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Informed Trading and Expected Returns

In **Informed Trading and Expected Returns** (NBER Working Paper No. 18680), co-authors **James Choi, Li Jin, and Hongjun Yan** use daily institutional ownership data from the Shanghai Stock Exchange to examine whether information asymmetry affects expected stock returns. They argue that focusing on China is useful because there is likely to be significant variation across companies in how much private information is shared with select investors, largely as a result of the state of Chinese legal institutions and regulations.

The authors first show that stocks bought heavily by institutions subsequently outperform stocks sold heavily by institutions. Thus, institutions appear to have a strong information

advantage over individual investors, and that is true for stocks of all sizes.

“Stocks with the greatest information asymmetry have annualized returns that are 10.8 percentage points higher than stocks with the least information asymmetry.”

Moreover, the authors confirm that the institutional sector’s future information advantage is larger in stocks that it previously traded more aggressively. Therefore, the aggressiveness of institutional trading in a stock, as measured by prior institutional ownership volatility, can be used as an ex ante predictor of future information asymmetry in this stock.

Sorting stocks based on this predictor of information asymmetry, the authors find that the 20 percent of

stocks with the greatest information asymmetry have future annualized

returns that are 10.8 percentage points higher than the 20 percent of stocks with the least information asymmetry. This difference remains significant for ten months after the initial sorting month—the same amount of time that the difference in institutional information advantage between the two portfolios lasts. There is no evidence of subsequent return reversals. They conclude that information asymmetry increases the cost of capital.

—Claire Brunel

Gasoline Prices, Fuel Economy, and the Energy Paradox

U.S. consumers spent \$286 billion on gasoline in 2007, which suggests that the potential savings from buying more fuel-efficient vehicles is easily in the billions of dollars. In justifying regulations such as Corporate Average Fuel Economy standards, some U.S. policymakers argue that consumers do not fully consider these potential savings

when choosing between automobiles.

In **Gasoline Prices, Fuel Economy, and the Energy Paradox** (NBER

“While relative automobile prices do move substantially in response to gasoline prices, they do not move as much as one might expect.”

Working Paper No.18583), co-authors **Hunt Allcott** and **Nathan Wozny** ana-

lyze gas and auto prices from tens of millions of auto transactions to determine whether there is a correlation

between changing energy costs and the price of vehicles with varying fuel-

economy ratings over time. They find that while relative automobile prices do move substantially in response to gasoline prices, they do not move as much as one might expect: vehicle prices move as if consumers are willing to pay only 76 cents to save one dollar in discounted future gasoline costs. While this result holds up to a number of dif-

ferent assumptions about changes in utilization patterns, new vehicle market shares, and underlying consumer preferences, it varies substantially with the age of used vehicles and assumptions about how consumers forecast future gasoline prices.

Interestingly, the authors show that there is a lag of up to six months before

changes in gasoline prices are fully internalized into vehicle price adjustments. This suggests that consumers have “sticky information” — that is, that consumers and businesses do not immediately update information about such macroeconomic variables as interest rates and inflation.

—Jay Fitzgerald

Labor Market Mobility in “Idea Space”

Workers may not only move physically from one job to another or one geographic area to another, they may also move in the more abstract space of ideas. In **Cognitive Mobility: Labor Market Responses to Supply Shocks in the Space of Ideas** (NBER Working Paper No. 18614), authors **George Borjas** and **Kirk Doran** focus on American mathematicians and ask how they may have “reallocated themselves in idea space” in response to an influx of Soviet mathematicians to the United States. After the collapse of the Soviet Union in the early 1990s, nearly 10 percent of the Soviet mathematical workforce left the country. A disproportionate number of them settled in the United States.

Borjas and Doran find that this “supply shock” generated a strong

response in terms of the topics studied by American mathematicians who reallocated themselves within idea space. The Americans moved to research

“American mathematicians... ‘reallocated themselves in idea space’ in response to an influx of Soviet mathematicians to the United States.”

topics and questions that did not receive a large number of Soviet émigrés. Furthermore, new entrants into the American mathematics community began to systematically avoid Soviet-style topics over the two-decade period that followed the Soviet influx.

The authors also find that the American mathematicians who moved to a different point in idea space took longer to produce their next paper than their colleagues who stayed within their comfort zones and areas

of prior experience. Tenured mathematicians, and those with a high rate of output prior to the Soviet supply shock, were relatively less likely to

switch fields than were the younger or less productive mathematicians.

The data used in this study included a complete tabulation of publications of all American mathematicians between 1940 and 2009, with detailed information on the field of each publication. That level of detail allowed the authors to study the evolution of research topics and interests over a particular mathematician’s working life.

—Lester Picker

The Hidden Supply of High-Achieving, Low Income Students

In **The Missing “One-Offs”: The Hidden Supply of High-Achieving, Low Income Students** (NBER Working Paper No. 18586), **Caroline Hoxby** and **Christopher Avery** study every student in the high school graduating class of 2008 who scored at the 90th percentile or above on the SAT or ACT and whose high school GPA was

A- or above. They show that despite the fact that these high-achievers are well qualified for admission at America’s most selective colleges, the vast majority of *low-income* high achievers do not apply to any selective school.

More than 50 percent of low-income high achievers apply exclusively to non-selective two-year and

four-year schools that typically have low graduation rates and low instructional resources. Only 8 percent of them apply in a manner similar to that of *high-income* high achievers, who normally apply to several “peer” schools where the median student has scores like their own, the graduation rate is high, and instructional

resources are ten times those at non-selective schools. High-income high achievers also usually apply to a few “reach” and “safety” schools.

These authors show that because low-income high achievers rarely apply to selective colleges, there are many more low-income high achievers than admissions staff thought. What the admissions staff see are eight to fifteen high-income applicants for every low-income applicant. However, the ratio of high-income high achievers to low-income high achievers is only about two-to-one in the population.

The authors eliminate a number of explanations for low-income high achievers’ failure to apply to selective colleges, including cost. They show that very selective colleges offer high-achieving, low-income students such generous financial aid that they could attend these colleges and pay *less* than they are currently paying to attend the much less selective colleges in which they enroll.

Nor do low-income high achievers fail if they apply to selective colleges. The authors show that if a low-income

is no cost-effective way for colleges to reach them using the traditional methods listed above, all of which work best

“Many low-income high achievers never think of applying to selective schools.”

student and a high-income student with the same achievement apply to the same college, they have outcomes (matriculation, persistence, on-time graduation) that are so similar that they cannot be distinguished statistically.

A lack of effort on the part of selective colleges does not explain these results, either. Their admissions staffs visit hundreds of high schools, organize campus visits, and work with many local college mentoring programs.

Why, then, do the vast majority of low-income, high-achievers not apply to very selective colleges? The authors show that those who do not apply are dispersed: they are “one-offs” in their high schools and localities. Thus, there

when students attend a school with a critical mass of high achievers (such as a magnet school) or live near a selective college (such as the Harlem students who live near Columbia University). This dispersion also explains why the students’ counselors do not develop expertise about very selective colleges. If a counselor has 350 advisees (the typical number in the United States) and only encounters a high achiever once every few years, that counselor will develop skills to help her other advisees — many of whom may be struggling to stay in school or attend any postsecondary institution — rather than skills that will help the rare one-off.

—Linda Gorman

Did the Community Reinvestment Act Lead to Risky Lending?

The Community Reinvestment Act of 1977 (CRA) instructs federal financial supervisory agencies to encourage financial institutions to help meet the credit needs of the communities in which they are chartered, while also conforming to “safe and sound” lending standards. To enforce the statute, federal regulatory agencies periodically examine banking institutions for CRA compliance.

In **Did the Community Reinvestment Act (CRA) Lead to Risky Lending?** (NBER Working Paper No. 18609), **Sumit Agarwal**, **Efraim Benmelech**, **Nittai Bergman**, and **Amit Seru** trace the effect of the CRA on both the quality and the quantity of mortgages originated by ana-

lyzing variation in banks’ incentives to conform to the standards of the CRA

operating in the same census tract-month that did not face these exams

“Adherence to the Community Reinvestment Act led to riskier lending by banks.”

around regulatory exam dates. The authors argue that banks have particularly strong incentives to concentrate their CRA-compliant lending close to examination periods. This ensures a satisfactory CRA evaluation while minimizing the likelihood that such loans might default and fail the “safe and sound” criteria during the exam. They compare the lending behavior of banks undergoing CRA exams within a given census tract in a given month (the treatment group) to the behavior of banks

(the control group). This comparison clearly indicates that adherence to the CRA led to riskier lending by banks.

The researchers use loan-level data on mortgage originations and performance for 1999 to 2009 from the Home Mortgage Disclosure Act, collected by the Federal Financial Institutions Examination Council, and data from the Federal Reserve Bank of Chicago that contains information on CRA exams. They find that in the six quarters surrounding a CRA exam,

lending by banks undergoing a CRA exam is 5 percent higher on average than lending by control-group banks.

Using data that track loan performance, the authors also show that loans originated by treatment-group banks

around CRA exams are 15 percent more likely to be delinquent one year after origination than loans originated by control-group banks. Thus the evidence shows that around CRA examinations, when incentives to conform

to CRA standards are particularly high, banks not only increase lending rates but also appear to originate loans that are markedly riskier.

—Matt Nesvisky

Disagreement and Asset Prices

When Wall Street traders disagree about the prospects for an asset, do investors who buy that asset receive a risk premium? In **Disagreement and Asset Prices** (NBER Working Paper No. 18619), authors **Bruce Carlin**, **Francis Longstaff**, and **Kyle Matoba** suggest that they do. Specifically, they show that market disagreement is associated with higher expected returns, higher return volatility, and more trading. They find that volatility by itself doesn't cause more trading; higher uncertainty leads to higher trading volume only when the market disagrees about an asset. Furthermore, when there is such disagreement, sophisticated investors appear to learn from prices and opinions in the market.

“Understanding how information gets incorporated into asset prices may be one of the most fundamental issues in finance,” these authors explain.

“Despite the fundamental nature of this issue, though, there still remains significant controversy in the literature about

“Higher-than-normal disagreement is linked to a positive risk premium.”

how disagreement risk affects expected returns and asset prices.” Some theorists predict that disagreement should lead to a risk premium for investors who climb out on a limb. Others argue there's no premium, because pessimists sit out of the market, allowing prices to rise to what optimists believe they should be, as least when there are constraints on short sales.

Using a 20-year time series of Wall Street dealers' forecasts of the prepayment speed of federally guaranteed mortgage-backed securities, the authors explore this question. First, they build a disagreement index. They

find a surprisingly high degree of disagreement about how quickly mortgages will be repaid, especially during

major events, such as the 9/11 terrorist attacks and the Lehman Brothers default. Then they compare future realized returns of those securities against the disagreement index and other proxy measures of risk about those securities. They find that the more disagreement, the higher are the expected returns. This suggests that higher-than-normal disagreement is linked to a positive risk premium. Higher trading volume is followed by lower disagreement. The authors write that “as investors learn through trade, this gives them opportunities to update their beliefs about the drivers of asset value.”

—Laurent Belsie

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