but accessible to a larger policy audience. Despite its academic tone, it reflects an understanding of the politically charged atmosphere in which trade affects the environment, and environmental policy affects trade.

The book is organized around a set of overview chapters by the editors which survey the state of economic knowledge of international trade theory as applied to environmental issues. Both theoretical and empirical literature are treated, and while a few items are left out, for the most part the surveys are comprehensive. An added chapter offers an overview of the political economy of trade and environment, which is somewhat less comprehensive. The book then moves on to a series of sector- or subject-specific chapters by authors well known in their subfields, many of whom have served as experts to the Organization for Economic Cooperation and Development (OECD). David Ervin surveys the agricultural sector, Edward Barbier forestry, and Michael Rauscher hazardous waste. Sjak Smulders provides a basic assessment of the "double dividend" resulting from simultaneous tariff reductions and environmental taxes. Lucas Bretscher and Hannes Egli, in an unusually lucid treatment, consider the interaction of trade liberalization and environmental sustainability. The last two chapters return, in a more focused way, to the political economy of trade and the environment. Carsten Schmidt surveys the literature on economic instruments and transboundary environmental externalities. Finally, Roger Congleton provides a brief concluding chapter on the role of international treaties and regimes as responses to global environmental commons dilemmas.

The overall effect of the book is to capture the incipient but growing understanding of the trade-offs and complementarities between growth through trade and environmental quality. The emerging consensus, while still not shared by critics of multinationals and the WTO, is well stated by Bretscher and Egli:

> "The most important lesson from the combination of growth theory and environmental economics is that economic growth and environmental care are compatible in principle. This statement is valid independent of the observation that certain natural resources are over-used in the present situation . . . The lesson for environmental policy consists in the finding that appropriate tax instruments, usually summarized under the heading of 'green tax reform,' can improve the protection of the environment as well as produce additional economic growth" (pp. 204–205).

If there is a shortcoming, it is that the early survey chapters fail to capture or reflect some of the insights offered in the more specialized later chapters. An example: the ample and well-merited references by Congleton to the work of Todd Sandler on international collective action problems, which do not appear in the surveys on political economy. On the whole, however, the book is a very useful reference for academic economists, policy analysts and students of a subject sure to occupy professional attention for the foreseeable future.

C. Ford Runge
University of Minnesota

The Money of Invention: How Venture Capital Creates New Wealth. By Paul A. Gompers and Josh Lerner. Boston: Harvard Business School Press, 2001. Pp. ix, 282. $29.95. ISBN 1–57851–326–X. *JEL 2002–0533*

Modern growth theory stresses how technological progress enhances productivity, raising living standards. But, to become effective, new technology must first be financed. *The Money of Invention* is about the structure and operation of the markets and institutions that provide the necessary capital.

The Money of Invention is a non-technical overview of the venture capital (VC) industry replete with examples, naming names, and connecting news items to economic theory. Moreover, it achieves this without any formalism beyond demand and supply curves. Consequently, the book is accessible to undergraduates and MBAs with little economics and to the general reader. Since some fluency about VC is *de rigueur* for anyone teaching at a business school, academics outside economics might also find this book useful.

This innocence makes *The Money of Invention* a useful counterpart to the authors' previous book, *The Venture Capital Cycle* (Paul Gompers and Josh Lerner 1999, Cambridge: MIT Press), a collection of their research papers that provides a high-level academic treatment of the same issues. A novice to this branch of corporate finance might first read *The Money of Invention* to grasp the big picture. This would put the papers in *The Venture Capital Cycle* in context as a foundation from which to explore the literature.

The issues that make the VC business complicated also make it interesting to economists. The familiar problems of agency, information asymmetry, adverse selection, and moral hazard assume overarching importance in the VC business. By clarifying these problems, first from the impecunious entrepreneur's side (part 1, chapters 2 through 4) and then from the VC provider's side (part 2, chapters 5 and 6), *The Money of Invention* gives them a tangible life. Excerpts from the book might thus be useful on reading lists as counterweights to the more traditional presentation of these issues.

Chapter 2 is perhaps particularly useful for this. It describes the entrepreneur's problem: how to get VC backing without losing property rights over the innovation. This is where information asymmetry, encompassing agency problems, moral hazards, adverse selection, and the like, loom large. Concepts like collateral as a commitment, intellectual property rights, and reputation are explicated with reference to actual incidents.

Chapter 3 describes how the VC business structures itself around these issues. Screening mechanisms, staged financing, syndication, compensation rules, financing covenants like convertible debt, and governance mechanisms are all discussed. The reader is left with little doubt that the VC business has managed the trick at least tolerably well. Chapter 4 lays out evidence of the hastened pace of innovation and accelerated economic growth that has coincided with the growth of the VC business.

Part 2 considers the venture capitalist's problem: how to attract only honest entrepreneurs with sound innovations while simultaneously attracting capital from passive investors.

Chapter 5 begins with the 1946 founding by MIT president Karl Compton and HBS professor Georges Doriot of American Research and Development, the first modern VC firm. It then explains how and why the limited partnership structure of VC funds developed. The importance of the federally guaranteed Small Business Investment Companies Program to venture capitalism in the 1960s and the subsequent scandal-plagued meltdown of the 1970s again highlight the information gap problems alluded to above. The latest VC boom dates from 1979, when the U.S. Labor Department clarified the 1974 Employee Retirement Income Security Act, allowing a "prudent man" to hold some high-risk investments. This opened a flow of institutional money into the VC business. The chapter describes how regulators and the industry are currently grappling with the now familiar list of information gap problems. Fund partners' compensation schemes, contractual restrictions, reputations, and the like are discussed.

Chapter 6 argues that these information gap problems allow "sentiment" to cause "overshooting." A feast or famine of financing results because capital flows in response to recent high returns. Thus, in the early 1980s when existing computer hardware stocks soared, 19 disk drive companies received VC financing. The inevitably fierce price competition pummelled the sector and a spate of bankruptcies ensued. At least in part, the authors argue, this phenomenon occurs because rapid growth strains VC firms' mechanisms for dealing with information gap problems.

Part 3 steps back to consider "emulators." Can somnolent corporations reinvent themselves by emulating VC firms? Can governments rear "high tech clusters" by underwriting venture capitalism?

Chapter 8 demonstrates that VC divisions within large corporations typically flounder because their compensation schemes and organizational structures are anathema to corporate bureaucrats. Thus, Exxon's HRM department succeeded in switching its venture staff to salary-plus-bonus, triggering a mass exodus. Senior managers also worry about creating competition—as when Xerox faced serious competition from Documentum, its own VC spin-off.

Chapter 9 describes publicly backed venture capitalism. Unfortunately, the mechanisms whereby private funds constrain information gap problems are often proscribed here. Pay-for-performance runs afoul of public sector pay scales. Careful screening upsets political bagmen and special interest groups. And, of course, there's old-fashioned corruption. Although some subsidized VC programs succeed, most flop. The second half of chapter 9, which describes how legal, physical, and social infrastructure promote innovation, should be required reading for industrial policy czars everywhere.

Chapter 10 is about how to succeed in the next great VC boom. To learn about this, you'll have to buy the book.

RANDALL MORCK
University of Alberta Business School and the National Bureau of Economic Research

Prudential Supervision: What Works and What Doesn't. Edited by Frederic S. Mishkin. Chicago and London: University of Chicago Press, 2001. Pp. 368 $50.00. ISBN 0–266–53188–0. *JEL 2002–0535*

This conference volume offers an excellent introduction to academic and government research on bank supervision. Editor Mishkin's perspective-building essay defines prudential supervision as government rulemaking, monitoring, and enforcement activity aimed at ensuring the safety and soundness of the banking system. Rooting the rationale for supervision in asymmetric information and safety-net subsidies to risk-taking, Mishkin provides a superb overview of the purposes, issues, and instruments of bank supervision.

The next five essays address the conference's core issue: the difficulties of striking an effective balance between market and regulatory discipline of bank risk-taking. James Barth, Gerard Caprio, and Ross Levine expand and publish their pioneering cross-country dataset detailing the formal structure of banking and regulatory environments in 60 countries. They go on to conduct regression experiments linking this information to Caprio-Klingebiel data on the incidence of financial crises. These experiments uncover some intriguing empirical relationships between restrictions on bank ownership and bank activities on the one hand and measures of financial-sector performance and stability on the other. Although the data lack controls for differences in the energy with which formal rules are enforced, the results indicate that countries that heavily restrict ownership structures and bank scope have more crisis-prone financial systems and that government ownership of banks impedes financial development.

The volume's third piece is a speech by then-Governor Laurence H. Meyer of the Federal Reserve System. Meyer describes the Fed's ongoing efforts to adapt its supervisory culture to relentless changes in bank scale and scope. Meyer concentrates on monitoring and enforcement problems posed by large complex banking organizations (LCBOs). He emphasizes that regulatory reforms that purport to expose LCBOs to complementary market discipline will not work "unless the market believes that authorities will refuse to rescue uninsured creditors of failed or reorganized institutions. And that expectation cannot be sustained unless [this reviewer would say 'until'] the government and its agencies demonstrate it by their actual behavior" (pp. 103–104).

Using corporate-finance perspectives, Robert Bliss and Mark Flannery disaggregate the channels of market discipline on large U.S. bank holding companies (BHCs) into two pieces: the extent to which outside understanding of BHC condition and risk-taking strategies generates unambiguous market signals and the extent to which market signals influence managers to increase the value of BHC securities. The authors first show that stock and bond prices frequently move in opposite directions, but are positively correlated overall. Then, using quarterly data for 107 BHCs over 1986–1998, they conduct a series of imaginative, but disputable regression and signs tests of the influence hypothesis. The regressions develop little evidence of investor influence, and the signs tests show an inconsistent mix of beneficial and perverse influences. Although conferees applauded Bliss and Flannery for isolating the issue of influence, they stressed the desirability of testing for the influence of regulatory and market discipline in an explicitly interactive framework.

Answering this challenge, Charles Calomiris and Andrew Powell describe, and evaluate favorably, 1992–1999 Argentine efforts to enhance the private discipline imposed on its banks. The Argentine program cut back the formal safety net, increased the autonomy of its central bank, opened its borders to foreign banks, privatized many provincially owned banks, and required that banks obtain external credit ratings and issue substantial amounts of subordinated debt. Marshalling the facts then available, the authors portray the Argentine blend of market and regulatory discipline as imperfect, but worthy of imitation by developing and developed countries alike (p. 188). One wonders how the authors would sort out post-conference Argentine experience and whether and in what ways this disastrous experience would alter their assessment of the Argentine regulatory blueprint.