

# The NBER Digest

NATIONAL BUREAU OF ECONOMIC RESEARCH

June 2000

## IN THIS ISSUE

- Individual Stocks Have Become More Volatile
- Foreign-Born Teaching Assistants Impair Undergraduate Performance
- International Differences in Investor Protection
- The History of the U.S. as a Monetary Union

## Individual Stocks Have Become More Volatile

Is the public correct in feeling that stocks are more volatile now than ever? New research by **John Campbell, Martin Lettau, Burton Malkiel, and Yexiao Xu** shows that while there's no trend toward increased volatility at the market level, there is a significant trend of increasing "idiosyncratic" volatility at the individual firm level. Their findings imply that it is more important than ever to control portfolio risk by diversifying across many stocks, whether these are held directly or in mutual funds. The study also raises important questions about what exactly is driving the increase in firm-level volatility.

In **Have Individual Stocks Become More Volatile? An Empirical Exploration of Idiosyncratic Risk** (NBER Working Paper No. 7590), the authors calculate market, industry, and firm-level variances using daily data from July 1962 to December 1997. All firms traded on the NYSE, AMEX, and NASDAQ are included in the study (just over 2,000 firms at the beginning of the sample period, increasing to almost 9,000 at the end), but variances are value-weighted so that larger firms are given greater weight in the study. Market and industry variances have remained fairly stable over the pe-

riod, but firm-level variance shows a large and significant positive trend, more than doubling from 1962 to 1997. All three forms of volatility increase substantially in economic downturns and tend to lead recessions.

The increase in firm-level volatility, with little change in market volatility, implies that correlations among stocks have tended to decrease over this period. The authors explore this directly by calculating an equal-weighted average of all the pair-wise

that increasing idiosyncratic risk has raised the number of randomly selected stocks needed to achieve portfolio diversification.

The authors discuss some possible explanations for their findings. Since the 1960s the trend has been to break up conglomerates into corporations with a more concentrated focus and less diversified cash flows. Also, more companies now issue stock early in their life cycle when there is still a great deal of uncertainty about

---

"While there's no trend toward increased volatility at the market level, there is a significant trend of increasing "idiosyncratic" volatility at the individual firm level."

---

correlations among stocks in their sample. The average correlation in the late 1990s is only about one-third the average correlation in the early 1960s. The authors argue that "declining correlations among stocks imply that the benefits of portfolio diversification have increased over time." To illustrate this, they calculate the standard deviations of portfolios containing different numbers of randomly selected stocks. The evidence reveals only a modest increase over time in the standard deviation of a typical 50-stock portfolio but a much more dramatic increase in a typical two-stock portfolio. They conclude

their long-run prospects. Leverage tends to increase the uncertainty of future payments to equity investors, but the authors note that this effect goes the wrong way; measured using market values, leverage has tended to decrease during the last decade which should have reduced firm-level volatility. Finally, the rise of institutional ownership may be an important influence. If institutional investors make decisions in similar ways and rely on similar information, then shocks to institutional sentiment may be an important factor driving increased firm-level volatility.

—Anna Bernasek

## FREE Electronic Version of the DIGEST

The NBER now offers the monthly *Digest* free of charge by e-mail. To receive the *Digest* by e-mail each month, simply sign up online at <http://www.nber.org/bulletin.html>. If you do register for the electronic version of the *Digest* and would like to cancel your hardcopy subscription, please send an e-mail to [subs@nber.org](mailto:subs@nber.org). NBER Working Papers are available at [www.nber.org](http://www.nber.org).

## Foreign-Born Teaching Assistants Impair Undergraduate Performance

**E**ver since American universities began letting foreign-born graduate students teach undergraduate classes, those undergraduates have complained that their teachers' lack of English proficiency has compromised their education. In **Foreign-Born Teaching Assistants and the Academic Performance of Undergraduates**, NBER Research Associ-

Borjas surveyed 309 students enrolled in the third course of a three-course economics sequence at a large public university. Students typically did not know in advance which section would be taught by a foreign-born TA, and uniform grading across the course eliminated the possibility that differences in performance could be attributed to different TA grading scales. Students were asked about their experience in the first two

equally well prepared for class. All else equal, the results suggest that switching a particular student from a section taught by a native-born TA to one taught by a foreign-born TA would reduce his grade in the course by 0.2 grade points. There was some evidence that better TA preparation could close the gap—estimates of final grades did not worsen if the switch was to a class in which the foreign-born TA was judged better prepared than his native counterpart.

The fact that about a quarter of the undergraduates surveyed were born outside of the United States allowed the effect of foreign-born TAs on foreign-born students to be compared with their effect on U.S.-born students. According to Borjas, "the evidence suggests that foreign-born graduate students do not have an adverse impact on the academic achievement of undergraduate students who are 'like them'—perhaps both in terms of language and culture—but do have an adverse impact on undergraduates who are sufficiently different."

—Linda Gorman

---

"American students enrolled in classes taught by foreign-born teaching assistants with limited English *do* tend to receive lower grades than those in classes taught by natives."

---

ate **George Borjas** concludes that American students enrolled in classes taught by foreign-born teaching assistants with limited English *do* tend to receive lower grades than those in classes taught by natives. His results suggest that at least one popular complaint, that foreign-born Teaching Assistants (TAs) lower the quality of American undergraduate education, may have some basis in fact.

courses in the sequence, the nativity of their TA, their final grade in each class, and their overall GPA. Other questions gathered information used to control for variations in ability and effort, both by the student and by the TA.

Although nearly 80 percent of the undergraduates said that foreign-born TAs had worse communications skills, the students considered the natives and the foreign-born

## International Differences in Investor Protection

**M**uch evidence links healthy financial markets with the presence of laws, regulations, and courts that protect shareholders and creditors from unscrupulous insiders who otherwise would syphon off profits with impunity. Comprehensive safeguards seem to foster responsible corporate behavior, giving investors the confidence to acquire shares and to extend credit; this in turn increases corporate valuations and provides capital

for lucrative expansion opportunities. But there appear to be a number of factors—from resistance to change by special interests to complex divergences in legal practices rooted in centuries-old battles between monarchs and property owners—that prevent some countries from reaping the fruits of well-managed financial markets.

In **Investor Protection: Origins, Consequences, Reform** (NBER Working Paper No. 7428), NBER researchers **Rafael La Porta, Flor-**

**encio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny** examine why the reach of investor protections varies so much from country to country, despite their clear association with "effective corporate governance." They also consider what can be done to at least lessen, if not close, the gaps. The authors note that "improving such protection is a difficult task," in part because "the nature of investor protection, and of regulation of financial markets more generally, is deeply rooted in the legal

structure of each country, and in the origin of its laws.”

For example, countries whose legal systems are based on English common law have “the strongest protection of outside investors” while French civil law countries have the weakest. The authors note that the common law system allows judges to apply general principles and legal precedents to alleged investor abuse “even when specific conduct has not been described or prohibited in the statutes.” Civil law, by contrast, requires judges to base their rulings on the exact letter of the law. “From this perspective, the vague fiduciary duty principles of the common law are more protective of investors than the bright line rules of the civil law, which can often be circumvented by sufficiently imaginative insiders,” they write.

The authors reveal how deeply ingrained these differences are by tracing investor protections back to historical tensions between property owners and monarchs. For example, they point out that strong investor protections found in English common law evolved from a successful move in the 17<sup>th</sup> century by Parliament to legally protect property owners from the taxing impulses of the crown. Meanwhile, relatively

weak safeguards in French civil law, they note, go back to the fact that Napoleon maintained the power over the centralized state, creating a body of law that made it hard for financiers to exercise power over corporations.

Of course, reform is not accomplished by simply advising civil law countries to adopt a common law approach to investor protection. The authors acknowledge that “for most countries, the improvement of investor protection requires radical changes

---

“Global financial markets will provide a political and economic impetus for broad improvements in investor protection.”

---

in the legal system,” and that invites intense opposition from “families that control large corporations.” According to the authors, reforms are seen by these families not only as limiting their ability to take or “expropriate” company assets, but also as making it easier for potential competitors to raise cash and challenge their dominance.

Still, the authors point out that events such as the Great Depression and, more recently, the East Asian financial crisis and Poland’s successful transition to a market economy show that opportunities for sweeping reforms “do arise, but under spe-

cial circumstances” and that they “should not be wasted.” Although they caution that there is “no checklist of what needs to be done,” the authors do point out that successful regulatory regimes share some common themes, such as “extensive and mandatory disclosure of financial information by the issuers, the accuracy of which is enforced by tightly regulated financial intermediaries.”

For countries where change appears to be a long way off, the authors note that companies might “opt into

more investor friendly legal regimes” by listing their securities “on an exchange that protects minority shareholders.” In addition, companies could be acquired by a foreign firm operating in a country where there are strong investor protections.

Overall, the authors are optimistic that the (currently much criticized) global financial markets will provide a political and economic impetus for broad improvements in investor protection. “The integration of world capital markets makes such reforms more likely today than they have been in decades,” they conclude.

—Matthew Davis

## The History of the U.S. as a Monetary Union

**I**n 1788, Congress was given the exclusive right to “coin money” and “regulate the value thereof.” Since then, Americans have spent and invested within the immense area of this country without ever having to worry about different exchange rates. The only exception to the monetary union occurred during the Civil War, when the nation was divided into three monetary regions.

**In How Long Did It Take the United States to Become an Optimal Currency Area?** (NBER Working Paper No. H124), NBER Research Associate **Hugh Rockoff** explores the costs and benefits of the monetary union. He notes that “the survival of the U.S. monetary union is at best muted evidence that the net effects have been positive.”

The incentive for a region to join a monetary union is the minimizing of transaction costs. But the costs of

uniting include giving up the exchange rate and changes in the money stock as policy tools. Whether a specific area composes an optimal currency area, or whether it would be better off as a segment of a larger monetary union, depends on the net sum of the costs and benefits. During the first 150 years of the U.S. monetary union, regional battles over monetary policy and institutions were widespread. Simply put, what was beneficial monetary policy

for one region was not necessarily beneficial for another.

Rockoff finds numerous examples of regional shocks magnified by monetary reactions. The typical scenario involves a shock in financial or agricultural markets which would hit

system. The resulting uncertainty about the future of existing monetary institutions would further intensify the initial contraction.

In the 1930s institutional changes, such as the adoption of interregional fiscal transfers and bank deposit in-

regions losing reserves. Deposit insurance tended to reduce regional banking problems that characterized recessions.

So, how long did it take the United States to become an optimal currency area? Rockoff concludes that a reasonable minimum may be 150 years. It was not until the 1930s that all regions in the country could be said to be components of a single optimal currency area, the United States. Thus for a country debating whether to join a monetary union, it would be wise to examine the U.S. history first.

—Marie A. Bussing-Burks

---

“So, how long did it take the United States to become an optimal currency area? Rockoff concludes that a reasonable minimum may be 150 years.”

---

one region particularly hard. The banking system in the region would lose reserves resulting in a monetary contraction. A political battle would often erupt, and the regions that had experienced the contraction would demand a reform of the monetary

insurance, overcame the problem of regional banking shocks. Federally funded transfer programs, such as unemployment insurance, Social Security, and agricultural price supports, cushioned regional shocks and pumped high-powered money into

---

## NBER

---

*The National Bureau of Economic Research is a private nonprofit research organization founded in 1920 and devoted to objective quantitative analysis of the American economy. Its officers are:*

*Martin Feldstein—President and  
Chief Executive Officer  
Carl F. Christ—Chairman  
Kathleen B. Cooper—Vice Chairman*

*Contributions to the National Bureau are tax deductible. Inquiries concerning the contributions may be addressed to Martin Feldstein, President, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138-5398.*

*The NBER Digest summarizes selected Working Papers recently produced as part of the Bureau's program of research. Working Papers are intended to make preliminary research results available to economists in the hope of encouraging discussion and suggestions for revision. The Digest is issued for similar informational purposes and to stimulate discus-*

*sion of Working Papers before their final publication. Neither the Working Papers nor the Digest has been reviewed by the Board of Directors of the NBER.*

*The Digest is not copyrighted and may be reproduced freely with appropriate attribution of source. Please provide the NBER's Public Information Department with copies of anything reproduced.*

*Preparation of the Digest is under the supervision of Donna Zerwitz, Director of Public Information.*

*Individual copies of the NBER Working Papers summarized here (and others) are available free of charge to Corporate Associates. For all others, there is a charge of \$5.00 per downloaded paper or \$10.00 per hard copy paper. Outside of the United States, add \$10.00 per order for postage and handling. Advance payment is required on all orders. To order, call the Publications Department at (617) 868-3900 or visit [www.nber.org/papers](http://www.nber.org/papers).*

*Please have the Working Paper Number(s) ready.*

*Subscriptions to the full NBER Working Paper series include all 500 or more papers published each year. Subscriptions are free to Corporate Associates. For others within the United States, the standard rate for a full subscription is \$1850; for academic libraries and faculty members, \$1070. Higher rates apply for foreign orders.*

*Partial Working Paper subscriptions, delineated by program, are also available. For further information, see our Web site, or please write: National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138-5398.*

*Requests for Digest subscriptions, changes of address, and cancellations should be sent to Digest, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138-5398. Please include the current mailing label.*