households' preferences and portfolio opportunities presumably made stock prices a more important influence on money demand.

## 2. How Would We Expect Stock Prices to Affect the Demand for Money Funds?

Money market mutual funds invest in liquid short-term securities, primarily Treasury bills and commercial paper. The return on these securities, less fund expenses, is passed on to owners of fund accounts. Because the average maturity of the assets held by money funds is generally less than 90 days, interest-rate fluctuations have a substantial effect on fund yields but do not change the funds' capital values. In addition, money funds generally purchase fairly safe securities, so default risk is low. Thus, households apparently view money fund accounts as safe investments, even though they are not government insured like accounts at banks and thrift institutions. Money fund accounts often have some check-writing privileges as well, usually with a maximum number of checks per month and a minimum amount per check. The Federal Reserve deems money funds with low initial investment requirements as "retail" money funds and includes them in M2. Money funds that require large initial investments (or whose sales are directed at firms rather than households) are termed "institutional" money funds and are included in M3 but not in M2.

We can think of two broad motivations for households' ownership of accounts at money market mutual funds. First, money funds are likely to be part of any balanced portfolio, as the combination of low risk, market rate of return, and liquidity is not matched by other mutual funds or by bank accounts. As a portfolio component, the demand for money funds should be affected by the expected return on all assets in the portfolio. Specifically, expected decreases in stock prices should cause investors to shift wealth out of equities and into money funds. Of course, past performance is no guarantee of future returns, so this connection does not imply that observed decreases in stock prices should necessarily spur money fund growth. Indeed, price declines would reduce the shares of portfolios held in stocks and might induce some rebalancing toward stocks and away from money funds.

The second motivation for owning money funds is to use them as a "gateway" when shifting wealth among other assets. The combination of market returns (albeit based on short maturities) and liquidity makes money funds an excellent place to "park" wealth temporarily while making further allocation decisions. This role seems especially clear when shifting wealth among mutual funds at the same fund "family," and household ownership of all types of mutual funds has increased sharply over the 1990s. In this gateway role for investments, money funds serve much the same role as narrow money does for purchases of consumption goods. With this motivation, changes in stock prices that cause a portfolio reallocation either toward *or* away from stocks will spur the demand for money funds.

A regression of money fund growth on changes in stock prices will reflect the net effect of these two motivations. However, differences in the timing or strength of the responses may provide some clues about the channels of influence.

## 3. Estimation Approach

To measure the effect of stock price movements on the demand for money, we regress the change in money on contemporaneous and lagged changes in stock prices and in other variables. Our base specification is:

$$\%\Delta Money_t = \alpha + \sum_{i=0}^{4} \beta_i \, \%\Delta StkIncrease_{t-i} + \sum_{i=0}^{4} \gamma_i \, \%\Delta StkDecrease_{t-i}$$
$$+ \sum_{i=0}^{2} \kappa_i \, \Delta r_{t-i}^{3\text{-}month} + \sum_{i=0}^{2} \lambda_i \, \Delta r_{t-i}^{30\text{-}year} + \sum_{i=0}^{2} \mu_i \, \Delta r_{t-i}^{MMDA}$$
$$+ \sum_{i=0}^{2} \eta_i \, \%\Delta Income_{t-i} + \tau \, trend_t + \pi \, trend_t^2 + \epsilon_t \quad ,$$

where the variables are defined as:

$\%\Delta Money_t$ is the annualized percent change in retail money funds in month $t$;

$\%\Delta StkIncrease_t$ is the percentage change in the Wilshire 5000 index of stock prices in month $t$ if the change is positive, and 0 otherwise;

$\%\Delta StkDecrease_t$ is the percentage change in the Wilshire 5000 index of stock prices in month $t$ if the change is negative, and 0 otherwise;

$r^{3\text{-}month}$ and $r^{30\text{-}year}$ are the yields on three-month and thirty-year Treasury securities;

$r^{MMDA}$ is the yield on money market deposit accounts at banks; and

$\%\Delta Income$ is the percent change in aggregate nominal disposable income.

We examine several components of the monetary aggregates as dependent variables in this equation. Our focus is on retail money market funds, but we also look at savings accounts (including money market deposit accounts), M2 excluding money market funds, and institutional money market funds.

We split the measure of stock price changes into its positive and negative elements in order to allow for an asymmetric response to price changes of different sign. One possible cost of this approach is that estimating the dynamic structure using polynomial distributed lags would be quite difficult, since months with positive price changes are often followed by months with negative price changes. Nevertheless, the results clearly demonstrate the importance of this flexibility in the specification. The other explanatory variables in the equation control for other influences on money demand: the interest-rate variables provide a traditional measure of opportunity cost, and the growth of disposable income is a scale variable. The trend terms are somewhat trickier, and we discuss them next.

As is well known, the early 1990s witnessed a dramatic shift in the demand for M2 (Feinman and Porter, 1992). Households sharply reduced their holdings of small time deposits and shifted this wealth into mutual funds, including both money market funds (which are included in M2) and stock and bond mutual funds (which are not). This shift has two ramifications for our analysis. First, developments in the equity market probably matter more for money demand today than previously. Thus, we focus on the 1992-1997 period but also examine the data for the 1980s for comparison. Second, the increasing interest in money market funds over our sample period imparts a trend to the dependent variable that is not explained by any of the explanatory variables. In order to control for this shift, we experiment with a variety of ad hoc trends. The basic regression includes a linear trend and a quadratic trend, and we also report results using a piecewise linear trend with a bend at the end of 1994. (Our specification of the trend terms follows the suggestion of Perron, 1989.) Fortunately, our qualitative results are robust to these alternative specifications, and even to a specification with no trend at all (although the fit of this latter equation is noticeably worse).

We use two types of monthly money fund data: changes based on the month-average levels usually reported by the Federal Reserve, and changes based on month-end levels that we constructed from weekly data. Figure 1 shows the annualized percent change in retail money funds using month-average data from 1992 to 1997. The other data are constructed in a comparable fashion whenever possible. A more complete description of the data is available from the authors.

## 4. Results

Our basic results are reported in Table 1. The first three columns refer to the 1990s, with columns 1 and 2 based on month-average data (and employing different time trends) and column 3 based on month-end data. The fourth column applies the specification of column 1 to the 1980s. We discuss the 1990s results first and then turn to the 1980s.

The first rows of the table show the effect of increases in stock prices. The growth rate of money funds rises significantly in the month following a rise in stock prices, and it basically remains high for the following three months. The sum of the estimated coefficients on the contemporaneous stock-price increase and four lags is between 7 and 9, and it is statistically significantly different from zero. Because the dependent variable is *annualized* growth, one needs to divide by 12 to obtain the actual increment to growth. Thus, this sum implies that a one percent increase in the Wilshire 5000 boosts retail money fund assets by about two-thirds of a percent. If money funds are being used to "park" money temporarily, then one would expect money fund growth to be depressed at some point, and we do not show any evidence of this phenomenon. At the same time, such outflows from money funds might occur gradually over a prolonged period, and the noise in the data could preclude our detecting these flows. When we add more lags of stock-price changes to the regression, the additional estimated coefficients are indistinguishable from zero.

The next set of rows shows the effect of decreases in stock prices. All three columns show that the growth rate of money funds rises in the month that stock prices decline and stays elevated in the following month. However, this effect is larger and more statistically significant in the month-average data (columns 1 and 2) than in the month-end data (column 3). In the month-average data, the sum of the estimated coefficients has essentially the same absolute value as the sum of the estimated coefficients for stock-price increases; that is, rises and falls in stock prices appear to have very similar total effects on money fund growth. In the month-end data, stock-price decreases have roughly half the effect of stock-price increases. Once again, there is little evidence of a reversal of this effect in the further lags shown in the table, or in additional lags that we have experimented with.

Substituting changes in the Standard and Poor's 500 for changes in the Wilshire 5000 has little effect on the estimated coefficients. Moreover, there is no evidence of heteroskedasticity in the error terms related to the size of stock-price changes.

The remaining rows of the table show the estimated coefficients on the control variables, which are generally not statistically significantly different from zero. Neither short-term nor long-term market interest rates have consistent negative effects on the demand for money market funds. The interest rate paid on money market deposit accounts (MMDAs) tends to have a negative effect, as one would expect. Growth of disposable income has no significant effect, suggesting that changes in money fund holdings at a monthly frequency are not driven by changes in income.

We experimented with including additional lags of the control variables, but the estimated coefficients on these terms were insignificant, and their inclusion had little impact on the estimated effects of stock-price changes. Dropping all of the variables with insignificant coefficients reduces the magnitude of the coefficients on stock-price changes but does not alter their basic pattern. Substituting the growth of personal consumption expenditures as a scale variable also has little effect. Finally, we tried including some other explanatory variables, including stock market volume, stock-price volatility as inferred from options contracts, and the level and change in mutual fund assets. The estimated coefficients on these variables were also insignificant, and their inclusion did not affect our qualitative conclusions.

The trend variables are quite significant. The estimated coefficients imply a time pattern of rapidly rising money fund growth followed by a leveling off in the growth rate. Indeed, this pattern is easily visible in the raw data. The Durbin-Watson statistic suggests a small amount of residual autocorrelation. Inclusion of the lagged dependent variable has no marked effect on any of the estimated coefficients, so we have not shown those results.

The response of money fund growth to a change in stock prices can also be represented graphically. Figure 2 is based on the estimates shown in column 1. The horizontal axis in each figure shows monthly changes in the Wilshire 5000. The vertical axis shows the average annualized percent change in retail money funds over the contemporaneous month and subsequent four months, controlling for changes in the other right-hand-side variables and in the Wilshire 5000 during the other months. The slope of the plotted line represents the estimated summed response to the stock-price change, and so the distribution of points around the line shows the fit of the regression. Our finding that stock-price rises and declines have similar effects on money fund growth is clearly seen in the "V" shape of the points displayed.

We have also estimated the equation using data for 1984 to 1989, a period of relatively stable money demand that excludes the monetary-aggregate targeting of the early 1980s. (We excluded the yield on money market deposit accounts from these regressions because the data are not available for the entire sample.) The fourth column of Table 1 shows the results for month-average data. Neither stock-price rises nor declines had significant effects on the demand for money funds during the late 1980s, in sharp contrast to the experience of the mid-1990s. The results for month-end data (not reported) are similar: the sums of the coefficients on stock-price rises and declines are both much smaller than in column 3, and the former coefficient is less statistically significant. The effect of stock-price changes on money demand has clearly been much different during the 1990s than earlier, as we hypothesized.

Table 2 shows additional regressions for alternative dependent variables. In column 1 we examine the effect of stock-price changes on the demand for savings accounts, including money market deposit accounts or MMDAs. Because MMDAs are often sold by banks as substitutes for money market mutual funds, one might expect the effect of stock-price changes on these two components of M2 to be fairly similar. But this is not the case: neither price rises nor declines have any significant effect on the demand for savings accounts including MMDAs. We suspect that the key difference is the ease with which assets in money funds can be moved to or from stock and bond mutual funds.

Column 2 shows the effect of stock-price changes on all of M2 excluding money funds (but including MMDAs). Once again, no effect can be seen in the data.

Column 3 shows the effect of stock-price changes on institutional money market mutual funds. As we noted earlier, these funds are money market funds that require large initial investments and are included in M3 but not in M2. The sum of the estimated coefficients on stock-price increases is roughly the same here as in Table 1, but the standard error is much larger, so the effect is not statistically distinguishable from zero. The last row of the table shows that the R-squared of this regression is much lower than those in Table 1, and the poor fit of the equation may be responsible for the large standard error. The sum of the estimated coefficients on stock-price decreases is even larger, but again the large standard error makes it difficult to draw any firm conclusions about what is going on.

## 5. Conclusion

During the 1990s households have sharply increased the share of their portfolios held in equities and mutual funds and sharply reduced the share held in bank accounts. One might reasonably expect that this reallocation would increase the impact of financial-market developments on the demand for money. We show that this expectation is correct, at least concerning stock-price movements and the demand for retail money market mutual funds. We find that--in contrast to estimates for the 1980s--both increases and decreases in the Wilshire 5000 have boosted the demand for money funds in the 1990s. These effects are generally statistically significant and economically important. In our base specification, a one percent rise or fall in equity prices raises the demand for money funds by about two-thirds of a percent over five months. In a reasonable alternative specification, the effect of stock-price increases is the same, but the effect of decreases is roughly half as large. This pattern of responses can be described by a “V” in a picture with stock-price changes on the horizontal axis and money fund changes (after accounting for other factors) on the vertical axis.

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**Table 1: Basic Estimates**
[Dependent Variable: Annualized Percent Change in Retail Money Market Mutual Funds; columns 1 and 2 use month-average data for 1/92-12/97, column 3 uses month-end data for 1/92-12/97, and column 4 uses month-average data for 1/84-12/89]

| Independent Variable | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| *Percent Increase in Stock Prices* | | | | |
| contemporaneous | -.06 | -.45 | -.29 | -.31 |
| | (.69) | (.72) | (1.42) | (.71) |
| first lag | 2.83** | 2.55** | 3.30** | 1.04 |
| | (.71) | (.74) | (1.18) | (.72) |
| second lag | 1.19 | .99 | 1.56 | .39 |
| | (.71) | (.74) | (1.19) | (.76) |
| third lag | 2.47** | 1.99** | 1.02 | -.04 |
| | (.67) | (.67) | (1.18) | (.67) |
| fourth lag | 2.92** | 2.26** | 2.34** | .15 |
| | (.74) | (.74) | (1.04) | (.70) |
| **Sum of coefficients** | **9.34**** | **7.33**** | **7.93**** | **1.23** |
| | **(1.84)** | **(1.80)** | **(3.14)** | **(1.69)** |
| *Percent Decrease in Stock Prices* | | | | |
| contemporaneous | -4.95** | -4.21** | -2.54 | -.70 |
| | (1.18) | (1.19) | (1.60) | (.64) |
| first lag | -2.70** | -2.43** | -2.56 | .31 |
| | (1.13) | (1.17) | (1.59) | (.70) |
| second lag | .01 | .48 | 1.04 | .42 |
| | (1.17) | (1.20) | (1.52) | (.69) |
| third lag | -1.71 | -.91 | .10 | -1.30* |
| | (1.23) | (1.24) | (1.63) | (.68) |
| fourth lag | -1.60 | -.97 | .17 | .39 |
| | (1.15) | (1.18) | (1.71) | (.62) |
| **Sum of coefficients** | **-10.95**** | **-8.04**** | **-3.78** | **-.89** |
| | **(3.46)** | **(3.39)** | **(4.04)** | **(1.08)** |
| *Change in Short-term Interest Rate* | | | | |
| contemporaneous | 11.04 | 3.82 | 7.59 | -10.56 |
| | (7.63) | (7.92) | (11.84) | (6.53) |
| first lag | .44 | -6.22 | -21.57* | -11.49 |
| | (8.82) | (9.27) | (12.52) | (7.28) |
| second lag | .90 | -1.88 | 10.94 | -9.73 |
| | (8.83) | (9.27) | (12.99) | (6.43) |

**Table 1 (continued)**

| Independent Variable | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| *Change in Long-term Interest Rate* | | | | |
| contemporaneous | 5.36 | 6.23 | -1.75 | 3.85 |
| | (6.10) | (6.37) | (8.77) | (6.01) |
| first lag | -.94 | 2.13 | 1.17 | 2.37 |
| | (6.72) | (6.97) | (8.63) | (7.01) |
| second lag | -10.37 | -9.12 | 1.78 | -8.81 |
| | (6.65) | (6.95) | (9.40) | (6.18) |
| *Change in MMDA Rate* | | | | |
| contemporaneous | -60.34** | -42.34* | -28.22 | -- |
| | (23.75) | (24.21) | (48.74) | |
| first lag | -35.00 | -30.36 | -46.60 | -- |
| | (22.86) | (23.80) | (40.15) | |
| second lag | 10.11 | 11.88 | -6.31 | -- |
| | (20.61) | (21.56) | (35.86) | |
| *Percent Change in Disposable Income* | | | | |
| contemporaneous | -.26 | -.33 | 1.51 | -.33 |
| | (1.24) | (1.30) | (2.15) | (1.76) |
| first lag | 1.81 | 1.34 | -.34 | -.20 |
| | (1.40) | (1.45) | (2.31) | (1.86) |
| second lag | -.24 | -.77 | -.83 | -1.03 |
| | (1.20) | (1.24) | (2.02) | (1.64) |
| *Trend* | | | | |
| linear trend (1992-97) | 10.20** | 1.14** | 10.26** | -3.02** |
| | (1.60) | (.20) | (2.74) | (.62) |
| linear trend squared | -.03** | | -.03** | .02** |
| | (.00) | | (.01) | (.00) |
| supplemental linear trend (1995-97) | | -1.82** | | |
| | | (.32) | | |
| Number of Observations | 71 | 71 | 71 | 72 |
| Durbin-Watson Statistic | 1.69 | 1.59 | 2.47 | 0.94 |
| $R^2$ | .79 | .77 | .61 | .65 |

Notes: A constant is included in each regression. Standard errors are in parentheses; * denotes significant at 10% and ** denotes significant at 5 percent.

**Table 2: Additional Estimates, January 1992 to December 1997**
[Dependent Variable: Annualized Percent Change in Money Components (month-avg basis); column 1 refers to savings accounts (including MMDAs), column 2 to M2 excluding retail money funds, and column 3 to institutional money funds]

| Independent Variable | 1 | 2 | 3 |
|---|---|---|---|
| *Percent Increase in Stock Prices* | | | |
| contemporaneous | -1.24** | -.32** | -.49 |
| | (.46) | (.14) | (2.27) |
| first lag | -.31 | .15 | .93 |
| | (.47) | (.15) | (2.32) |
| second lag | -.37 | -.24 | 4.13* |
| | (.47) | (.15) | (2.34) |
| third lag | .40 | .10 | 2.09 |
| | (.44) | (.14) | (2.18) |
| fourth lag | .12 | -.02 | 1.18 |
| | (.49) | (.15) | (2.43) |
| **Sum of coefficients** | **-1.39** | **-.33** | **7.83** |
| | **(1.21)** | **(.38)** | **(6.02)** |
| *Percent Decrease in Stock Prices* | | | |
| contemporaneous | .18 | .34 | -3.50 |
| | (.78) | (.24) | (3.85) |
| first lag | -.43 | -.25 | -3.63 |
| | (.75) | (.23) | (3.70) |
| second lag | .46 | .26 | -2.75 |
| | (.77) | (.24) | (3.82) |
| third lag | -.06 | .12 | -1.82 |
| | (.81) | (.25) | (4.02) |
| fourth lag | .05 | -.40 | -.07 |
| | (.76) | (.24) | (3.78) |
| **Sum of coefficients** | **.20** | **.06** | **-11.77** |
| | **(2.28)** | **(.72)** | **(11.32)** |
| *Change in Short-term Interest Rate* | | | |
| contemporaneous | -14.65** | -.22 | -37.10 |
| | (5.03) | (1.58) | (25.00) |
| first lag | -17.19** | -3.16* | -25.86 |
| | (5.82) | (1.83) | (28.90) |
| second lag | -9.83* | -2.11 | 7.05 |
| | (5.82) | (1.83) | (28.92) |

**Table 2 (continued)**

| Independent Variable | 1 | 2 | 3 |
|---|---|---|---|
| *Change in Long-term Interest Rate* | | | |
| contemporaneous | 1.45 | -.25 | -10.57 |
| | (4.03) | (1.27) | (20.00) |
| first lag | 3.61 | -1.60 | -12.06 |
| | (4.44) | (1.40) | (22.02) |
| second lag | 1.83 | -3.71** | 6.27 |
| | (4.39) | (1.38) | (21.79) |
| *Change in MMDA Rate* | | | |
| contemporaneous | -9.15 | -5.76 | -25.52 |
| | (15.67) | (4.93) | (77.81) |
| first lag | -21.35 | 2.47 | -85.79 |
| | (15.09) | (4.75) | (74.90) |
| second lag | -38.38** | -9.95** | 61.26 |
| | (13.60) | (4.28) | (67.51) |
| *Percent Change in Disposable Income* | | | |
| contemporaneous | .58 | .59** | 5.49 |
| | (.82) | (.26) | (4.07) |
| first lag | .91 | 1.15** | 4.19 |
| | (.92) | (.29) | (4.58) |
| second lag | .23 | .61** | -.07 |
| | (.79) | (.25) | (3.92) |
| *Trend* | | | |
| linear trend | -.23 | .35 | 5.37 |
| | (1.06) | (.33) | (5.26) |
| linear trend squared | .00 | -.00 | -.01 |
| | (.00) | (.00) | (.01) |
| Number of Observations | 71 | 71 | 71 |
| Durbin-Watson Statistic | .93 | 1.89 | 1.75 |
| $R^2$ | .84 | .74 | .32 |

Notes: A constant is included in each regression. Standard errors are in parentheses; * denotes significant at 10% and ** denotes significant at 5 percent.

**Figure 1**
**Growth of Retail Money Market Mutual Funds**
(seasonally adjusted annual rates, January 1992 - December 1997)

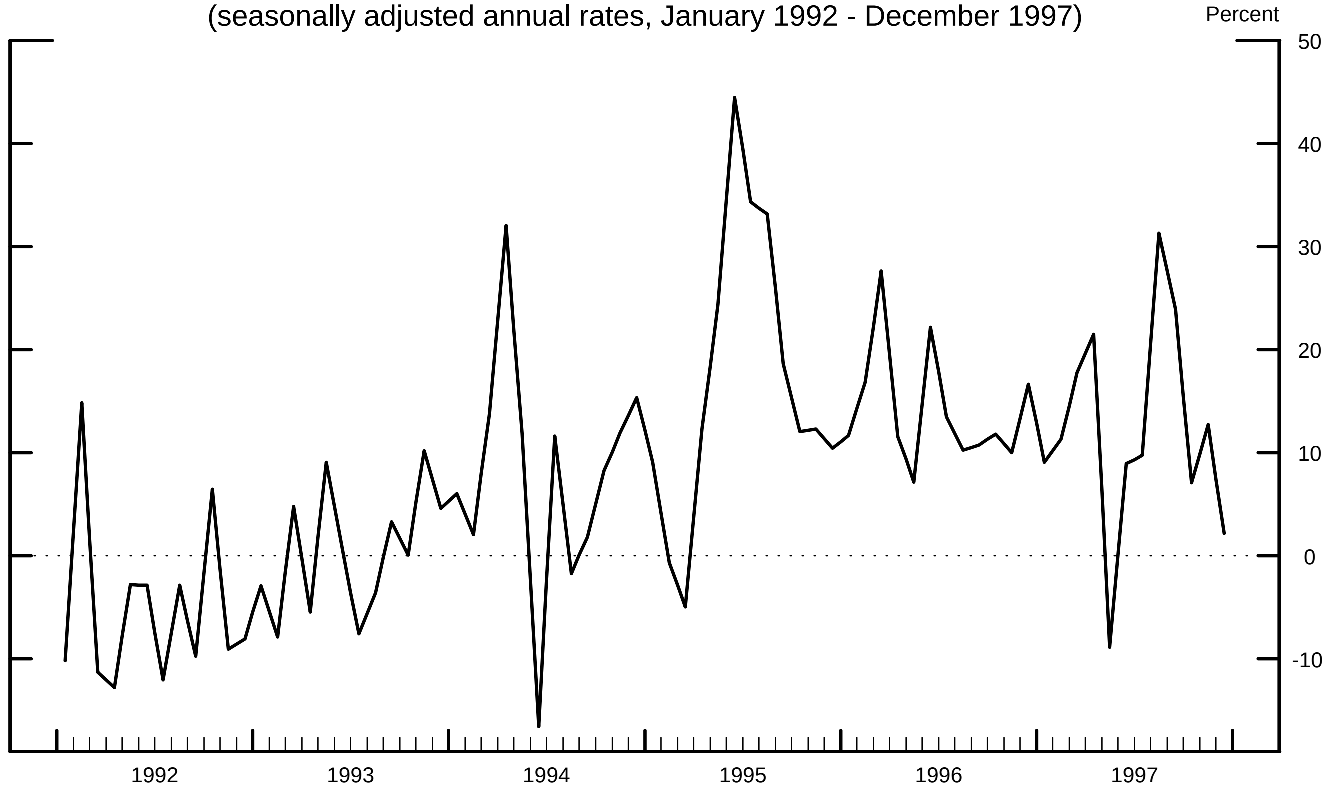


**Figure 2**
**Equity Price Changes and Money Fund Growth**
(month-average data, January 1992 - August 1997)