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Erratum:

In the Program Report by Claudia Goldin in the Spring 1998 NBER Reporter, a subhead was inadvertently omitted. On p. 4, the subhead after the first full paragraph should read "Early 20th Century Expansion in Education."

Program Report

Corporate Finance

Robert W. Vishny

In the three years since my last report on the NBER's Program on Corporate Finance, the focus of its research has shifted somewhat from debates about the effects of takeovers and high leverage to some of the deeper puzzles which have intrigued finance researchers for many years. For example, what corporate governance systems work best and make for well-developed capital markets? How informationally efficient are markets, and how much more do insiders know than other market participants? How does the willingness of financial institutions to provide credit or insurance change cyclically? And, why are conglomerates valued less by the market than undiversified firms? This report summarizes some of the recent work done by NBER researchers in several of these broad areas.

The Informativeness of Insider Actions

A key issue in corporate finance is the degree to which corporate insiders can exploit their superior information in the marketplace. Even if insiders have superior information, various securities laws may limit their ability to take actions based on that information without first informing the market. For example, companies need to disclose large issues or repurchases of equity before they occur. If the market fully appreciates the superiority of insiders' information, then insiders will not be able to profit systematically from such information, because prices will adjust once insiders' upcoming actions are announced. Yet various researchers have found that the market is not fully efficient with respect to insider signals and, in particular, underreacts to the information content of insider signals. The implication of these findings is that well-timed decisions to go public, repurchase shares, and so on, can benefit insiders and their firms at the expense of the less-informed market.

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NBER researchers have studied a wide variety of phenomena that appear to fit this general pattern. David Ikenberry, Josef Lakonishok, and Theo Vermaelen have found that, while share prices rise on the announcement of a share repurchase, they also continue to rise over the subsequent three years.¹ This suggests that corporate insiders are able to successfully time their repurchases to occur when stock prices are low. A similar phenomenon exists for security issuance decisions, particularly for initial public offerings (IPOs). Long-run returns of companies going public are on average significantly lower than those of the market as a whole, suggesting that insiders go public at relatively high share prices. Recent research by Alon Brav and Paul Gompers indicates that the only serious return anomalies are found in the smallest IPOs and those without venture capital backing.² Gompers and Josh Lerner also have found that, when venture capitalists distribute company shares from their venture funds to the limited partners (effectively a form of sale), subsequent returns on those shares are below market for at least 12 months after the distribution.³ Here the venture capitalist plays the role of well-informed corporate insider, successfully timing its sell decision. Roni Michaely, Richard Thaler, and Kent Womack document another example of underreaction to insider signals.⁴ They find that stock returns are abnormally low for a period of up to three years after firms cut dividends; this supports the idea that the market underestimates the informativeness of the signal. Nicholas Barberis, Andrei Shleifer, and I, as well as Harrison Hong and Jeremy C. Stein, have tried to formulate simple models to explain these results and those of other stock market anomalies, such as the well-known value and momentum anomalies.⁵ The principal contribution of these models is that

they try to predict when underreaction or overreaction to information will occur.

Internal Capital Markets and the Conglomerate Discount

Ever since the conglomerate merger wave of the 1960s, economists have tried to understand the efficiency properties of conglomerates. In the late 1960s, this meant marshalling arguments for the superiority of all the conglomerates being created. For the last 15 to 20 years, this has meant trying to understand why the conglomerates have been largely dismantled and why highly diversified firms seem to sell at a market value discount. Recent work by NBER researchers suggests that one of the main problems with conglomerates is the very same factor cited as a strength in the 1960s: they create internal capital markets and bypass the discipline of the external capital market.

Owen Lamont was the first to use COMPUSTAT business segment data to refocus empirical work on the interdependence among the investment of one division and the cash flow of other divisions.⁶ He shows that investment in non-oil divisions of petroleum companies fell when the cash flow of the oil divisions decreased dramatically with the large drop in oil prices in the mid-1980s. Using the COMPUSTAT universe of firms that report business segment information from 1980 to 1992, Hyun-Han Shin and Rene Stulz find that the investment by a segment of a diversified firm depends on the cash flow of the other firm's segments, but significantly less than on its own cash flow.⁷ The investment by segments of highly diversified firms is larger and less sensitive to the cash flow of those firms than is the investment of comparable single-segment firms.

The sensitivity of a segment's investment to the cash flow of other segments does not depend on whether its investment opportunities are better than those of the firm's other segments, however. This suggests that the internal capital market does not operate efficiently.

Two other recent working papers describe the inefficient operation of the internal capital market and its relationship to the conglomerate discount. Raghuram Rajan, Henri Servaes, and Luigi Zingales find that diversified firms systematically allocate more investment to low-Q divisions and less investment to high-Q divisions than do comparable stand-alone firms in those same industries.⁸ They then relate this measure of the misallocation of investment resources (judged against the stand-alone industry benchmarks) to the conglomerate discount in the cross-section of firms. They calculate a conglomerate discount for each firm by taking the deviation of firm value from a weighted average of book value multiples for each of the industries in which the firm operates. The authors find that their measure of investment misallocation by firm helps to explain the variation of the conglomerate discount across firms. They also show that the conglomerate discount is strongly related to the variance of the firm's investment opportunities, as measured by the variance of Tobin's Q across divisions. David S. Scharfstein also finds strong evidence of "corporate socialism."⁹ He finds that high-Q divisions invest less than their stand-alone industry peers while low-Q divisions invest more. Scharfstein also uses data on management ownership to relate the degree of socialism to the magnitude of agency problems within the firm. He finds that the degree of cross-subsidization is significantly greater when top management owns a smaller equity stake in the firm.

Volatility of Credit Supplied by Financial Institutions

How does monetary policy affect the credit supplied to firms? Anil K Kashyap and Jeremy C. Stein have a long-term research program in this area focusing on the role of banks. In a recent working paper, they analyze data for every insured commercial bank in the United States during 1976–93.¹⁰ Their key finding is that the impact of monetary policy on lending behavior is significantly more pronounced for banks with less liquid balance sheets—that is, banks with lower ratios of cash and securities to assets. Moreover, this result is entirely attributable to the smaller banks in their sample, those in the bottom 95 percent of the size distribution. These findings provide strong support for the existence of a "bank lending channel" of monetary policy transmission. Stein explores the theoretical basis for these "balance sheet" effects on lending in another paper.¹¹ He and Ken A. Froot also analyze a general model of the investment decisions of financial institutions which are fully integrated with their capital structure decisions.¹² Jun-Koo Kang and Rene Stulz show that these same balance sheet effects also have been important in Japan.¹³ Analyzing the period from 1990 to 1993, during which most Japanese banks experienced adverse shocks, they find that firms that were more bank-dependent invested less than other firms during this period.

The insurance industry also may be subject to important balance sheet effects. A recent paper by Froot and Paul O'Connell focuses on the market for catastrophe insurance in the United States during 1970–94.¹⁴ They find that the price of catastrophe insurance has fluctuated significantly in recent years. These fluctuations are commonly associated with the pat-

tern of catastrophe occurrences. For example, catastrophe losses in 1992–4 totaled \$38.6 billion in 1994 dollars, exceeding the cumulative total of losses during 1949–91 of \$34.6 billion. During this recent three-year period, prices on catastrophe reinsurance coverage more than doubled; then they began to decline. Froot and O'Connell find that supply rather than demand shocks are more important for understanding the effect of losses on reinsurance prices and quantities. Moreover, the evidence suggests that the effect of probability updating is small.¹⁶ The authors conclude that balance sheet effects and capital market imperfections are the dominant explanation for shifts in insurance supply. Finally, the estimated supply effects are very large: A \$10 billion catastrophe loss raises average contract prices by between 19 percent and 40 percent, and reduces the quantity of reinsurance purchased by between 5 percent and 16 percent. The basis for these large effects ultimately lies in imperfect access to external capital markets by insurance companies. In an early paper in this area, Anne Gron and Deborah Lucas find that when the net worth of insurers declines, the total amount of capital raised through security issues is small.¹⁵

Cross-Country Analysis of Corporate Governance and Financing Practices

As European integration continues and capital markets become more global, many governments have been exploring how they can increase the breadth of their capital markets. This inevitably leads to a discussion of corporate governance and to the questions of what represents good corporate governance practice and how it leads to broader capital markets. Further, how does capital market

development encourage economic growth? NBER researchers recently have focused on this set of questions.

In a pair of papers, Rafael La Porta, Florencio Lopes de Silanes, Andrei Shleifer, and I examine legal rules covering protection of corporate shareholders and creditors, the origin of these rules, and the quality of law enforcement in 49 countries.¹⁶ We show that common law countries generally have the best, and French civil law countries the worst, legal protections of investors, with German and Scandinavian civil law countries located in the middle. We also show that the dispersion of share ownership in the largest public companies is positively related to the degree of investor protection, consistent with the hypotheses that small, diversified shareholders are discouraged when countries fail to protect their rights. In a second paper, we show that countries with poorer investor protections, measured by both the character of legal rules and the quality of law enforcement, have smaller capital markets. These findings apply to both equity and debt markets (including private debt). French civil law countries have both the weakest investor protections and the least developed capital markets, especially as compared to common law countries.

One particularly important mechanism for corporate governance is universal banking. In Germany, where the stock market historically has been small, banks hold equity stakes in firms and have proxy voting rights over other agents' shares. In addition, banks lend to firms and have representatives on corporate boards. Gary B. Gorton and Frank Schmid investigate the influence of banks on the performance of German firms in the 1970s and 1980s, taking account of banks' equity holdings, the extent of banks' proxy voting rights, and the ownership structure of the firms' equity.¹⁷ Their evidence suggests that, during the 1970s, German banks

improved the performance of German firms to the extent that each held the firm's equity. They also find no evidence of conflict-of-interest concerning bank use of proxy votes. However, by the mid-1980s, the world of German corporate finance had changed. Security markets became more developed and banks had reduced the extent of their blockholding. While the authors still find a positive effect from blockholding in the 1980s, the influence of German banks has clearly declined over time. According to the authors, German corporate finance may still be in the process of change, making it difficult to extrapolate their results into the future.

Raghuram Rajan and Luigi Zingales examine the link between financial development and economic growth.¹⁸ Because of the difficulties inferring causality from growth regressions, the authors take a somewhat different approach. Specifically, they ask whether industrial sectors that are more in need of external finance (as determined by the investment behavior of that sector in other countries) develop disproportionately faster in countries with more developed financial markets. They find this to be true in a large sample of countries over the 1980s. Their results suggest that financial development has a substantial supportive influence on the rate of economic growth, and this works, at least partly, by reducing the cost of external finance to financially dependent firms.

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² A. Brav and P. Gompers, "Myth or Reality? Long-Run Underperformance of Initial Public Offerings: Evidence from Venture Capital and Non-Venture Capital-Backed IPOs," *Journal of Finance*, 52(5), (December 1997), pp. 1791–821.

³ P. Gompers and J. Lerner, "Venture Capital Distributions: Short-Run and

Long-Run Reactions," *Journal of Finance*, forthcoming.

⁴ R. Michaely, R. Thaler, and K. Womack, "Price Reactions to Dividend Initiations and Omissions: Overreaction or Drift," *Journal of Finance*, 52(2), (June 1995), pp. 573-608. Formerly NBER Working Paper No. 4778, June 1994.

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⁶ O. Lamont, "Cash Flow and Investment: Evidence From Internal Capital Markets," *Journal of Finance*, 1, (March 1997), pp. 83-109. Formerly NBER Working Paper No. 5499, March 1996.

⁷ H. Shin and R. Stulz, "Are Internal Capital Markets Efficient?" formerly NBER Working Paper No. 5639, revised 1997.

⁸ R. Rajan, H. Servaes, and L. Zingales, "The Cost of Diversity: The Diversification Discount and Inefficient Investment,"

NBER Working Paper No. 6368, January 1998.

⁹ D.S. Scharfstein, "The Dark Side of Internal Capital Markets II: Evidence from Diversified Conglomerates," NBER Working Paper No. 6352, January 1998.

¹⁰ A.K. Kashyap and J.C. Stein, "What Do a Million Banks Have to Say About the Transmission of Monetary Policy?" NBER Working Paper No. 6056, June 1997.

¹¹ J.C. Stein, "An Adverse Selection Model of Bank Asset and Liability Management with Implications for the Transmission of Monetary Policy," NBER Working Paper No. 5217, August 1995.

¹² K.A. Froot and J.C. Stein, "Risk Management, Capital Budgeting and Capital Structure Policy for Financial Institutions," *Journal of Financial Economics*, 47(1), (January 1998), pp. 55-82. Formerly NBER Working Paper No. 5403, January 1996.

¹³ J. Kang and R. Stulz, "Is Bank-Centered Corporate Governance Worth it? A Cross-Sectional Analysis of the Performance of Japanese Firms During the Asset Price Deflation," NBER Working Paper No.

6238, October 1997.

¹⁴ K.A. Froot and P. O'Connell, "The Pricing of U.S. Catastrophe Reinsurance," NBER Working Paper No. 6043, May 1997.

¹⁵ A. Gron and D.J. Lucas, "External Financing and Insurance Cycles," NBER Working Paper No. 5229, August 1995.

¹⁶ R. La Porta, F. Lopez-de-Silanes, A. Shleifer, and R.W. Vishny, "Law and Finance," NBER Working Paper No. 5661, July 1996, and R. La Porta, F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, "Legal Determinants of External Finance," NBER Working Paper No. 5879, January 1997, and *Journal of Finance*, 52(3), (July 1997), pp. 1131-50.

¹⁷ G.B. Gorton and F. Schmid, "Universal Banking and the Performance of German Firms," NBER Working Paper No. 5453, February 1996.

¹⁸ R.G. Rajan and L. Zingales, "Financial Dependence and Growth," NBER Working Paper No. 5758, September 1996, and *American Economic Review*, 88(3), (June 1998).

Research Summaries

The Future of Investment in Emerging Markets

Campbell R. Harvey*

Emerging market investments are certainly not for the faint of heart. In the early 1990s, several papers promoted the high average returns in these markets. Indeed, on the surface, these returns appeared to be much higher than those generated by investing in developed countries. At the same time, several developing countries liberalized their equity markets, allowing foreigners relatively

unfettered access to them. As a result of these liberalizations and of domestic U.S. conditions, there was a sharp increase in U.S. capital flows to these equity markets.

Despite the considerable history of research on emerging markets, much of the current work was initiated as a result of the World Bank Conference on Portfolio Investment in Developing Countries, held in Washington in late 1993. Stijn Claessens and Sudarshan Gooptu brought together there a diverse group of academics and practitioners to try to gain a better understanding of emerging equity markets, and a number of myths about emerging markets were put to rest. Some of the ideas presented at

the conference motivated much of the research, including my own, on emerging markets over the next five years. That research is discussed here.

Special Challenges

I discuss these data challenges first, because we can ask many interesting questions about emerging markets, but we must take into account the special features of the data before trying to answer these questions. Most empirical research on emerging markets relies on the International Finance Corporation (IFC) indexes. These indexes represent portfolios of securities that comprise at least 60 percent of the market capitalization

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