Health economists have long studied the implications of private information on the adoption of health insurance. Consumers who are more likely to suffer adverse health should be more likely to insure against such events. However, differing risk profiles complicate the investigation of this phenomenon. Since more cautious consumers are also more likely to purchase insurance, analysts have a difficult time exploring the correlation between consumers’ risk of adverse events and their inclination to purchase insurance.

In PERC Working paper #1003, PERC Research Fellow Li Gan and coauthors Feng Huang and Adalbert Mayer examine how researchers can investigate the effects of private information on the health insurance industry. They first consider the reasons why previous researchers have had difficulty detecting private information. They then propose a method to determine the effect of private information while accounting for consumers’ risk-aversion. Finally, they apply their model to the data from Finkelstein and McGarry’s 2006 contribution in the Econ. J.

Because of the difficulty in obtaining private information, analyzing its effect on health decisions has been challenging. Historical research has concentrated on the link between an individual consumer’s risk and his decision to purchase insurance—if consumers who purchase insurance have a higher susceptibility to adverse health, then this suggests the presence of private information in their decision. Results from this strategy have been mixed. The authors believe that including factors that account for individual cautiousness will sharpen analysis on private information.

Since data on consumers’ cautiousness are not readily available, the authors choose factors they believe will substitute for consumers’ risk preferences; as in the Finkelstein-McGarry paper, the authors use wealth, adoption of preventive health activities, and seat belt usage. However, since these variables only partially characterize a consumer’s risk preference, the model cannot estimate the effect of private information. To circumvent this problem, the authors divide the consumers into two types—bold and timid. Bold types are less risk-averse and, therefore, less likely to purchase insurance.

Gan, Huang, and Mayer choose to use the same framework as Finkelstein and McGarry and model two consumer decisions. The first is whether the consumer entered a nursing home; the second is whether the consumer chose to purchase long term health insurance. The former decision signifies how prone the consumer is to adverse health events—the model implicitly assumes they entered the nursing home because of the event. The drawback to Finkelstein and McGarry’s approach, however, is that since they weren’t fully characterizing the consumers’ risk preferences, their estimates would be inconsistent.

Theoretically, the model is akin to the two-stage instrumental variable model. In the proposed model, they first estimate the subject’s risk preference—whether he is bold or timid type. To do so, one needs only partial information on the characteristic in question to achieve consistent estimates in the second stage. In this case, the second stage determines the effect of private information on the consumers’ choices.

They use data provided by the Asset and Health Dynamics cohort of the Health and Retirement Study which includes the non-institutionalized US population born after 1923. After omitting records with missing values, the utilized dataset included 5,000 individuals’ characteristics from 1995-2000.

As expected, when accounting for consumers’ risk preferences, the authors find that those who are relatively more risk-averse are more likely to purchase the long-term
Researchers studied the influence of capital market information on firms' stock returns. In addition to firm size, companies' stock returns more strongly influence the market. For example, are larger effects on firms according to the firms' characteristics. Moreover, market reactions to unexpected changes to the Fed Funds rate. Later contributors tried to determine whether changes in stock returns depend on whether these announcements have different effects. Guo was the first to show that stock returns fall; the reverse occurs with an unexpected rise in the discount rate and worry that it signals a more stringent future financial market. Typically, when traders learn of an unexpected announcement of a fall in the discount rate, they sell their shares and stock prices fall; the reverse occurs with an unexpected announcement of a fall in the discount rate.

In PERC Working paper #1004, authors Dennis Jansen and Chun-Li Tsai investigate whether changes in stock returns depend on the concurrent overall trend in the stock market. Namely, they investigate whether the changes statistically differ in bull and bear markets.

Many authors have made notable contributions to this thread of the literature. In a 2004 *Quart. Rev. Econ. Finance* article, Guo was the first to show that stock returns react to unexpected changes to the Fed Funds rate. Later contributors tried to determine whether these announcements had different effects on firms according to the firms' characteristics. For example, are larger companies' stock returns more strongly influenced? In addition to firm size, researchers studied the influence of capital intensity and financial restraints. Concurrent theoretical research had indicated that monetary policy may have different effects on firms in the same industry depending on their financial characteristics; these empirical studies validated the theoretical predictions.

Where this paper differs from its predecessors is in the methodology of determining which monetary announcements were unanticipated. Instead of using the money supply growth rate, the authors here use futures data to determine whether a Fed Funds rate change was expected. This method was developed by Kuttner in a 2001 *J. Monet. Econ.* piece and continues to be widely used. An additional benefit from Kuttner's method is that the futures data is recorded daily while the money supply data from previous research could only be obtained on a monthly basis, so the authors can more precisely estimate the immediate consequences of a policy change.

Theoretically, the reason that firms' stock returns may be affected differentially by monetary policy results from information asymmetries between firms and their financial intermediaries. Since financial intermediaries are not completely informed as to a firm's financial status, they base their loan generosity on the firm's collateral. Firms with more
collateral can command more loanable funds, and, therefore, financing frictions—the difference in cost between external and internal funding—are smaller for firms with more collateral.

Furthermore, the more financially constrained a firm is, the larger the effects of surprise monetary policy changes. Later research showed that the magnitude of a surprise increase in the Fed Funds rate has no effect on the magnitude of the consequent changes in stock returns. However, for unanticipated decreases in the Fed Funds rate, the magnitude of the decrease does affect the magnitude of the increase in stock returns.

The secondary goal of this paper is to determine whether financial constraints change the stock returns asymmetrically between bull and bear markets. To perform the desired analysis necessitated that the authors define bull and bear markets. They use Federal Funds Rate targets from the 100 Federal Open Market Committee meetings held between February 1994 and December 2005. To measure the surprise component, the authors use market data on the Federal Funds futures contracts. The futures contracts represent the expected Fed Funds Rate for the next day. So if expectations change markedly on a day that the Fed announces a change, the authors assume that the announced policy was unanticipated.

For an index of stock prices, the authors use value-weighted and equal-weighted market portfolios. Financial and utility firms are excluded. Bull and bear markets are defined by relative minima and maxima following the Pagan-Sossounov methodology.

If the monetary policy announcement coincides with other unanticipated events (as happened after September 11th), results may be spurious. The September 17th, 2001 FOMC meeting was excluded from the analysis for that reason, and since previous research has shown that the coincidence of FOMC surprise announcements and unanticipated financial events is rare, this potential problem is ignored.

As in the previous literature, the authors find that surprise changes in monetary policy do have opposite effects on stock returns (i.e. surprise increases in the Fed Funds rate decrease stock returns) and that the larger a firm, the smaller the effect. Also, certain industries’ stock returns are affected differentially (transportation and communication are most affected while mining is least affected). In bear markets, the impact is large and significant while in bull markets, the effect was insignificant. The difference in effects between the two market-types was significant.

They also find that financial constraints do affect the change in stock returns. The returns for more financially constrained firms are more responsive to unanticipated monetary policy, thereby corroborating the theoretical explanation and previous empirical research. The different proxies for financial constrainedness—profitability, return on investment, S&P debt rating, and dividend payout ratio—all bear this out. Again, the differential is more pronounced in a bear market; in fact, as before, surprise monetary policy’s effect on stock returns is insignificant in bull markets.

In other words, the authors find that when the stock market is trending down, unexpected changes in monetary policy will change traders’ valuations of firms’ future profits. However, when the market is trending up, changes in monetary policy don’t affect the stock market. Since firms are more likely to be financially constrained in a bear market, the authors also control for this factor, and find that changes in monetary policy still have a significant effect. Moreover, even when controlling for financial constraints, the effects of surprise monetary policy are larger in bear markets. This fact suggests that another factor must be at least partially responsible for the differential impacts.

Many have noticed the effect that Federal Reserve announcements have on the economy; this paper has used empirical strategies to not only verify the common perception but also to investigate the underlying cause. The results support the primary theoretical explanation but also suggest that there’s more to understand.