ABSTRACTS OF WORKING PAPERS IN ECONOMICS

This section contains abstracts and complete bibliographic information for current working papers, listed alphabetically by primary author. Brief entries appear for secondary authors, cross-referenced to the primary author. For more recent as well as historical information, consult the AWPE DATABASE, available on magnetic media from Cambridge University Press. (Call 212-924-3900)

Abel, Andrew B.

PD April 1995. **TI** Optimal Investment With Costly Reversibility. **AU** Abel, Andrew B.; Eberly, Janice C. **AA** University of Pennsylvania and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5091; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 52. **PR** $5.00. **JE** E13, E22. **KW** Investment. Reversibility. User-Costs. Uncertainty.

AB Investment is characterized by costly reversibility when a firm can purchase capital at a given price and sell capital at a lower price. We derive an explicit analytic solution for optimal investment by a firm facing costly reversibility. In addition, we derive a local approximation to the solution which highlights the effects of the parameters of the problem on the triggers for investment. More generally, we extend the Jorgensonian concept of the user cost of capital to the case of uncertainty and define CU and CL as the user costs of capital associated with the purchase and sale of capital, respectively. Optimality requires the firm to purchase and sell capital as needed to keep the marginal revenue product of capital in the closed interval [CU, CL]. This prescription encompasses the case of irreversible investment as well as the standard neoclassical case of costlessly reversible investment. Finally, quantitative analysis suggests that even when the difference between the purchase and sale prices of capital is small, the user costs associated with purchasing and selling capital are closer to those applicable under complete irreversibility than to those applicable under costless reversibility.

Abowd, John M.

PD April 1995. **TI** Product Quality and Worker Quality. **AU** Abowd, John M.; Moreau, Antoine; Kramarz, Francis. **AA** Abowd: Cornell University and National Bureau of Economic Research. Moreau and Kramarz: CREST/INSEE. **SR** National Bureau of Economic Research, Working Paper: 5077; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 18. **PR** $5.00. **JE** J24, L15. **KW** Product Quality. Worker Quality. Price.

AB We study the relation between product quality and worker quality using an economic model that, under certain conditions, provides a direct link between product price, product quality and work force quality. Our measures of product quality are the evolution in the detailed product price relative to its product group and the level of the product price relative to this group. Our worker quality measures are the firm's average person effect and personal characteristics effect from individual wage rates. We find a very weak, generally positive, relation between worker quality and product quality using detailed firm- level data from the French Producer Price Index surveys.

Abramovich, Y.A

TI A Representation Theorem for Riesz Spaces and its Applications to Economics. **AU** Zame, William R.; Abramovich, Y.A.; Aliprantis, C.D.

Acharya, Sankarshan

PD April 1995. **TI** Efficient Resolution of Moral Hazard Under no Arbitrage: Risk Premium, Volatility and Leverage. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/15; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 26. **PR** no charge. **JE** G32, G34. **KW** Efficient Resolution. Moral Hazard. Risk Premium. Volatility. Leverage.

AB The shareholder-debtholder conflict is efficiently resolved when the capital market acts as a super monitor to preclude arbitrage and debtholders monitor the firm. The market value of a firm in a world where monitoring is necessary is equal to the market value in a world where monitoring is not necessary; it is the state pricing density which adjusts in equilibrium. In a no-arbitrage equilibrium, the asset risk premium and volatility of a levered firm are negatively related, the asset volatility and risk premium are increasing in the asset/debt ratio, and the threshold asset/debt ratio below which the firm is closed due to bankruptcy or liquidation is an increasing function of the asset risk premium.

PD April 1995. **TI** Debtholders' Option to Walk Out of a Bankruptcy Process, Degree of Diversification and Multi-Tier Capital Structure. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/16; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 30. **PR** no charge. **JE** G32, G33. **KW** Debtholders. Option to Walk. Bankruptcy. Capital Structure. Organizational Choice.

AB This paper presents a novel idea that debtholders of a firm have a put option to walk out (DOW) of a bankruptcy process, when the transaction cost needed to recover the value from assets is greater than the value of recovery. Two important theories emerge from the idea of DOW. First, we show that the DOW entails a novel cost of diversification and this results in less than fully diversified firms, as in the real world. Second, we develop a theory of choice of organizations defined by the number of tiers in the capital structure, as opposed to the efficiency of management and operation.

PD April 1995. **TI** Charter Value, Minimum Bank Capital Requirement and Deposit Insurance Pricing in Equilibrium. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/18; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 21. **PR** no charge. **JE** G21, D82, G22. **KW** Charter Value. Capital. Insurance. Banks.

AB This paper shows that leaving insolvent banks with large enough charter values open can be optimal, and derives normative bank closure/reorganization policies based on the liquidation value of assets and the charter value. The charter value of a bank is broadly defined as the value that would be foregone due to a closure. Our simulations of risk taking show that an optimal forbearance for an insolvent bank with a large enough charter value alleviates the moral hazard problem. This is because increasing the risk raises the probability of losing the charter value, although it generates a moral hazard gain.

PD May 1995. **TI** Asset Pricing in an Incomplete Market With a Locally Risky Discount Factor. **AU** Acharya, Sankarshan; Madan, Dilip B. **AA** Acharya: Board of Governors of Federal Reserve System. Madan: University of Maryland. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/19; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 22. **PR** no charge. **JE** G12, D43. **KW** Asset Pricing. Incomplete Markets. Discount Factor.

AB We show that in an incomplete market with a locally risky discount factor (one with a positive instantaneous volatility), the risk- adjusted drift on any traded asset is equal to the drift on the minimum instantaneous variance portfolio, which we call the latent interest rate of the economy. Options can still be priced by replication if the drift and volatility coefficients are homogeneous of degree 0 in asset prices. Our latent interest rate contrasts the expected return on a zero-beta portfolio within the no riskless asset discrete time model. Option price data imply that our latent interest rate is significantly different and 20 times more variable (over time) than the observed spot interest rate.

PD May 1995. **TI** Credit Rating Enhancement Norms and Ratings-Based Bank Capital and Deposit Insurance Premium. **AA** Board of Governors and the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/28; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 22. **PR** no charge. **JE** G21, G22. **KW** Credit Rating. Bank Capital. Deposit Insurance.

AB The standard asset pricing paradigm is applied to measure a credit rating agency's implied rating standards, such as leverage and asset volatility, from observed bond yield spread data. A methodology is proposed to measure the amount of debt that a firm needs to reduce in order to enhance its credit quality (bond rating) without changing its asset risk and size. This methodology is applied to develop implementable bank capital and deposit insurance premium standards based on ratings of pools of bonds held by banks in equilibrium within a paradigm (an alternative to narrow banking and consistent with universal banking) in which regulators act like private surrogates of bank debtholders, insuring debt for a price but not for profit, and banks choose their asset composition.

Aggarwal, Reena

TI The Equity Performance of Firms Emerging From Bankruptcy. **AU** Altman, Edward I.; Eberhart, Allan C.; Aggarwal, Reena.

Ahn, Illtae

PD February 1996. **TI** Word-of-Mouth Communication and Community Enforcement. **AU** Ahn, Illtae; Suominen, Matti. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 96/02; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 27. **PR** no charge. **JE** D83, C11. **KW** Search. Networks. Asymmetric Information.

AB We study community enforcement in a private information, random matching setting, where buyers privately "network" for information and sellers have a short term incentive to supply low quality. We show that high quality can be sold in a sequential equilibrium with population M even when each buyer periodically interacts with only N(M) players where the limit as M increases without bound of N-squared divided by M is positive and finite. We also show that when networking is costly and M is large, low quality is supplied with positive probability in any Nash equilibrium. For this case, we characterize conditions for a sequential equilibrium in which both high and low quality are supplied.

Aitken, Brian

PD May 1995. **TI** Wages and Foreign Ownership: A Comparative Study of Mexico, Venezuela, and the United States. **AU** Aitken, Brian; Harrison, Ann; Lipsey, Robert E. **AA** Aitken: International Monetary Fund. Harrison: Columbia University and National Bureau of Economic Research. Lipsey: National Bureau of Economic Research. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/21; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 23. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** F21, J31. **KW** Foreign Investment. Wage Level. Mexico. Venezuela.

AB This paper explores the relationship between wages and foreign investment in Mexico, Venezuela, and the United States. Despite very different economic conditions and levels of development, we find one fact which is robust across all three countries: higher levels of foreign investment are associated with higher wages. In Mexico and Venezuela, foreign investment was associated with higher wages only for foreign-owned firms -- there is no evidence of wage spillovers leading to higher wages for domestic firms. In the United States there is evidence of wage spillovers. The lack of spillovers in Mexico and Venezuela is consistent with significant wage differentials between foreign and domestic enterprises. In the United States, wage differentials are smaller.

PD May 1995. **TI** Wages and Foreign Ownership: A Comparative Study of Mexico, Venezuela, and the United States. **AU** Aitken, Brian; Harrison, Ann; Lipsey, Robert E. **AA** Aitken: International Monetary Fund. Harrison:

Columbia University and National Bureau of Economic Research. Lipsey: National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5102; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 23. **PR** $5.00. **JE** F21, J31, O57. **KW** Wages. Foreign Investment. Comparative Study.

AB This paper explores the relationship between wages and foreign investment in Mexico, Venezuela, and the United States. Despite very different economic conditions and levels of development, we find one fact which is robust across all three countries: Higher levels of foreign investment are associated with higher wages. In Mexico and Venezuela, foreign investment was associated with higher wages only for foreign-owned firms -- there is no evidence of wage spillovers leading to higher wages for domestic firms. In the United States, wage differentials are smaller.

Aizcorbe, Ana M.

PD July 1995. **TI** The Comovement of Output and Labor Productivity in Aggregate Data for Auto Assembly Plants. **AU** Aizcorbe, Ana M.; Kozicki, Sharon. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/33; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 22. **PR** no charge. **JE** D24, L62. **KW** Business Cycle. Procyclical. Measurement Issues.

AB This paper documents the importance of high-frequency plant shutdowns in auto assembly plants in generating the observed procyclicality of an aggregate labor productivity series for that industry. An important fact about plant shutdowns in this industry is that some workers typically remain at the plant when the assembly line is idle. Using a high-frequency panel of 22 auto assembly plants over an eight-year period, we find that the number of production worker hours reported from shutdown establishments is nontrivial and highly cyclical. Using time-series analysis, we find that virtually all of the comovement between output and labor productivity for aggregate measures constructed from the panel is associated with labor hours reported at shutdown plants. This result is robust to the treatment of other measurement issues discussed in the literature, and to the choice of time-series technique.

Akhavein, Jalal D.

TI Solving an Empirical Puzzle in the Capital Asset Pricing Model. **AU** Leusner, John; Akhavein, Jalal D.; Swamy, P.A.V.B.

Al-Najjar, Nabil I.

PD October 1995. **TI** Factor Structures and Arbitrage Pricing in Large Asset Markets. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1140; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 24. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C62, G12. **KW** Factor Models. Arbitrage. APT.

AB The paper develops a new modeling framework to study factor structures and Arbitrage Pricing Theory in large asset markets. The asset economy in this framework consists of a continuum of assets. Finite subsets of assets are interpreted as random draws from the underlying economy. I show that the absence of arbitrage opportunities (or equivalently, the continuity of the pricing function) implies, under the traditional assumptions, exact factor-pricing for a full measure of assets. In particular, with probability one, in a typical finite subset of assets, all assets are exactly factor-price. I further show that approximate factor structures exist in general, and that they can be chosen efficiently according to a measure of explanatory power in the spirit of R squared in econometrics. The definition of approximate factor structures here is less stringent than in Chamberlain and Rothchild (1983), yet still sufficiently strong to imply approximate factor pricing for most assets. Factor structures in the present model are also robust to using proxies to replace the true factors. None of these results hold in the traditional modeling approach in which the large asset economy is represented by an infinite sequence of assets. I provide examples explaining the reasons for the sharp differences between the implications of the two modeling approaches.

PD October 1995. **TI** Incentive Contracts in Two-Sided Moral Hazards With Multiple Agents. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1143.; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 23. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D82, D83, D84. **KW** Moral Hazard. Two Sided. Contracts.

AB The paper studies a contracting problem in which a Principal enters in two-sided moral hazards with N independent agents. There are no technological or informational linkages between the N agency problems: The Principal's costs are additive across agents; there is no common uncertainty in the agents' performance; and the Principal can freely vary his actions across agents. Despite this, optimal incentive schemes essentially eliminate the Principal's incentive problem when team size N is large enough. This implies that it is suboptimal to require each agent's compensation to depend only on his own outcome. The result also implies the existence of purely informational economies of scale to increasing team size. Thus, the concentration of otherwise unrelated transactions in a single "firm" creates wealth through a more efficient use of information about the Principal's actions. The paper shows that extremely simple statistical contracts are approximately optimal in large teams. The outcome of such contracts is observationally indistinguishable from standard Principal-Agent contracts. This provides a theoretical justification for using standard Principal-Agent contracts in environments that involve two-sided hazard in a fundamental way.

Aliprantis, C.D

TI A Representation Theorem for Riesz Spaces and its Applications to Economics. **AU** Zame, William R.; Abramovich, Y.A.; Aliprantis, C.D.

PD October 1995. **TI** Economies with Many Commodities. **AU** Aliprantis, C.D.; Border, Kim C.; Burkinshaw, Owen. **AA** Aliprantis and Burkinshaw: IUPUI. Border: California Institute of Technology. **SR** Caltech

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Social Science Working Paper: 944; Division of Humanities and Social Sciences, 228/77, California Institute of Technology, Pasadena, CA 91125. **PG** 60. **PR** no charge. **JE** C62, D51. **KW** General Equilibrium. Properness. Core Equivalence. Existence.

AB We discuss the two fundamental theorems of welfare economics in the context of the Arrow-Debreu- McKenzie model with an infinite dimensional commodity space. As an application, we prove the existence of competitive equilibrium in the standard single agent growth model.

PD May 1996. **TI** Hedging with Derivatives in Incomplete Markets. **AU** Aliprantis, C.D.; Brown, Donald J.; Werner, J. **AA** Aliprantis: IUPUI, Cornell University and California Institute of Technology. Brown: Yale University. Werner: University of Minnesota. **SR** Yale University, Cowles Foundation Discussion Paper: 1126; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 17. **PR** no charge. **JE** G12, G13. **KW** Hedging. Incomplete Markets. Derivative Assets.

AB We present a preference-free theory of hedging by arbitrage in dynamically incomplete, multiperiod asset markets, using marketed "put options" of the form (kb-s)++.

Altemeyer, Bob

PD December 1994. **TI** Economic Philosophy and Authoritarianism Among North American Legislators. **AA** University of Manitoba. **SR** University of Western Ontario, Papers in Political Economy: 54; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 23. **PR** no charge. **JE** D78, H11. **KW** Legislators. Authoritarianism. Social Psychology.

AB This paper measures a concept called "Right Wing Authoritarianism," which consists of authoritarian submission, authoritarian aggression, and conventionalism, by surveying North American legislators. It concludes that political conservatives tend strongly to match these criteria, while economic conservatives match these criteria slightly less strongly. RWA appears to be the measure that people are implicitly discussing when they talk about the "liberal-conservative" dimension in politics.

Altman, Edward I.

PD 1995. **TI** Report on the Investment Performance of Defaulted Bonds for 1994 and 1987-1994. **AU** Altman, Edward I.; Simon, Bobe E. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/2; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 10. **PR** not available. **JE** G14, G12. **KW** Bonds. Default. Securities. High Yield.

AB This report presents a discussion of the investment performance of those bond issues that have defaulted and continue trading in the public market while the issuing firm attempts a financial reorganization. Monthly total returns measures are compiled based on the Altman-NYU Salomon Center Index of Defaulted Debt Securities and compared with the total returns of common stocks and high yield bonds. Returns based on our market weighted index are presented for the past year, 1994, as well as the eight year period 1987-1994. While 1994 was at best a modest year of performance for defaulted bonds, these securities performed very well compared to our two other risky indexes and to risk free government bonds. The superior return performance of defaulted bonds is also manifest for the eight year sample period. The volatility of this portfolio is greater than that of our comparable indexes. Diversification and seasonal movements are also analyzed in this report. Finally, future supply and demand estimates for the defaulted and distressed market are discussed.

PD 1995. **TI** Report on Defaults and Returns on High Yield Bonds: Analysis Through 1994. **AU** Altman, Edward I.; Kishore, Vellore. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/3; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 8. **PR** not available. **JE** G14, G12. **KW** High Yield. Securities. Bonds.

AB Nineteen-ninety-four was a relatively lackluster year for the high yield market with relatively low defaults combined with slightly negative total returns. When viewed in comparative terms with other fixed income securities markets, however, high yield debt performed quite well. Compared to long term U.S. Government securities, the average yield spread on high yield debt dropped to the lowest year-end level (3.44%) since 1984. This report documents the high yield debt market's risk and return performance in 1994 by presenting default and mortality statistics and provides a matrix of average returns and other performance statistics over the relevant periods of the market's evolution. Our analysis covers the period 1971-1994 for defaults and 1978-1994 for returns.

PD 1995. **TI** Corporate Credit Scoring Models: Approaches and Standards for Successful Implementation. **AU** Altman, Edward I.; Haldeman, Robert. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/6; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 25. **PR** not available. **JE** G21, E43, G32. **KW** Loans. Banks. Debt.

AB A number of banks have recently undertaken a reassessment of their credit-lending process. The banks' endeavors coincided with the efforts of a small, but growing number of vendors who have developed systems to assess both public and private corporations. The purpose of this article is to define the qualities of a carefully developed and rigorously tested credit modeling system for assessing the attractiveness of lending opportunities. We identify and discuss several types of credit evaluation systems and their relative importance. These systems are classified as primary ("ground up" or "firm-intrinsic" approach) and supplementary ("top-down" or "firm capital market") approaches. The crucial step in evaluating any of these systems is the thorough testing of the results and the establishment of rigorous standards for acceptance. In addition to these standards, we discuss the role that an acceptable credit system can play as the link between individual loan assessment and logically derived estimates of expected loss rates and loan pricing criteria.

PD 1995. **TI** A Yield Premium Model for the High Yield Debt Market. **AU** Altman, Edward I.; Bencivenga, Joseph C. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/7; Salomon Brothers Center for the Study of Financial Institutions, Graduate School

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of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 15. **PR** not available. **JE** G12, E43. **KW** High Yield. Bonds. Securities.

AB This report presents a rather simple method to determine if the high yield debt market is "rich" or "poor" at any point in time. We utilize a Break-Even-Yield Concept to measure the current market premium that investors can expect to receive over the yield that would leave them equally as well off compared to our benchmark default risk-free bonds. This analysis, covering the sample period 1988-1994, is carried out by: Assuming that default rates and recovery rates on default in the future will essentially be identical to the historical average over the last 24 years. Assuming default rates will be different from the past based on current firm profiles in the market. Correlating historical premiums over the break-even-yield with subsequent returns to high yield investors. Our report analyzes for the first time: Premiums and Implied Default Rates for each of the bond rating categories (BB, B, and CCC) as well as the overall high yield market. BBB results are also included. We conclude that: Premiums over the break-even-yield have varied dramatically over the last six years from 0.5% to 8.0% (for the overall market, assuming historical default rates and recoveries). Total returns are significantly positively correlated with lagged premiums. This implies an effective model for predicting returns over a six and twelve month horizon.

PD 1996. **TI** Report on the Investment Performance of Defaulted Bonds for 1987- 1995 and Market Outlook. **AU** Altman, Edward I.; Morris, Anthony C. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/1; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 12. **PR** not available. **JE** G12, G14. **KW** Bonds. High Yield. Default. Securities.

AB This report presents a discussion of the investment performance of those bonds that have defaulted and continue trading in the public market while the issuing firm attempts a financial reorganization. monthly total returns measures are compiled based on the Altman-NYU Salomon Center Index of Defaulted Debt Securities and compared with the total returns of common stocks and high yield bonds. Returns based on our market weighted index are presented for the past year, 1995, as well as the nine year period 1987-1995. 1995 was a modest year of performance for defaulted bonds especially when compared to our two other risky indexes and to risk free government bonds. The return performance of our three indexes for the nine year sample period shows that common stocks are now the number one performer with defaulted bonds in second place followed by high yield bonds. All three asset classes have done quite well in the last decade. Diversification and seasonal movements are also analyzed in this report. Finally, current and future supply estimates for the defaulted and distressed market are presented.

PD 1996. **TI** Special Report on Defaults and Returns on High Yield Bonds: Analysis Through 1995. **AU** Altman, Edward I.; Kishore, Vellore. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/2; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 8. **PR** not available. **JE** G12, G14. **KW** Bonds. High Yield. Default. Securities.

AB Nineteen-ninety five was an excellent year for the high yield market with relatively low defaults combined with returns of almost 20%, the highest since 1991. When viewed in comparative terms with other fixed income securities markets, however, the high yield debt market's performance in 1995 was not exceptional. This report documents the high yield debt market's risk and return performance by presenting default and mortality statistics and providing a matrix of average returns and other performance statistics over the relevant periods of the market's evolution. Our analysis covers the period 1971-1995 for defaults and 1978-1995 for returns.

PD 1996. **TI** Recoveries on Defaulted Bonds: By Industry and Debt Seniority. **AU** Altman, Edward I.; Kishore, Vellore. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/6; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 11. **PR** not available. **JE** Bonds. Recovery. Default. Debt. **KW** G12, G14, G33.

AB This paper documents average recovery rates, i.e., prices, on defaulted bonds stratified by industry and also by seniority. When we aggregate by 3-digit SIC codes, although we do observe great differences in a few sectors, the results show similar recoveries for a large number of industries. We have not calculated default rates by industry which would require assembling new issue and cumulative totals of amounts outstanding stratified by accepted definitions of industries. We intend to pursue this compilation in a subsequent study.

PD April 1996. **TI** The Equity Performance of Firms Emerging From Bankruptcy. **AU** Altman, Edward I.; Eberhart, Allan C.; Aggarwal, Reena. **AA** Altman: New York University. Eberhart and Aggarwal: Georgetown University. **SR** New York University, Salomon Brothers Working Paper: S/96/10; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 23. **PR** not available. **JE** G33, G12. **KW** Bankruptcy. Stocks. Securities.

AB This study assesses the stock return performance of 131 firms emerging from Chapter 11 between 1980 and 1993. Though there are some important differences, a firm issuing stocks upon emergence from bankruptcy is analogous to an initial public offering (IPO). Many studies have documented significant abnormal short-term positive returns accruing to IPO investors but more recent evidence suggests that IPO's are overpriced in the 1 to 3 years following issuance. We uncover some evidence that stocks of firms emerging from bankruptcy are underpriced in the short term; the average cumulative abnormal return (ACAR) is, depending on how expected returns are estimated, between 2.8% and 2.9% for the first 2 days following emergence (the medians, though, range from 0.1% to 0.3%). In the first 200 trading days following emergence, the ACAR's vary from 22.8% to 29.6% and the medians range from 16.8% to 22.2%. Our results are of broad interest for three main reasons. First, they cast doubt on the informational efficiency of this market. This is of particular interest to investors primarily bondholders, in formerly bankrupt firms that liquidate their equity position in the newly emerged firms or to investors who specialize in the purchase of post Chapter 11 equities. Second, the results are in stark contrast to the long- term under performance observed in the IPO market. Finally, the results provide an interesting comparison with the operating performance of firms emerging from bankruptcy between 1979 and 1988 as documented by Hotchkiss (1995). The poor average operating performance she reports suggests that the Chapter 11 process does not efficiently screen out economically inefficient firms. Our results suggest that, although these firms may not achieve strong operating performance, they appear to do better than the market expected at the time they emerged from Chapter 11.

Andrews, Donald W.K

PD March 1996. **TI** A Conditional Kolmogorov Test. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1111R; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 43. **PR** no charge. **JE** C12, C52. **KW** Bootstrap. Consistent Test. Parametric Model. Specification Test.

AB This paper introduces a conditional Kolmogorov test of model specification for parametric models with covariates (regressors). The test is an extension of the Kolmogorov test of goodness-of-fit for distribution functions. The test is shown to have power against n to the negative one-half local alternatives and all fixed alternatives to the null hypothesis. A parametric bootstrap procedure is used to obtain critical values for the test.

PD March 1996. **TI** Semiparametric Estimation of a Sample Selection Model. **AU** Andrews, Donald W.K.; Schafgans, Marcia M.A. **AA** Andrews: Yale University. Schafgans: London School of Economics. **SR** Yale University, Cowles Foundation Discussion Paper: 1119; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 31. **PR** no charge. **JE** C14, C81. **KW** Intercept Estimator. Sample Selection. Semiparametric Estimator.

AB This paper provides a consistent and asymptotically normal estimator for the intercept of a semiparametrically estimated sample selection model. The estimator uses a decreasingly small fraction of all observations as the sample size goes to infinity, as in Heckman (1990). In the semiparametrics literature, estimation of the intercept typically has been subsumed in the nonparametric sample selection bias correction term. The estimation of the intercept, however, is important from an economic perspective. For instance, it permits one to determine the "wage gap" between unionized and nonunionized workers, decompose the wage differential between different socio-economic groups (e.g., male-female and black- white), and evaluate the net benefits of a social program.

PD April 1996. **TI** A Stopping Rule for the Computation of Generalized Method of Moments Estimators. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1120; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 29. **PR** no charge. **JE** C13, C51. **KW** Computation. Method of Moments. Global Optimization. J-Step Estimator. Stopping Rule.

AB To obtain consistency and asymptotic normality, a generalized method of moments (GMM) estimator typically is defined to be an approximate global minimize of a GMM criterion function. To compute such an estimator, however, can be problematic because of the difficulty of global optimization. In consequence, practitioners usually ignore the problem and take the GMM estimator to be the result of a local optimization algorithm. This yields an estimator that is not necessarily consistent and asymptotically normal. The use of a local optimization algorithm also can run into the problem of instability due to flats or ridges in the criterion function, which makes it difficult to know when to stop the algorithm. To alleviate these problems of global and local optimization, we propose a stopping rule (SR) procedure for computing GMM estimators. The procedure eliminates the need for global search with high probability. And, it provides an explicit for problems of stability that may arise with local optimization problems.

PD May 1996. **TI** Tests of Seasonal and Non-Seasonal Serial Correlation. **AU** Andrews, Donald W.K.; Liu, Xuemei; Ploberger, Werner. **AA** Andrews and Liu: Yale University. Ploberger: University of St. Andrews, Scotland. **SR** Yale University, Cowles Foundation Discussion Paper: 1124; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 32. **PR** no charge. **JE** C22, C52. **KW** Moving Average. Consistent Test. Lagrange Multiplier. Likelihood Ratio. Seasonality.

AB This paper considers tests for seasonal and non-seasonal serial correlation in time series and in the errors of regression model. The problem of testing for white noise against multiplicative seasonal ARMA(1,1)-ARMA(1,1) alternatives is investigated. This testing problem is non-standard due to nuisance parameters that appear under the alternative but not under the null hypothesis. The likelihood ratio (LR), sup Lagrange multiplier (LM), and exponential average LM and LR tests are considered and are shown to be asymptotically admissible for multiplicative seasonal ARMA(1,1)-ARMA(1,1) alternatives. In addition, they are shown to be consistent against all (weakly stationary strong mixing) non-white noise alternatives. Simulation results compare the tests to several tests in the literature. The exponential average test, Exp-LR, is found to be the best test overall. It performs substantially better than the Box-Pierce, Durbin-Watson, and Wallis tests.

Aragones, Enriqueta

PD June 1994. **TI** Negativity Effect and the Emergence of Ideologies. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1125; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 23. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D72, D81. **KW** Political Economy. Attitude Formation. Voting. Elections.

AB "Negativity effect" refers to the psychological phenomenon that people tend to attach greater weight to negative information than to equally extreme and equally likely positive information in a variety of information processing tasks. Numerous studies of impression formation have found that negative information is weighted more heavily than positive information as impressions of others are formed. There is empirical evidence in political science that shows the importance of the negativity effect in the information processing of the voters. This effect can explain the observed decrease of popularity for a president the longer he is in office. We construct a dynamic model of political competition, incorporating the negativity effect in the decision rule of the voters and allowing their preferences to change over time, according to the past performance of the candidates while in office. Our model may explain the emergence of ideologies out of the competition for votes of myopic candidates freely choosing policy positions. This result gives rise to the formation of political parties, as infinitely-lived agents with a certain ideology. We also show that Hotelling's principle of minimum differentiation is no longer satisfied. Furthermore, in this model some voters may start out by switching among parties associated with different policies, but find themselves supporting one of the parties from some point on. Thus, the model describes a process by which some voters become identified with a "right" or "left" bloc, while others "swing" between the two parties.

Asheim, Geir B.

PD June 1995. **TI** Individual and Collective Time-Consistency. **AA** University of Oslo. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1128; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 18. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C62, C72. **KW** Time Consistency. Nash Equilibrium.

AB This paper reconsiders the Strotz-Pollak problem of consistent planning and argues that a solution to this problem requires a refinement of subgame-perfectness. Such a refinement is offered through an analysis based on Greenberg's "theory of social situations." A unifying framework is presented whereby consistent one-person planning as a problem of individual time-consistency and renegotiation-proofness as a problem of collective time-consistency are captured through the same general concept.

PD June 1995. **TI** Rational Reasoning and Rationalizable Sets. **AU** Asheim, Geir B.; Dufwenberg, Martin. **AA** Asheim: University of Oslo. Dufwenberg: Uppsala University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1129; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 23. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D81, D11. **KW** Forward Induction. Rationality. Best Response.

AB Earlier contributions have shown that imposing common knowledge of rationality is problematic when rationality is defined as choosing an admissible best response. Here we instead impose common knowledge of rational reasoning and define the concept of rationalizable sets. General existence (for any non-empty valued best response operator) is established, and a finite algorithm (eliminating strategy sets instead of strategies) is provided. Combined with the ordinary best response operator, Bernheim-Pearce rationalizability is fully characterized. Combined with the admissible best response operator, rationalizability is defined under the assumption of cautious and sequentially rational behavior, and a notion of forward induction is captured.

Athanasoulis, Stefano

TI World Income Components: Measuring and Exploiting International Risk Sharing Opportunities. **AU** Shiller, Robert J.; Athanasoulis, Stefano.

TI World Income Components: Measuring and Exploiting International Risk Sharing Opportunities. **AU** Shiller, Robert J.; Athanasoulis, Stefano.

Atsushi, Kajii

PD November 1995. **TI** The Robustness of Equilibria to Incomplete Information. **AU** Atsushi, Kajii; Morris, Stephen. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/18; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 49. **PR** no charge. **JE** C62, C72, D83. **KW** Nash Equilibrium. Incomplete Information.

AB A number of papers have shown that a strict Nash equilibrium action profile of a game may never be played if there is a small amount of incomplete information. We present a general approach to analyzing the robustness of equilibria to a small amount of incomplete information. A Nash equilibrium of a complete information game is said to be robust to incomplete information if every incomplete information game with payoffs almost always given by the complete information game has an equilibrium which generates behavior close to the Nash equilibrium. We show that an open set of games has no robust equilibrium and examine why we get such different results from the refinements literature. We show that if a game has a unique correlated equilibrium, it is robust. Finally, a natural many-player many-action generalization of risk dominance is shown to be a sufficient condition for robustness.

Auerbach, Alan J.

PD April 1995. **TI** The Annuitization of Americans' Resources: A Cohort Analysis. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J.; Sabelhaus, John; Weil, David N. **AA** Auerbach: University of California, Berkeley. Gokhale: Federal Reserve Bank of Cleveland. Kotlikoff: Boston University and National Bureau of Economic Research. Sabelhaus: The Urban Institute. Weil: Brown University and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5089; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** $5.00. **JE** D91, E21. **KW** Cohort Analysis. Generational Transfers. Saving. Bequests. Annuitized Resources.

AB This paper constructs a unique cohort data set to study the changes since 1960 in the share of Americans' resources that are annuitized. Understanding these changes is important because the larger this share, the more cohorts are likely to consume and the less they are likely to bequeath. Hence, the degree of annuitization affects national saving as well as the transmission of inequality over time. Our findings are striking. Although the annuitized share of resources of younger Americans declined slightly between 1960 and 1990, it increased dramatically for older Americans. It doubled for older men and quadrupled for older women. Since the elderly have much higher mortality probabilities than do the young, their degree of annuitization is much more important for aggregate bequests and saving. According to our estimates, aggregate U.S. bequests would now be 66 percent larger had the post-1960 increase in annuitization not occurred. In addition, U.S. national saving would likely be substantially larger than is currently the case.

Austen-Smith, David

PD June 1995. **TI** Campaign Contributions and Access. **AA** University of Rochester. **SR** University of Western Ontario, Papers in Political Economy: 59; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 26. **PR** no charge. **JE** D72, D78. **KW** Rent-Seeking. Lobbying. Political Donations.

AB An important and pervasive view of campaign contributions is that they are given to promote access to successful candidates under circumstances when such access would not ordinarily be given. Under complete information regarding donors' policy preferences, I argue that this model predicts a negative relationship between contributions and the extent to which the groups' and the recipient legislators' preferences are similar. However, one of the more robust empirical findings in the literature is that this relationship is positive. Relaxing the informational assumption on donors' preferences, this paper reexamines the access story with a simple model in which campaign contributions can act as signals of policy preference. In the model, the value of access to any agent is endogenous. The main result is that, although contributions can generate at best noisy information on donors' preferences, when it does lead to access the prediction is that groups with preferences close to those of the target legislator will on average offer the larger contributions. However, while consistent with the empirical data, this prediction is statistical; the actual pattern of this relationship can be U-shaped.

Bagwell, Kyle

PD December 1994. **TI** Dynamic Retail Price and Investment Competition. **AU** Bagwell, Kyle; Ramey, Garey; Spulber, Daniel F. **AA** Bagwell and Spulber: Northwestern University. Ramey: University of California, San Diego. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1115; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 26. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D21, D43, G31, L41. **KW** Predatory Pricing. Competition. Retail.

AB We develop a simple model of retail competition in which retailers select prices and investments in cost reduction. Unable to observe firms' current prices prior to costly search, consumers monitor firms' historic pricing behavior. An equilibrium is constructed in which several identical firms enter and then engage in a phase of vigorous price competition, corresponding to a battle for low-price reputations. This phase is concluded with a "shakeout," as a low-price, low-cost firm comes to dominate the market while other firms lose market share. A central feature of the equilibrium is that low prices are complementary to large investments in cost reduction. Even though the dominant firm's price rises through time, and initially may be below marginal cost, we argue that an interpretation of predatory pricing may be inappropriate, since the dominant firm is also the most-efficient (lowest-cost) firm in the market.

PD January 1995. **TI** Collusion Over the Business Cycle. **AU** Bagwell, Kyle; Staiger, Robert W. **AA** Bagwell: Northwestern University. Staiger: University of Wisconsin. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1118; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 48. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D43, E32, E13, L13. **KW** Collusion. Business Cycles. Game Theory. Dynamics.

AB We present a theory of collusive pricing in markets subject to business cycle fluctuations. In the business cycle model that we adopt, market demand alternates stochastically between fast-growth (boom) and slow-growth (recession) phases. We provide a complete characterization of the most-collusive prices and show that: (1). the most-collusive prices may be procyclical (countercyclical) when demand growth rates are positively (negatively) correlated through time, and (2). the amplitude of the collusive pricing cycle is larger when the expected duration of boom phases decreases and when the expected duration of recession phases increases. We also offer a generalization of Rotemberg and Saloner's (1986) model, and interpret their findings in terms of transitory demand shocks that occur within broader business cycle phases.

PD May 1995. **TI** Protection and the Business Cycle. **AU** Bagwell, Kyle; Staiger, Robert W. **AA** Bagwell: Northwestern University. Staiger: University of Wisconsin. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1130; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 38. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D78, F13, F11, E32. **KW** Political Economy. Protectionism. Business Cycles. Fluctuations.

AB Empirical studies have repeatedly documented the countercyclical nature of trade barriers. In this paper, we propose a simple theoretical framework that is consistent with this and other empirical regularities in the relationship between protection and the business cycle. We examine the ability of countries to maintain efficiency- enhancing reciprocal trade agreements that control their temptation to resort to beggar-thy-neighbor policies, under the requirement that such agreements are self enforcing. We find theoretical support for countercyclical movements in protection levels, as the fast growth in trade volume that is associated with a boom phase facilitates that maintenance of more liberal trade policies than can be sustained during a recession phase in which growth is slow. However, we also find that acyclical increases in the level of trade volume give rise to protection, implying that whether rising imports are met with greater liberalization or increased protection depends on whether they are part of a cyclic upward trend in trade volume or an acyclical increase in import levels.

PD June 1995. **TI** Capacity, Entry and Forward Induction. **AU** Bagwell, Kyle; Ramey, Garey. **AA** Bagwell: Northwestern University. Ramey: University of California, San Diego. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1131; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208-2014. **PG** 23. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** L13, D43. **KW** Capacity. Entry. Forward Induction. Second Mover. First Mover. Countermeasures.

AB We show that when avoidable fixed costs are introduced into the capacity-and-entry model of Dixit (1980) and Ware (1984), there arises a coordination problem in selecting among post-entry Nash equilibria. Elimination of weakly dominated strategies makes it possible for the entrant to us a market-capturing strategy, consisting of a large capacity commitment that selects the entrant's preferred post-entry equilibrium and drives the incumbent from the market. Deterring the entrant's market-capturing strategy typically requires the incumbent to reduce its initial capacity choice. As avoidable fixed costs rise, the incumbent must restrict its capacity by a greater amount, and the relative advantage of the entrant rises.

PD January 1996. **TI** Reciprocal Trade Liberalization. **AU** Bagwell, Kyle; Staiger, Robert W. **AA** Bagwell: Northwestern University. Staiger: University of Wisconsin at Madison and National Bureau of Economic Research. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1150; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 42. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** F13, F11, F02. **KW** Terms-of-Trade. Political Economy. Reciprocity. Export Subsidies.

AB Why have governments found reciprocal trade agreements such as GATT to be a more effective means of facilitating trade liberalization than unilateral initiatives? We provide in this paper an analytic framework for the study of reciprocal trade agreements. We use this framework to establish three main results. First, we argue that political-economy factors are important for explaining the range of trade policies observed, but that these factors can not explain why governments seek reciprocal trade agreements as an institutional form for implementing their preferred policies. Rather, whether or not governments are politically motivated, Johnson (1953-54) was right: The central purpose of a reciprocal trade agreement is to eliminate the terms-of-trade driven policies that arise in the absence of such an agreement. Second, we establish an economic interpretation of the principles of reciprocity and nondiscrimination that represent the foundation of postwar reciprocal trade agreements. Finally, we offer new insights regarding the treatment of export subsidies in reciprocal trade agreements.

PD February 1996. **TI** Coordination Economies, Sequential Search and Advertising. **AU** Bagwell, Kyle; Ramey, Garey. **AA** Bagwell: Northwestern University. Ramey: University of California, San Diego. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1148; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 35. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D83, L15, M37. **KW** Coordination Economies. Sequential Search. Advertising.

AB This paper considers pricing, cost-reducing investment and dissipative advertising by firms when consumers acquire price information via two information channels, observation of advertising and sequential price search. We find that advertising guides consumers to the lowest prices in the market, even when consumers have the option to search. The threat of search by advertising-uninformed consumers introduces price competition among firms, giving short- and long-run resolutions to the Diamond paradox. Higher concentration raises welfare as a consequence of coordination economies. An extension to loss- leader advertising is developed.

PD April 1996. **TI** Strategic Export Subsidies and Reciprocal Trade Agreements: The Natural Monopoly Case. **AU** Bagwell, Kyle; Staiger, Robert W. **AA** Bagwell: Northwestern University. Staiger: University of Wisconsin-Madison and National Bureau of Economic Research. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1156; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 29. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** F12, F13. **KW** Strategic Export Subsidies. GATT. Entry. Coordination.

AB Why do governments seek restrictions on the use of export subsidies through reciprocal trade agreements such as GATT? With existing arguments, it is possible to understand GATT's restrictions on export subsidies as representing an inefficient victory of the interests of exporting governments over the interests of importing governments. However, to our knowledge, there does not exist a formal theoretical treatment that provides circumstances under which GATT's restrictions on export subsidies can be given a world-wide efficiency rationale. In this paper, we offer one such treatment in the context of a natural monopoly market. We emphasize that subsidy competition between governments can serve to coordinate the entry decisions of firms, finding that consumers in the importing countries may suffer if the coordination afforded exporters by government subsidy programs does more to prevent entry than to promote it. In such circumstances, we show that the existence of export subsidy programs can lead to inefficiencies, and importing countries and the world as a whole can be better off when such programs are banned.

Baily, Martin N.

PD February 1996. **TI** Labor Productivity: Structural Change and Cyclical Dynamics. **AU** Baily, Martin N.; Bartelsman, Eric J.; Haltiwanger, John. **AA** Baily and Haltiwanger: University of Maryland and National Bureau of Economic Research. Bartelsman: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/10; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 18. **PR** no charge. **JE** E32, J24. **KW** Labor Productivity. Structural Change. Downsizing.

AB A long-standing puzzle of empirical economics is that average labor productivity declines during recessions and increases during booms. This paper provides a framework to assess the empirical importance of competing hypotheses for explaining the observed procyclicality. For each competing hypothesis we derive the implications for cyclical productivity conditional on expectations of future demand and supply conditions. The novelty of the paper is that we exploit the tremendous heterogeneity in long-run structural changes across individual plants to identify the short-run sources of procyclical productivity. Our findings favor an adjustment cost model which involves a productivity penalty for downsizing as the largest source of procyclical labor productivity.

Bakan, Abigail B.

PD March 1994. **TI** Making the Match: Domestic Placement Agencies and the Racialization of Women's Household Work. **AU** Bakan, Abigail B.; Stasiulis, Daiva K.

AA Bakan: Queen's University. Stasiulis: Carleton University. SR University of Western Ontario, Papers in Political Economy: 55; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. PG 63. PR no charge. JE J13, J16. KW Employment Agencies. Discrimination.

AB In this paper, we argue that the nature, implications, and structure of women's work in the home cannot be fully understood without addressing the relationship of citizenship statuses between female adult members of the household in "advanced" states, and female migrant domestic workers. The paper explores the ideological and allocative activities of one set of gatekeepers: domestic placement agencies which specialize in the recruitment and placing of migrant domestic workers into private family households. The analysis is based largely on intensive qualitative interviews with ten of the leading and most established domestic placement agencies in Toronto, Ontario. The analysis illuminates the influential role of these gatekeepers in reproducing a highly racialized set of practices and criteria in the recruitment and placement of female migrant domestic workers in upper income Canadian households.

Baliga, Sandeep

PD April 1995. TI Banks Versus Bonds: A Simple Theory of Comparative Financial Institutions. AU Baliga, Sandeep; Polak, Ben. AA Baliga: King's College Cambridge. Polak: Yale University. SR Yale University, Cowles Foundation Discussion Paper: 1100; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. PG 37. PR no charge. JE N20, D82. KW Financial Institutions. Bonds.

AB We use a simple, graphical moral hazard model to compare monitored bank lending versus non- monitored bond issues as sources of external funds for industry. We contrast the conditions that theoretically favor each system, such as the size and number of firms, with conditions prevailing when these financial systems were developed during the British and German Industrial Revolutions. Then, to address the question why different systems have persisted, we embed the model in an entry game in which firm size and number are endogenous. We show that multiple equilibria can exist if financiers take the industrial structure as given and vice versa. Finally, we compare these equilibria in welfare terms.

Barany, I.

PD December 1994. TI The Topological Structure of Maximal Lattice Free Convex Bodies: The General Case. AU Barany, I.; Scarf, Herbert E.; Shallcross, D. AA Barany: Mathematical Institute, Budapest. Scarf: Yale University. Shallcross: Bellcore. SR Yale University, Cowles Foundation Discussion Paper: 1087; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. PG 17. PR no charge. JE C61. KW Integer Programming. Minimal Test.

AB not available.

PD May 1996. TI Matrices with Identical Sets of Neighbors. AU Barany, I.; Scarf, Herbert E. AA Barany: Hungarian National Science Foundation. Scarf: Yale University. SR Yale University, Cowles Foundation Discussion Paper: 1127; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. PG 18. PR no charge. JE C61. KW Test Sets. Discrete Programming. Sensitivity. Production Matrix.

AB This paper contributes to the literature of test sets in integer programming.

Barbera, Salvador

PD September 1995. TI Strategy-Proof Allotment Rules. AU Barbera, Salvador; Jackson, Matthew O.; Neme, Alejandro. AA Barbera: Universitat Autonoma de Barcelona. Jackson: Northwestern University. Neme: Universidad Nacional de San Luis. SR Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1142; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. PG 18. PR $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. JE D11, D61, D63. KW Strategy-Proof. Allotment Rules. Rationing. Uniform Rule. Single Peaked.

AB We consider the problem of allotting shares of a task or good among agents with single peaked preferences over their own shares. Previous characterizations have examined rules, such as the uniform rule, which satisfy various symmetry requirements. We consider the case where agents might begin with natural claims to minimal or maximal allotments, or might be treated with different priorities. We provide characterizations of the rules which are strategy-proof and efficient, but may treat individuals asymmetrically.

Barrow, Lisa

PD June 1996. TI An Analysis of Women's Labor Force Participation Following First Birth. AA Princeton University. SR Princeton University, Industrial Relations Section, Working Paper: 363; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. PG 24. PR $1.50. JE J13, J22. KW Labor Participation. Women.

AB Women's labor force participation rate has increased sharply over the last two decades. The increase has been particularly dramatic for married women with young children suggesting that women are spending less time out of the labor force for child-bearing and rearing. Using the relatively detailed information available in the National Longitudinal Survey of Youth, this paper explores women's decisions to return to work within one year of the birth of their first child, focusing particularly on the effect of child care costs. By constructing two indices of child care cost across states, I am able to utilize instrumental variables estimation to reduce the effect of measurement error on the estimated influence of child care cost. Consistent with economic theory, women who face lower child care costs are more likely to return to work after giving birth as are women with higher potential wages and lower family income from other sources.

Bartel, Ann P.

PD May 1995. TI Technological Change and the Skill Acquisition of Young Workers. AU Bartel, Ann P.; Sicherman, Nachum. AA Columbia University and National Bureau of Economic Research. SR National Bureau of Economic Research, Working Paper: 5107; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 57. PR $5.00. JE J24, J33, L60, O30. KW Technological Change. Skill Accumulation. Company

Training.
AB Using the National Longitudinal Survey of Youth (NLSY) and six proxies for industry rates of technological change, we study the impact of technological change on skill accumulation among young male workers in the manufacturing sector during the time period 1987 through 1992. Production workers in manufacturing industries with higher rates of technological change are more likely to receive formal company training, but not other types of training. An important finding is that, while more educated workers are more likely to receive formal company training, the training gap between the highly educated and the less educated narrows, on average, as the rate of technological change increases. The positive effect of technological change on hours of training is due largely to an increase in the incidence of training, not in the number of hours per training spell.

PD July 1995. TI Technological Change and the Skill Acquisition of Young Workers. AU Bartel, Ann P.; Sicherman, Nachum. AA Bartel and Sicherman: Columbia University and National Bureau of Economic Research. SR Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/10; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. PG 31. PR $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). JE J24, O33, L60, I21. KW Job Training. Manufacturing. Education.
AB Using the National Longitudinal Survey of Youth (NLSY) and six proxies for industry rates of technological change, we study the impact of technological change on skill accumulation among young male workers in the manufacturing sector during the time period 1987 through 1992. Production workers in manufacturing industries with higher rates of technological change are more likely to receive formal company training, but not other types of training. An important finding is that, while more educated workers are more likely to receive formal company training, the training gap between the highly educated and the less educated narrows, on average, as the rate of technological change increases. The positive effect of technological change on hours of training is due largely to an increase in the incidence of training, not in the number of hours per training spell.

Bartelsman, Eric J.

TI Labor Productivity: Structural Change and Cyclical Dynamics. AU Baily, Martin N.; Bartelsman, Eric J.; Haltiwanger, John.

Barth, James R.

TI Determinants of U.S. Commercial Bank Performance: Regulatory and Econometric Issues. AU Swamy, P.A.V.B.; Barth, James R.; Chou, Ray Y.; Jahera, John S. Jr.

Basu, Susanto

PD March 1995. TI Are Apparent Productive Spillovers a Figment of Specification Error? AU Basu, Susanto; Fernald, John G. AA Basu: University of Michigan and National Bureau of Economic Research. Fernald: Federal Reserve Board. SR National Bureau of Economic Research, Working Paper: 5073; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 25. PR $5.00. JE D24, D43, L60, O47. KW Output Spillovers. Imperfect Competition. Productivity. Manufacturing Industries.
AB Using data on gross output for two-digit manufacturing industries, we find that an increase in the output of one manufacturing sector has little or no significant effect on the productivity of other sectors. Using value-added data, however, we confirm the results of previous studies which find that output spillovers instead appear large. We provide an explanation for these differences, showing why, with imperfect competition, the use of value-added data leads to a spurious finding of large apparent external effects.

Bencivenga, Joseph C.

TI A Yield Premium Model for the High Yield Debt Market. AU Altman, Edward I.; Bencivenga, Joseph C.

Bennett, Elaine

PD November 1994. TI A Demand Adjustment Process. AU Bennett, Elaine; Maschler, Michael; Zame, William R. AA Bennett: Virginia Polytechnic Institute & State University and University of California, Los Angeles. Maschler: Hebrew University of Jerusalem. Zame: University of California, Los Angeles. SR University of California, Los Angeles, Department of Economics, Working Paper: 724; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. PG 18. PR $5.00. JE C71, D11. KW Aspirations. Demand Vectors. Adjustment Processes.
AB Aspirations arise as solutions of non-cooperative bargaining models. In the context of games with sidepayments, such a model was described and analyzed by Selten (1981), who used the framework of recursive games. Missing from these and other analyses is a model of how aspirations arise; the purpose of this paper is to provide such a model, in the context of cooperative games without sidepayments (NTU games, for short). The formalization we give is motivated in part by the Albers and Selten interpretation of aspirations as vectors of demands, and by the behavior of subjects in experimental games.

Bergemann, Dirk

PD November 1995. TI Learning and Strategic Pricing. AU Bergemann, Dirk; Valimaki, Juuso. AA Bergemann: Yale University. Valimaki: Northwestern University. SR Yale University, Cowles Foundation Discussion Paper: 1113; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. PG 33. PR no charge. JE C73, D43, D83. KW Learning. Experimentation. Dynamic Oligopoly. Stochastic Game. Multi-Armed Bandit.
AB We consider the situation where a single consumer buys a stream of goods from different sellers over time. The true value of each seller's product to the buyer is initially unknown. Additional information can be gained only by experimentation. For exogenously given prices the buyer's problem is a multi-armed bandit problem. The innovation in this paper is to endogenize the cost of experimentation to the consumer by allowing for price competition between the sellers. The role of prices is then to allocate intertemporally the costs and benefits of learning between buyer and sellers. We examine how strategic aspects of the oligopoly model interact with the learning process. All Markov Perfect Equilibria (MPE) are efficient. We identify an equilibrium which besides its unique robustness properties has a strikingly simple, seemingly myopic

pricing rule. Prices below marginal cost emerge naturally to sustain experimentation. Intertemporal exchange of the gains of learning is necessary to support efficient experimentation. We analyze the asymptotic behavior of the equilibria.

PD November 1996. **TI** Market Experimentation and Pricing. **AU** Bergemann, Dirk; Valimaki, Juuso. **AA** Bergemann: Yale University and Boston University. Valimaki: Northwestern University. **SR** Yale University, Cowles Foundation Discussion Paper: 1122; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 40. **PR** no charge. **JE** C73, D43, D83. **KW** Learning. Experimentation. Dynamic Oligopoly. Public Goods.
AB We present a continuous-time model of Bayesian learning in a duopolistic market. Initially the value of one product offered is unknown to the market. The market participants learn more about the true value of the product as experimentation occurs over time. Firms set prices to induce experimentation with their product. The aggregate outcomes are public information. As agents learn from the experiments of others, informational externalities arise. Surprisingly, the informational externality leads to too much learning. Buyers do not consider the impact of their experimentation on other buyers while the sellers internalize the gains from experiments conducted by the buyers. The firms free ride on the market as the social costs of experiments are not appropriately reflected in the equilibrium prices. The value functions of the sellers display preference for information in contrast to the buyers who are information averse. We determine Markov Perfect Equilibrium prices and allocations in this two sided learning model. The analysis is presented for a finite number of buyers as well as for a continuum of buyers. The severity of the inefficiency is shown to be monotonically increasing in the number of buyers.

Berger, Allen N.

PD 1995. **TI** Relationship Lending and Lines of Credit in Small Firm Finance. **AU** Berger, Allen N.; Udell, Gregory F. **AA** Berger: Board of Governors of the Federal System and University of Pennsylvania. Udell: New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/5; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 29. **PR** not available. **JE** D82, D83, E43, G21. **KW** Banks. Small Business. Loans. Asymmetric Information.
AB This paper examines the role of relationship lending in small firm finance. We examine price and nonprice terms of bank lines of credit (L/C) extended to small firms. Our focus on bank L/C's allows us to examine a type of loan contract in which the bank-borrower relationship is likely to be an important mechanism for solving asymmetric information problems associated with financing small enterprises. We find that borrowers with longer banking relationships pay lower interest rates and are less likely to pledge collateral. These results are consistent with theoretical arguments that relationship lending generates valuable information about borrower quality.

PD 1995. **TI** Universal Banking and the Future of Small Business Lending. **AU** Berger, Allen N.; Udell, Gregory F. **AA** Berger: Board of Governors of the Federal Reserve System. Udell: New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/10; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 41. **PR** not available. **JE** G21, G28, L11. **KW** Bank. Universal. Loan. Collateral.
AB We examine the contention that as banks become larger and more organizationally complex (i.e., more like universal banks) they may reduce the supply of credit to small business borrowers. This would be consistent with an effort to reduce Williamson-type managerial diseconomies in providing services for large and small borrowers jointly. We investigate the empirical association of loan price and quantity with bank size and complexity, using a data set with over 900,000 bank loans. The data support the proposition that larger, more complex banks may reduce the supply of small business lending, although other institutions may replace many of these loans.

PD May 1995. **TI** Universal Banking and the Future of Small Business Lending. **AU** Berger, Allen N.; Udell, Gregory F. **AA** Berger: Board of Governors of the Federal Reserve System and Wharton Financial Institutions Center. Udell: New York University. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/21; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 42. **PR** no charge. **JE** G21, G28, L11. **KW** Bank. Universal. Loan. Collateral.
AB We examine the contention that as banks become larger and more organizationally complex -- i.e., more like universal banks -- they may reduce the supply of credit to small business borrowers. This would be consistent with an effort to reduce Williamson-type managerial diseconomies in providing services for large and small borrowers jointly. We investigate the empirical association of loan price and quantity with bank size and complexity, using a data set with over 900,000 bank loans. The data support the proposition that larger, more complex banks may reduce the supply of small business lending, although other institutions may replace many of these loans.

PD May 1995. **TI** The Coexistence of Multiple Distribution Systems for Financial Services: The Case of Property- Liability Insurance. **AU** Berger, Allen N.; Cummins, J. David; Weiss, Mary A. **AA** Berger: Board of Governors of the Federal Reserve System and Wharton Financial Institutions Center. Cummins: University of Pennsylvania. Weiss: Temple University and University of Pennsylvania. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/22; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 41. **PR** no charge. **JE** G22, G28, G32. **KW** Liability Insurance. Distribution System. Direct Writer. Independent Agent. Corporate Form.
AB Property-liability insurance is distributed by independent agents, who represent several insurers, and exclusive agents, who represent only on insurer. The independent agency system is known to have higher costs than the exclusive agency system. The market imperfections hypothesis attributes the coexistence of the two systems to impediments to competition, while the product quality hypothesis holds that independent agents provide higher quality services. We measure both profit efficiency and cost efficiency for a sample of property- liability

insurers and find strong support for the product quality hypothesis. The data are consistent with a higher quality of output for independent agency insurers that is rewarded with additional revenues.

PD May 1995. **TI** The Role of Capital in Financial Institutions. **AU** Berger, Allen N.; Herring, Richard J.; Szego, Giorgio. **AA** Berger: Board of Governors of the Federal Reserve System and Wharton Financial Institutions Center. Herring: Wharton Financial Institutions Center. Szego: University of Rome. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/23; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 41. **PR** no charge. **JE** G21, G28, G32, E58. **KW** Bank. Capital. Regulation. Securization. Credit Crunch.
AB This article examines the role of capital in financial institutions -- why it is important, how market- generated capital "requirements" differ from regulatory requirements, and the form that regulatory requirements should take. Along the way, we examine historical trends in bank capital, problems in measuring capital, and some possible unintended consequences of capital requirements. Within this framework, we evaluate how the contributions to the special issue of the same title in the Journal of Business and Finance, April 1995, advance the literature and suggest topics for future research.

Berger, Jacqueline

PD November 1995. **TI** Were You Referred By a Man or a Woman? Gender of Contacts and Labor Market Outcomes. **AA** Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 353; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 32. **PR** $2.00. **JE** J16. **KW** Job Contacts. Gender.
AB There is a substantial body of research in economics and sociology suggesting that personal contacts are widely used as a method to find jobs. This study investigates how a worker's labor market outcomes are related to the gender of the person who refers the worker to his or her job. Data from the National Longitudinal Survey of Youth show that information networks are highly segregated by sex. A significant majority of the men who use contacts use male contacts, and a significant majority of the women who use contacts use female contacts. In addition, it is found that both men and women who use male contacts have significantly higher wages than those who do not use contacts, and men who use female contacts have significantly lower wages than those who do not use contacts. It is possible that individuals who use female contacts possess other unobservable characteristics that make them less likely to succeed and individuals who use male contacts possess other unobservable characteristics that make them more likely to succeed. This concern is addressed with two econometric models that control for possible endogeneity.

Berger, Philip G.

PD May 1995. **TI** Investor Valuation of the Abandonment Option. **AU** Berger, Philip G.; Ofek, Eli; Swary, Itzhak. **AA** Berger: University of Pennsylvania. Eli: New York University. Swary: Tel Aviv University. **SR** New York University, Salomon Brothers Working Paper: S/96/12; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 27. **PR** not available. **JE** D92, G13, G12. **KW** Expectations. Bankruptcy. Liquidation. Corporate Control.
AB We investigate whether investors price the option to abandon the firm for its liquidation value. Theory prices this real option as an American put with both a stochastic strike price (liquidation value) and a stochastic value of the underlying security (the value of cash flows). The major empirical implications are that firm value increases in liquidation value, after controlling for expected going-concern cash flows, and that more generalizable assets produce more abandonment option value. Using discounted earnings forecasts to proxy for expected cash flows, and relying on prior literature to categorize asset generalizability, we find strong support for abandonment option theory's predictions.

PD December 1995. **TI** Managerial Entrenchment and Capital Structure Decisions. **AU** Berger, Philip G.; Ofek, Eli; Yermack, David L. **AA** Berger: University of Pennsylvania. Ofek and Yermack: New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/17; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 22. **PR** not available. **JE** G31, G34, G32. **KW** Corporate Control. Leverage. Debt. Bonds.
AB We test the prediction that leverage is inversely associated with managerial entrenchment. We examine leverage levels and year-to-year changes for several hundred firms between 1984 and 1991. We find that leverage levels are positively related to CEO stock ownership and CEO stock option holdings, and negatively related to CEO tenure and board of directors size. While generally consistent with less entrenched CEO's pursuing more leverage, these results are subject to alternative interpretations. We therefore analyze year-to-year changes in leverage around exogenous shocks to corporate governance variables. We find that leverage increases after unsuccessful tender offers and "forced" CEO replacements, and under certain conditions after the arrival of major stockholders. These relations have greater magnitude when the sample is restricted to low-leverage firms, even when 80% of firms are defined as low-leverage. The results are consistent with decreases in entrenchment leading to increases in leverage, and with majority of firms having less debt than optimal.

Besley, Timothy

PD January 1995. **TI** An Economic Model of Representative Democracy. **AU** Besley, Timothy; Coate, Stephen. **AA** Besley: Princeton University. Coate: University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/02; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 62. **PR** no charge. **JE** D72, D71, D78. **KW** Political Candidates. Representative Government. Political Economy.
AB This paper develops a new approach to the study of democratic policymaking where politicians are selected by the people from those citizens who present themselves as candidates for public office. Participation in the policy making process is, therefore, derived endogenously. The approach has a

number of attractive features. First, it is a conceptualization of a pure form of representative democracy in which government is by, as well as of, the people. Second, the model is analytically tractable, being able to handle multidimensional issue and policy spaces very naturally. Third, it provides a vehicle for answering questions about the achievements of representative democracy. We study, in particular, whether representative democracy produces efficient outcomes.

PD May 1995. **TI** Efficient Policy Choice in a Representative Democracy: A Dynamic Analysis. **AU** Besley, Timothy; Coate, Stephen. **AA** Besley: London School of Economics. Coate: University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/10; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 36. **PR** no charge. **JE** D61, D78, H11. **KW** Dynamic Efficiency. Democracy. Political Failure.

AB This paper studies the efficiency of policy choice in representative democracies. It extends the model of democratic policy making developed in our earlier paper (Besley and Coate (1995)) to a simple dynamic environment. Equilibrium policy choices are shown to be efficient in the sense that in each period, conditional on future policies being selected through the democratic process, there exists no alternative current policy choices which can raise the expected utilities of all citizens. However, policies which would be declared efficient by standard economic criteria are not necessarily adopted in political equilibrium. The paper argues that these divergences are legitimately viewed as "political failures".

Bhasin, Vijay

PD November 1995. **TI** On the Credit Risk of OTC Derivative Users. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/50; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 25. **PR** no charge. **JE** G13, G18, G23, G28. **KW** Credit Risk. Ratings. OTC Derivatives.

AB A unique data set is constructed using publicly available information from financial reports filed with the S.E.C. The data set is used to examine trends in the credit quality of firms reporting the use of over-the- counter (OTC) derivatives. Contrary to popular belief, the OTC derivative marketplace is not found to be closed to poor (indeed speculative) credit quality firms. Further, the data reveal that the newer participants in the OTC derivative marketplace increasingly tend to have poorer credit qualities than the older participants. The industry's stated reluctance to do business with poorer credit risks combined with diagnostic tests point towards a reliance on collateralization. The credit quality comparisons are then used to assess Federal Reserve Board policy on credit risk weights for OTC derivative positions of banks.

PD May 1996. **TI** Changes in REIT Liquidity 1990-94: Evidence From Intra-Day Transactions. **AU** Bhasin, Vijay; Cole, Rebel A.; Kiely, Joseph K. **AA** Bhasin and Cole: Board of Governors of the Federal Reserve System. Kiely: Eastern Carolina University. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/22; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 21. **PR** no charge. **JE** G11, G23, G32. **KW** Bid-Ask Spread. Liquidity. REIT. Real Estate.

AB In this study, we use data on intra-day transactions to analyze whether REIT liquidity as measured by the bid-ask spread changed from 1990 to 1994, a period during which the industry's market capitalization increased from $9 billion to $45 billion. We find that REIT spreads narrowed significantly. We then use a variation of the empirical model proposed by Stoll (1978) to analyze the determinants of percentage spreads including whether spreads are determined by return variability, share price, exchange listing, and asset type. We find strong support for Stoll's model, in that return variance and share price are the primary determinants of percentage spreads in both periods analyzed. This suggests that the liquidity of REIT securities is similar to that of non-REIT securities with similar prices and return variance. In addition, we find that percentage spreads are wider for REIT's trading on NASDAQ. In contrast with an earlier study, we find that market capitalization is not a significant determinant of REIT percentage spreads.

Blais, Andre

PD January 1996. **TI** Why Do People Vote? An Experiment in Rationality. **AU** Blais, Andre; Young, Robert A. **AA** Blais: Universite de Montreal. Young: University of Western Ontario. **SR** University of Western Ontario, Papers in Political Economy: 64; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 19. **PR** no charge. **JE** D72, C91. **KW** Voting. Rational Choice. Experiments.

AB The study presents the findings of an experiment in which students in two universities were exposed to a ten minute presentation about the rational model and the paradox of voting during the 1993 Canadian election campaign. Our data indicate that exposure to the presentation decreased turnout in the election by seven percentage points. Turnout was reduced mainly because the presentation diminished sense of duty. The effect was indirect, since there was no reference to attitudes such as sense of duty in the presentation. Framing the voting act in rational choice terms induced some students to reconsider whether they should feel obliged to vote.

Blake, Christopher R.

TI Survivorship Bias and Mutual Fund Performance. **AU** Elton, Edwin J.; Gruber, Martin J.; Blake, Christopher R.

TI Fundamental Variables, APT, and Bond Fund Performance. **AU** Elton, Edwin J.; Gruber, Martin J.; Blake, Christopher R.

TI The Persistence of Risk-Adjusted Mutual Fund Performance. **AU** Elton, Edwin J.; Gruber, Martin J.; Blake, Christopher R.

Blank, Kermit

PD January 1996. **TI** European Integration and the State. **AU** Blank, Kermit; Hooghe, Liesbet; Marks, Gary. **AA** Blank and Marks: University of North Carolina, Chapel Hill. Hooghe: University of Toronto. **SR** University of Western Ontario, Papers in Political Economy: 68; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 43.

PR no charge. **JE** F15, D78, P16. **KW** Political Economy. Autonomy.
AB We argue here that while European integration has proceeded through a series of governmental bargains, one cannot conclude that individual states have gained or even sustained their former authoritative control over individual in their respective territories. States remain immensely strong institutions, but we detect some fundamental changes in the locus of political control toward the European arena and other supranational institutions.

Boldrin, Michele

PD October 1995. **TI** Asset Pricing Lessons for Modeling Business Cycles. **AU** Boldrin, Michele; Christiano, Lawrence J.; Fisher, Jonas D.M. **AA** Boldrin: Universidad Carlos III, Madrid. Christiano: Federal Reserve Bank of Minneapolis, Northwestern University, National Bureau of Economic Research and Federal Reserve Bank of Chicago. Fisher: University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9513; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 30. **PR** $10.00. **JE** G12, E44. **KW** Asset Pricing. Equity Premium. Business Cycles.
AB We develop a model which accounts for the observed equity premium and average risk-free rate, without implying counterfactually high risk aversion. The model also does well in accounting for business-cycle phenomena. With respect to the conventional measures of business-cycle volatility and comovement with output, the model does roughly as well as the standard business-cycle model. On two other dimensions, the model's business-cycle implications are actually improved. Its enhanced internal propagation allows it to account for the fact that there is positive persistence in output growth, and the model also provides a resolution to the "excess sensitivity puzzle" for consumption and income. Two key features of the model are habit persistence preferences and a multisector technology with limited intersectoral mobility of factors of production.

Bomfim, Antulio N.

PD August 1995. **TI** The Equilibrium Fed Funds Rate and the Indicator Properties of Term- Structure Spreads. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/40; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 16. **PR** no charge. **JE** C32, E43, E44. **KW** Fed Funds Rate. Term Structure. Vector Autoregression.
AB This paper introduces a model-based measure of the equilibrium federal funds rate and examines the indicator properties of the spread between observed and equilibrium rates. The results are compared to the findings of the existing literature, which implicitly uses long-term interest rates as proxies for the equilibrium funds rate. Granger- causality tests suggest that different measures of the term-structure spread are dominated by the funds-rate spread as a forecaster of a wide range of macroeconomic variables. The results are also supported by variance-decomposition analysis. In addition, the paper also estimates simple VARs to discuss how the policy stance responds to macroeconomic shocks.

Boozer, Michael

PD June 1995. **TI** Intraschool Variation in Class Size: Patterns and Implications. **AU** Boozer, Michael; Rouse, Cecilia Elena. **AA** Boozer: Yale University. Rouse: Princeton University and National Bureau of Economic Research. **SR** Princeton University, Industrial Relations Section, Working Paper: 344; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 24. **PR** $1.50. **JE** I21, J15. **KW** Black-White Wage Gap. Education. Production Function. Class Size.
AB Economists attempting to explain the widening of the black-white wage gap in the late 1970's by differences in school quality have been faced the problem that recent data reveal virtually no gap in the quality of schools attended by blacks and whites using a variety of measures. In this paper, we re-examine racial differences in school quality. We begin by considering the effects of using the pupil-teacher ratio, rather than the school's average class size, in an education production function since the pupil-teacher ratio is a rough proxy, at best. Second, we consider the importance of using actual class size rather than school- level measures of class size. We find that while the pupil-teacher ratio and average class size are correlated, the pupil-teacher ratio is systematically less than or equal to the average class size. Mathematically, part of the difference is due to the intraschool allocation of teachers to classes. We find that not only are blacks in schools with larger average class sizes, but they are also in larger classes within schools, conditional on class type. The intraschool class size patterns suggest that using within-school variation in education production functions is not a perfect solution to aggregation problems because of non-random assignment of students to classes at the eighth grade lead to larger test score gains from eighth to tenth grade and that differences in class size can explain approximately 15 percent of the black-white difference in educational achievement.

Border, Kim C.

TI Economies with Many Commodities. **AU** Aliprantis, C.D.; Border, Kim C.; Burkinshaw, Owen.

PD November 1995. **TI** Preferences Over Solutions to the Bargaining Problem. **AU** Border, Kim C.; Segal, Uzi. **AA** Border: California Institute of Technology. Segal: University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9518; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 11. **PR** $10.00. **JE** C78, C72. **KW** Bargaining. Game Theory. Preference Relations.
AB There are several solutions to the Nash bargaining problem in the literature. Since various authors have expressed preferences for one solution over another, we find it useful to study preferences over solutions in their own right. We identify a set of appealing axioms on such preferences that lead to unanimity in the choice of solution, which turns out to be the solution of Nash.

Borenstein, Severin

PD April 1995. **TI** Settling for Coupons: Discount Contracts as Compensation and Punishment in Antitrust Lawsuits. **AA** U.C. Energy Institute and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5085; National Bureau of Economic

Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 35. **PR** $5.00. **JE** K21, L14. **KW** Antitrust Law. Discount Contracts. Settlement Costs. Prices.

AB A number of recent antitrust lawsuits have been settled with discount contracts in which the defendants agree in the future to sell to the plaintiffs at a discount off of the price they offer to other buyers. Economists often object to such settlements, arguing that the sellers will partially or fully offset these discounts by increasing the baseline price from which the discount is calculated. This paper shows that poorly structured discount contracts will indeed result in price increases for other buyers and that other buyers, not the sellers, are likely to bear most of the cost imposed by the settlement. Carefully formulated discount settlements, however, can avoid giving the sellers an incentive to raise prices to buyers not covered by the settlement. In such cases, the defendant bears the full cost of the settlement. I suggest that poorly structured settlements still take place because their costs are borne primarily by consumers who are not parties to these cases.

Bowlus, Audra J.

PD March 1995. **TI** A Search Interpretation of Male-Female Wage Differentials. **AA** University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9504; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 23. **PR** $10.00. **JE** J16, J31. **KW** Gender. Wage Differentials. Search.

AB A general equilibrium search framework is used in this paper to examine the role of differences in behavioral patterns of labor force participation across the sexes in determining male-female wage differentials. A 3-state model of the labor market is put forth and estimated with data on wages and durations from the NLSY. The results indicate that men and women exhibit significantly different behavioral patterns, as well as face varying labor market conditions with respect to job finding and job loss rates. In certain cases, particularly for college graduates, the male-female wage differential can be substantially reduced by increasing the competition for female workers (raising(lowering) their job finding (loss) rates) or by reducing the tendency for females to exit for personal reasons.

PD December 1995. **TI** What Generation X Can Tell Us About the U.S.-Canadian Unemployment Rate Gap. **AA** University of Western Ontario. **SR** University of Western Ontario, Papers in Political Economy: 69; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 14. **PR** no charge. **JE** J64, E24. **KW** Unemployment. Duration. Incidence. Canada.

AB The evidence presented here points to several important differences in the structure of the U.S. and Canadian labor markets behind the observed incidence and duration differences. Canadians face a greater likelihood of being involuntarily separated from their jobs. The largest component of involuntary job separations in Canada is seasonal and temporary employment. This is in direct contrast to the U.S. Seasonal and temporary employment is the most likely of all involuntary separation categories to result in a transition to nonemployment. Thus the structure of Canada's economy is having a direct effect on the incidence of unemployment amongst its young low-skilled workers.

Brams, Steven J.

PD January 1996. **TI** Game Theory and Emotions. **AA** New York University. **SR** University of Western Ontario, Papers in Political Economy: 65; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 40. **PR** no charge. **JE** C91, C72, C73. **KW** Emotions. Experiments. Game Theory.

AB Emotions are feelings like anger, jealousy, and love that arise spontaneously. Although they would not appear to be products of rational calculation, that view has recently been challenged by analysts from several different disciplines. A game-theoretic model is developed to analyze structural features of frustration, which is engendered by a player's being in an unsatisfying situation and feeling an inability to escape it because of a lack of control. Of the 78 distinct 2 x 2 strict ordinal games of conflict, 57 are "conflict games" that contain no mutually best outcome for the players. Of these, 12 are "frustration games," in which it is the player with the dominant strategy who is frustrated by the best response of the other player. Altogether, there are 17 different games of frustration or self-frustration (one is common to both classes), which is 30% of all the conflict games. In four of the 12 frustration games, the frustrated player can, if it has "threat power," gain some relief, which is illustrated by Aristophanes' play, Lysistrata, in which the frustrated women induced the men to stop fighting by abstaining from sex. In the six self-frustration games, the player with the dominant strategy can always induce a better outcome, called a "nonmyopic equilibrium," based on the "theory of moves." Shakespeare's Macbeth illustrates how a self-frustrated Lady Macbeth incited her husband to kill King Duncan by choosing her dominated strategy. In both cases, the frustrated and self-frustrated players, who start out at inferior outcomes, move initially to still worse outcomes -- and explode in anger -- to effect better outcomes. Conditions are given for the rationality of such moves.

Branstetter, Lee

PD July 1995. **TI** The Time Series Relationship Between Investment and Cash Flow in the Scientific Sector: A Panel Data Study Comparing French, Japanese, and the United States Firms. **AU** Branstetter, Lee; Crepon, Bruno; Hall, Bronwyn H.; Mairesse, Jacques. **AA** Branstetter: Harvard University and National Bureau of Economic. Crepon: INSEE. Hall: University of California, Berkeley and National Bureau of Economic Research. Mairesse: INSEE/CREST, EHESS and National Bureau of Economic Research. **SR** University of California, Berkeley, Working Paper in Economics: 95/240; IBER, 156 Barrows Hall, University of California, Berkeley, CA 94720. **PG** 46. **PR** $3.50 U.S. and Canada; $7.00 foreign. **JE** O32, O33. **KW** R&D. Investment. Cash Flow. Japan. France.

AB In a recent paper, Mairesse and Hall (1994) found evidence that investment in both research and development and in physical capital were more sensitive to sales growth in the United States than in France, suggesting that either demand shocks or liquidity constraints play a more important role in determining investment in the former country than in the latter. If true, this is an important finding that is relevant to the current debate in the economic policy literature on the role of financial institutions and corporate governance in the conduct of industrial policy (broadly defined). For example, some have argued that U.S. financial institutions force firms to have the kind of short-term investment horizons that might lead to excess sensitivity of investment to current income, contrasting the U.S. institutional framework unfavorably with those of Japan and parts of Western Europe. This paper makes two contributions to the debate: first, it adds evidence from a panel of Japanese firms to the results from the prior Mairesse and Hall study. Second, it investigates this finding in a more systematic way using the Vector Auto Regressive (VAR) methodology to test for causal relationship among our key variables, output, employment, R&D, investment, and profits. We perform this testing using three large panels of firms in the scientific (high technology) sectors, one for each country. Preliminary findings are that both investment and R&D are more highly sensitive to cash flow (and sales) in the United States than in France and Japan, although investment in Japan exhibits some sensitivity. Correspondingly, both investment and R&D predict both cash flow and sales positively in the United States, while the impact is somewhat more mixed in the other countries, with only R&D exhibiting uniformly positive predictive effects.

Brown, Donald J.

PD August 1995. **TI** Testable Restrictions on the Equilibrium Manifold. **AU** Brown, Donald J.; Matzkin, Rosa L. **AA** Brown: Yale University. Matzkin: Northwestern University. **SR** Yale University, Cowles Foundation Discussion Paper: 1109; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 12. **PR** no charge. **JE** D51, C62. **KW** General Equilibrium. Nonparametric Restrictions. Quantifier Elimination.

AB We present a finite system of polynomial inequalities in unobservable variables and market data that observations on market prices, individual incomes and aggregate endowments must satisfy to be consistent with the equilibrium behavior of some pure trade economy. Quantifier elimination is used to derive testable propositions on finite data sets for the pure trade model.

TI Hedging with Derivatives in Incomplete Markets. **AU** Aliprantis, C.D.; Brown, Donald J.; Werner, J.

Browne, Sid

PD July 1994. **TI** Optimal Investment Policies for a Firm With a Random Risk Process: Exponential Utility and Minimizing the Probability of Ruin. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/08; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 24. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** E21, G14, G11. **KW** Stochastic Control. Portfolio Theory. Diffusions. Brownian Motion. Incomplete Markets.

AB We consider a firm that is faced with an uncontrollable stochastic cash flow, or random risk process. There is one investment opportunity, a risky stock, and we study the optimal investment decision for such firms. There is a fundamental incompleteness in the market, in that the risk to the investor of going bankrupt can not be eliminated under any investment strategy, since the random risk process ensures that there is always a positive probability of ruin (bankruptcy). We therefore focus on obtaining investment strategies which are optimal in the sense of minimizing the risk of ruin. In particular, we solve for the strategy that maximizes the probability of achieving a given upper wealth level before hitting a given lower level. This policy also minimizes the probability of ruin. We prove that when there is no risk- free interest rate, this policy is equivalent to the policy that maximizes utility from terminal wealth, for a fixed terminal time, when the firm has an exponential utility function. This validates a long- standing conjecture about the relation between minimizing probability of ruin and exponential utility. When there is a positive risk-free interest rate, the conjecture is shown to be false. We also solve for the optimal policy for related objective of minimizing the expected discounted penalty paid upon ruin.

PD June 1995. **TI** The Return on Investment From Proportional Portfolio Strategies. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/09; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 28. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G11, C61, D81. **KW** Portfolio Theory. Diffusions. Stationary Distributions. Limit Theorems. Optimal Growth.

AB In this paper we study the rate of return on investment, defined as the net gain in wealth divided by the cumulative investment, for such investment strategies in continuous time. Among other results, we prove that the limiting distribution of this measure of return is a gamma distribution. This limit theorem allows for comparisons of different strategies. For example, the mean return on investment is maximized by the same strategy that maximizes logarithmic utility, which is also known to maximize the exponential rate at which wealth grows. The return from this policy turns out to have other stochastic dominance properties as well. We also study the return on the risky investment alone, defined as the present value of the gain from investment divided by the present value of the cumulative investment in the risky asset needed to achieve the gain. We show that for the log-optimal, or optimal growth policy, this return tends to an exponential distribution. We compare the return from the optimal growth policy with the return from a policy that invests a constant amount in the risky stock. We show that for the case of the single risky investment, the constant investor's expected return is twice that of the optimal growth policy. This difference can be considered the cost for insuring that the proportional investor does not go bankrupt.

Buchinsky, Moshe

PD March 1995. **TI** Quantile Regression Model With Unknown Censoring Point. **AU** Buchinsky, Moshe; Hahn, Jinyong. **AA** Buchinsky: Yale University and National Bureau of Economic Research. Hahn: University of Pennsylvania. **SR** Yale University, Cowles Foundation Discussion Paper: 1096; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 36. **PR** no charge. **JE** C13, C14, C24. **KW** Quantile Regression. Unknown Censoring.

AB The paper introduces an estimator for the linear censored quantile regression model when the censoring point is an unknown function of a set of regressors. The objective function minimized is convex and the minimization problem is a linear programming problem, for which there is a global minimum. The suggested procedure applies also to the special case of a fixed known censoring point. Under fairly weak conditions the estimator is shown to have the square root of n- convergence rate and is asymptotically normal. In the special case of a fixed censoring point it is asymptotically equivalent to the estimator suggested by Powell (1984, 1986a). A Monte Carlo study performed shows that the suggested estimator has very desirable small sample properties. It precisely corrects for the bias induced by censoring, even when there is a large amount of censoring, and for relatively small sample sizes. The estimator outperforms that suggested by Powell in cases where both apply.

PD August 1995. **TI** Evaluating the Probability of Failure of a Banking Firm. **AU** Buchinsky, Moshe; Yosha, Oved. **AA** Buchinsky: Yale University. Yosha: Tel Aviv University and Brown University. **SR** Yale University, Cowles Foundation Discussion Paper: 1108; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 52. **PR** no charge. **JE** C61, G21, G24. **KW** Banking Firm. Dynamic Optimization. Endogenous Probability of Default. Simulations.
AB We develop a dynamic model in which the probability of failure of an infinitely lived financial intermediary (bank) is determined endogenously as a function of observable state and policy variables. The bank takes into account the effect of the optimal policy (the interest on deposits, dividend payouts, risky investments) on the probability of failure, which in turn affects the bank's ability to extract deposits. With the aid of simulations we study the effect of variables such as bank size, the riskiness of the bank's investment opportunities, and reserve requirements on the bank's optimal policy and on its probability of failure. A major finding is that small banks choose policies that render them more risky than large banks. As the risks are correctly priced by depositors, rates offered by small banks incorporate substantial risk premia. Another interesting finding is that a tighter reserve requirement induces banks of all sizes to take fewer risks.

Buiter, Willem H.

PD April 1995. **TI** Generational Accounts, Aggregate Saving and Intergenerational Distribution. **AA** University of Cambridge and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5087; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 32. **PR** $5.00. **JE** D91, E21, H22, H41. **KW** Generational Accounts. Consumption. Saving. Life-Cycle Model.
AB Are generational accounts informative about the effect of the budget on the intergenerational distribution of resources and (when augmented with generation-specific propensities to consume out of life-time resources) on aggregate consumption and saving? This paper makes three points. First, the usefulness of generational accounts lives or dies with the strict life-cycle model of household consumption. Voluntary intergenerational gifts or liquidity constraints may therefore adversely affect or even destroy their informativeness. Second, even when the life-cycle model holds, generational accounts only measure the effect of the budget on the lifetime consumption of private goods and services. They ignore the intergenerational (re-)distribution associated with the government's provision of public goods and services. Third, generational accounting ignores the effect of the budget on before-tax and before-transfer quantities and prices, including before-tax and transfer distribution of life-time resources across generations and intertemporal relative prices. That is, it does not handle incidence or general equilibrium repercussions very well. Although useful, generational accounts should therefore carry the label "handle with great care.".

Burkinshaw, Owen

TI Economies with Many Commodities. **AU** Aliprantis, C.D.; Border, Kim C.; Burkinshaw, Owen.

Busch, Lutz-A

PD July 1995. **TI** Concessions and the Agenda in Bargaining. **AU** Busch, Lutz-A.; Horstmann, Ignatius J. **AA** Busch: University of Waterloo and University of Western Ontario. Horstmann: University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9511; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 22. **PR** $10.00. **JE** C72, C78. **KW** Game Theory. Bargaining. Agendas.
AB While bargaining problems tend to require allocations for many items or issues, most extant models of bargaining fail to incorporate decisions regarding the bargaining agenda. Instead, they impose a fixed order in which issues are to be resolved: most often simultaneously. We show, in a model of endogenous agenda choice, that agenda selection can act as a means to signal type when there is (one-sided) incomplete information. Compared to bargaining with no agenda choice, bargaining where there is a choice between an issue-by-issue versus a simultaneous- offers agenda produces less frequent pooling on offers by the informed and introduces a separating equilibrium in which the "strong" bargainer signals type by use of issue-by-issue bargaining. The issue-by-issue agenda allows the strong bargainer to make sufficiently large concessions on initial issues as to credibly signal type, thereby generating large concessions from his opponent on later issues. This need to make initial concessions when issue-by-issue bargaining is used also means that the order in which issues are bargained over can be relevant.

Calem, Paul

PD May 1995. **TI** Branch Banking and the Geography of Bank Pricing. **AU** Calem, Paul; Nakamura, Leonard I. **AA** Calem: Board of Governors of the Federal Reserve System. Nakamura: Federal Reserve Bank of Philadelphia. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/25; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 28. **PR** no charge. **JE** G21, D41, D43. **KW** Bank Branching. Banking. Market Delineation.
AB We show that bank branching tends to mitigate localized market power by broadening the geographic scope of competition among banks. Banking services at peripheral locations will be priced more competitively when those locales are served by branch networks. We develop a theoretical model in support of this view and also offer empirical evidence.

PD February 1996. **TI** The Impact of Capital-Based Regulation on Bank Risk-Taking: A Dynamic Model. **AU** Calem, Paul; Rob, Rafael. **AA** Calem: Board of Governors of the Federal Reserve System. Rob: University of Pennsylvania. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/12; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board,

Washington, DC 20551. **PG** 36. **PR** no charge. **JE** G21, G28. **KW** Capital-Asset Ratio. Bank Regulation. Risk.
AB In recent years, new and more stringent federal regulations governing bank capital have been adopted, including insurance premia linked to banks' capital-to-asset ratios and capital requirements linked to asset portfolio risk. In this paper, we model the dynamic portfolio choice problem facing banks, calibrate the model using empirical data from the banking industry for 1984-1993, and assess quantitatively the impact of the new regulations. The model suggests that two aspects of the new regulatory environment may have unintended effects: higher capital requirements may lead to increased portfolio risk, and capital-based premia do not deter risk-taking by well- capitalized banks and tend to promote risk-taking among undercapitalized banks. On the other hand, risk-based capital standards may have favorable effects provided the requirements are stringent enough.

Cameron, Lisa

PD July 1995. **TI** Raising the Stakes in the Ultimatum Game: Experimental Evidence From Indonesia. **AA** Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 345; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 17. **PR** $1.50. **JE** C91, C72. **KW** Ultimatum Game. Large Stakes. Experiments.
AB Implementing the ultimatum game experimentally in Indonesia makes it possible to raise the stakes to three times the monthly expenditure of the average participant. Contrary to predictions in the literature, the results show no evidence of approaching the sub-game perfect, selfish outcomes. Responders seem to be just as willing to reject a given percentage offer at high stakes as at low stakes, and Proposers make slightly less selfish offers as the stakes increase.

Campa, Jose Manuel

PD July 1995. **TI** Arbitrage-Based Tests of Target Zone Credibility: Evidence From ERM Cross-Rate Options. **AU** Campa, Jose Manuel; Chang, P.H. Kevin. **AA** Campa: New York University and Columbia University. Chang: University of Southern California. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/25; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 23. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** F31, F33, F36. **KW** Germany. France. Exchange Rates. ERM.
AB This paper introduces two arbitrage-based tests of target zone credibility using a new data source, ERM cross-rate options. We use daily option prices from September 1991 to August 1994 to assess the credibility of the pound-mark and mark-lira target zones that collapsed September 1992, and the ongoing mark-French franc target zone. These tests are based on restrictions that must apply to all option prices within a credible target zone. Since they rely only on arbitrage, our tests have the advantages of being free from specification error and estimation error. Our approach enables us to identify a minimum "intensity of realignment," an expression indicating the probability- weighted average realignment size. We also show that current option prices are consistent with considerably narrower mark-franc bands than the current 15%.

PD November 1995. **TI** The Forecasting Ability of Correlations Implied in Foreign Exchange Options. **AU** Campa, Jose Manuel; Chang, P.H. Kevin. **AA** Campa: New York University and Columbia University. Chang: University of Southern California. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/26; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 19. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** F31, G13, F47. **KW** Japan. Germany. France. Exchange Rates. Options.
AB This paper evaluates the forecasting accuracy of correlation derived from implied volatilities in dollar- mark, dollar-yen, and mark-yen options from January 1989 to May 1995. As a forecast of realized correlation between the dollar-mark and dollar-yen, implied correlation is compared against three alternative forecasts based on time series data: historical correlation is compared against three alternative forecasts based on time series data: historical correlation, RiskMetrics' exponentially weighted moving average correlation, and correlation estimated using a bivariate GARCH (1,1) model. At the one- month and three-month forecast horizons, we find that implied correlation outperforms, often significantly, these alternative forecasts. In combinations, implied correlation always incrementally improves the performance of other forecasts, but not the converse; in certain cases historically based forecasts contribute no incremental information to implied forecasts. The superiority of the implied correlation forecast holds even when forecast errors are weighted by realized variances, reflecting the correlation's contribution to the dollar variance of a multicurrency portfolio.

Campbell, John Y.

PD May 1996. **TI** A Scorecard for Indexed Government Debt. **AU** Campbell, John Y.; Shiller, Robert J. **AA** Campbell: Harvard University. Shiller: Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1125; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 63. **PR** no charge. **JE** E44, C43. **KW** Indexed Bonds. Indexation. Inflation. Cost of Living. Risk Premium.
AB Within the last five years, Canada, Sweden and New Zealand have joined the ranks of the United Kingdom and other countries in issuing government bonds that are indexed to inflation. Some observers of the experience in these countries have argued that the United States should follow suit . This paper provides an overview of the issues surrounding debt indexation, and it tries to answer three empirical questions about indexed debt. First, how different would the returns on indexed bonds be from the returns on existing US debt instruments? Second, how would indexed bonds affect the government's average financing cost? Third, how might the Federal Reserve be able to use the information contained in the prices of indexed bonds to help formulate monetary policy? The paper concludes with a more speculative discussion of the possible consequences of increased use of indexed debt contracts by the private sector.

Campos, Ed

PD December 1994. **TI** Information Aggregation and

Economic Development: The Case of East Asia. **AU** Campos, Ed; Root, Hilton L. **AA** Campos: The World Bank. Root: Stanford University. **SR** University of Western Ontario, Papers in Political Economy: 50; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 53. **PR** no charge. **JE** O11, O12, O53. **KW** Information. Development. Japan. Korea. Malaysia.

AB East Asia's successful leaders recognized that uncertainty and the costs of information were at the heart of the individual and social obstacles to development. Creating political institutions that inspired spontaneous market led growth while at the same time coordinating the aggregation of information needed for long term investment as a central contribution of East Asian leadership to the science of development management. Incentives for firms and individuals to use local information effectively were essential and suggest that leadership in East Asia saw the importance of information more clearly than their counterparts among leaders of the world's poor countries. for example, leadership in Japan, Korea, Malaysia, Thailand, Singapore and Hong Kong, created consultative committees with real input into the policy making process. The councils provide: 1) assurances to important sectors that policies governing them will not be capriciously altered; 2) a venue for information about the production and implementation of policy that is available to all players, thus improved transparency; and 3) procedural guidances and precedents for the exchange of views between leadership and the private sector. Policies, in turn, are more credible because it can be assumed they are backed by the relevant sectors and thus can be enforced with limited coercion.

Card, David

PD February 1995. **TI** The Wage Curve: A Review. **AA** Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 343; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 26. **PR** $1.50. **JE** J31, J41, R12. **KW** Wage Curve. Local Labor Markets. Wage Determination.

AB In The Wage Curve, David G. Blanchflower and Andrew J. Oswald argue that there is a fundamental negative relation between wages and the unemployment rate in a worker's local labor market. Blanchflower and Oswald use large-scale micro data sets to estimate this relation for the United States, Britain, and 10 other countries. I review their empirical methods and findings, and provide some further evidence on the nature of the wage curve relationship in the United States. I conclude that there is a strong statistical correlation between rates of pay and local unemployment, although the interpretation of this correlation remains unresolved.

PD November 1995. **TI** Unemployment in Canada and the United States: A Further Analysis. **AU** Card, David; Riddell, W. Craig. **AA** Card: Princeton University. Riddell: University of British Columbia and Canadian Institute for Advanced Research. **SR** Princeton University, Industrial Relations Section, Working Paper: 352; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 23. **PR** $1.50. **JE** J64. **KW** Unemployment. United States. Canada. Unemployment Insurance.

AB During the 1980's a substantial gap emerged between unemployment rates in Canada and the United States. In this paper, we use microdata from labor force surveys at the beginning and end of the decade to examine the sources of the emergent gap. As in earlier work, we find that most of the relative rise in unemployment in Canada is attributable to an increase in the relative "labor force attachment" of Canadians, rather than to any shortfall in relative employment. Indeed, relative employment rates increased in Canada over the 1980's for younger workers and for adult women. The relative rise in labor force attachment of Canadians is manifested by a sharp increase in the propensity of non- workers to report themselves as unemployed (i.e. looking for work) rather than out-of-the-labor force. This change is especially pronounced for individuals who work just enough to qualify for unemployment insurance (UI) in Canada. Moreover, two-thirds of the relative increase in weeks of unemployment among non-workers is associated with the divergent trends in UI recipiency in the two countries. Both findings point to the availability of UI benefits as an important determinant of the labor force attachment of nonworkers.

PD December 1995. **TI** Changes in the Relative Structure of Wages and Employment: A Comparison of the United States, Canada, and France. **AU** Card, David; Kramarz, Francis; Lemieux, Thomas. **AA** Card: Princeton University. Kramarz: INSEE. Lemieux: University of Montreal. **SR** Princeton University, Industrial Relations Section, Working Paper: 355; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 35. **PR** $2.00. **JE** J31, J64. **KW** Flexibility. International Comparisons. Wage Structure.

AB According to standard economic models, adverse demand shocks will lead to bigger employment losses if institutional factors like minimum wages and trade unions prevent real wages from falling. Some economists have argued that this insight explains the contrast between the United States, where real wages fell over the 1980's and aggregate employment expanded vigorously, and Europe, where real wages held steady and employment was stagnant. We test the hypothesis by comparing recent changes in wages and employment rates for different age and education groups in the United States, Canada, and France. We argue that the same forces that led to falling real wages for less-skilled workers in the U.S. also affected Canada and France. Consistent with the view that labor market institutions in Canada and France reduce wage flexibility, we find that the relative wages of less-skilled workers fell more slowly in Canada than the U.S. during the 1980's, and did not fall at all in France. Contrary to expectations, however, we find little evidence that wage inflexibilities generated divergent patterns of relative employment growth across the three countries.

PD December 1995. **TI** Does Inflation "Grease the Wheels of the Labor Market?" **AU** Card, David; Hyslop, Dean. **AA** Card: Princeton University. Hyslop: University of California, Los Angeles. **SR** Princeton University, Industrial Relations Section, Working Paper: 356; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 32. **PR** $2.00. **JE** J31, E31. **KW** Wage Rigidity. Inflation. Flexibility.

AB One of the basic tenets of Keynesian economics is that labor market institutions cause downward nominal wage rigidity. We attempt to evaluate the evidence that relative wage adjustments occur more quickly in higher-inflation environments. Using matched individual wage data from consecutive years, we find that about 6-10 percent of workers experience wage rigidity in a 10-percent inflation environment, while this proportion rises to over 15 percent when inflation is less than 5 percent. By invoking a simple symmetry assumption, we generate counterfactual distributions of wage changes from the distributions of actual wage changes. Using these counterfactual distributions, we estimate that, over the sample period, a 1 percent increase in the inflation rate reduces the fraction of workers affected by downward nominal rigidities by about 0.5 percent, and slows the rate of real wage growth by about 0.06 percent. Using state-level data, the analysis of the effects of nominal rigidities is less conclusive. We find only a weak statistical relationship between the rate of inflation and the pace of relative wage adjustments across local labor markets.

PD January 1996. **TI** Labor Market Effects of School Quality: Theory and Evidence. **AU** Card, David; Krueger, Alan B. **AA** Princeton University and National Bureau of Economic Research. **SR** Princeton University, Industrial Relations Section, Working Paper: 357; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 47. **PR** $2.00. **JE** I21, H52, J24, J31. **KW** School Quality. Earnings. Schooling Attainment.
AB This paper presents an overview and interpretation of the literature relating school quality to students' subsequent labor market success. We begin with a simple theoretical model that describes the determination of schooling and earnings with varying school quality. A key insight of the model is that changes in school quality may affect the characteristics of individuals who choose each level of schooling, imparting a potential selection bias to comparisons of earnings conditional on education. We then summarize the literature that relates school resources to students' earnings and educational attainment. A variety of evidence suggests that students who were educated in schools with more resources tend to earn more and have higher schooling. We also discuss two important issues in the literature: the tradeoffs involved in using school-level versus more aggregated (district or state-level) quality measures; and the evidence on school quality effects for African Americans educated in the segregated school systems of the South.

PD February 1996. **TI** Do Financial Incentives Encourage Welfare Recipients to Work? Early Findings From the Canadian Self Sufficiency Project. **AU** Card, David; Robins, Philip K. **AA** Card: Princeton University. Robins: University of Miami. **SR** Princeton University, Industrial Relations Section, Working Paper: 359; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 22. **PR** $2.00. **JE** I38, J22. **KW** Welfare. Social Experiment. Labor Supply.
AB This paper presents results from an experimental evaluation of an earnings supplement program offered to long-term welfare recipients in two Canadian provinces. The program -- known as the Self-Sufficiency Project -- provides a supplement equal to one-half of the difference between an earnings target ($2,500 or $3083 per month, Canadian dollars, depending on the province) and the individual's actual earnings. The supplement is similar to a negative income tax with two important differences: (1) eligibility is limited to long-term welfare recipients who find a full-time job (30 hours per week or more); and (2) the supplement payment is based on individual earnings rather than family income. The evaluation is based on a randomized design that will follow 6,000 individuals for five years. Early findings for a first cohort of 2,000 individuals observed over 18 months of program eligibility suggest that the financial incentives of the Self-Sufficiency Program significantly increase labor market attachment and significantly reduce welfare participation.

Carpenter, Jennifer N.

PD November 1995. **TI** The Optimal Dynamic Investment Policy for a Fund Manager Compensated With an Incentive Fee. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/7; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 13. **PR** not available. **JE** G23, G11, L22, D92. **KW** Mutual Funds. Incentives. Institutions.
AB We use martingale methods to solve the investment problem of a risk averse fund manager who charges an incentive fee which he cannot hedge in his personal account. An incentive fee is a share in the positive part of the returns on the client's portfolio net of some benchmark return. The optimal policy is a long-shot; there is always some chance of bankrupting the client, but if the terminal fund value is nonzero, it is in the money by some strictly positive amount. We provide explicit expressions for the optimal trading strategy with either the riskless asset or the market portfolio as benchmark and with either constant relative or absolute risk aversion. Rather than trying to maximize volatility, as earlier literature suggests, the manager dynamically adjusts volatility as the assets move in or out of the money. As the manager accumulates profits, he moderates portfolio risk. For example, if the manager has constant relative risk aversion, volatility converges to the Merton constant as fund value grows large. On the other hand, as bankruptcy approaches, portfolio volatility goes to infinity.

PD March 1996. **TI** The Valuation and Exercise of Executive Stock Options. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/8; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 24. **PR** not available. **JE** G32, G13, J33. **KW** Options. Compensation.
AB This paper evaluates the performance of two option models in predicting the exercise decisions of managers who hold nontransferable executive stock options. Using data on option exercises from 40 firms from 1979 to 1994, I compare the predictions of an elaborate model based on utility maximization and those from a naive model that combines standard option exercise theory with an exogenous departure rate. I show that the naive model provides just as good a description of actual exercise patterns as the utility- based model. The naive model could therefore be better for valuing executive stock options. With the increasing use of stock option plans at U.S. firms, this research is important because it improves our understanding of the cost to shareholders of option compensation.

Carr, Jack

PD December 1994. **TI** The Economics of Canadian Deposit Insurance. **AU** Carr, Jack; Mathewson, Frank; Quigley, Neil. **AA** Carr and Mathewson: University of Toronto. Quigley: University of Western Ontario and

University of Toronto. **SR** University of Western Ontario, Department of Economics, Research Report: 9502; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 26. **PR** $10.00. **JE** D72, G21. **KW** Deposit Insurance. Canada. Political Economy.

AB The introduction of deposit insurance in Canada in 1967 is commonly explained as an efficiency-enhancing response to macroeconomic shocks and contagious runs by imperfectly informed depositors, as well as a means of promoting domestic institutions that would compete with the large chartered banks. We show that since 1967 insolvencies among Canadian banks, trust and mortgage loan companies have increased, and the number of domestic competitors for the large banks has been reduced. A model in the spirit of Akerlof and Romer (1993) links these observations to the incentives provided by deposit insurance. We argue that the Canadian scheme was primarily designed to force the incumbent banks to subsidize trust and mortgage loan companies and the entry of regionally based chartered banks. As such, the scheme was politically efficient in the sense of Becker (1983) but has reduced economic efficiency.

Carroll, Christopher D.

PD February 1995. **TI** On the Concavity of the Consumption Function. **AU** Carroll, Christopher D.; Kimball, Miles S. **AA** Carroll: Board of Governors of the Federal Reserve System. Kimball: University of Michigan. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/10; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 11. **PR** no charge. **JE** C61, D91, E21. **KW** Consumption Function. Policy Rule. Uncertainty. Certainty Equivalence. Precautionary Saving.

AB Zeldes (1989), Carroll (1992; 1993), and others have shown that optimal consumption behavior for consumers facing income uncertainty can be remarkably different from the certainty-equivalent case. Carroll (1992;1993) observes that many of the differences can be attributed to the concavity of the consumption function under uncertainty, but he does not describe the conditions under which the consumption function will be concave. We show that if labor income is stochastic, the consumption function will be concave for many commonly used utility functions, and if both labor income and capital income are stochastic, the consumption function is concave for an even broader group of utility functions.

PD September 1995. **TI** Saving and Growth With Habit Formation. **AU** Carroll, Christopher D.; Overland, Jody; Weil, David N. **AA** Carroll: Board of Governors of the Federal Reserve System and John Hopkins University. Overland and Weil: Brown University. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/42; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 23. **PR** no charge. **JE** D91, E21, O41. **KW** Habit Formation. Relative Consumption. Endogenous Growth.

AB Standard growth models take the form of a representative consumer maximizing an intertemporally separable utility function. We explore the implications of one kind of nonseparability by allowing utility to depend on a comparison of consumption to a "habit stock" determined by past consumption. Our model is consistent with some empirical findings which are problematic for standard models. For example, Carroll and Weil (1994) find that aggregate saving rates increase after increases in the aggregate growth rate, even though growth rates are positively serially correlated; the standard model would predict a decline in saving as consumers spent part of their anticipated higher future income.

Case, Karl E.

PD April 1995. **TI** Mortgage Default Risk and Real Estate Prices: The Use of Index-Based Futures and Options in Real Estate. **AU** Case, Karl E.; Shiller, Robert J.; Weiss, Allan N. **AA** Case: Wellesley College. Shiller: Yale University. Weiss: Case Shiller Weiss, Inc. **SR** Yale University, Cowles Foundation Discussion Paper: 1098; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 33. **PR** no charge. **JE** G21, G12, G13. **KW** Foreclosures. Houses. Mortgages. Hedging. Homes. Lenders.

AB Evidence is shown, using U.S. foreclosure data by state 1975-93, that periods of high default rates on home mortgages strongly tend to follow real estate price declines or interruptions in real estate price increase. The relation between price decline and foreclosure rates is modelled using a distributed lag. Using this model, holders of residential mortgage portfolios could hedge some of the risk of default by taking positions in futures or options markets for residential real estate prices, were such markets to be established.

PD April 1995. **TI** Mortgage Default Risk and Real Estate Prices: The Use of Index-Based Futures and Options in Real Estate. **AU** Case, Karl E.; Shiller, Robert J.; Weiss, Allan N. **AA** Case: Wellesley College. Shiller: Yale University and National Bureau of Economic Research. Weiss: Case Shiller Weiss, Inc. **SR** National Bureau of Economic Research, Working Paper: 5078; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 20. **PR** $5.00. **JE** G11, G12, G13, G21. **KW** Mortgages. Foreclosure. Futures. Options. Risk Hedging.

AB Evidence is shown, using US foreclosure data by state from 1975-93, that periods of high default rates on home mortgages strongly tend to follow real estate price declines or interruptions in real estate price increase. The relation between price decline and foreclosure rates is modeled using a distributed lag. Using this model, holders of residential mortgage portfolios could hedge some of the risk of default by taking positions in futures or options markets for residential real estate prices, were such markets to be established.

Cass, David

PD March 1994. **TI** Pareto Improving Financial Innovation in Incomplete Markets. **AU** Cass, David; Citanna, Alessandro. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/07; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 29. **PR** no charge. **JE** D61, C62, D52. **KW** General Equilibrium. Incomplete Markets.

AB In this paper we develop a differential technique for investigating the welfare effects of financial innovation in incomplete markets. Utilizing this technique, and after parameterizing the standard competitive, pure-exchange economy by both endowments and utility functions, we establish the following generic property: Let S be the number of states, I be the number of assets and H be the number of households, and consider a particular financial equilibrium. Then, provided that the degree of market incompleteness is sufficiently larger than the extent of household heterogeneity, there is an open set of single assets whose introduction can make every household better off (and, symmetrically, an open set of single assets whose introduction can make them all worse off). We also devise a very simple nonparametric procedure for reducing extensive household heterogeneity to manageable size, a procedure which not only makes our restrictions on market incompleteness more palatable, but could also prove to be quite useful in other applications involving smooth analysis.

Celentani, Marco

PD April 1995. **TI** Maintaining a Reputation Against a Long-Lived Opponent. **AU** Celentani, Marco; Fudenberg, Drew; Levine, K. David; Pessendorfer, Wolfgang. **AA** Celentani: University Carlos III de Madrid. Fudenberg: Harvard University. Levine: University of California, Los Angeles. Pesendorfer: Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1075R; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 19. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, C73, D84, D91. **KW** Repeated Games. Commitment. Reputation. Patience.

AB We analyze reputation in a game between a patient player 1 and a non-myopic but less patient opponent, player 2. We assume that Player 1's type is private information and that players do not directly observe each other's action but rather see an imperfect signal of it. We show that in any Nash equilibrium of the game player 1 will get almost the largest payoff consistent with player 2 choosing a best response in a finite truncation of the game. If the discount factor of player 2 is sufficiently large, then player 1 will get approximately the maximum payoff consistent with player 2 getting at least his pure strategy minmax payoff.

PD May 1995. **TI** Reputation in Dynamic Games. **AU** Celentani, Marco; Pesendorfer, Wolfgang. **AA** Celentani: Universidad Carlos III de Madrid. Pesendorfer: Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1009R; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 26. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, C73. **KW** Dynamic Games. Reputation. Time Consistency. Durable Goods. Monopoly.

AB We analyze reputation in a game between a large player and a continuum of long lived small players in which state variables affect players' payoffs. The large player's type is private information. We give conditions under which in every Nash equilibrium a very patient large player will get almost the largest payoff consistent with the small players choosing a best response in a large finite truncation of the game. While our results apply to the time inconsistency problem of optimal government policy, we show that for the durable goods monopoly reputation may fail to improve the monopolist's payoff.

Chang, P.H. Kevin

TI Arbitrage-Based Tests of Target Zone Credibility: Evidence From ERM Cross-Rate Options. **AU** Campa, Jose Manuel; Chang, P.H. Kevin.

TI The Forecasting Ability of Correlations Implied in Foreign Exchange Options. **AU** Campa, Jose Manuel; Chang, P.H. Kevin.

Chay, Kenneth Y.

PD August 1995. **TI** The Impact of Federal Civil Rights Policy on Black Economic Progress: Evidence From the Equal Employment Opportunity Act of 1972. **AA** Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 346; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 29. **PR** $1.50. **JE** J71, J78, K31. **KW** Discrimination. Civil Rights. Policy. Natural Experiment.

AB The Equal Employment Opportunity Act (EEOA) of 1972 extended civil rights coverage to employers with 15-24 employees, while leaving unaffected the civil rights protection for employees of larger firms. In conjunction with already existing state fair employment practice (FEP) laws, the EEOA provides a "natural experiment" in which the treatment and control groups are defined by differences across industries in the fraction of workers employed in the newly-covered establishments and across states in the scope of the FEP laws. Using data from the Current Population Surveys, the treatment and control group methodology is used to evaluate the impact of civil rights policy. This analysis shows that there were large shifts in the employment and pay practices of the industries most affected by the amendment. The timing of the relative gains and their concentration by industry and region provide evidence that the EEOA had a positive impact on the labor market status of African-Americans.

Chichilnisky, Graciela

PD November 1994. **TI** Social Choice With Infinite Populations: Construction of a Rule and Impossibility Results. **AU** Chichilnisky, Graciela; Heal, Geoffrey M. **AA** Chichilnisky: Columbia University. Heal: University of Sussex and Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/19; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 15. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** D71, D62. **KW** Chichilnisky Rules. Social Choice. Pareto Efficiency.

AB We provide a simple construction of social choice rules for economies with infinite populations. The rules are continuous. Pareto and non-dictatorial; they are constructed as limits of individual preferences when the limit exists, and otherwise as adequate generalizations. This contrasts with the impossibility results of Arrow (1951) and Chichilnisky (1980), which are valid on economies with finitely many individuals. Our social choice rules are, however, limits of dictatorial rules.

PD February 1995. **TI** The Geometry of Implementation: A Necessary and Sufficient Condition for Straightforward Games. **AU** Chichilnisky, Graciela; Heal, Geoffrey M. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/22; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 11. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** C72, C71. **KW** Social Choice. Game Theory. Preference Aggregation.

AB We characterize games which induce truthful revelation of the players' preferences, either as dominant strategies (straightforward games) or in Nash equilibria. Strategies are statements of individual preferences on the N-dimensional Euclidean space. Outcomes are social preferences. Preferences over outcomes are defined by a distance from a bliss point. We prove that g is straightforward if and only if g is locally constant or dictatorial (LCD), i.e., coordinate-wise either a constant or a projection map locally for almost all strategy profiles. We also establish that: (i) If a game is straightforward and respects unanimity, then the map g must be continuous, (ii) Straightforwardness is a nowhere dense property, (iii) There exist differentiable straightforward games which are non-dictatorial. (iv) If a social choice rule is Nash implementable, then it is straightforward and locally constant or dictatorial.

Chidambaran, N.K

PD July 1995. **TI** Performance of the U.S. Property-Casualty Insurance Company. **AU** Chidambaran, N.K.; Pugel, Thomas A.; Saunders, Anthony. **AA** Chidambaran: Tulane University. Pugel and Saunders: New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/17; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 18. **PR** not available. **JE** G22, D81, D82. **KW** Insurance. Property. Casualty. Loss Ratio.

AB This paper presents an empirical analysis of the economic performance of the U.S. property-casualty insurance industry, using estimations across 18 lines of insurance for the years 1984-1993. It adopts an industrial organization approach, focusing on loss ratios and combined ratios as measures of pricing performance. The line's seller concentration ratio and the share of direct writers in the line are both found to be significant determinants of performance. The results are consistent with shortcomings in competition in some insurance lines.

PD September 1995. **TI** Streamlining Monte-Carlo Simulation With the Quasi-Analytic Method: An Analysis of a Path- Dependent Option Strategy. **AU** Chidambaran, N.K.; Figlewski, Stephen. **AA** Chidambaran: Tulane University. Figlewski: New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/28; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 19. **PR** not available. **JE** G14, G12, D84, G13, C15. **KW** Options. Monte Carlo. Simulations.

AB Trading strategies and contingent claims with path-dependent returns are difficult to model analytically. Monte Carlo simulation, the standard solution technique, is computationally expensive and provides a solution only for the specific parameter values used in the simulation. We present an alternate "quasi-analytic" procedure that combines the power of the simulation approach with the computational efficiency of an analytical solution. Our method uses simulation results to construct an analytic function that maps the input parameters to the returns distribution function. This analytic function can then be used to directly estimate the returns distribution for other parameter values without further simulation. We illustrate the approach by analyzing the performance of a path-dependent long term protective put strategy that requires rolling over a series of short term options. The returns to the strategy depend on the investor's choice of put strike and rollover policy. We use our method to examine a risk averse investor's optimal trading strategy, a problem that is exceedingly time-consuming using standard Monte Carlo Simulation. For example, the simulation approach takes more than 45 minutes to solve for just one particular volatility scenario. Our method provides the answer in a matter of seconds.

Chou, Ray Y.

TI Determinants of U.S. Commercial Bank Performance: Regulatory and Econometric Issues. **AU** Swamy, P.A.V.B.; Barth, James R.; Chou, Ray Y.; Jahera, John S. Jr.

Christiano, Lawrence J.

TI Asset Pricing Lessons for Modeling Business Cycles. **AU** Boldrin, Michele; Christiano, Lawrence J.; Fisher, Jonas D.M.

PD October 1995. **TI** Tobin's q and Asset Returns: Implications for Business Cycle Analysis. **AU** Christiano, Lawrence J.; Fisher, Jonas D.M. **AA** Christiano: Federal Reserve Bank of Minneapolis, Northwestern University, National Bureau of Economic Research and Federal Reserve Bank of Chicago. Fisher: University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9515; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 37. **PR** $10.00. **JE** E22, E32, D51. **KW** Inventory. Tobin's q. Business Cycles.

AB The marginal cost of plant capacity, measured by the price of equity, is significantly procyclical. Yet, the price of a major intermediate input into expanding plant capacity, investment goods, is countercyclical. The ratio of these prices is Tobin's q. Following convention, we interpret the fact that Tobin's q differs from unity at all, as reflecting that there are diminishing returns to expanding plant capacity by installing investment goods ("adjustment costs"). However, the phenomenon that interests us is not just that Tobin's q differs from unity, but also that its numerator and denominator have such different cyclical properties. We interpret the sign switch in their covariation with output as reflecting the interaction of our adjustment cost specification with the operation of two shocks: one which affects the demand for equity and another which shifts the technology for producing investment goods. The adjustment costs cause the two prices to respond differently to these two shocks, and this is why it is possible to choose the shock variances to reproduce the sign switch. We turn to the business cycle implications of our model. The model does as well as standard models with respect to conventional business cycle measures of volatility and comovement with output, and on one dimension the model significantly dominates standard models. The factors that help it account for prices and rates of return on assets also help it account for the fact that employment across a broad range of sectors moves together over the cycle.

Citanna, Alessandro

PD March 1994. **TI** Constrained Suboptimality in Incomplete Markets: A General Approach and Two Applications. **AU** Citanna, Alessandro; Kajii, Atsushi; Villanacci, Antonio. **AA** Citanna and Kajii: University of Pennsylvania. Villanacci: Universita degli Studi di Firenze. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/06; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 32. **PR** no charge. **JE** D52, C62. **KW** General Equilibrium. Incomplete Markets. Assets.

AB In this paper we re-examine the generic constrained suboptimality of equilibrium allocations with incomplete numeraire asset markets. We provide a general framework that encompasses many kinds of intervention in partially controlled market economies and which is capable of solving some issues left open by the previous literature. In particular, we get constrained suboptimality even without an upper bound on the number of households. Moreover, we consider the case where asset markets are left open and the planner can make a lump-sum transfer in a very limited number of goods. We show that such a minimal (in a Tinbergen-like sense), perfectly anticipated wealth redistribution policy, yet consistent with the assumed incomplete financial structure, is typically effective.

TI Pareto Improving Financial Innovation in Incomplete Markets. **AU** Cass, David; Citanna, Alessandro.

PD December 1994. **TI** Financial Innovation and Expectations. Endogenous Incompleteness and Real Indeterminacy. **AU** Citanna, Alessandro; Villanacci, Antonio. **AA** Citanna: University of Pennsylvania. Villanacci: Universita degli Studi di Firenze. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/01; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 19. **PR** no charge. **JE** O52, G14, G12, C62. **KW** Incomplete Markets. Financial Innovation. Equilibrium.

AB This paper analyzes an incomplete financial markets model with price-taking utility-maximizing financial innovators and no-short sales restrictions. It is shown that, given the indeterminacy of the no arbitrage price conjecture of innovators, financial markets can remain incomplete in equilibrium. As a consequence, real indeterminacy of degree at least equal to (S/2)(S-(S/2)) results, where S is the number of spots in the future. The dimension of innovators' beliefs giving rise to I newly introduced financial assets is I(S-I), with an equal degree of real indeterminacy.

PD November 1996. **TI** Underemployment of Resources and Self-Confirming Beliefs. **AU** Citanna, Alessandro; Cres, Herve; Villanacci, Antonio. **AA** Citanna: McGill University. Cres: University of Pennsylvania. Villanacci: Universita degli Studi. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/20; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 29. **PR** no charge. **JE** D51, C62, E24, D84. **KW** General Equilibrium. Unemployment. Expectations.

AB In a model of exchange with price-taking individuals, the existence of nontrivial underemployment equilibria with Walrasian prices is proved for a generic set of economies. The likelihood of the occurrence of these equilibria is higher the farther the economy is from a Pareto optimal initial allocation, and the larger the economy is, when considering log-linear preferences. Moreover, these equilibria can be interpreted as the result of some self-fulfilling beliefs. We show how markets are vulnerable to psychological effects translating aggregate signals into bad expectations, which are nonetheless rational in the sense of being confirmed in equilibrium. The possibility of distortions in market allocations is essentially derived from: 1) myopic individual behavior preventing sufficient experimentation; 2) the timing of "production" decisions; 3) the absence of certain financial contracts; 4) the fear of government restrictions on supply.

Coate, Stephen

PD October 1994. **TI** On the Form of Transfers to Special Interests. **AU** Coate, Stephen; Morris, Stephen. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/21; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 30. **PR** no charge. **JE** D71, D72, D82, H21. **KW** Political Economy. Redistribution. Transfers. Public Choice.

AB An important question in political economy concerns the form of transfers to special interests. One view, associated with the Chicago school of political economy, is that political competition will lead to such transfers being made efficiently. An alternative view, associated with the Virginia school, is that lack of information about the effects of policies on the part of voters will lead politicians to favor inefficient "sneaky" methods of redistribution over more transparent efficient methods. This paper analyzes the form of transfers in a model of political competition in which politicians have financial incentives to make transfers to a special interest and voters are imperfectly informed. We show that when there is asymmetric information about both the effects of policy and the predispositions of politicians, inefficient methods of redistribution may be employed. In our model, asymmetric information about policies alone is not sufficient to generate this result.

TI An Economic Model of Representative Democracy. **AU** Besley, Timothy; Coate, Stephen.

TI Efficient Policy Choice in a Representative Democracy: A Dynamic Analysis. **AU** Besley, Timothy; Coate, Stephen.

PD November 1995. **TI** Policy Persistence. **AU** Coate, Stephen; Morris, Stephen. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/19; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 32. **PR** no charge. **JE** D78, D72. **KW** Political Economy. Public Choice. Persistence.

AB Policy persistence refers to the tendency of the political process to maintain policies once they have been introduced. This paper develops a theory of policy persistence based on the idea that policies create incentives for beneficiaries to take actions which increase their willingness to pay for these policies in the future. The theory is used to show that policy persistence may lead to "political failure", in the sense that policy sequences arising in political equilibrium can be Pareto dominated. In addition, the theory is used to provide an explanation as to why "policy conditionality" may have permanent effects.

Cohen, Darrel

PD July 1995. **TI** Are U.S. Investment and Capital Stocks at Optimal Levels? **AU** Cohen, Darrel; Hassett, Kevin A.; Kennedy, James E. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/32; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 17. **PR** no charge. **JE** E22, O41. **KW** Golden Rule. Capital Stock. Net Investment. Growth.

AB In this paper, we use criteria developed in the literature on economic growth to compare the levels of U.S. net investment and the U.S. capital stock (relative to GDP) to their golden rule levels. Specific comparisons are made for total fixed capital, business fixed capital, producers' durable equipment, nonresidential structures, and residential structures for the period since 1955. We conclude that the stocks and investment flows of producers' durable equipment, nonresidential structures, business fixed capital, and total fixed capital generally have been below their golden rule levels; but, for some periods, the investment flows have been near, and even exceeded, the golden rule values. By contrast, residential stocks and investment spending generally have exceeded their optimal levels.

Cole, Harold L.

PD August 1995. **TI** Incorporating Concern for Relative Wealth Into Economic Models. **AU** Cole, Harold L.; Mailath, George J.; Postlewaite, Andrew. **AA** Cole: Federal Reserve Bank of Minneapolis. Mailath and Postlewaite: University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/14; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 18. **PR** no charge. **JE** D11, D63, E25. **KW** Inequality. Income Distribution. Wealth.

AB We develop a simple model that captures a concern for relative standing. The concern for relative standing is instrumental in the sense that individuals do not get utility directly from their relative standing, but rather, the concern is induced because relative standing affects consumption of standard commodities. We investigate the consequences of a concern for relative wealth in models in which individuals are making labor-leisure choice decisions. Among the results, we show how individuals' decisions are affected by the aggregate income distribution and how the concern for relative wealth can generate behavior that can be interpreted as conspicuous consumption when wealth is not directly observable.

Cole, Rebel A.

PD May 1995. **TI** The Role of Principal-Agent Conflicts in the 1980's Thrift Crisis. **AU** Cole, Rebel A.; Eisenbeis, Robert A. **AA** Cole: Board of Governor of the Federal Reserve System. Eisenbeis: University of North Carolina. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/27; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 24. **PR** no charge. **JE** G21, G28, G32, G33. **KW** Agency Problem. Moral Hazard. Failure. Thrift. Savings and Loan.

AB Agency theory suggests that many of the costs incurred by the taxpayer during the 1980's thrift crisis were the result of conflicts between principals and their agents. This study models thrift failure costs as a function of three distinct types of agency conflicts: conflicts between creditors and owners, between owners and managers, and between taxpayers and government officials. Using a model that controls for sample-selection bias, the study presents strong evidence that thrift owners effected wealth transfers from creditors by undertaking high-risk investments, and that government officials pursued policies that increased losses to the thrift deposit insurance fund that were ultimately funded by the taxpayer. The results do not show that managers effected wealth transfers from owners through expense-preference behavior, but rather that inefficient management increased losses to the deposit insurance fund.

PD February 1996. **TI** The Effect of Changes in Ownership Structure on Performance: Evidence From the Thrift Industry. **AU** Cole, Rebel A.; Mehran, Hamid. **AA** Cole: Board of Governors of the Federal Reserve System. Mehran: Northwestern University. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/06; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 27. **PR** no charge. **JE** G21, G28, G32, G38. **KW** Corporate Control. Regulation. Ownership Structure. Anti-Takeover Provisions.

AB Restrictions on the ownership structure of a public company may harm the company's performance by preventing owners from choosing the best structure. We examine the stock-price performance and ownership structure, before and after the expiration of anti-takeover regulations, of a sample of thrift institutions that converted from mutual to stock ownership. We find that after the anti-takeover provisions expire, firm performance improves significantly, and the portions of the firm owned by managers, noninstitutional outside blockholders, and the firm's employee stock ownership plan increase. Changes in performance are positively associated with changes in ownership by managers and by noninstitutional outside blockholders but negatively associated with changes in ownership by employee stock ownership plans.

TI Commercial Banks and Real Estate Lending: The Texas Experience. **AU** Eisenbeis, Robert A.; Horvitz, Paul M.; Cole, Rebel A.

TI Changes in REIT Liquidity 1990-94: Evidence From Intra-Day Transactions. **AU** Bhasin, Vijay; Cole, Rebel A.; Kiely, Joseph K.

Collins, Sean

PD December 1995. **TI** Will Bank Proprietary Mutual Funds Survive? Assessing Their Viability Via Scope and Scale Estimates. **AU** Collins, Sean; Mack, Phillip. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/52; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 17.

PR no charge. **JE** G21, G11, D43. **KW** Mutual Funds. Banks. Transaction Costs.

AB This paper evaluates the scale and scope of bank proprietary mutual funds. We show that most bank proprietary funds could possibly realize substantial efficiency gains by increasing the amount of assets under management and some by offering more diversified product lines. The data indicate that the appropriate size for a diversified bank complex is $15 billion to $30 billion. This suggests it will be difficult for many bank complexes to survive in the near future because their assets under management are substantially less than this. Unless these smaller complexes can charge either high management fees or form alliances with other fund groups, their prospects for survival in an increasingly competitive environment are dim.

TI A Minor Redefinition of M2. **AU** Whitesell, William; Collins, Sean.

Cooley, Thomas F.

PD July 1995. **TI** The Replacement Problem. **AU** Cooley, Thomas F.; Greenwood, Jeremy; Yorukoglu, Mehmet. **AA** Cooley and Yorukoglu: University of Rochester. Greenwood: University of Rochester and University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9508; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 30. **PR** $10.00. **JE** D51, E22, D91, D92. **KW** General Equilibrium. Growth. Vintage. Capital.

AB A vintage capital model of economic growth is developed here. Technological change is modeled as being investment specific. The decision to replace old vintages of capital goods with new ones is studied. Depreciation in this environment is an economic, not a physical, concept. An analysis of the vintage capital economy's balanced growth paths and transitional dynamics is undertaken.

Cowan, Robin

PD June 1994. **TI** Quandaries in the Economics of Dual Technologies and Spillovers From Military to Civilian Research and Development. **AU** Cowan, Robin; Foray, Dominique. **AA** Cowan: University of Western Ontario. Foray: Universite Dauphine. **SR** University of Western Ontario, Department of Economics, Research Report: 9509; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 22. **PR** $10.00. **JE** O31, O33, O38, H56. **KW** Defense. Technology. R&D. Externalities.

AB In this paper we argue that the "standard" view of the relationship between military and civilian technology is too simple and cannot account for the variety of historical experiences. In order to understand the relationship attention must be paid to two things: that technologies have a life cycle, in different parts of which different types of learning are important; and that the relationship between military and civilian sectors will change depending on the nature of the technology involved, in particular whether it is a process or a product technology. In addition, the standard view does not pay heed to the fact that there are specific organizational requirements to realize these potential cross-benefits. We describe a framework with which to analyze the various features of the relationship taking into account these considerations.

PD April 1995. **TI** Spatially Dependent Interactions: A Statistical Approach to Spatial Equilibria, Technological Standardization and Variety. **AU** Cowan, Robin; Cowan, William. **AA** Cowan, R.: University of Western Ontario. Cowan, W.: University of Waterloo. **SR** University of Western Ontario, Department of Economics, Research Report: 9507; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 15. **PR** $10.00. **JE** D51, C62. **KW** Interacting Agents. Spatial Equilibria. Technology Choice. Standardization.

AB This paper develops a technique for analyzing economies with a large but finite number of interacting agents. Heterogeneous agents are faced with a repeated choice problem, and are subject to externalities from the actions of other agents, but the nature of these externalities is dependent on the location of the agents. The concern is with the spatial distribution of economic activity in such an economy. We develop a technique that allows us to relate the probability of observing a particular state of the economy with the costs associated with that state. We use this technique to analyze a technology choice problem in which the concern is with the degree and spatial nature of technical standardization and the conditions under which variety is preserved.

Cowan, William

TI Spatially Dependent Interactions: A Statistical Approach to Spatial Equilibria, Technological Standardization and Variety. **AU** Cowan, Robin; Cowan, William.

Cramton, Peter C.

PD May 1995. **TI** The Effect of Collective Bargaining Legislation on Strikes and Wages. **AU** Cramton, Peter C.; Gunderson, Morley; Tracy, Joseph S. **AA** Cramton: University of Maryland. Tracy: Columbia University and National Bureau of Economic Research. Gunderson: University of Toronto. **SR** National Bureau of Economic Research, Working Paper: 5105; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 15. **PR** $5.00. **JE** C78, J31, J51, J52, J58. **KW** Wages. Strikes. Labor Policy. Replacement Workers.

AB Using Canadian data on large, private-sector contract negotiations from January 1967 to March 1993, we find that wages and strikes are substantially influenced by labor policy. In particular, we find that prohibiting the use of replacement workers during strikes is associated with significantly higher wages, and more frequent and longer strikes. This is consistent with private information theories of bargaining. We estimate the welfare consequences of a ban on replacement workers, as well as other labor policies. Despite the higher dispute costs, union workers are better off with a ban on replacement workers. The higher wage more than compensates for the more frequent and longer strikes.

PD May 1995. **TI** The Use of Replacement Workers in Union Contract Negotiations: The U.S. Experience, 1980-1989. **AU** Cramton, Peter C.; Tracy, Joseph S. **AA** Cramton: University of Maryland. Tracy: Columbia University and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5106; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 18. **PR** $5.00. **JE** C78, J31, J52, J58. **KW** Collective Bargaining. Strikes. Replacement Workers. Worker Experience.

AB It is argued in many circles that a structural change occurred in U.S. collective bargaining in the 1980s. We investigate the extent to which the hiring of replacement workers can account for this change. For a sample of over 300 major strikes since 1980, we estimate the likelihood of replacements being hired. We find that the risk of replacement declines during tight labor markets, and is lower for bargaining units with more experienced workers. We use the predicted replacement risk as an explanatory variable in a model of the union's choice between the strike and holdout threat. We find that strike usage decreases significantly as the predicted replacement risk increases. We estimate that a ban on the use of replacement workers would have increased strike incidence from 1982-1989 by 3 percentage points, a 30 percent increase.

Crepon, Bruno
TI The Time Series Relationship Between Investment and Cash Flow in the Scientific Sector: A Panel Data Study Comparing French, Japanese, and the United States Firms. **AU** Branstetter, Lee; Crepon, Bruno; Hall, Bronwyn H.; Mairesse, Jacques.

Cres, Herve
TI Underemployment of Resources and Self-Confirming Beliefs. **AU** Citanna, Alessandro; Cres, Herve; Villanacci, Antonio.

Crow, John W.
PD October 1994. **TI** Central Banks: Independence, Mandates and Accountability. **AA** Bank of Canada. **SR** University of Western Ontario, Papers in Political Economy: 56; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 15. **PR** no charge. **JE** E52, E58, E44. **KW** Central Banks. Political Economy.
AB This speech, by a former governor of the Bank of Canada, discusses the economic and political implications of central bank independence.

Cukierman, Alex
PD April 1995. **TI** Why Does it Take a Nixon to go to China? **AU** Cukierman, Alex; Tommasi, Mariano. **AA** Cukierman: Tel Aviv University. Tommasi: University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 728; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 27. **PR** $5.00. **JE** D74, D72, D82. **KW** Asymmetric Information. Economic Reforms. Credible Commitment. Political Economy.
AB When voters are not fully informed about the way in which policies map into outcomes, policy proposals convey information. This leads to conditions under which policies that benefit a majority are more likely to be implemented by "unlikely" characters. We argue that these conditions were at work in some well-know economic and foreign policy episodes. Rodrik (1993) points out that it is ironic that populist and interventionist parties have implemented radical trade liberalizations, fiscal adjustments and institutional reforms. We demonstrate here why those parties had a comparative advantage at such policies. Similarly, sometimes it is "hawks" like M. Begin, R. Nixon and A. Sadat, who are able to take substantial steps towards peace. Our analysis has more general implications for information transmission and credibility. Drazen and Masson (1994) have distinguished between credibility of policymakers and credibility of policies. We show here how credibility depends on the policymaker-policy pair.

Cumby, Robert E.
PD May 1995. **TI** The Term Structure of Credit Risk: Estimates and Specification Tests. **AU** Cumby, Robert E.; Evans, Martin D.D. **AA** Cumby: Georgetown University. Evans: New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/21; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 20. **PR** not available. **JE** C32, G12, F34. **KW** Mexico. Venezuela. Costa Rica. Bonds. Debt.
AB This paper examines alternative methods for making inferences about the value and dynamics of (unobserved) credit quality from market prices. Using data on Brady bonds issued by Mexico, Venezuela, and Costa Rica, we show that estimates of credit quality from of a simple model (often used by practitioners) with a constant conditional probability of default are dynamically inconsistent; the market distinguishes between current and future credit quality. We then examine two models with this feature. The first assumes that credit quality follows a diffusion process while the second assumes mean reverting dynamics for credit quality. Although these models have very different implications for the asymptotic probability of default, we show that it is impossible to distinguish between them on the basis of the few years of high frequency data in our sample. We then examine the possible consequences for the pricing of new issues that can arise from misspecification of the asymptotic probabilities.

Cummins, J. David
TI The Coexistence of Multiple Distribution Systems for Financial Services: The Case of Property- Liability Insurance. **AU** Berger, Allen N.; Cummins, J. David; Weiss, Mary A.

Cutler, David M.
PD April 1995. **TI** Does Public Insurance Crowd Out Private Insurance? **AU** Cutler, David M.; Gruber, Jonathan. **AA** Cutler: Harvard University and National Bureau of Economic Research. Gruber: Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5082; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 33. **PR** $5.00. **JE** G22, H42, H51, I11, I18. **KW** Health Care Reform. Insurance. Medicaid.
AB One popular option for health care reform in the U.S. is to make particular groups, such as children, eligible for public health insurance coverage. A key question in assessing the cost of this option is the extent to which public eligibility will crowd out the private insurance coverage of these groups. We estimate the extent of crowdout arising from the dramatic expansions of the Medicaid program during the 1987-1992 period. Over this time period, Medicaid eligibility for children increased by 50 percent and eligibility for pregnant women doubled. We estimate that between 50 percent and 75 percent of the increase in Medicaid coverage was associated with a reduction in private insurance coverage. This occurred largely because employees took up employer-based insurance less

frequently, although employers may have encouraged them to do so by contributing less for insurance. There is some evidence that workers dropped coverage for their family switched into individual policies.

David, Alexander

PD August 1995. **TI** Controlling Information Premia by Repackaging Asset Backed Securities. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/38; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 28. **PR** no charge. **JE** G14, D82. **KW** Information. Security Design. Receivables. Individuals and Institutions.

AB Securities created from a base of underlying receivables are sold to "individual" and "institutional" traders. While both classes of traders are uninformed about the payoff characteristics of receivables, institutions are more sophisticated than individuals. Based on their customers' needs, they carry out any given level of transactions by minimizing transactions costs across all open markets. Closed-form solutions for the optimal correlation between the receivables and the number of securities to be issued are provided as functions of (i) The objective of the security designer, (ii) The masses of each kind of trader in the market and (iii) The elasticities of traders hedging demands with respect to transactions costs. All three parameters can be measured empirically by practitioners. It is found that while profits earned off individuals can be optimized by changing the correlation coefficient between sets of receivables backing different securities, profits earned off institutions are immune to changes in the correlation and can be controlled only by altering the number of securities created.

Davies, James B.

PD April 1995. **TI** Measuring Marginal Income Tax Rates for Individuals in Canada: Averages and Distributions Over Time. **AU** Davies, James B.; Zhang, Junsen. **AA** Davies: University of Western Ontario. Zhang: Chinese University of Hong Kong. **SR** University of Western Ontario, Department of Economics, Research Report: 9516; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 13. **PR** $10.00. **JE** H24, C22, H21. **KW** Marginal Rates. Income Taxes. Canada.

AB This paper presents estimates for Canada of average marginal tax rates (AMTRs), and the distribution of the MTRs across income groups, over a forty-four year period starting in 1947. These MTRs represent the marginal tax rates levied on assessed income, which affect many distortions and incentive effects of income taxation. We show that federal AMTRs fluctuated with little trend from 1947 to the mid 1960s and then increased in the mid 1970s, as Barro and Sahasakul (1983) found for the U.S. Starting in 1983-4 there was a further increase in Canada, leading to the highest federal AMTRs for the whole postwar period being observed in 1991. The simple time series properties of the AMTRs calculated have been examined and compared to the U.S. We find that AMTRs are quite volatile in both countries, and have not rejected the hypothesis that the AMTRs are difference stationary, which implies that shocks to AMTRs may typically have some permanence rather than being merely temporary.

Dhillon, Upinder S.

PD June 1995. **TI** Debtor-in-Possession Financing and the Resolution of Uncertainty in Chapter 11 Reorganizations. **AU** Dhillon, Upinder S.; Noe, Thomas; Ramirez, Gabriel. **AA** Dhillon: Binghamton University. Noe: Georgia State University and Federal Reserve Bank of Atlanta. Ramirez: Binghamton University and New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/11; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 33. **PR** not available. **JE** G33. **KW** Bankruptcy. Reorganization.

AB This paper investigates the use of debtor-in-possession (DIP) financing by firms reorganizing under Chapter 11. A model is developed in which there is asymmetric information between the creditors of a distressed firm and its management. In this context, it is demonstrated that reliance on DIP financing resolves informational asymmetries regarding the true economic value of distressed firms. Empirical results support the models conclusions. The signaling role of DIP financing is evidenced both by positive stock and bond price reactions to DIP announcements and the fact that firms employing DIP financing have more successful reorganizations.

PD October 1995. **TI** Bond Calls, Credible Commitment, and Equity Dilution: A Theoretical and Clinical Analysis of Simultaneous Tender and Call (STAC) Offers. **AU** Dhillon, Upinder S.; Noe, Thomas; Ramirez, Gabriel. **AA** Dhillon: Binghamton University. Noe: Georgia State University and Federal Reserve Bank of Atlanta. Ramirez: Binghamton University and New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/14; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 26. **PR** not available. **JE** C72, D82, G12. **KW** Bonds. Debt. Securities. Credible Commitment.

AB This paper investigates, from both a theoretical and clinical perspective, bond tender offers accompanied by a threat to call nontendered bonds, so-called STAC's. The theoretical analysis explains the use of STAC's and derives conditions under which the call threats embedded in STAC's are credible. These conditions relate to the degree of bondholder coordination, and the relative costs of adverse selection and suboptimal call policies. Next, three cases of actual STAC's -- James River, May Department Stores, and Houston Power and Light -- are investigated. A rough correspondence between the evolution of these STAC's and the different strategic equilibria of the model is established.

Dick, Andrew R.

PD March 1995. **TI** Where Do Cartels Form?: Antitrust Screens and the Cost of Cartel Transactions. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 729; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 26. **PR** $5.00. **JE** L41, L14. **KW** Cartels. Webb-Pomerene. Transaction Costs.

AB Screening industries for antitrust review raises three questions. 1) Why do cartels form in some industries but not in others? 2) What determines a cartel's influence, as reflected in its industry market share and span of control? And 3) when are cartels more likely to raise or lower welfare? I answer these three questions directly by developing a transaction cost theory of cartel formation. I then apply the theory to a unique group of legal, privately-enforced industry cartels that formed under the Webb-Pomerene Export Trade Act. This approach avoids the methodological constraints and data biases that have limited previous empirical research into cartels' formation.

PD March 1995. **TI** Explaining Managed Trade as Rational Cheating. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 730; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 19. **PR** $5.00. **JE** F13, C72. **KW** Managed Trade. Self-Enforcing Agreements.
AB Post-war "managed trade" policies feature low baseline tariffs combined with selective non-tariff protection. This paper interprets managed trade as a rational strategy to undermine trade liberalization agreements in the absence of credible external enforcement. Analyzing the Kennedy GATT Round, I explore the calculus that led the United States to undermine selectively across-the-board tariff reductions by introducing non-tariff barriers in industries with rapidly rising import demand. I show empirically that non-tariff barrier dynamics across 216 industries support a rational cheating interpretation of managed trade policy.

PD March 1995. **TI** When Are Cartels Stable Contracts? **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 731; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 33. **PR** $5.00. **JE** L41, L14, L13. **KW** Cartels. Webb-Pomerene. Hazard Models. Oligopoly Theory.
AB Why do some industry cartels survive for decades, while many others are quickly undermined by price wars and fringe competition? I show that variation in cartels' longevity can be explained by differences in their costs of self-enforcement and service value to members. Analyzing the private costs and benefits of legal cartel contracts formed under the Webb-Pomerene Export Trade Act, I find that longer-lived cartels tended to export to relatively small buyers, to have wide industry coverage, to operate in periods of strong and stable export demand, and to sell under side-agreements with foreign competitors. Contracts in which the cartel operated a common sales agency, providing highly centralized control over members' operations, also tended to be more stable. However, cartel contracts also displayed sources of inherent instability. For example, cartels usually grew less stable the longer their contract remained in force. Agreements also tended to be less stable in industries with long and recent histories of cartel activity. Finally, cartels whose primary rationale was to fix price tended to be particularly unstable, because these contracts invited fringe competition and entry.

Diebold, Francis X.

TI Why are Estimates of Agricultural Supply Response so Variable? **AU** Lamb, Russell L.; Diebold, Francis X.

Diermeier, Daniel

PD June 1995. **TI** Lobbying and Incentives for Legislative Organization. **AU** Diermeier, Daniel; Myerson, Roger B. **AA** Diermeier: Stanford University. Myerson: Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1134; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 31. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D71, D72. **KW** Political Economy. Collective Action. Social Choice.
AB Formal theories of the internal organization of legislatures have mainly focused on the United States Congress. While these models have been successful in showing why committee systems should emerge in Congress, they fail to explain the variance in internal organization across legislatures which is indicated by the comparative study of legislative politics. To analyze the effects of different constitutional features on the organizational choices of legislatures we adopt a vote-buying model (Groseclose and Snyder 1994) and then consider the incentives to delegate decision rights in a multi-chamber noncooperative game. Our main result states that multi-cameral legislatures encourage the existence of internal veto players or super- majority rules, while unicameral bodies provide incentives to delegate power to a single actor such as a prime minister or party leader.

Diewert, Erwin

PD May 1995. **TI** Price and Volume Measures in the System of National Accounts. **AA** University of British Colombia and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5103; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 63. **PR** $5.00. **JE** C43, E31. **KW** Price Indexes. National Accounts. Measurement Methods.
AB The paper is an extensive review of chapter 16 in the "System of National Accounts", 1993 written by Peter Hill. The basic principles for measuring price and quantity change in the National Accounts are explained. The paper also presents some new material on the consistency of superlative indexes with indexes which are additive in their components. Some new material on the treatment of quality change is also presented which indicates that traditional Statistical Agency treatments of this issue will lead to upward bias in price indexes. The literature on sources of bias in consumer price indexes is also reviewed.

PD May 1995. **TI** Axiomatic and Economic Approaches to Elementary Price Indexes. **AA** University of British Colombia and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5104; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 60. **PR** $5.00. **JE** C43, E31. **KW** Price Indexes. Aggregation. Measurement Methods.
AB In a 1993 paper, Marshall Reinsdorf finds that the CPI components for food and gas were biased upward by about 2 percent and 1 percent per year respectively during the 1980s. He attributed this result to outlet substitution bias. The more recent paper by Reinsdorf and Moulton [1994] presents an alternative explanation for Reinsdorf's earlier results: when the BLS moved to probability sampling of prices in 1978, the micro price quotations were aggregated together using an index number formula that generates an upward bias. This paper further explores the central theoretical issue raised by the Reinsdorf-Moulton paper: the choice of an index number

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formula to aggregate prices at the finest level of disaggregation. This issue is examined from both axiomatic and economic perspectives. This paper also reviews the empirical literature on alternative elementary price indexes and the recent literature on sources of bias in consumer price indexes. The findings of this paper in conjunction with the empirical work of Reinsdorf and Moulton yield a number of recommendations for Statistical Agencies which are outlined in the final section.

DiNardo, John

PD April 1995. **TI** Labor Market Institutions and the Distribution of Wages, 1973-1992: A Semiparametric Approach. **AU** DiNardo, John; Fortin, Nicole M.; Lemieux, Thomas. **AA** DiNardo: University of California, Irvine. Fortin: Universite de Montreal. Lemieux: Universite de Montreal and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5093; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 41. **PR** $5.00. **JE** J22, J23, J31, J51. **KW** Wage Distribution. Kernel Density Method. Unionization. Labor Market. Minimum Wage.

AB This paper presents a semiparametric procedure to analyze the effects of institutional and labor market factors on recent changes in the U.S. distribution of wages. The effects of these factors are estimated by applying kernel density methods to appropriately "reweighted" samples. The procedure provides a visually clear representation of where in the density of wages these various factors exert the greatest impact. Using data from the Current Population Survey, we find, as in previous research, that de-unionization and supply and demand shocks were important factors in explaining the rise in wage inequality from 1979- 1988. We find also compelling visual and quantitative evidence that the decline in the real value of the minimum wage explains a substantial proportion of this increase in inequality, particularly for women. We conclude that labor market institutions are as important as supply and demand considerations in explaining changes in the U.S. distribution of wages from 1979 to 1988.

Donaldson, John B.

PD December 1994. **TI** Anticipation and the Aggregation of Idiosyncratic Risks. **AU** Donaldson, John B.; Dutta, Jayasri. **AA** Donaldson: Columbia University. Dutta: Cambridge University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/03; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 44. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** D84, G12, G14, E23. **KW** Business Cycles. Productivity Shocks. Expectations.

AB This paper demonstrates that if investors are able to anticipate future productivity differentials across firms, they will allocate investment capital to firms which they expected to experience the most favorable shocks. In contrast to the non-anticipating case, this guarantees not only that prices but quantities as well will bear some of the adjustment necessary to bring about the new equilibrium. We also demonstrate that the quantity variation induced exhibits the standard business cycle characteristics.

Dubin, Jeffrey A.

PD October 1995. **TI** Comparing Absentee and Precinct Voters: A View Over Time. **AU** Dubin, Jeffrey A.; Kalsow, Gretchen A. **AA** California Institute of Technology. **SR** Caltech Social Science Working Paper: 942; Division of Humanities and Social Sciences, 228/77, California Institute of Technology, Pasadena, CA 91125. **PG** 33. **PR** no charge. **JE** C23, C33, D72. **KW** Absentee Voting. Nested Logit. Panel Data. Political Participation. Random Effects.

AB This paper examines the trend in absentee voting over the last thirty years in California. With the liberalization of absentee voting laws and practices, an increase in the numbers of absentee voters quickly followed. Absentee voters have already demonstrated their ability to influence the outcomes of local elections. An open question is what will become of absentee voters in the future. If they are the model for "voting at home," and if technological advances allow such, then the behavior of current absentee voters may be indicative of the future electorate. The increasing trend of voters opting for absentee ballots is analyzed by using Generalized Least Squares on a random effects time-series cross-section model with county level data. The focus is on identifying structural factors such as changing voter demographics that have influenced the decision of voters to cast absentee ballots. Thirty-three recent state-wide elections in California are the basis for this analysis, covering the statewide primary and general elections from November 1962, through November 1994. We find that the impact of demographics and time trends on absentee voting differ between general and primary elections. In addition, we find that a 1977 liberalization law in California had the effect of accelerating the usage of the absentee format. Finally, we conclude that absentee and precinct voting are substitutes in general elections but complements in primary elections.

PD October 1995. **TI** Comparing Absentee and Precinct Voters: Voting on Direct Legislation. **AU** Dubin, Jeffrey A.; Kalsow, Gretchen A. **AA** California Institute of Technology. **SR** Caltech Social Science Working Paper: 943; Division of Humanities and Social Sciences, 228/77, California Institute of Technology, Pasadena, CA 91125. **PG** 25. **PR** no charge. **JE** C25, C35, D72. **KW** Absentee Voting. Proposition Voting.

AB This paper addresses issues related to how the absentee voter actually casts their ballot on propositions. If the liberalization of absentee laws changed either the composition or behavior of the electorate then the outcome of the election may be affected. This paper tests whether the electoral behavior of absentee and precinct voters differs in regards to voting on propositions. The analysis is based on sample of actual absentee and precinct voter ballots drawn from the approximately three million ballots cast in Los Angeles county for the 1992 general election. The analysis uses a nested model of voter participation and is estimated using the weighted exogenous sampling maximum likelihood method. We find that precinct and absentee voters do differ on both the propositions they cast votes on, and in their propensity to vote "Yes" for a proposition. For example, absentees appear to vote on fewer bonds and initiatives than do precinct voters. They also vote on fewer propositions dealing with state taxes, food taxes, and property taxes. In addition, given that a voter casts a valid vote, the propensity for absentee voters to vote "Yes" is higher on initiatives and propositions related to education, welfare, and health care than it is for precinct voters.

Duffee, Gregory R.

PD May 1996. **TI** Treasury Yields and Corporate Bond Yield Spreads: An Empirical Analysis. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/20; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 22. **PR** no charge. **JE** G13, E51. **KW** Credit Risk. Yield Spreads. Business Cycles. Term Structure.

AB This paper empirically examines the relation between the Treasury term structure and spreads of investment grade corporate bond yields over Treasuries. I find that noncallable bond yield spreads fall when the level of the Treasury term structure rises. The extent of this decline depends on the initial credit quality of the bond; the decline is small for Aaa-rated bonds and large for Baa-rated bonds. The role of the business cycle in generating this pattern is explored, as is the link between yield spreads and default risk. I also argue that yield spreads based on commonly-used bond yield indexes are contaminated in two important ways. The first is that they are "refreshed" indexes, which hold credit ratings constant over time; the second is that they usually are constructed with both callable and noncallable bonds. The impact of both of these problems is examined.

Dufwenberg, Martin

TI Rational Reasoning and Rationalizable Sets. **AU** Asheim, Geir B.; Dufwenberg, Martin.

Durham, Yvonne

PD August 1995. **TI** Experimental Tests of the Paradox of Power. **AU** Durham, Yvonne; Hirshleifer, Jack; Smith, Vernon L. **AA** Durham: University of Arkansas. Hirshleifer: University of California, Los Angeles. Smith: University of Arizona. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 741; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 25. **PR** $5.00. **JE** D74, C92. **KW** Experimental Economics. Power. Conflict. Paradox of Power. Production vs. Appropriation.

AB Rational decision-makers will be equalizing the marginal returns of cooperative effort in production versus fighting over the distribution of output. Given both cooperative and conflictual opportunities, our experimental subjects overwhelmingly arrived at the Nash rather than the cooperative solution -- though with some slippage toward cooperation in experimental treatments that permitted learning. As predicted by the analytic model, more resources were devoted to conflict when decisiveness was high. With one significant exception, the results supported the model's "paradox of power" predictions, as to when an initially weaker party will improve its position relative to a stronger opponent.

Dutta, Jayasri

TI Anticipation and the Aggregation of Idiosyncratic Risks. **AU** Donaldson, John B.; Dutta, Jayasri.

PD March 1995. **TI** The Revelation of Information and Self-Fulfilling Beliefs. **AU** Dutta, Jayasri; Morris, Stephen. **AA** Dutta: University of Cambridge. Morris: University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/03; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 36. **PR** no charge. **JE** D84, E13, E31, E32. **KW** Rational Expectations. Beliefs. General Equilibrium.

AB At a rational expectations equilibrium (REE), individuals are assumed to know the map from states to prices. This hypothesis has two components, that agents agree (consensus), and that they have point expectations (degeneracy). We consider economies where agents' beliefs are described by a joint distribution on states and prices, and these beliefs are fulfilled at equilibrium. Beliefs are self-fulfilling if every price in the support of the distribution is an equilibrium price. The corresponding equilibria are Beliefs Equilibria (BE). The further restriction that agents have the same beliefs results in Common Beliefs Equilibria (CBE). We study the relationship between BE, CBE, and REE, thus isolating the role of consensus and of degeneracy in achieving rational expectations.

Dynan, Karen E.

PD October 1995. **TI** The Underrepresentation of Women in Economics: A Study of Undergraduate Economics Students. **AU** Dynan, Karen E.; Rouse, Cecilia Elena. **AA** Dynan: Federal Reserve Board. Rouse: Princeton University and National Bureau of Economic Research. **SR** Princeton University, Industrial Relations Section, Working Paper: 348; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 17. **PR** $1.50. **JE** A22, A11, A23. **KW** Women. Economics. Economics Majors.

AB We examine the factors that influence undergraduate students' decisions to become economics majors by analyzing a survey of students in the introductory economics course at Harvard University as well as data on an entire class of students from Harvard's registrar. We find that although women in the introductory economics course at Harvard tend to begin the course with a weaker math background than men, math background does not appear to explain much of the gender difference in students' decisions about whether to major in economics. The class environment and the presence or absence of role models also do not explain much of the gender gap. On the other hand, women do less well in economics relative to their other courses than men do, and controlling for this difference in relative performance significantly diminishes the estimated gender gap. An economically large, but statistically insignificant, difference between sexes in the probability of majoring in economics remains, however. This remaining gender gap may be due to differing tastes or information about the nature of economics. As evidence, we find that women who were considering majoring in economics when they began introductory economics were about as likely to choose economics as were men.

Eaton, Jonathan

TI Trade in Ideas: Patenting and Productivity in the OECD. **AU** Kortum, Samuel S.; Eaton, Jonathan.

TI Engines of Growth: Domestic and Foreign Sources of Innovation. **AU** Kortum, Samuel S.; Eaton, Jonathan.

Eberhart, Allan C.

TI The Equity Performance of Firms Emerging From

https://doi.org/10.1017/S0951007900003508 Published online by Cambridge University Press

Bankruptcy. **AU** Altman, Edward I.; Eberhart, Allan C.; Aggarwal, Reena.

Eberly, Janice C.

TI Optimal Investment With Costly Reversibility. **AU** Abel, Andrew B.; Eberly, Janice C.

Economides, Nicholas

PD July 1995. **TI** The Incentive of a Multiproduct Monopolist to Provide All Goods. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/32; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 4. **PR** not available. **JE** L12, D42. **KW** Monopoly. Linear Demand.

AB This note show that a monopolist facing any linear demand system for n goods and no fixed costs will produce positive quantities of all goods as long as demand is positive for all goods when all are sold at marginal cost. This is in contrast with the traditional view that, in general, a multiproduct monopolist does not produce positive quantities of all goods even though there is positive demand for each of them when prices are equal to marginal cost.

PD August 1995. **TI** The Political Economy of Branching Restrictions and Deposit Insurance: A Model of Monopolistic Competition Among Small and Large Banks. **AU** Economides, Nicholas; Hubbard, R. Glenn; Palia, Darius. **AA** Economides: New York University. Hubbard: Columbia University and National Bureau of Economic Research. Palia: Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/14; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 27. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** D72, D71, G21. **KW** Social Choice. Branching Restrictions. Banks. Political Economy.

AB This paper suggests that the introduction of bank branching restrictions and federal deposit insurance in the United States likely was motivated by political considerations. Specifically, we argue that these restrictions were instituted for the benefit of the small, unit banks that were unable to compete effectively with large, multi-unit banks. We analyze this "political hypothesis" in two steps. First, we use a model of monopolistic competition between small and large banks to examine gains to the former group from the introduction of branching restrictions and government-sponsored deposit insurance. We then find strong evidence for the political hypothesis by examining the voting record of Congress.

PD August 1995. **TI** Monopolistic Competition With Two-Part Tariffs. **AU** Economides, Nicholas; Wildman, Steven S. **AA** Economides: New York University. Wildman: Northwestern University. **SR** New York University, Salomon Brothers Working Paper: S/95/25; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 23. **PR** not available. **JE** L12, L13, D42, D43. **KW** Two Part Tariffs. Monopolistic Competition. Variety.

AB Non-uniform pricing equilibria are shown to dominate uniform pricing equilibria in free entry, monopolistically competitive markets with identical consumers. The non-uniform pricing equilibrium is welfare optimal. Comparisons of Cournot and non-uniform pricing equilibria in terms of the equilibrium number of firms and sales per firm show that the positioning of Cournot equilibria relative to the welfare optimal configuration of firms and outputs depends on the relative curvatures of inverse demand and average cost functions, entry-induced rotation of inverse demand functions, and the relative price effects of changes in own and other firms outputs. The choice between the non-uniform and uniform pricing interpretations of equilibria in differentiated product markets may have important implications for policy analysis.

PD August 1995. **TI** Critical Mass and Network Size With Application to the US Fax Market. **AU** Economides, Nicholas; Himmelberg, Charles P. **AA** Economides: New York University. Himmelberg: Columbia University. **SR** New York University, Salomon Brothers Working Paper: S/95/26; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 36. **PR** not available. **JE** L11, L13, D23, D41. **KW** Networks. Critical Mass. Fax. Externalities.

AB We analyze the equilibrium size of networks under alternative market structures. Networks are characterized by positive size externalities (commonly called "network externalities"). That is, the benefits of the addition of an extra node (or an extra customer) exceed the private benefits accruing to the particular node (or customer). A direct consequence of this demand structure is that perfect competition does not implement the optimal outcome. Because of the externality, there exists a range of prices within which three different network sizes can be supported as equilibria: a zero size network, an intermediate size that is unstable, and a large stable and Pareto optimal one. We expect that the market will select the largest of the three equilibrium networks. As a result, small networks will not observed. We call critical mass the size of the smallest network that can be supported in equilibrium. Alternative allocation systems internalize the network externality to different degrees, and therefore result in a variety of sizes of critical mass and price- network size paths. A welfare- maximizing planner supports a larger network than results in perfect competition. Surprisingly, a monopolist, even if allowed to influence consumers' expectations, always chooses a network of smaller size than in perfect competition. Oligopolists of compatible network goods support networks of smaller size than perfect competition and larger than monopoly. We extend our results to durable goods in a dynamic setting. In the presence of a downward time trend for industry marginal cost, the presence of network externalities increases the speed at which market demand grows. We use this prediction to calibrate the model and obtain estimates of the parameter measuring a consumer's valuation of the installed base (i.e., the network effect) using aggregate time series data on prices and quantities in the U.S. fax market.

PD October 1995. **TI** Access and Interconnection Pricing: How Efficient is the "Efficient Component Pricing Rule?" **AU** Economides, Nicholas; White, Lawrence J. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/24; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 18. **PR** not available. **JE** D42, G12, L12, D61. **KW** Bottlenecks. Efficient

Components. Cash Flow.
AB This paper critiques some of the properties of the so-called "efficient component pricing rule" (ECPR) for access to a bottleneck (monopoly) facility. When an entrant/rival and the bottleneck monopolist both produce a complementary component to the bottleneck service, the ECPR specifies that the access fee paid by the rival to the monopolist should be equal to the monopolist's opportunity costs of providing access, including any forgone revenues from a concomitant reduction in the monopolist's sales of the complementary component. We focus especially on the case in which the monopolist's price for the complementary component is above all relevant marginal costs. In this case the ECPR's exclusion of rivals may be socially harmful, since it may be preventing a substantial decrease in the price of the complementary component.

PD October 1995. **TI** Technical Standards Coalition for Network Goods. **AU** Economides, Nicholas; Flyer, Frederick. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/33; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 30. **PR** not available. **JE** L13, L14, D23, D43. **KW** Networks. Coalition Structures. Technical Standards. Fulfilled Expectations. Compatibility.
AB We examine the incentives of firms to form coalitions based on adherence to common technical standards. Many network goods as well as non-network goods with close complements exhibit "network externalities" (i.e., the value of such goods increases with the size of sales of compatible products). Thus, firms have incentives to be in coalitions of compatible goods that share the same technical "standards". This incentive contrasts with the traditional incentive to differentiate each product and be a dominant player in a particular market "niche". This paper analyzes the interaction of these opposite incentives in the creation of technical standards coalitions. Despite no inherent differences in the features of the products and no cost differences, we find that often at equilibrium the market is highly concentrated with coalitions of widely varying sizes charging very different prices.

PD February 1996. **TI** The Inefficiency of the ECPR Yet Again: A Reply to Larson. **AU** Economides, Nicholas; White, Lawrence J. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/9; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 14. **PR** not available. **JE** D43, L13, L41, L43, L96. **KW** Antitrust. Deregulation. Telecommunications.
AB The appropriate pricing of access to a monopolist's bottleneck facility poses interesting theoretical questions and will increasingly be important in the policy realm, especially in light of the open- access provisions in the Telecommunications Act of 1996, the growing pressures toward open access in natural gas and electricity distribution, and a growing antitrust interest in "network effects" in various industries. In our original article we offered a simple model that, we believe, raises serious questions about the applicability of the Efficient Component Pricing Rule in many real-world situations. Larson's Comments offered some criticisms of our analysis, especially in its applicability to the telecommunications industry, and the tone and content of the Comment indicate that Larson believes that the application of the ECPR would not be so bad after all, especially in telecommunications. For the reasons stated in this Reply, we believe that our original arguments concerning the flaws in the ECPR have not been seriously undercut by Larson, even for applications in telecommunications.

Edlin, Aaron S.

PD July 1995. **TI** Strict Monotonicity in Comparative Statics. **AU** Edlin, Aaron S.; Shannon, Chris. **AA** Edlin: University of California, Berkeley and National Bureau of Economic Research. Shannon: University of California, Berkeley. **SR** University of California, Berkeley, Working Paper in Economics: 95/238; IBER, 156 Barrows Hall, University of California, Berkeley, CA 94720. **PG** 13. **PR** $3.50 U.S. and Canada; $7.00 foreign. **JE** C61, D11, H21. **KW** Strict Monotonicity. Comparative Statics. Single Crossing Property.
AB This note provides sufficient conditions to draw strict monotone comparative statics conclusions in optimization problems. These results extend the lattice-theoretic result of Milgrom and Shannon (1994) by imposing a stronger differential version of the single crossing property and arguing from first-order conditions. We illustrate the importance of these results through examples involving holdup problems and optimal tax problems.

Edwards, Franklin R.

PD January 1996. **TI** Mutual Funds and Financial Stability. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/31; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 32. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G23, G14. **KW** Mutual Funds. Panics.
AB The purpose of this paper is to evaluate the potential for shareholder runs on mutual funds to destabilize financial markets. The possibility of systemic instability caused by shareholder runs on mutual funds has been cited as a reason for expanding bank-type prudential regulation (such as risk-based capital requirements) to mutual funds.

PD February 1996. **TI** Do Managed Futures Make Good Investments? **AU** Edwards, Franklin R.; Park, James M. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/32; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 29. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G13, G23, G24. **KW** Mutual Funds. Futures. Return.
AB This paper examines the performance of alternative managed futures investments both as stand-alone investments and as assets in diversified stock and bond portfolios. Several types of managed futures investments are examined for the period 1983-1992: a randomly-selected commodity traders advisors (CTA's), private pool or public futures fund; and a market portfolio of CTA's, private pools or public futures funds. For the 1983-92 period, an investment in a portfolio of either CTA's or pools provides both an attractive stand-alone investment and a portfolio asset. An investment in a randomly-selected CTA or pool is less attractive. In contrast, all investments in public futures funds make poor stand-alone investments and poor portfolio assets. Finally, the performance

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of managed futures investments in the subperiod 1989-92 is significantly poorer than in either the 1983-92 period or the 1983- 88 subperiod.

Edwards, Sebastian

PD April 1995. **TI** Why are Saving Rates so Different Across Countries?: An International Comparative Analysis. **AA** The World Bank and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5097; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 38. **PR** $5.00. **JE** E21, E62, H55. **KW** Savings Determinants. Social Security. Private Savings. Government Savings. Political Economy.

AB This paper analyzes the determinants of savings in the world economy and discusses why saving ratios have been so uneven across countries. A distinction is made between private and government savings, using panel data for 36 countries from 1970-1992. In particular, it is assumed that government savings are not completely exogenous and respond to both economic and political (strategic) determinants, along the lines of the recent literature on the political economy of macroeconomic policy. Using instrumental variables estimation methods it is found that per capita growth is one of the most important determinants of both private and public savings. The results indicate that government-run social security systems affect private savings negatively. In addition, the results provide some support for the political economy perspective to government finances, which evidences a different underlying process determining public savings. Public savings tend to be lower in countries with higher political instability. Higher government savings crowd out private savings, but in a less than proportional fashion. Higher levels of foreign savings -- i.e. reductions in the current account balance -- are associated with lower domestic (both private and public) saving rates, although the degree of offset is also less than proportional. The degree of financial development turns out to be another important determinant of private savings. The results are mixed regarding the role of borrowing constraints -- a topic deserving additional research attention.

Eisenbeis, Robert A.

TI The Role of Principal-Agent Conflicts in the 1980's Thrift Crisis. **AU** Cole, Rebel A.; Eisenbeis, Robert A.

PD April 1996. **TI** Commercial Banks and Real Estate Lending: The Texas Experience. **AU** Eisenbeis, Robert A.; Horvitz, Paul M.; Cole, Rebel A. **AA** Eisenbeis: University of North Carolina. Horvitz: University of Houston. Cole: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/15; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 15. **PR** no charge. **JE** G21, G28. **KW** Bank. Mortgage Lending. Real Estate. Real Estate Bank. Texas.

AB This paper examines the performance of Texas commercial banks specializing in mortgage lending during the difficult times of the late 1980's and early 1990's to investigate how representative was their experience as compared with that of banks across the country concentrating in real estate lending. The results show that Texas real estate banks (REB's) performed very poorly during the 1980's and early 1990's, but this was because the Texas REB's were clearly different from the majority of the banks classified as REB's in the rest of the country. In contrast to non-Texas real estate specializing banks, those in Texas banks put substantial assets into much riskier construction and development loans, and in loans on commercial property, such as office buildings, hotels and shopping centers. In a poor real estate market, these loans performed very poorly. The analysis indicates that the Texas experience is not a basis for rejecting the view that the commercial bank industry can safely replace the declining thrift industry as a major source of residential mortgage financing.

Eisenberg, Theodore

PD June 1996. **TI** The Litigious Plaintiff Hypothesis: Case Selection and Resolution. **AU** Eisenberg, Theodore; Farber, Henry S. **AA** Eisenberg: Cornell University. Farber: Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 364; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 27. **PR** $1.50. **JE** K41, D73. **KW** Litigation. Case Selection. Trials.

AB A central feature of the litigation process that affects case outcomes is the selection of cases for litigation. In this study, we present a theoretical framework for understanding the operation of this suit selection process and its relationship to the underlying distribution of potential claims and claimants. We implement the model empirically by assuming that individuals vary more in their litigiousness (inverse costs of litigation) than do corporations. This assumption, coupled with the case selection process we present, yields clear predictions on trial rates as a function of whether the plaintiff and defendant were individuals or corporations. The model also yields a prediction on the plaintiff's identity. Our empirical analysis, using data on over 200,000 federal civil litigations, yields results that are generally consistent with the theory. Lawsuits where the plaintiff is an individual are found to have higher trial rates and lower plaintiff win rates.

Ellickson, Bryan

PD August 1995. **TI** Intertemporal Insurance. **AU** Ellickson, Bryan; Penalva-Zuasti, Jose. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 742; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 28. **PR** $5.00. **JE** G12, G22, D51. **KW** Martingale. Dynamic Spanning. Counting Process. Insurance.

AB This paper applies techniques of intertemporal finance to insurance markets. The essential concepts employed are the Harrison and Kreps (1979) characterization of asset prices as martingales and the use of sequential trading to achieve dynamic spanning as formulated by Kreps (1982). Our ultimate goal is to develop this theory of intertemporal insurance in a continuous-time setting. However, in this paper we treat only discrete time. We apply "standard finance" as represented by Dothan (1990), Duffie (1988), or Huang and Litzenberger (1988) to insurance markets. Finally, we give a detailed illustration of the theory applied to a simple setting with two consumers.

Elton, Edwin J.

PD March 1995. **TI** Survivorship Bias and Mutual Fund Performance. **AU** Elton, Edwin J.; Gruber, Martin J.; Blake,

Christopher R. **AA** Elton and Gruber: New York University. Blake: Fordham University. **SR** New York University, Salomon Brothers Working Paper: S/95/14; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 31. **PR** not available. **JE** G23, G11, G12. **KW** Mutual Funds. Survivorship Bias.
AB Mutual fund attrition can create problems for a researcher, because funds that disappear tend to do so due to poor performance. In this paper we estimate the size of the bias by tracking all funds that existed at the end of 1976. When a fund merges we calculate the return, taking into account the merger terms. This allows a precise estimate of survivorship bias. In addition, we examine characteristics of both mutual funds that merge and their partner funds. Estimates of survivorship bias over different horizons and using different models to evaluate performance are provided.

PD April 1995. **TI** Fundamental Variables, APT, and Bond Fund Performance. **AU** Elton, Edwin J.; Gruber, Martin J.; Blake, Christopher R. **AA** Elton and Gruber: New York University. Blake: Fordham University. **SR** New York University, Salomon Brothers Working Paper: S/95/15; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 28. **PR** not available. **JE** G12, D84. **KW** Expectations. APT. Arbitrage. Bonds. Debt.
AB In this paper, we develop relative pricing (APT) models that are successful in explaining expected returns in the bond market. We utilize indexes as well as unanticipated changes in economic variables as factors driving security returns. An innovation in this paper is the measurement of the economic factors as changes in forecasts. The return indexes are the most important variables in explaining the time series of returns. However, the addition of the economic variables leads to a large improvement in the explanation of expected returns. We utilize our relative pricing models to examine the performance of bond funds.

PD May 1995. **TI** The Persistence of Risk-Adjusted Mutual Fund Performance. **AU** Elton, Edwin J.; Gruber, Martin J.; Blake, Christopher R. **AA** Elton and Gruber: New York University. Blake: Fordham University. **SR** New York University, Salomon Brothers Working Paper: S/95/13; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 23. **PR** not available. **JE** G12, G14, G23. **KW** Mutual Funds. Indexes.
AB This paper examines mutual fund predictability for common stock funds, using a sample free of survivorship bias, and measures performance using risk-adjusted returns. We reconfirm the hot hands result that high return can predict high return in the short run. Like Hendricks, Patel, and Zeckhauser, we find that this is a short-run phenomenon. However, using risk-adjusted returns to rank funds, we find that past performance is predictive of future risk-adjusted performance in both the short run and the longer run. Furthermore, when we utilize modern portfolio theory techniques to allocate capital among funds, we can construct a portfolio of funds based on prior data that significantly outperforms a rule based on past rank alone and that produces a positive risk-adjusted excess return. Throughout our study we are able to construct portfolios of funds that have small but statistically significant positive risk-adjusted returns during a period where mutual funds in general had negative risk-adjusted returns.

Engineer, Merwan

PD March 1994. **TI** Bargaining-Induced Transaction Demand for Fiat Money. **AU** Engineer, Merwan; Shi, Shouyong. **AA** Engineer: University of Guelph. Shi: University of Pennsylvania and Queen's University. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/10; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 52. **PR** no charge. **JE** E41, C73. **KW** Money. Game Theory. Search.
AB This paper demonstrates that bargaining in an anonymous sequential game can generate a transaction demand for fiat money. We introduce divisible quantities into the Kiyotaki and Wright (1991, 1993) search- theoretic framework and eliminate physical transaction costs, storage costs and information problems so that there is no absence of the coincidence of wants in matches. Agents bargain over quantities in Nash bargaining or sequential bargaining subgames. In these subgames agents transact excessive amounts of goods. Fiat money has value in equilibrium because it reduces the excess exchange of goods relative to barter. We characterize the equilibria of the model and discuss the implications of other bargaining games.

English, William B.

PD April 1996. **TI** Inflation and Financial Sector Size. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/16; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop.61, Federal Reserve Board, Washington, DC 20551. **PG** 32. **PR** no charge. **JE** E31, L14, E41. **KW** Inflation. Transactions Services. Financial Sector. Money Demand.
AB Traditionally, the cost of expected inflation has been seen as the "shoeleather cost" of going to the bank more often. This paper focuses on the other side of these transactions--i.e., on the increased production of financial services by financial firms. I construct a model in which households must make purchases either with cash or with costly transactions services produced by firms in the financial services sector. One can think of these services as being the use of a credit card or other method of paying without cash. In the model, a higher inflation rate leads households to substitute purchased transactions services for money balances. As a result, the financial services sector gets larger. A test of the model using cross- sectional data finds that the size of a nation's financial sector is strongly affected by its inflation rate. The empirical results provide an alternative way to measure the costs of inflation. These costs appear to be large.

Ennis, Sean

PD November 1995. **TI** The Northridge Earthquake: A Natural Experiment in Market Structure. **AA** University of California, Berkeley. **SR** University of California, Berkeley, Working Paper in Economics: 95/244; IBER, 156 Barrows Hall, University of California, Berkeley, CA 94720. **PG** 23. **PR** $3.50 U.S. and Canada; $7.00 foreign. **JE** I11, L11. **KW** Capacity. Identification. Hospitals.

AB This paper focuses on structural damage from the Northridge earthquake of 1994 as an exogenous shock to hospital capacity in the Los Angeles area. The exogenous shock allows us to identify the effect of reduced capacity on prices by avoiding the standard problem that market variables, such as prices and capacity, are typically determined endogenously. Hospitals in areas unaffected by the earthquake serve as a control group to establish expected prices in the absence of capacity changes. The findings are consistent with a significant positive price effect from the reduced capacity.

Estevao, Marcello

PD November 1995. **TI** The Role of Profits in Wage Determination: Evidence From U.S. Manufacturing. **AU** Estevao, Marcello; Tevlin, Stacey. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/48; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 24. **PR** no charge. **JE** J33, J31. **KW** Profit Sharing. Wages.
AB We estimate the effect of firms' profitability on wage determination for the American economy. Two standard bargaining models are used to illustrate the problems caused by the endogeneity of profits-per- worker in a real wage equation. The profit-sharing parameter can be identified with instruments which shift demand. Using information from the input-output table, we create demand-shift variables for 63 4-digit sectors of the U.S. manufacturing sector. The I.V. estimates show that profit-sharing is a relevant and widespread phenomenon. The elasticity of wages with respect to profits-per-worker is seven times as large as OLS estimates here and in previous papers. Sensitivity analysis of the profit-sharing parameter controlling for the extent of unionization and product market concentration reinforces our results.

PD January 1996. **TI** Measurement Error and Time Aggregation: A Closer Look at Estimates of Output-Labor Elasticities. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/02; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 25. **PR** no charge. **JE** D24, E23, C13. **KW** Labor Elasticity. Production Function. Time. Aggregation. Effort.
AB This paper analyzes the effect of time aggregation on estimates of the elasticities of output with respect to employment and to average hours of work. The main goal is to get accurate estimates of production function parameters. Low frequency data generate better estimates of output-employment elasticity while high frequency data generate better estimates of output-average hours elasticity. This result comes from the fact that time aggregation increases (decreases) the bias in the estimate of the elasticity with respect to average hours (employment). Estimations of these elasticities at different data frequencies and numerical simulations illustrate this point. In addition, this estimation methodology shows that the elasticity of output with respect to employment is bigger than the elasticity of output with respect to average hours, as theory predicts, contradicting an established result in the literature.

Evans, Martin D.D

PD May 1995. **TI** Peso Problems: Their Theoretical and Empirical Implications. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/11; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 62. **PR** not available. **JE** F31, D84, F33. **KW** Peso Problem. Expectations. Information. Rational Bubbles.
AB This paper examines how the theoretical and empirical implications of asset pricing models are affected by the presence of a "peso problem"; a situation where the potential for discrete shifts in the distribution of future shocks to the economy affects the rational expectations held by market participants. The paper examines the ways in which "peso problems" can induce behavior in asset prices that apparently contradicts conventional rational expectations assumptions. This analysis covers the relationship between realized and expected returns, asset prices and fundamentals, and the determination of risk premia.

TI The Term Structure of Credit Risk: Estimates and Specification Tests. **AU** Cumby, Robert E.; Evans, Martin D.D.

PD August 1995. **TI** Dividend Variability and Stock Market Swings. **AA** London Business School and New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/22; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 35. **PR** not available. **JE** G14, G12, D84, C32. **KW** Dividends. Efficient Markets. Switching Processes.
AB This paper examines the extent to which swings in stock prices can be related to variations in the discounted value of expected future dividends when investors face uncertainty about their future behavior. First, I present evidence of instability in time series behavior of dividends and discount rates over the past 120 years and show that it can be well represented by switching processes. I then develop a model for the log dividend-price ratio in which investors rationally anticipate the future switches in the dividend and discount rate processes. Estimates of the model reveal that changing forecasts of future dividend growth account for more than 90% of the predictable variations in dividend-prices. The estimates also imply that process switches contribute significantly to the apparent "excess volatility" of dividend-prices and the predictability of stock returns.

Fair, Ray C.

PD February 1995. **TI** Evaluating Alternative Monetary Policy Rules. **AU** Fair, Ray C.; Howrey, E. Philip. **AA** Fair: Yale University. Howrey: University of Michigan. **SR** Yale University, Cowles Foundation Discussion Paper: 1091; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 25. **PR** no charge. **JE** E52, C61, C32. **KW** Monetary Policy. Optimal Control. Policy Rules.
AB This paper examines monetary policy from an optimal control perspective. Three loss functions are minimized for each of three models, and the results are compared. The three loss functions target nominal growth, real growth, and inflation, respectively. The three models are a small structural model, a

VAR model, and a large structural model. A numerical procedure is presented that can handle a variety of loss functions and models.

PD January 1996. **TI** Explaining the Labor Force Participation of Women 20-24. **AU** Fair, Ray C.; Macunovich, Diane J. **AA** Fair: Yale University. Macunovich: Williams College. **SR** Yale University, Cowles Foundation Discussion Paper: 1116; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 22. **PR** no charge. **JE** J21, J16. **KW** Labor Force. Relative Income.

AB Between about the mid 1960's and the late 1970's there was a remarkable rise in the labor force participation of women and then a leveling off that has persisted through the mid 1990's. This paper attempts to explain the labor force participation of women 20-24 over this period. A "relative income" variable is constructed based on Easterlin's (1980) relative income hypothesis, and this is found to be an important explanatory variable. Easterlin's "cohort wage" hypothesis is also used in the analysis. The basic equation estimated does very well in various tests that were performed on it, and it appears to explain well the rapid rise and then leveling off of the labor force participation of young women.

PD April 1996. **TI** Testing the Standard View of the Long-Run Unemployment-Inflation Relationship. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1121; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 28. **PR** no charge. **JE** E31, E24. **KW** Unemployment. Inflation.

AB The results in this paper, based on estimating and testing price equations for 30 countries, do not support the standard view of the long-run relationship between unemployment and inflation. They overwhelmingly reject the dynamics implied by the standard view. Wage equations are also estimated and tested. The paper also attempts to estimate the functional form of the relationship between measures of demand pressure and price and wage levels, but no strong conclusions emerge.

Fallick, Bruce C.

PD January 1995. **TI** Unionization and Acquisitions. **AU** Fallick, Bruce C.; Hassett, Kevin A. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/04; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 22. **PR** no charge. **JE** G34, J53. **KW** Union. Acquisition. Merger. Matching. Wealth-Transfer.

AB This paper explores the question of whether unionization influences the decision of a firm to merge with another firm. We combine merger data, taken from COMPUSTAT, with firm-specific union data obtained from several sources. An econometric matching model allows us to isolate the effects of unionization on the probability that the firms studied will be involved in a merger. We find that unionization increases the likelihood that a firm will enter the acquisition market and that firms with similar union statuses tend to merge with one another.

PD April 1995. **TI** A Review of the Recent Empirical Literature on Displaced Workers. **AA** Board of Governors of the Federal Reserve Bank. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/14; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 41. **PR** no charge. **JE** J64, J31, J24. **KW** Displaced Worker. Plant Closings. Unemployment. Wage Losses.

AB This paper summarizes recent empirical work on displaced workers. Although widely distributed, displacement is strongly countercyclical and concentrated in less-educated occupations and in industries and states doing relatively poorly. There has been a shift toward plant closings and more senior workers since 1980, but no trend in total numbers. Displaced workers experience more nonemployment than nondisplaced workers, but the difference fades after several years. Earnings losses persist. Greater tenure and changing industry or occupation increases nonemployment and wage losses. Outcomes are heavily influenced by surrounding economic conditions. There are no differences among age, race, or sex groups.

Farber, Henry S.

PD January 1995. **TI** Are Lifetime Jobs Disappearing? Job Duration in the United States: 1973-1993. **AA** Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 341; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 26. **PR** $2.00. **JE** J60. **KW** Long-Term Jobs. Job Mobility. Turnover. Tenure.

AB The public believes that job security has deteriorated dramatically in the United States. In this study, I examine job durations from eight supplements to the Current Population Survey (CPS) administered between 1973 and 1993 in order to determine if, in fact, there has been a systematic change in the likelihood of long-term employment. In order to measure changes in the distribution of job durations, I examine changes in selected quintiles (the median and the 0.9 quantile) of the distribution of duration of jobs in progress. I also examine selected points in the cumulative distribution function including the fraction of workers who have been with their employer 1) less than one year, 2) more than ten years, and 3) more than twenty years. The central findings are clear. By the measures I examine, there has been no systematic change in the overall distribution of job duration over the last two decades, but the distribution of long-term jobs across the population has changed in two ways. First, individuals, particularly men, with little education (less than twelve years) are substantially less likely to be in on jobs today than they were twenty years ago. Second, women with at least a high-school education are substantially more likely to be in long jobs today than they were twenty years ago.

PD January 1995. **TI** Common Interest or Common Polities? Reinterpreting the Democratic Peace. **AU** Farber, Henry S.; Gowa, Joanne. **AA** Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 342; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 30. **PR** $1.50. **JE** D72, D74. **KW** Democracy. War. International Relations. Disputes. Alliances.

AB The central claim of a rapidly growing literature in international relations is that members of pairs of democratic states are much less likely to engage each other in war or in serious disputes short of war than are members of other pairs of states. Our analysis does not support this claim. Instead, we find that the dispute rate between democracies is lower than is that of other country pairs only after World War II. Before 1914 and between the World Wars, there is no difference between the war rates of members of democratic pairs of states and those of members of other pairs of states. We also find that there is a higher incidence of serious disputes short of war between democracies than between nondemocracies before 1914. We attribute this cross-temporal variation in dispute rates to changes in patterns of common and conflicting interests across time. We use alliances as an indicator of common interests to show that cross-temporal variation in dispute rates conforms to variations in interest patterns for two of the three time periods in our sample.

PD March 1996. **TI** The Changing Face of Job Loss in the United States, 1981-1993. **AA** Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 360; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 39. **PR** $2.50. **JE** J63, J62. **KW** Displacement. Job Loss.
AB I examine changes in the incidence and consequences of job loss by reported cause between 1981 and 1993 using data from Displaced Workers Surveys (DWS), conducted as part of the Current Population Survey (CPS) in even years since 1984. The overall rate of job loss is up somewhat in the 1990's. The increase in job loss is larger for older and more educated workers, but younger and less-educated workers continue to have the highest rates of job loss. The rate of job loss due to plant closings has been fairly constant over time while the rate of job loss due to "slack work" moves counter-cyclically. The most substantial changes are increases in the last several years in rates of job loss due to "position or shift abolished" and for other (unspecified) reasons. These changes in composition are larger among more educated workers. Next I examine the consequences of displacement for several post- displacement labor market outcomes, including the probability of employment, full-time/part-time status, earnings, job stability, and self-employment status. More educated workers suffer less economic loss relative to income due to displacement than to the less educated. The more educated have higher post-displacement employment rates, are more likely to be employed full-time, have more stable employment histories, and suffer smaller proportional earnings losses on average.

TI The Litigious Plaintiff Hypothesis: Case Selection and Resolution. **AU** Eisenberg, Theodore; Farber, Henry S.

Feddersen, Timothy

PD December 1994. **TI** Voting Behavior and Information Aggregation in Elections With Private Information. **AU** Feddersen, Timothy; Pesendorfer, Wolfgang. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1117; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 26. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D72, D82, D84, D81. **KW** Political Economy. Voting. Elections.
AB We analyze two-candidate elections in which voters are uncertain about the realization of a state variable that affects the utility of all voters. Each voter has noisy private information about the state variable. We show that the fraction of voters whose vote depends on their private information goes to zero as the size of the electorate goes to infinity. Nevertheless elections fully aggregate information in the sense that the chosen candidate would not change if all private information were common knowledge among voters. We also show that the equilibrium voting behavior is to a large extent determined by the electoral rule, i.e., if a candidate is required to get at least x percent of the vote in order to win the election then in equilibrium this candidate gets very close to x percent of the vote with probability close to one.

Fehr, Hans

PD April 1995. **TI** Generational Accounting in General Equilibrium. **AU** Fehr, Hans; Kotlikoff, Laurence J. **AA** Fehr: Universitat Tubingen. Kotlikoff: Boston University and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5090; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 28. **PR** $5.00. **JE** D91, E22, E62, H22, H25. **KW** Fiscal Policy. Generational Accounting. Life-Cycle Model. Tax. Capital Adjustment.
AB This paper shows how changes in generational accounts relate to the generational incidence of fiscal policy. To illustrate the relationship, it uses the Auerach-Kotlikoff Dynamic Life-Cycle Simulation Model to compare policy-induced changes in generational accounts with actual changes in generations' utilities. The paper considers a wide range of policies in closed and small open economies as well as economies with and without capital adjustment costs. In general, changes in generational accounts appear to provide fairly good approximations to generations' actual changes in utilities. The approximations are better for living generations. They are worse for policies that involve significant changes in the degree of tax progressivity and for economies with sizable capital-adjustment costs. Finally, generational accounting needs to be adjusted in the case of small open economies to take into account the fact that the incidence of corporate taxation is on labor. The method of adjustment is simply to allocate changes in corporate tax revenues to generations in proportion to their changes in labor supply.

Fernald, John G.

TI Are Apparent Productive Spillovers a Figment of Specification Error? **AU** Basu, Susanto; Fernald, John G.

Figlewski, Stephen

PD Winter 1995. **TI** Remembering Fischer Black. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/16; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 5. **PR** not available. **JE** G13, B31, B21. **KW** Options. Fischer Black. Black-Scholes.
AB An obituary in memory of Black, one of the major figures in modern finance.

TI Streamlining Monte-Carlo Simulation With the Quasi-Analytic Method: An Analysis of a Path- Dependent Option Strategy. **AU** Chidambaran, N.K.; Figlewski, Stephen.

Fisher, Jonas D.M

PD May 1995. **TI** (S,s) Inventory Policies in General

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Equilibrium. **AU** Fisher, Jonas D.M.; Hornstein, Andreas. **AA** University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9514; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 30. **PR** $10.00. **JE** E01, E32, E22. **KW** Inventories. Business Cycles. Search. Matching.

AB We study the aggregate implications of (S,s) inventory policies in a dynamic general equilibrium model. Firms in the model's retail sector face idiosyncratic demand risk, and (S,s) inventory policies are optimal because of fixed order costs. The model economy replicates salient features of the business cycle and reconciles evidence that orders are more volatile than sales, and that inventory investment is positively correlated with sales. There are two main results. first, we find that general equilibrium effects and the optimal order size are important for the economy's response to exogenous shocks. Second, we find that key features of our results are independent of the presence of idiosyncratic risk.

TI Asset Pricing Lessons for Modeling Business Cycles. **AU** Boldrin, Michele; Christiano, Lawrence J.; Fisher, Jonas D.M.

TI Tobin's q and Asset Returns: Implications for Business Cycle Analysis. **AU** Christiano, Lawrence J.; Fisher, Jonas D.M.

Fisher, Mark

PD January 1995. **TI** Fitting the Term Structure of Interest Rates With Smoothing Splines. **AU** Fisher, Mark; Nychka, Douglas; Zervos, David. **AA** Fisher and Zervos: Board of Governors of the Federal Reserve System. Nychka: North Carolina State University. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/01; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 21. **PR** no charge. **JE** G12, C14. **KW** Term Structure. Smoothing Splines. Cross Validation.

AB We describe a technique for fitting the term structure of interest rates using smoothing splines, which incorporate a "roughness" penalty. An increase in the penalty reduces the effective number of parameters. We use generalized cross validation to choose adaptively the penalty and hence the effective number of parameters. We show how our technique can be used to spline an arbitrary transformation of the discount function, using a B-spline bases. Our Monte Carlo simulations and estimation results suggest that fitting a smoothing spline to the forward rate curve using generalized cross validation produces the best results.

PD April 1996. **TI** Around and Around: The Expectations Hypothesis. **AU** Fisher, Mark; Gilles, Christian. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/17; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 13. **PR** no charge. **JE** E43, G12. **KW** Expectations Hypothesis. Yield Curve. Arbitrage.

AB We show how to construct arbitrage-free models of the term structure of interest rates in which various expectations hypotheses can hold. McCulloch (1993) provided a Gaussian non-Markovian example of the unbiased expectations hypothesis (U-EH), thereby contradicting the assertion by Cox, Ingersoll, and Ross (CIR,1981) that only the so- called local expectations hypothesis could hold. We generalize that example in three ways: (i) We characterize the U-EH in terms of forward rate; (ii) we extend this characterization to a class of expectations hypotheses that includes all of those considered by CIR; and (iii) we construct stationary Markovian and non-Gaussian economies. The building block is a maturity-dependent vector that travels around a circle at a constant speed as maturity increases.

Fluck, Zsuzsanna

PD December 1994. **TI** The Predictability of Stock Returns: A Cross-Sectional Simulation. **AU** Fluck, Zsuzsanna; Malkiel, Burton G.; Quandt, Richard E. **AA** Fluck: New York University. Malkiel and Quandt: Princeton University. **SR** New York University, Salomon Brothers Working Paper: S/95/9; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 14. **PR** not available. **JE** G12, G14. **KW** Return Predictability. Portfolio Simulation. Market Microstructure.

AB This paper investigates whether predictable patterns that previous empirical work in finance have isolated appear to be persistent and exploitable by portfolio managers. On a sample that is free from survivorship bias we construct a test wherein we simulate the purchases and sales an investor would undertake to exploit the predictable patterns, charging the appropriate transaction costs for buying and selling and using only publicly available information at the time of decisionmaking. We restrict investment to large companies only to assure that the full cost of transactions is properly accounted for. We confirmed on our sample that contrarian strategies yield sizable excess returns after adjusting for risk, as measured by beta. Using analysts' estimates of long term growth we construct a test of the Lakonishok, Shleifer and Vishny (1994) hypothesis. We reach the conclusion that, contrary to Lakonishok et al. (1994), the superior performance of contrarian strategies can not be explained by the superior performance of stocks with low estimated growth rates.

PD February 1995. **TI** The Optimality of Debt Versus Outside Equity. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/4; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 25. **PR** not available. **JE** G34, L14. **KW** Security Design. Cash Flows. Moral Hazard. Debt. Outside Equity.

AB This paper demonstrates that in contrast with previous results in the security design literature, nonverifiability of cash flows and managerial ability to divert cash flows as private benefits is compatible with outside equity financing. The only outside equity that is compatible with nonverifiability of cash flows and managerial ability to divert cash flows as private benefits is outside equity with unlimited life, and secondly that the entrepreneur-manager is willing to issue outside equity with unlimited life. Furthermore, we find that, consistent with empirical evidence, projects with stable cash flows use debt financing and those with volatile cash flows use outside equity.

Flyer, Frederick

TI Technical Standards Coalition for Network Goods.

AU Economides, Nicholas; Flyer, Frederick.

Foray, Dominique

TI Quandaries in the Economics of Dual Technologies and Spillovers From Military to Civilian Research and Development. AU Cowan, Robin; Foray, Dominique.

Fortin, Nicole M.

TI Labor Market Institutions and the Distribution of Wages, 1973-1992: A Semiparametric Approach. AU DiNardo, John; Fortin, Nicole M.; Lemieux, Thomas.

Fudenberg, Drew

PD January 1995. TI When are Non-Anonymous Players Negligible? AU Fudenberg, Drew; Levine, K. David; Pesendorfer, Wolfgang. AA Fudenberg: Harvard University. Levine: University of California, Los Angeles. Pesendorfer: Northwestern University. SR Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1114; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. PG 25. PR $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. JE C72, C73. KW Anonymity. Continuum Models. Dynamic Games. Short Run. Long Run.

AB We examine games played by a single large player and a large number of opponents who are small, but not anonymous. If the play of the small players is observed with noise, and if the number of actions the large player controls is bounded independently of the number of small players, then as the number of small players grows, the equilibrium set converges to that of the game where there is a continuum of small players. The paper extends previous work on the negligibility of small players by dropping the assumption that small players' actions are "anonymous". That is, we allow each small player's actions to be observed separately, instead of supposing that the small players' actions are only observed through their effect on an aggregate statistic.

TI Maintaining a Reputation Against a Long-Lived Opponent. AU Celentani, Marco; Fudenberg, Drew; Levine, K. David; Pessendorfer, Wolfgang.

Gamble, A.B

PD March 1995. TI A Linear Programming Framework for Network Games. AU Gamble, A.B.; Pazgal, Amit I. AA Northwestern University. SR Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1119; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. PG 27. PR $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. JE C71, C44, C61. KW Linear Programming. Network Games. Core. Oval. Optimal Solutions.

AB In this paper we present a linear programming game that is motivated by the assignment game of Shapley and Shubik. This new game is a very natural generalization of many of the network optimization games that have been well studied in the past. We first show that for this general class of games the core is nonempty. In fact any dual optimal solution of the underlying linear programming problem gives rise to a core allocation. We also show that for a particular subclass of games (which include the assignment, max flow and location games) the core exactly coincides with the set of optimal dual solutions. Additionally we study the relationship between this linear programming game and the production game of Owen.

Geanakoplos, John

PD March 1996. TI Two Brief Proofs of Arrow's Impossibility Theorem. AA Yale University. SR Yale University, Cowles Foundation Discussion Paper: 1123; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. PG 6. PR no charge. JE D11, D71. KW Arrow. Neutrality Transitivity. Independence. Unanimity. Dictatorship.

AB The first proof shows the Arrow's axioms guarantee neutrality: every social choice must be made in exactly the same way, which quickly leads to dictatorship. The second proof clarifies the last step, and also confirms the intimate connection between Arrow's Impossibility Theorem and the Condorcet triple. The second proof shows that a doubly pivotal agent must be a dictator; the Condorcet triple guarantees the existence of a doubly pivotal agent. Neutrality guarantees the existence of a (symmetrically) doubly pivotal agent.

Gentry, William M.

PD April 1995. TI The Distributional Effects of the Tax Treatment of Child Care Expenses. AU Gentry, William M.; Hagy, Alison P. AA Gentry: Duke University and National Bureau of Economic Research. Hagy: Pomona College. SR National Bureau of Economic Research, Working Paper: 5088; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 36. PR $5.00. JE H21, H24, H31, H53, J13. KW Child Care. Tax Credits. Distributional Effects.

AB Tax relief for child care expenses, encompassing the Child Care Tax Credit and Dependent Care Assistance Plans, is the largest federal government program in the United States aimed at helping families with child care. We examine the distributional effects of these policies among families with children using both the National Child Care Survey and tax return data. Among families that use tax relief, the benefits average 1.24 percent of family income. Benefits as a percentage of income vary systematically over the income distribution. Despite being regressive at low income levels (mainly due to the credit being non- refundable), tax relief is progressively distributed over most of the income distribution with the ratio of benefits to income falling above the bottom quintile of the income distribution. The benefits of tax relief also vary among families with the same income depending on a family's structure and its labor market and child care choices.

Ghiglino, Christian

TI Multiplicity of Equilibria. AU Tvede, Mich; Ghiglino, Christian.

Giddy, Ian

PD July 1995. TI European Financial Market Integration: Clearance and Settlement Issues. AU Giddy, Ian; Saunders, Anthony; Walter, Ingo. AA New York University. SR New York University, Salomon Brothers Working Paper: S/95/19; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. PG 41. PR not available. JE G15, F36, F15. KW Financial Integration. European Union. EU.

AB In this paper, we examine the barriers posed to European financial market integration by imperfections and frictions relating to the clearance and settlement of equity trades.

Gilboa, Itzhak

PD April 1995. TI Case-Based Knowledge and Planning. AU Gilboa, Itzhak; Schmeidler, David. AA Gilboa: Northwestern University. Schmeidler: Tel Aviv University and Ohio State University. SR Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1127; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208-2014. PG 37. PR $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. JE D44, D81, C83. KW Decision Theory. Risk. Learning.
AB "Case-Based Decision Theory" is a theory of decision making under uncertainty, suggesting that people tend to choose acts that performed well in similar cases they recall. The theory has been developed from a decision-/game-/economic-theoretical point of view, as a potential alternative to expected utility theory. In this paper we attempt to reconsider CBDT as a theory of knowledge representation and of planning, to contrast it with the rule-based approach, and to study its implications regarding the process of induction.

PD November 1995. TI History Dependent Brand Switching: Theory and Evidence. AU Gilboa, Itzhak; Pazgal, Amit I. AA Gilboa: Northwestern University and University of Pennsylvania. Pazgal: Northwestern University. SR Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1146; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. PG 33. PR $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. JE D11, D12, C35, M31. KW Brand Switching. Random Utility. Brand Loyalty. Variety Seeking.
AB We present a model of brand-switching in which a consumer's impression of each brand is based on her memory of past consumption of this brand, and is stochastically updated whenever the brand is consumed. In the ordinal version of the model, consumer's memory is an ordering of the available brands. The top brand is chosen and consumed, and may therefore move to a different ranking. In the cardinal version, the consumer remembers a "cumulative utility index" per brand, and, when a brand is consumed, the index is updated by the addition of a random variable, interpreted as "instantaneous utility." In both versions of the model it may be assumed that the consumer may sometimes be "dormant," choosing the same brand out of inertia, or that she is always "active," re-evaluating her decision based on her cumulative. We prove that, in all versions, the frequencies of choice converge, with probability 1, to limit frequencies which can be computed from the model's parameters. We also that, under mild assumptions, every sequence of choices would have a positive probability. We test the ordinal model empirically, using scanner data on purchases of crackers, yogurts, and catsups. We show that both the "order effect" and the "inertia effect" exist. Specifically, the ordinal model performs significantly better than its restricted version, in which only the last brand is recalled. Similarly, the model performs significantly better with the inertia assumption than without it.

Gilchrist, Simon

PD October 1995. TI Evidence on the Role of Cash Flow for Investment. AU Gilchrist, Simon; Himmelberg, Charles P. AA Gilchrist: Boston University. Himmelberg: Columbia University. SR Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/29; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. PG 25. PR $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). JE E32, L16, G32. KW Cash Flow. Business Cycles. Financial Accelerator. Credit Rationing.
AB Recent work in macroeconomics argues that imperfections in capital markets may lead to business cycle fluctuations by propagating relatively modest shocks. Evidence for such a mechanism (also known as the "financial accelerator") consists largely of firm-level studies showing that cash flow is an important predictor of investment opportunities. In this paper, we develop a framework for estimating the extent to which the predictive power of cash flow can be attributed to its role as a "fundamental" versus its role in alleviating credit frictions. For firms with access to commercial paper and bond markets, we find that the perfect capital markets model of investment can fully account for the role of cash flow. For firms with only limited access to capital markets (as indicated by lack of participation in public debt markets) however, investment appears to be "excessively" sensitive to fluctuations in cash flow. These results thus clarify the role of cash flow in investment equations and provide support for the existence of a financial accelerator.

Gilles, Christian

PD February 1996. TI Bubbles as Payoffs at Infinity. AU Gilles, Christian; LeRoy, Stephen F. AA Gilles: Board of Governors of the Federal Reserve System. LeRoy: University of Minnesota. SR Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/09; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. PG 23. PR no charge. JE G12, C14. KW Charges. Asset Prices. Money Market.
AB We define rational bubbles to be securities with payoffs occurring in the infinitely distant future and investigate the behavior of bubble values. We extend our analysis to a setting of uncertainty. In an infinite horizon arbitrage-free model of asset prices, we interpret the money market account as the value of a particular bubble; a similar interpretation holds for other assets related to the state-price deflator and to payoffs on bonds maturing in the distant future. We present three applications of this characterization of bubbles.

TI Around and Around: The Expectations Hypothesis. AU Fisher, Mark; Gilles, Christian.

Gilles, Robert P.

PD October 1995. TI Decentralization in Replicated Club Economies With Multiple Private Goods. AU Gilles, Robert P.; Scotchmer, Suzanne. AA Gilles: Virginia Polytechnic Institute and State University. Scotchmer: University of California, Berkeley. SR University of California, Berkeley, Working Paper in Economics: 95/243; IBER, 156 Barrows Hall, University of California, Berkeley, CA 94720. PG 29. PR $3.50 U.S. and Canada; $7.00 foreign. JE D51, D71, C62. KW Clubs. Decentralization.

Core. Convergence.
AB We show that "exhaustion of blocking opportunities" is a sufficient condition such that every allocation in the core of a replicated club economy can be decentralized as a competitive equilibrium, and that a related condition "efficient scale" is a necessary condition such that any allocation in the core can be decentralized. Efficient scale is defined with respect to the economy as a whole, and not with respect to individual club sizes. These decentralization results do not require the Euclidean structure an monotonicity assumed in Lindahl equilibrium, do not require convexity of preferences or costs, and do not require the strong assumption that private goods are "essential".

Gokhale, Jagadeesh

TI The Annuitization of Americans' Resources: A Cohort Analysis. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J.; Sabelhaus, John; Weil, David N.

Goldman, Steven M.

PD January 1996. **TI** Cost Optimization in the SIS Model of Infectious Disease With Treatment. **AU** Goldman, Steven M.; Lightwood, James. **AA** University of California, Berkeley. **SR** University of California, Berkeley, Working Paper in Economics: 96/245; IBER, 156 Barrows Hall, University of California, Berkeley, CA 94720. **PG** 25. **PR** $3.50 U.S. and Canada; $7.00 foreign. **JE** I11, D62. **KW** Cost Optimization. Infectious Disease. SIS Model.
AB We consider the intertemporal social optimization problem of minimizing the present value of the costs incurred from both disease and treatment. Though the analysis is complicated by the analytical failure of concavity, we are able to substantially characterize both the long run equilibria and the adjustment paths. The cost minimizing program is shown to exhibit a tendency towards decreased levels of treatment in the presence of higher disease levels. The socially optimal program is compared to individually rational behavior and the inefficiencies in private behavior from the infection externality are shown to cause potentially large increases in the equilibrium rate of infection.

Gordon, Robert J.

PD April 1995. **TI** Is There a Tradeoff Between Unemployment and Productivity Growth? **AA** Northwestern University and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5081; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 51. **PR** $5.00. **JE** E22, E24, O47, P52. **KW** Productivity. Unemployment. Capital Accumulation. Convergence. Country Comparisons.
AB This paper shows how misleading is the facile contrast of Europe following a path of high productivity growth, high unemployment, and relatively greater income equality, in contrast to the opposite path being pursued by the United States. While structural shocks may initially create a positive tradeoff between productivity and unemployment, they set in motion a dynamic path of adjustment involving capital accumulation or decumulation that in principle can eliminate the tradeoff. The main theoretical contributions of this paper are to show how a productivity-unemployment tradeoff might emerge and how it might subsequently disappear as this dynamic adjustment path is set in motion. Its empirical work develops a new data base for levels and growth rates of output per hour, capital per hour, and multifactor productivity in the G-7 nations both for the aggregate economy and for nine sub-sectors. It provides regression estimates that decompose observed differences in productivity growth across sectors. It finds that much of the productivity growth advantage of the four large European countries over the United States is explained by convergence and by more rapid capital accumulation, and that the only significant effect of higher unemployment is to cause capital accumulation to decelerate, thus reducing the growth rate of output per hour relative to multi-factor productivity.

Gorton, Gary

PD April 1995. **TI** Banks and Derivatives. **AU** Gorton, Gary; Rosen Richard. **AA** Gorton: University of Pennsylvania and National Bureau of Economic Research. Rosen: University of Pennsylvania. **SR** National Bureau of Economic Research, Working Paper: 5100; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 33. **PR** $5.00. **JE** G12, G21, G24. **KW** Financial Derivatives. Commercial Banks. Swaps. Interest Rate Risk.
AB In the last ten to fifteen years financial derivative securities have become an important, and controversial, product for commercial banks. The controversy concerns whether the size, complexity, and risks associated with these securities, the difficulties with accurately reporting timely information concerning the value of firms' derivative positions, and the concentration of activity in a small number of firms, has substantially increased the risk of collapse of the world banking system. Despite the widespread attention to derivatives, there has been little systematic analysis. We estimate market values and interest-rate sensitivities of interest rate swap positions of U. S. commercial banks to empirically address the question of whether swap contracts have increased or decreased systematic risk in the U. S. banking system. We find that the banking system as a whole faces little net interest-rate risk from swap portfolios.

Gottardi, Piero

PD June 1995. **TI** Generic Existence of Sunspot Equilibria: The Real Asset Case. **AU** Gottardi, Piero; Kajii, Atsushi. **AA** Gottardi: Universita di Venezia. Kajii: University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/12; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 25. **PR** no charge. **JE** C62, D84, D52, D43. **KW** Sunspots. Incomplete Markets. Endogenous Uncertainty.
AB This paper establishes the generic existence of sunspot equilibria in a standard two period exchange economy with real assets. We show that for a generic choice of utility functions and endowments, there exists an open set of real asset structures whose payoffs are independent of sunspots such that the economy with this asset structure has a regular sunspot equilibrium. This result also clarifies the relationship between equilibrium multiplicity and existence of sunspot equilibria. Our technique is very general and can be applied to other frameworks as the overlapping generations model with sunspots.

Gowa, Joanne

TI Common Interest or Common Polities? Reinterpreting the Democratic Peace. **AU** Farber, Henry S.; Gowa, Joanne.

Gozalo, Pedro

TI A Nonparametric Test of Conditional Independence. **AU** Linton, Oliver B.; Gozalo, Pedro.

Grant, Simon

PD July 1995. **TI** Information Externalities, Share-Price Based Incentives and Managerial Behaviour. **AU** Grant, Simon; King, Stephen; Polak, Ben. **AA** Grant and King: Australian National University. Polak: Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1107; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 23. **PR** no charge. **JE** D82, L21, J33. **KW** Incentives. Managerial Compensation. Asymmetric Information.

AB We survey recent theoretical research on the effects of short-term share-price based managerial incentive schemes. Such schemes can induce inefficient managerial behavior in both hidden action and hidden type contexts. These problems arise from informational asymmetries: managers take actions to manipulate the information flow rather than to maximize firm value. More generally, imperfect transmission of information between managers and shareholders or between managers of different firms can lead to similar distortions even when the parties' interests are aligned.

PD October 1995. **TI** Preference for Information. **AU** Grant, Simon; Kajii, Atsushi; Polak, Ben. **AA** Grant: Australian National University. Kajii: University of Pennsylvania. Polak: Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1114; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 43. **PR** no charge. **JE** D81, D11, D83. **KW** Information. Risk. Non-Expected Utility. Dynamic Choice.

AB What is the relationship between an agent's attitude towards information, and her attitude towards risk? If an agent always prefers more information, does this imply that she obeys the independence axiom? We provide a substitution property on preferences that is equivalent to the agent (intrinsically) liking information in the absence of contingent choices. We use this property to explore both questions, first in general, then for recursive smooth preferences, and then in specific recursive non-expected utility models. Given smoothness, for both the rank dependence and betweenness models, if an agent is information- loving then her preferences can depart from Kreps & Porteus's (1978) temporal expected utility model in at most one stage. This result does not extend to quadratic utility. Finally, we give several conditions such that, provided the agent intrinsically likes information, Blackwell's (1953) result holds; that is, she will always prefer more informative signals, whether or not she can condition her subsequent behavior on the signal.

Gravelle, Toni

PD January 1995. **TI** What is Old is New Again. **AA** University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9501; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 20. **PR** $10.00. **JE** E41, C72. **KW** Money Demand. Search.

AB Formal modeling of money's origin and function as medium of exchange has until recently been elusive. However, the advent of search-based models of money has contributed to a renewed interest in modeling money's medium of exchange function. As well as exploring the origins of commodity money, the search-based models of money allow for the endogenous emergence of valued fiat currency as well as analysis of other substantive monetary issues such as the rate of return dominance phenomena. This paper offers a review of the different search-based models of money and their findings. As well, this paper endeavors to relate and compare these new insights to some of the ideas put forward by late nineteenth- and twentieth-century theorists on the origins of money as a medium of exchange. This is done in order to give some historical perspective to these search models of money as well as to outline further avenues of research in modeling money as a medium of exchange.

Green, Edward J.

PD September 1995. **TI** A Rudimentary Model of Search With Divisible Money and Prices. **AU** Green, Edward J.; Zhou, Ruilin. **AA** Green: Federal Reserve Bank of Minneapolis. Zhou: University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/17; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 18. **PR** no charge. **JE** E41, D83, C72. **KW** Money Demand. Search.

AB We consider a version of Kiyotaki and Wright's monetary search model in which agents can hold arbitrary amounts of divisible money. A continuum of stationary equilibria, indexed by the aggregate real- money stock, exist with all trading occurring at a single price. There is always a maximum level of the real money stock consistent with existence of such an equilibrium. In the limit, as trading becomes faster relative to discounting, any real money stock becomes feasible in such an equilibrium. In contrast to the original Kiyotaki-Wright model, higher equilibrium real money stocks unambiguously correspond to higher welfare.

Green, Gordon R.

PD March 1995. **TI** Market Institutions and Core Allocations. **AA** University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9503; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 17. **PR** $10.00. **JE** C72, L22. **KW** Institutions. Game Theory.

AB We seek to provide a method of analysis that will, in applications, allow us to explain why we observe the market institutions that we do. We define a market by a set of agents, their types, preferences and beliefs, and a set of resource feasible allocations. Any process used to determine an allocation is interpreted as a set of market institutions. We maintain the assumption that we may model as a noncooperative game any such set of market institutions and we consider only payoffs that are obtainable in Nash equilibria of such games. However, we drop the assumption that the game is exogenously given and immutable. We assume that market institutions are created, and may be circumvented, in order to capture "gains from trade." An allocation game is any game whose outcomes correspond to some allocation. Payoffs are obtainable if they are obtainable in a Nash equilibrium of an allocation game. We assume that individuals will circumvent the market's institutions if there exist alternative institutions that provide them a preferred allocation. The allocations that a given subset of individuals, with given beliefs, may obtain are those that are obtainable in Nash equilibria of allocation games for the subset. An allocation is in the incomplete information core if it is obtainable in a Nash equilibrium of an allocation game, and no subset of individuals can improve upon it.

Greenwood, Jeremy

PD January 1995. **TI** Long-Run Implications of Investment-Specific Technological Change. **AU** Greenwood, Jeremy; Hercowitz, Zvi; Krusell, Per. **AA** Greenwood: University of Rochester and University of Western Ontario. Hercowitz: Tel Aviv University. Krusell: University of Rochester and Institute for International Economic Studies. **SR** University of Western Ontario, Department of Economics, Research Report: 9510; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 28. **PR** $10.00. **JE** O31, O33, E22. **KW** Technology. R&D.
AB The role that investment-specific technological change played in generating postwar U.S. growth is investigated here. The premise is that the introduction of new, more efficient capital goods is an important source of productivity change, and an attempt is made to disentangle its effects from the more traditional Hicks-neutral form of technological progress. The balanced-growth path for the model is characterized and calibrated to U.S. National Income and Product Account data. The quantitative analysis suggests that investment-specific change accounts for the major part of growth.

TI The Replacement Problem. **AU** Cooley, Thomas F.; Greenwood, Jeremy; Yorukoglu, Mehmet.

Grilli, Vittorio

PD July 1995. **TI** Liquidity and Exchange Rates: Puzzling Evidence From the G-7 Countries. **AU** Grilli, Vittorio; Roubini, Nouriel. **AA** Grilli: Ministero del Tesoro. Roubini: New York University, Centre for Economic Policy Research and National Bureau of Economic Research. **SR** New York University, Salomon Brothers Working Paper: S/95/31; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 28. **PR** not available. **JE** E52, F41. **KW** Monetary Policy. Exchange Rates. Liquidity. Vector Autoregression.
AB This paper considers the empirical evidence on liquidity effects in open economies; we study the effects of monetary policy shocks (identified by innovations in interest rates) on exchange rates. Both overshooting models with short-run price stickiness and flexible-price models with "liquidity effects" suggest that, in the short run, the effects of a positive monetary innovation will be a reduction of nominal interest rates and a depreciation of the domestic currency. We consider VAR systems for the G-7 countries and find that, while positive innovations in U.S. interest rates lead to an impact appreciation of the U.S. dollar, positive innovations in the interest rates of the other G-7 countries are associated with an impact depreciation of their currency. We offer two explanations of this "exchange rate puzzle"; one is based on the idea that the U.S. is the "leader" country in the setting of monetary policy for the G-7 area, while the other countries are "followers". The other explanation suggests that interest rate innovations in the non- U.S. G-7 countries occur as an endogenous policy reaction to underlying inflationary shocks that are a cause of exchange rate depreciation. We then offer some empirical evidence consistent with these two interpretations of the exchange rate puzzle: after controlling for U.S. monetary policies and expected inflation, the response of exchange rates to positive interest rate shocks is a persistent currency appreciation in most of the G-7 countries. Moreover, consistently with both overshooting and liquidity models, a monetary contraction is associated with a transitory appreciation of the real exchange rate and a temporary fall in output.

PD September 1995. **TI** Liquidity Models in Open Economies: Theory and Empirical Evidence. **AU** Grilli, Vittorio; Roubini, Nouriel. **AA** Grilli: Ministero del Tesoro. Roubini: New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/30; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 10. **PR** not available. **JE** E52, F41. **KW** Monetary Policy. Exchange Rates. Liquidity. Vector Autoregressions.
AB This paper presents an overview of recent theoretical and empirical research on "liquidity models" in open economies; this is a class of optimizing models where money has effects on real asset prices and economic activity without relying on the "ad-hoc" assumption of price/wage stickiness. The non-neutrality of money derives from a temporary segmentation between goods and asset markets. After surveying the theoretical literature on liquidity models, we present empirical evidence based on VAR econometric techniques for the seven major industrial countries. Such evidence is shown to be consistent with the main implications of the liquidity models.

Grossman, Herschel I.

PD May 1995. **TI** American Fiscal Policy in the 1990's. **AA** Brown University and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5109; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 10. **PR** $5.00. **JE** H63, E62. **KW** Fiscal Policy. Government Debt.
AB This essay analyzes current fiscal policy in the United States within a historical context. The objective is to clarify why recent developments in the United States are troubling, but also to understand why the United States, in contrast to other countries such as Italy, has so far avoided the path to fiscal disaster. The discussion suggests that perhaps the American public understands, at least implicitly, that unless fiscal policy limits the growth of the public debt, the government's credit is sure to run out at some unpredictable future time, as has happened in Italy, with the consequent need for drastic and painful fiscal adjustments.

Gruber, Jonathan

TI Does Public Insurance Crowd Out Private Insurance?
AU Cutler, David M.; Gruber, Jonathan.

Gruber, Martin J.

TI Survivorship Bias and Mutual Fund Performance. **AU** Elton, Edwin J.; Gruber, Martin J.; Blake, Christopher R.

TI Fundamental Variables, APT, and Bond Fund Performance. **AU** Elton, Edwin J.; Gruber, Martin J.; Blake, Christopher R.

TI The Persistence of Risk-Adjusted Mutual Fund Performance. **AU** Elton, Edwin J.; Gruber, Martin J.; Blake, Christopher R.

Gunderson, Morley

TI The Effect of Collective Bargaining Legislation on Strikes and Wages. **AU** Cramton, Peter C.; Gunderson, Morley; Tracy, Joseph S.

Hagy, Alison P.

TI The Distributional Effects of the Tax Treatment of Child Care Expenses. **AU** Gentry, William M.; Hagy, Alison P.

Hahn, Jinyong

TI Quantile Regression Model With Unknown Censoring Point. **AU** Buchinsky, Moshe; Hahn, Jinyong.

Hajivassiliou, Vassilis A.

PD October 1994. **TI** Simulation of Multivariate Normal Rectangle Probabilities and Their Derivatives: Theoretical and Computational Results. **AU** Hajivassiliou, Vassilis A.; McFadden, Daniel; Ruud, Paul. **AA** Hajivassiliou: Yale University. McFadden and Ruud: University of California, Berkeley. **SR** Yale University, Cowles Foundation Discussion Paper: 1021R; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 43. **PR** no charge. **JE** C15, C88, C87. **KW** Simulation Estimation. Monte Carlo Integration. Discrete Choice. Multinomial Probit. Importance Sampling.

AB An extensive literature in econometrics and in numerical analysis has considered the problem of evaluating the probability distribution of an m-dimensional normal vector. The multinomial probit model (MNP) used in econometrics and biometrics has cell probabilities that are negative orthant probabilities, with the mean and covariance matrix depending on unknown parameters (and, in general, on covariates). Estimation of this model requires, for each trial parameter vector and each observation in a sample, evaluation of the probability distribution function and its derivatives with respect to the mean and covariance matrix. . This paper surveys Monte Carlo techniques that have been developed while possessing properties that facilitate their use in iterative calculations for statistical inference: the Crude Frequency Simulator (CFS), Normal Importance Sampling (NIS), a Kernel- Smoothed Frequency Simulator (KFS), Stern's Decomposition Simulator (SDS), the Geweke-Hajivassiliou-Keane Simulator (DCS), an Acceptance/Rejection Simulator (ARS), the Gibbs Sampler Simulator (GSS), a Sequentially Unbiased Simulator (SUS), and an Approximately Unbiased Simulator (AUS). We also discuss Gauss and FORTRAN implementation of these algorithms and present our computational experience with them. We find that GHK is overall the most reliable method.

PD January 1995. **TI** Unemployment and Liquidity Constraints. **AU** Hajivassiliou, Vassilis A.; Ioannides, Yannis M. **AA** Hajivassiliou: Yale University. Ioannides: Virginia Polytechnic Institute and State University. **SR** Yale University, Cowles Foundation Discussion Paper: 1090; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 50. **PR** no charge. **JE** D91, E24, C61, C33, C35. **KW** Intertemporal Optimization. Quantity Constraints. Liquidity Constraints. Unemployment. Simulation Estimation.

AB In this paper we propose a modelling approach for labor supply and consumption decisions that is firmly grounded within a utility maximizing framework and allows for a role of such institutional constraints as limited access to borrowing and involuntary unemployment. We report estimations for a system of dynamic probit models with data from the Panel Study of Income Dynamics. These estimations test broad predictions of the theoretical model. One of our models describes a household's propensity to be liquidity constrained in a given period. The second is a dynamic ordered probit model for a labor constraint indicator describing qualitative aspects of the conditions of employment, that is, whether the household head is involuntarily overemployed, voluntarily employed, or involuntarily underemployed or unemployed. These models are estimated separately as well as jointly. Our results provide strong support for the basic theory of constrained behavior and the interaction between liquidity constraints and exogenous constraints on labor supply.

Haldeman, Robert

TI Corporate Credit Scoring Models: Approaches and Standards for Successful Implementation. **AU** Altman, Edward I.; Haldeman, Robert.

Hall, Bronwyn H.

TI The Time Series Relationship Between Investment and Cash Flow in the Scientific Sector: A Panel Data Study Comparing French, Japanese, and the United States Firms. **AU** Branstetter, Lee; Crepon, Bruno; Hall, Bronwyn H.; Mairesse, Jacques.

TI The Time Series Relationship Between Investment and Cash Flow in the Scientific Sector: A Panel Data Study Comparing French, Japanese, and the United States Firms. **AU** Branstetter, Lee; Crepon, Bruno; Hall, Bronwyn H.; Mairesse, Jacques.

Hallock, Kevin

PD January 1995. **TI** Executive Pay and Reciprocally Interlocking Boards of Directors. **AA** Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 340; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 29. **PR** $2.00. **JE** J33, G3. **KW** Executive Compensation. Boards of Directors.

AB Is executive compensation influenced by the composition of the Board of Directors? About one in ten Chief Executive Officers (CEO's) is "reciprocally interlocked" with another CEO -- a current or retired CEO of firm A serves as a director of firm B and a current or retired CEO of firm B serves as a director of firm A. An even larger fraction (20%) of firms have at least one current or retired employee sitting on the board of positions. I investigate how these and other features of board composition affect CEO pay. I use a newly assembled sample of nearly 10,000 director positions in America's largest companies, collected from annual reports, together with information on firm value, recent stock returns, and other determinants of CEO salary. Chief executives heading interlocked firms earn significantly higher compensation. After controlling for firm and CEO characteristics, however, interlocking directorates are associated with at most 10% higher pay. Furthermore, there is some evidence that this return is getting smaller over time.

Haltiwanger, John

TI Labor Productivity: Structural Change and Cyclical Dynamics. **AU** Baily, Martin N.; Bartelsman, Eric J.; Haltiwanger, John.

Hamao, Yasushi

PD August 1995. **TI** Living With the "Enemy": An Analysis of Foreign Investment in the Japanese Equity Market. **AU** Hamao, Yasushi; Mei, Jianping. **AA** Hamao: Columbia University. Mei: New York University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/15; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 20. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G14, G15. **KW** Excess Return. Market Timing. Volatility.

AB This paper studies the impact of foreign investment on domestic financial markets. It examines the empirical validity of some protectionist claims used by regulators to restrict foreign investment. These people argue that 1) trading by foreign investors tends to increase market volatility more than domestic investors, 2) foreign investors have sophisticated investment technology to which domestic investors do not have access so that domestic investors tend to "lose" to foreign investors, and 3) foreign investors tend to be short term investors whose investments are mostly driven by expectation of short- term gains rather than long-term fundamentals such as corporate dividend growth. We find there is no evidence supporting these claims from the Japanese experience. To the contrary, we find that foreign investors tend to be long- term contrarian players in the market and their presence helps to improve liquidity in the Japanese market. Thus, our results support the hypothesis that international free flow of equity capital is beneficial to domestic markets.

PD November 1995. **TI** Japanese Government Bond Auctions: The U.S. Experience. **AU** Hamao, Yasushi; Jegadeesh, Narasimhan. **AA** Hamao: Columbia University. Jegadeesh: University of Illinois, Urbana-Champaign. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/28; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 18. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** D44, H63. **KW** Auctions. Government Debt. Japan.

AB There has been constant friction between the U.S. and Japan on economic issues. After lengthy negotiations and threats of reprisal, Japan agreed to sell its Government Bonds through auctions that were open to foreign competition. This paper examines the U.S. experience in the Japanese Government Bond (JGB) auctions. It also empirically tests the predictions of auction theory with JGB auction data. While the winning share of U.S. firms in 10-year JGB auction market went through ups and downs, their share in the 20-year market has increased steadily. We find that the winning shares by the U.S. firms are positively related to auction profits, whereas the Japanese "Big Four" winning shares show negative association. We offer some possible explanations for this phenomenon. Furthermore, the average profits to winning bids in JGB auctions is not reliably different from zero, and the degree of competition and the level of uncertainty are found to be insignificant in determining auction profits.

Hamilton, Barton H.

PD June 1995. **TI** Access, Utilization, and Equity in Canada and the U.S.: An Empirical Model of Physician Visits. **AU** Hamilton, Barton H.; Hamilton, Vivian H.; Paarsch, Harry J. **AA** Hamilton, B.: McGill University and University of Montreal. Hamilton, V.: McGill University and Montreal General Hospital. **SR** University of Western Ontario, Department of Economics, Research Report: 9512; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 23. **PR** $10.00. **JE** D63, I11, I18. **KW** Equity. Health Care. Insurance.

AB We use a simple theoretical model and generalized Lorenz curves to provide an economic interpretation of the distribution of physician visits in Canada and the U.S. The methodology enables us to compare differences in access, level of utilization, and equity in the distribution of services across populations, while controlling for differences in the distribution of covariates. We find that Canadians have greater access to physician services, greater utilization, and a more equitable distribution of services relative to Americans. Insurance mitigates inequities in the distribution of services for females ages 20 to 64 in the U.S., but not for males. The observed differences across countries are consistent with a model in which the ratio of marginal benefits to marginal costs for a physician visit is higher in Canada than the U.S.

Hamilton, Vivian H.

TI Access, Utilization, and Equity in Canada and the U.S.: An Empirical Model of Physician Visits. **AU** Hamilton, Barton H.; Hamilton, Vivian H.; Paarsch, Harry J.

Hanson, Gordon H.

PD May 1995. **TI** Trade, Technology and Wage Inequality. **AU** Hanson, Gordon H.; Harrison, Ann. **AA** Hanson: University of Texas and National Bureau of Economic Research. Harrison: Columbia University and National Bureau of Economic Research. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/20; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 20. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** J31, F11, F14. **KW** Wage Inequality. GATT. Skill Bias.

AB In Mexico during the 1980's, the wages of more-educated, more- experienced workers rose relative to those of less-educated, less- experienced workers. We assess the extent to which the increase in the skilled- unskilled wage gap was associated with Mexico's recent trade reform. In particular, we examine whether trade reform has shifted employment towards industries that are relatively intensive in the use of skilled labor (Stopler-Samuelson-type effects). The results suggest that the rising wage gap is associated with changes internal to industries and even internal to plants that cannot be explained by Stopler-Samuelson- type effects. We also find that other characteristics associated with globalization -- such as foreign investment and export orientation -- matter. Exporting firms and joint ventures pay higher wages to skilled workers and demand more skilled labor than other firms.

PD May 1995. **TI** Trade, Technology, and Wage Inequality. **AU** Hanson, Gordon H.; Harrison, Ann. **AA** Hanson: University of Texas and National Bureau of Economic Research. Harrison: Columbia University and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5110; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 36. **PR** $5.00. **JE** F13, F14, F41, J31. **KW** Labor Skills. Wage Gap. Trade Reform. Stolper-Samuelson Effects.
AB In Mexico during the 1980s the wages of more-educated, more- experienced workers rose relative to those of less-educated, less- experienced workers. We assess the extent to which the increase in the skilled-unskilled wage gap was associated with Mexico's recent trade reform. In particular, we examine whether trade reform had shifted employment towards industries that are relatively intensive in the use of skilled labor (Stolper-Samuelson-type effects). The results suggest that the rising wage gap is associated with changes internal to industries and even internal to plants that cannot be explained by Stolper-Samuelson-type effects. We also find that other characteristics associated with globalization -- such as foreign investment and export orientation -- matter. Exporting firms and joint ventures pay higher wages to skilled workers and demand more skilled labor than other firms.

Harrison, Ann

TI Trade, Technology and Wage Inequality. **AU** Hanson, Gordon H.; Harrison, Ann.

TI Wages and Foreign Ownership: A Comparative Study of Mexico, Venezuela, and the United States. **AU** Aitken, Brian; Harrison, Ann; Lipsey, Robert E.

TI Wages and Foreign Ownership: A Comparative Study of Mexico, Venezuela, and the United States. **AU** Aitken, Brian; Harrison, Ann; Lipsey, Robert E.

TI Trade, Technology, and Wage Inequality. **AU** Hanson, Gordon H.; Harrison, Ann.

Hassett, Kevin A.

TI Unionization and Acquisitions. **AU** Fallick, Bruce C.; Hassett, Kevin A.

TI Are U.S. Investment and Capital Stocks at Optimal Levels? **AU** Cohen, Darrel; Hassett, Kevin A.; Kennedy, James E.

Haurin, Donald R.

TI Endogenous Mortgage Choice, Borrowing Constraints and the Tenure Decision. **AU** LaFayette, William C.; Haurin, Donald R.; Hendershott, Patric H.

Heal, Geoffrey M.

PD September 1994. **TI** International Dimensions of Environmental Policy. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/16; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 15. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** D62, Q48, Q28, Q38. **KW** Greenhouse Effect. Ozone Layer. Environmental Policy. Rio Earth Summit.
AB Current global environmental problems are global public good issues. These include carbon dioxide and CFC emissions, loss of biodiversity, and acid rain and sulfur dioxide emission. The efficient provision of global, privately-produced public goods poses interesting challenges, both for economic theory and for policy choice and implementation. The equity-efficiency choice has proven especially interesting for economists. To this end, I simulate results using the OECD's GREEN model.

PD September 1994. **TI** Markets and Biodiversity. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/17; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 8. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** D62, Q21, Q22, Q23. **KW** Biodiversity. Ecotourism. Externalities. Resource Allocation.
AB Biodiversity is being destroyed at a rate which is paralleled only by the rates of destruction in historical episodes such as the extinction of the dinosaurs. Today, however, the driving forces are mainly human economic and social organizations. In particular, markets and the incentives they generate are playing a central role. This observation leads one naturally to question whether there is a basic antipathy between market forces and biodiversity. In this paper I present a preliminary review of some of the relevant issues, trying to classify biodiversity as an economic commodity and to understand how it fits into the economic system.

TI Social Choice With Infinite Populations: Construction of a Rule and Impossibility Results. **AU** Chichilnisky, Graciela; Heal, Geoffrey M.

PD December 1994. **TI** Social Choice and Resource Allocation: A Topological Perspective. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/18; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 10. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** C61, D62, D71. **KW** Chichilnisky Rules. Social Choice. Topology.
AB This paper surveys an area which has evolved rapidly in recent years, the area of continuous or topological approaches to the study of social choice, and the analysis of what have come to be known as "Chichilnisky rules." Initiated by Chichilnisky in a 1980 paper in Advances in Mathematics, the field has quickly evolved to one which is integrated into the mainstreams of both social choice and the general equilibrium approach to markets. This paper also places the papers in a forthcoming volume in the context of the area in general, and then gives some personal reflections on the growth of this area and its role in economic theory.

TI The Geometry of Implementation: A Necessary and Sufficient Condition for Straightforward Games. **AU** Chichilnisky, Graciela; Heal, Geoffrey M.

PD July 1995. **TI** Emission Constraints, Emission Permits, and Marginal Abatement Costs. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/23; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 10. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** D62, Q38, Q28, Q48. **KW** Emission Permits. Externalities. Abatement Costs.

AB Chichilnisky and Chichilnisky & Heal proved that efficient abatement of emissions of carbon dioxide does not require the equalization of marginal abatement costs across countries. Chichilnisky Heal & Starrett introduced a new market, for emission permits, and showed that if emission is controlled by the issuing and trading of emission quotas, then the manner in which the initial property rights on emissions are distributed between countries is important for efficiency. Subsequently, several commentators have inquired whether equivalent results hold in a framework in which the total level of emission is imposed arbitrarily by a political authority. We assume here that an arbitrary level of emission abatement is imposed on the world economy, and ask if equivalent results hold. The answers are exactly as before: equalization of marginal costs is necessary for constrained efficiency if and only if it is possible to make unrestricted lump sum transfers of wealth between countries on a scale sufficient to equalize the social marginal valuation of consumption in all countries, and permit markets lead to emission-constrained efficiency only for certain initial distributions of emission permits.

PD July 1995. **TI** Interpreting Sustainability. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/24; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 10. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** O11, Q21, Q31, Q41. **KW** Sustainability. Growth. Development.

AB Sustainability is an important, influential but elusive concept. I review concepts related to sustainability in earlier literature, and then summarize and synthesize recent work on sustainability by Chichilnisky, Beltratti Chichilnisky and Heal, and Heal. This provides a basis for formalizing the concept and operationalizing it via shadow prices and associated accounting practices.

PD February 1996. **TI** Derivatives and the Efficient Allocation of Price Risks in a General Equilibrium World. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/30; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 15. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G13, D81, G12. **KW** Derivatives. Price Uncertainty. Endogenous Uncertainty. General Equilibrium. Hilbert Space.

AB We establish an extension of the classical general equilibrium treatment of uncertainty to the phenomenon of price uncertainty. Traders do not know the prices at which trade will occur, but have expectations over possible prices. They trade derivatives, price- contingent securities, to insure against the risks arising from this uncertainty. We establish three results: one is a set of necessary and sufficient conditions for the existence of equilibrium, called an equilibrium with price insurance, in such a framework; another is the fact that equilibria with price insurance are Pareto efficient and agents insure themselves optimally against the price uncertainty represented by their price expectations; and finally we show that in this framework agents' price expectations matter, in the sense that they affect the equilibrium allocation of resources. Completeness of the securities markets requires an uncountable number of securities, one contingent on each possible goods price vector.

Heckman, James J.

PD March 1995. **TI** Ashenfelter's Dip and the Determinants of Participation in a Social Program: Implications for Simple Program Evaluation Strategies. **AU** Heckman, James J.; Smith, Jeffrey A. **AA** Heckman: University of Chicago. Smith: University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9505; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 26. **PR** $10.00. **JE** J24, J38, C81. **KW** Evaluation. Job Training. Difference in Differences. Experiments. JTPA.

AB This paper uses unique data from a major social experiment to identify what would have happened to the earnings of participants in a job training program had they not participated. We investigate the implications of these earnings patterns for the validity of widely used before-after and difference in differences estimators. Motivated by the failure of these estimators to produce credible estimates, we investigate the determinants of program participation. We find that labor force status dynamics, rather then just earnings or employment dynamics, drive the participation process. Our evidence suggests that training programs function as a form of job search for many of their participants. Methods that control only for earnings dynamics, like the difference in differences estimator, do not adequately capture the underlying choices leading to differences between participants and non- participants. Our findings regarding the participation process suggest how a valid nonexperimental evaluation strategy may be developed.

PD July 1995. **TI** The Performance of Performance Standards: The Effects of JTPA Performance Standards on Efficiency, Equity and Participant Outcomes. **AU** Heckman, James J.; Smith, Jeffrey A. **AA** Heckman: University of Chicago. Smith: University of Western Ontario. **SR** University of Western Ontario, Papers in Political Economy: 73; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 16. **PR** no charge. **JE** L32, I28, D78. **KW** Performance Standards. Job Training.

AB Performance standards systems designed to direct bureaucratic behavior are widely viewed as a solution to the problem of inefficiency in government. Such systems aim to motivate bureaucrats to achieve program goals by rewarding them on the basis of observable short-run outcomes. This paper examines the JTPA performance standards system, which is widely regarded as a prototype for other government programs. The greatest reservation about such reward systems is that they promote cream-skimming, the practice of serving the least disadvantaged among a program's target population. This paper clarifies the multiple definitions of cream-skimming used in the literature and shows that cream-skimming may be socially efficient. Evidence is presented that the cost of equitable allocation of program services is low because the gains from participation are close to uniform across skill groups. We also discuss the problem of using short term targets to motivate the achievement of long-run gains. We show that the short-run targets used in the JTPA system to monitor performance are only weakly, and sometimes perversely, related to longer-run impact measures. This represents a fundamental weakness of the JTPA performance management system and reveals a serious challenge to designers of performance standards systems.

Helliwell, John F.

PD May 1996. **TI** Do National Borders Matter for Quebec's Trade? **AA** University of British Columbia. **SR** University of Western Ontario, Papers in Political Economy: 74; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 18. **PR** no charge. **JE** F14, F15. **KW** Economic Integration. Canada. Quebec.
AB Growing trade and capital mobility, and much talk of globalization, may have created the impression that national boundaries no longer matter much for trade and capital movements. John McCallum (1995) has compared trade flows among Canadian provinces with those between Canadian provinces and U.S. states, making use of a gravity model in which trade is determined primarily by the economic size of the trading partners and the distance between them, to calculate that Canadian provinces trade about 20 times as much with each other as with U.S. states of a similar distance and size. Thus the trade-generating powers of the Canadian federation are more than an order of magnitude larger than those of the European Union. This paper attempts to assess the importance of this new research for Quebec.

Hendershott, Patric H.

TI Endogenous Mortgage Choice, Borrowing Constraints and the Tenure Decision. **AU** LaFayette, William C.; Haurin, Donald R.; Hendershott, Patric H.

Hercowitz, Zvi

TI Long-Run Implications of Investment-Specific Technological Change. **AU** Greenwood, Jeremy; Hercowitz, Zvi; Krusell, Per.

Herring, Richard J.

TI The Role of Capital in Financial Institutions. **AU** Berger, Allen N.; Herring, Richard J.; Szego, Giorgio.

Hickson, Charles R.

TI Exchange Controls and Hyperinflation as Efficient Governmental Responses to Externally Imposed Trade Liberalization. **AU** Thompson, Earl A.; Hickson, Charles R.

Himmelberg, Charles P.

TI Critical Mass and Network Size With Application to the US Fax Market. **AU** Economides, Nicholas; Himmelberg, Charles P.

TI Evidence on the Role of Cash Flow for Investment. **AU** Gilchrist, Simon; Himmelberg, Charles P.

Hirshleifer, Jack

PD February 1995. **TI** Theorizing About Conflict. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 727; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 30. **PR** $5.00. **JE** D74, P16, H56. **KW** Conflict. War. Redistribution. Politics. Political Economy.
AB The category of conflict encompasses not only war but also crime, litigation, strikes and lockouts, and redistributive politics. Exchange theory and conflict theory constitute two coequal branches of economic analysis, the first based upon contract and mutual gain, the second upon contest for asymmetric advantage. A number of the analytic options for modelling conflict are reviewed. Preferences, opportunities, and perceptions are shown to determine the choice between conflict and settlement. The technology of conflict as an economic activity is surveyed. Two illustrative models are presented, the first involving actual fighting and the other armed peace.

TI Experimental Tests of the Paradox of Power. **AU** Durham, Yvonne; Hirshleifer, Jack; Smith, Vernon L.

PD March 1996. **TI** The Legal Battle. **AU** Hirshleifer, Jack; Osborne, Evan. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 749; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 17. **PR** $5.00. **JE** K41, D61, D63. **KW** Litigation. Conflict. Justice. Fault.
AB Lawsuits are a form of conflict in which relative success depends upon two main factors: (1) the true degree of fault, and (2) the litigation efforts on each side. We assume Plaintiff commits to a level of litigation effort, to which Defendant then responds. The result depends upon a number of parameters including the costs of litigation and the weights attached to the fault and effort factors. Outcomes are evaluated in terms of two social criteria: (i) achieving "justice" (defined as equality between degree of fault and the probability of Plaintiff victory, or latter's proportionate award) and (ii) minimizing aggregate cost. Achievement of these aims is hampered mainly by high "decisiveness" of litigation effort, that is, when a high weight attaches to the effort factor as opposed to the fault factor. The analysis has suggestive implications for proposed litigation reforms.

Ho, T.S

PD March 1996. **TI** The Valuation of American Options With Stochastic Interest Rates: A Generalization of the Geske-Johnson Technique. **AU** Ho, T.S.; Stapleton, Richard C.; Subrahmanyam, Marti G. **AA** Ho: Lancaster University. Stapleton and Subrahmanyam: New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/5; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 19. **PR** not available. **JE** E43, G13, G12. **KW** Options. Term Structure. Expectations. Interest Rates.
AB The Geske-Johnson approach provides an efficient and intuitively appealing technique for the valuation and hedging of American-style contingent claims. Here, we generalize their approach to a stochastic interest rate economy. We implement our methodology using options exercisable on one of a finite number of dates and report results on the effect of stochastic interest rates on the values. We illustrate how the value of an American-style option increases with interest rate volatility. The magnitude of the effect depends on the depth-in-the-

money of the option, the volatilities of the returns on the underlying asset and the interest rates as well as the correlation between them.

Hooghe, Liesbet

TI European Integration and the State. **AU** Blank, Kermit; Hooghe, Liesbet; Marks, Gary.

Hornstein, Andreas

TI (S,s) Inventory Policies in General Equilibrium. **AU** Fisher, Jonas D.M.; Hornstein, Andreas.

Horstmann, Ignatius J.

TI Concessions and the Agenda in Bargaining. **AU** Busch, Lutz-A.; Horstmann, Ignatius J.

PD August 1995. **TI** Secret Reserve Prices in a Bidding Model With a Re-Sale Option. **AU** Horstmann, Ignatius J.; LaCasse, Chantale. **AA** Horstmann: University of Western Ontario. LaCasse: University of Ottawa. **SR** University of Western Ontario, Department of Economics, Research Report: 9522; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 27. **PR** $10.00. **JE** D44, C72. **KW** Auctions. Bidding.

AB This paper presents a model of auctions in which sellers may fail to sell an object in spite of receiving a bid above the announced reserve price. In this sense, sellers use a secret reserve price. Such behavior is seen frequently in auctions and yet would be sub-optimal in most existing auction models. Here, sellers have information about the object the cannot credibly be communicated to buyers. Sellers with more favorable information about the object's value would prefer a higher reserve price; however, any such reserve price would be mimicked by a seller with less favorable information. As a consequence, a seller's only option is to have a secret reserve price, rejecting bids that are too low and auctioning the object in the future. The model predicts that re-auctioned items, on average, sell for higher prices and that prices of re-auctioned items rise as the delay in re-auctioning increases.

PD August 1995. **TI** Advertising as a Signal of Product Quality: Compact Disc Players. **AU** Horstmann, Ignatius J.; MacDonald, Glenn M. **AA** Horstmann: University of Western Ontario. MacDonald: University of Rochester and Economics Research Center/NORC. **SR** University of Western Ontario, Department of Economics, Research Report: 9523; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 30. **PR** $10.00. **JE** M37, L13, L15. **KW** Advertising. Signaling.

AB Whether signaling models of advertising have empirical content has not been established. This paper explores panel data on advertising and product pricing for firms in the compact disc player market over 1983- 92. Using what appear to be the most reliable measures of these variables, advertising and price move together, rising for the first two to three years after a player is introduced and falling thereafter. This behavior is inconsistent with formalizations of Nelson's (1974) original signaling model, and partially consistent with the imperfect consumer learning model developed by Horstmann and MacDonald (1994); a modest (adding one period) extension of the latter provides predictions consistent with the observed behavior.

Horvitz, Paul M.

TI Commercial Banks and Real Estate Lending: The Texas Experience. **AU** Eisenbeis, Robert A.; Horvitz, Paul M.; Cole, Rebel A.

Howrey, E. Philip

TI Evaluating Alternative Monetary Policy Rules. **AU** Fair, Ray C.; Howrey, E. Philip.

Hu, Wei-Yin

PD June 1995. **TI** Child Support, Welfare Dependency, and Women's Labor Supply. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 734; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 31. **PR** $5.00. **JE** I38, J13, J22. **KW** Child Support. AFDC. Labor Supply. Non-Labor Income. Remarriage.

AB This study evaluates the potential effectiveness of alternative child support policies in reducing welfare program participation. Employing longitudinal data from the Panel Study of Income Dynamics, the analysis addresses the simultaneity of women's decisions regarding welfare participation, labor force participation, and annual hours of work following marital breakup. The estimation framework accounts for the endogeneity of child support payments with female labor supply and for the selection bias due to differential rates of remarriage among divorced/separated women. Results show that higher child support payments would (i) decrease AFDC participation and (ii) increase average hours of work. The empirical estimates are used to assess the potential effects of adopting alternative child support policies such as the Wisconsin child support assurance system. These results suggest that large potential AFDC cost savings are attainable but significant reductions in welfare participation rates would only be achieved through substantial improvements in child support enforcement or through government-assured child support payments.

Huang, Jing-zhi

PD June 1995. **TI** Pricing and Hedging American Options: A Recursive Integration Method. **AU** Huang, Jing-zhi; Subrahmanyam, Marti G.; Yu, G. George. **AA** Huang and Subrahmanyam: New York University. Yu: Goldman, Sachs, & Co. **SR** New York University, Salomon Brothers Working Paper: S/96/13; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 17. **PR** not available. **JE** G13, D81, D84, D63. **KW** Options. Hedge. Numerical Methods.

AB In this paper, we present a new method for pricing and hedging American options along with an efficient implementation procedure. The proposed method is efficient and accurate in computing both option values and various option hedge parameters. We demonstrate the computational accuracy and efficiency of this numerical procedure in relation to other competing approaches. We also show how the method can be applied to the case of any American option for which a closed-form solution exists for the corresponding European option.

Huang, Yasheng

PD July 1995. **TI** Fiscal and Political Decentralizations in China: A Critique of the Current Fiscal Reform Efforts. **AA** University of Michigan. **SR** University of Western Ontario, Papers in Political Economy: 70; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 14. **PR** no charge. **JE** E62, H26, H21. **KW** Fiscal Policy. Tax Evasion. Public Enterprises.

AB One of the important objectives in the current fiscal reform effort is to re-impose some degree of fiscal recentralization. According to press reports, the Center hopes to increase its share from currently 30 percent of the consolidated revenue to about 60 percent. This is done by establishing a form of tax federalism and by a redefinition of tax categories. These measures have enjoyed widespread support from both foreign and Chinese economists and China specialists, who argue that China's tax system is overly decentralized. In this paper, I offer a defense of the principle of fiscal decentralization and in particular the fiscal decentralization as institutionalized in the tax contract system that the current reform seeks to abolish. My argument is both empirical and normative. I argue that the current reform effort aiming to achieve a more centralized tax structure is arguably unnecessary on economic grounds and definitely undesirable on political grounds. As an empirical issue, I show that China's tax system is not as decentralized as commonly believed by examining the structure of China's budget and of the effect of China's unitary political system. The single-minded focus of the current reform on raising revenue is particularly unfortunate when the more important causes for fiscal decline have to do with the chronic inefficiency of the state owned enterprises, compulsory bank lendings, and the continued bureaucratic provisions of private goods. My more severe criticism of the current fiscal reforms rests on normative and political grounds. I argue that a fundamental political challenge in contemporary China is to devise means to constrain the discretion and the power of the central government.

Hubbard, R. Glenn

PD April 1995. **TI** Benefits of Control, Managerial Ownership, and the Stock Returns of Acquiring Firms. **AU** Hubbard, R. Glenn; Palia, Darius. **AA** Hubbard: Columbia University and National Bureau of Economic Research. Palia: Columbia University. **SR** National Bureau of Economic Research, Working Paper: 5079; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 18. **PR** $5.00. **JE** G34, L22, M20. **KW** Corporate Control. Mergers. Managerial Ownership. Acquisitions.

AB This paper examines the effect of the benefits of corporate control to managers on the relationship between managerial ownership and the stock returns of acquiring firms in corporate control transactions. At low levels of managerial ownership, agency costs of equity (such as perquisite consumption) reduce the returns earned by acquirers. As the managerial stake in the acquiring firm increases, the interests of managers are more closely aligned with those of shareholders, reducing the acquisition premium. At sufficiently high levels of managerial ownership, managers value a reduction in the risk of their nondiversifed financial portfolio. However, managers enjoy nonassignable private benefits of control at high levels of ownership which they are not willing to lose by selling their stake in the financial markets. These benefits of control are increasing in the managerial ownership stake and can lead to managers "overpaying" even when they own a substantial fraction of the firm. Examining mergers that occurred during 1985 to 1991, we find evidence of such a nonmonotonic relationship between the stock returns earned by acquirers and their managerial ownership level. Further, we find that acquiring firms with high levels of managerial ownership tend to diversify more than acquiring firms with low levels of managerial ownership.

TI The Political Economy of Branching Restrictions and Deposit Insurance: A Model of Monopolistic Competition Among Small and Large Banks. **AU** Economides, Nicholas; Hubbard, R. Glenn; Palia, Darius.

Hyslop, Dean

PD September 1995. **TI** State Dependence, Serial Correlation and Heterogeneity in Intertemporal Participation Behavior: Monte Carlo Evidence and Empirical Results for Married Women. **AA** University of California, Los Angeles. **SR** Princeton University, Industrial Relations Section, Working Paper: 347; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 44. **PR** $2.50. **JE** J22, C15. **KW** Female Participation. Heterogeneity. State Dependence. Simulation Estimation.

AB The labor force participation behavior of married women, particularly their responses to husbands' labor market outcomes and the effects of fertility variables, is modeled using longitudinal data to control for a rich dynamic structure. The models are estimated using the method of maximum simulated likelihood (MSL) estimation. The empirical results imply that women's participation outcomes are characterized by significant structural state dependence, unobserved heterogeneity, and serially correlated transitory latent component of error. The results show that the effect of husbands' permanent earnings on the participation decision is significantly stronger than that of current earnings; however, the implied income elasticities of participation are small, on the order of -0.10. The results also provide strong evidence that fertility variables are not exogenous to women's participation decisions.

TI Does Inflation "Grease the Wheels of the Labor Market?" **AU** Card, David; Hyslop, Dean.

Ioannides, Yannis M.

TI Unemployment and Liquidity Constraints. **AU** Hajivassiliou, Vassilis A.; Ioannides, Yannis M.

Jackson, Matthew O.

PD April 1995. **TI** Recurring Bullies, Trembling and Learning. **AU** Jackson, Matthew O.; Kalai, Ehud. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1151; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 15. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, C73. **KW** Game Theory. Learning. Recurring Game. Chain Store.

AB In a recurring game, a stage game is played consecutively by different groups of players, with each group receiving information about the play of earlier groups. Starting with uncertainty about the distribution of types in the population, late groups may learn to play a correct Bayesian equilibrium, as if they know the type distribution. This paper concentrates on Selten's Chain Store game and the Kreps, Milgrom, Roberts, Wilson phenomenon, where a small perceived inaccuracy about the type distribution can drastically alter the equilibrium behavior. It presents sufficient conditions that prevent this phenomenon from persisting in a recurring setting.

PD August 1995. **TI** Social Learning in Recurring Games. **AU** Jackson, Matthew O.; Kalai, Ehud. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1138; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 35. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, C73, D83. **KW** Learning. Game Theory.

AB In a recurring game, a stage game is played sequentially by different groups of players. Each group receives publicly available information about the play of earlier groups. Players begin with initial uncertainty about the distribution of types (representing the preferences and strategic behavior) of players in the population. Later groups of players are able to learn from the history of play of earlier groups. We first study the evolution of beliefs in this uncertain recurring setting and then study how the structure of uncertainty and information determine the eventual convergence of play. We show that beliefs converge over time and, moreover, that the limit beliefs are empirically correct: their forecast of future public information matches the true distribution of future public information. Next, we provide sufficient conditions to ensure that the play of any stage game is eventually close to that of a Bayesian equilibrium where players know the true type generating distribution. We go further to identify conditions under which play converges to the play of a trembling-hand perfect (Bayesian) equilibrium.

TI Strategy-Proof Allotment Rules. **AU** Barbera, Salvador; Jackson, Matthew O.; Neme, Alejandro.

Jagtiani, Julapa

PD 1995. **TI** Characteristics of Banks That are More Active in the Swap Market. **AA** City University of New York. **SR** New York University, Salomon Brothers Working Paper: S/95/8; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 10. **PR** not available. **JE** G21, G31. **KW** Swaps. Banks. Creditworthiness. Risk.

AB The impact of swap-related risks on the safety and soundness of the banking system has been a topic of concern. This paper provides evidence that some banks may have engaged in swaps as a means to generate income when their loan activities were constrained by the fixed capital requirements. However, the results also suggest that creditworthiness plays an important role. All money center banks (too- big-to-fail) and those non-money center banks that are highly rated by S&P experience higher swap demand and achieve higher swap market shares. This implies some market discipline for non-money center banks, which may compensate for risk-measurement inadequacies in the current risk-based capital requirements. On the other hand, the results suggest that greater oversight may be required for money center banks.

Jahera, John S. Jr

TI Determinants of U.S. Commercial Bank Performance: Regulatory and Econometric Issues. **AU** Swamy, P.A.V.B.; Barth, James R.; Chou, Ray Y.; Jahera, John S. Jr.

Jegadeesh, Narasimhan

TI Japanese Government Bond Auctions: The U.S. Experience. **AU** Hamao, Yasushi; Jegadeesh, Narasimhan.

John, Kose

PD January 1995. **TI** A Theory of Bank Regulation and Management Compensation. **AU** John, Kose; Saunders, Anthony; Senbet, Lemma W. **AA** Kose and Saunders: New York University. Senbet: University of Maryland. **SR** New York University, Salomon Brothers Working Paper: S/95/1; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 30. **PR** not available. **JE** G21, G22, L21, L14, G28. **KW** Bank Regulation. Deposit Insurance. Incentives.

AB This paper examines the incentive structure underlying the current features of bank regulation, particularly the role of prompt corrective action, capital requirements and mandatory restrictions on asset choice as primary tools to control risk-shifting incentives of depository institutions. We propose instead a more direct and effective mechanism of influencing incentives through the role of top-management compensation, whereby a fair and revenue-neutral FDIC premium incorporates incentive features of top- management compensation as well as the level of bank capitalization. With this pricing scheme (for FDIC insurance) we show that bank owners choose an optimal management compensation structure which induces first-best value-maximizing investment choices by a bank's management. We also characterize the parameters of the optimal managerial compensation structure and the FDIC premium schedule explicitly.

Jones, Charles I.

TI Too Much of a Good Thing? The Economics of Investment in R&D. **AU** Williams, John C.; Jones, Charles I.

Jones, Michael A.

PD June 1995. **TI** Cones of Cooperation for Indefinitely Repeated, Generalized Prisoner's Dilemma Games. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1136; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 14. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, C73. **KW** Repeated Games. Prisoner's Dilemma. Continuation Probability. Correlated Equilibria.

AB A continuation probability is introduced to develop a theory of indefinitely repeated games where the extreme cases of finitely and infinitely repeated games are specific cases. The set of publicly correlated strategies (vectors) that satisfy a matrix inequality equivalent to the one-stage-deviation principle forms a cone of cooperation. The geometry of these cones provides a means to verify intuition regarding the levels of cooperation attained when the discount parameter and continuation probability vary. A bifurcation point is identified which indicates whether or not a cooperative subgame perfect publicly correlated outcome exists for the indefinitely repeated game. When a cooperative equilibrium exists, a recursive relationship is used to construct an equilibrium strategy. New cooperative behavior is demonstrated in an indefinitely repeated game with infrequent shocks (a subsequence of the continuation probability goes to zero).

PD July 1995. **TI** The Classification of Continuation Probabilities. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1137; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 10. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, C73. **KW** Continuation Probabilities. Prisoner's Dilemma. Subgame Perfect. Repeated Games.
AB It is known that the only subgame perfect equilibrium for finitely repeated Prisoner's Dilemma games consists of "defecting" in every round. Finitely repeated games are only representative of a class of indefinitely repeated games where the sole subgame perfect equilibrium is noncooperative. This broader class of repeated games with "quasifinite" continuation probabilities is defined. A matrix inequality is recalled that when solved by a cooperation vector, induces a subgame perfect equilibrium. A condition for continuation probabilities indicates when this matrix inequality can be satisfied at equality by a cooperation vector. The associated strategy is a cooperative subgame perfect equilibrium.

Jovanovic, Boyan

PD October 1995. **TI** Product Innovation and the Business Cycle. **AU** Jovanovic, Boyan; Lach, Saul. **AA** Jovanovic: University of Pennsylvania and National Bureau of Economic Research. Lach: Hebrew University, Board of Governors of the Federal Reserve System and National Bureau of Economic Research. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/46; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 20. **PR** no charge. **JE** O31, E32. **KW** Innovation. New Products. Business Cycles. Productivity Shocks.
AB This paper studies how product innovations whose quality is random affect the cyclical properties of per capita GNP. Micro data from the U.S. show that the quality of new products varies quite a bit; its coefficient of variation is 0.56. What role does such variation in quality play in shaping the business cycle? The diffusion of new products is slow: Only 8.1% of the potential market size is realized every year, which means that these technology shocks take several years to attain this maximal effect on GNP. The model overpredicts long lag autocovariances, and underpredicts the short lag autocovariances. The latter is not surprising since several obvious candidate high-frequency shocks are left out. But the micro data show that products survive for a long time and that innovation shocks should therefore persist for along time. It is puzzling, therefore, that the U.S. GNP data do not show stronger autocorrelation at higher lags. A surprising finding is that while the speed of diffusion has huge level effects, it plays a relatively minor role in shaping the character of the business cycle.

Judson, Ruth

PD March 1996. **TI** Do Low Human Capital Coefficients Make Sense? A Puzzle and Some Answers. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/13; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 34. **PR** no charge. **JE** J24, O41. **KW** Growth. Human Capital. Panel Data.
AB In this paper, I develop a new measure of human capital stock that has two advantages over previous measures. First, it allows for the fact that the cost of education varies across time, countries, and levels. Second, the unit of measurement is dollars, which allows comparison of human capital stocks with other macroeconomic variables, including national income (GDP) and physical capital stocks. Using cross- country panel regression analysis, I find that human capital accumulation accounts for a relatively small (about ten percent) of per-capita GDP growth. I further find that, unlike physical capital, the stock of human capital as a share of GDP increases with GDP.

PD May 1996. **TI** Inflation, Volatility and Growth. **AU** Judson, Ruth; Orphanides, Athanasios. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/19; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 13. **PR** no charge. **JE** C23, N10, O57. **KW** Inflation. Growth. Volatility. Panel Data.
AB This paper re-examines the relationship between inflation, inflation volatility and growth using cross- country panel data for the past 30 years. With regard to the level of inflation, we find that in contrast to current findings which are based on cross-sectional time-average regression comparisons, exploiting the time dimension of the data reveals a strong negative correlation between inflation and income growth for all but very low inflation countries. To examine the role of inflation uncertainty on growth, we use intra- year inflation data to construct an annual measure of inflation volatility. Using this measure, we find that inflation volatility is also robustly negatively correlated with growth even after the effect of the level of inflation is controlled for.

Kajii, Atsushi

TI Constrained Suboptimality in Incomplete Markets: A General Approach and Two Applications. **AU** Citanna, Alessandro; Kajii, Atsushi; Villanacci, Antonio.

PD August 1994. **TI** Common p-Belief: The General Case. **AU** Kajii, Atsushi; Morris, Stephen. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/15; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 14. **PR** no charge. **JE** D81, C73, D84. **KW** Probability. Uncertainty. Beliefs.
AB We develop belief operators for uncountable state spaces and give a general version of Monderer and Samet's theorem relating "iterative" and "fixed point" notions of common p-belief.

PD September 1994. **TI** Payoff Continuity in Incomplete

Information Games and Almost Uniform Convergence of Beliefs. **AU** Kajii, Atsushi; Morris, Stephen. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/17; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 28. **PR** no charge. **JE** C72, C73, D84, D81. **KW** Uncertainty. Beliefs. Game Theory. Probability.

AB In single person decision problems, pointwise convergence of prior probabilities is sufficient to ensure continuity of equilibrium payoffs, since the set of states where conditional probabilities are badly behaved has small probability in the limit. But in many person decision problems (i.e., games) this argument breaks down: because of strategic interaction, arbitrarily small probability events matter. We show that "almost uniform convergence" of conditional probabilities is necessary and sufficient for continuity of payoffs.

PD June 1995. **TI** The Sequential Regularity of Competitive Equilibria and Sunspots. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/11; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 14. **PR** no charge. **JE** C62, D84. **KW** Sunspots. Expectations. Uncertainty.

AB This paper studies the robustness of a competitive equilibrium against sunspots, or endogenous uncertainty. It is shown that an equilibrium is robust if and only if it is sequentially regular.

TI Generic Existence of Sunspot Equilibria: The Real Asset Case. **AU** Gottardi, Piero; Kajii, Atsushi.

TI Preference for Information. **AU** Grant, Simon; Kajii, Atsushi; Polak, Ben.

Kalai, Ehud

TI Recurring Bullies, Trembling and Learning. **AU** Jackson, Matthew O.; Kalai, Ehud.

TI Social Learning in Recurring Games. **AU** Jackson, Matthew O.; Kalai, Ehud.

PD October 1995. **TI** Games, Computers, and O.R. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1141; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 3. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, C73, C78. **KW** Bounded Rationality. Game Theory. Artificial Intelligence.

AB As game theory attempts to model larger games realistically, the need for a good model of boundedly rational players becomes urgent. Creative conceptual input from other fields, such as computer science, artificial intelligence, mathematical psychology and the like, may help to overcome modelling difficulties.

PD December 1995. **TI** Calibrated Forecasting and Merging. **AU** Kalai, Ehud; Lehrer, Ehud; Smorodinsky, Rann. **AA** Kalai and Smordinsky: Northwestern University. Lehrer: Northwestern University and Tel Aviv University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1144; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 20. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C53, C11, C53. **KW** Forecasting. Bayesian Updating. Calibrating Merging.

AB Consider a general finite-state stochastic process governed by an unknown objective probability distribution. A forecaster, observing the system, assigns subjective probabilities to future states. The subjective forecast merges to the objective distribution if, with time, forecasted probabilities converge to the (unknown) correct probabilities. The forecast is calibrated if observed long-run empirical distributions coincide with their forecasted probabilities. This paper links the unobserved reliability of forecasts to their observed empirical performance by showing full equivalents between notions of merging and calibration.

Kalsow, Gretchen A.

TI Comparing Absentee and Precinct Voters: A View Over Time. **AU** Dubin, Jeffrey A.; Kalsow, Gretchen A.

TI Comparing Absentee and Precinct Voters: Voting on Direct Legislation. **AU** Dubin, Jeffrey A.; Kalsow, Gretchen A.

Kane, Edward J.

PD May 1995. **TI** What is the Value-Added for Large U.S. Banks in Offering Mutual Funds? **AA** Boston College and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5111; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 12. **PR** $5.00. **JE** G11, G12, G21, G22. **KW** Mutual Funds. Deposit Insurance. Banks.

AB This paper argues that an implicit deposit-insurance credit enhancement is extended to any nondeposit savings vehicle offered by a very large bank. This unpriced credit enhancement helps to explain the preference revealed by very large U.S. banks for gearing up to offer mutual funds instead of developing index-linked deposit products. It also explains why large banks have been more eager than small banks to offer mutual funds and why bank mutual funds could be priced to grow at a time when bank deposits were being priced to shrink.

Karatzas, Ioannis

PD May 1995. **TI** A Strategic Market Game With Secured Lending. **AU** Karatzas, Ioannis; Shubik, Martin; Sudderth, William D. **AA** Karatzas: Columbia University. Shubik: Yale University. Sudderth: University of Minnesota. **SR** Yale University, Cowles Foundation Discussion Paper: 1099; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 56. **PR** no charge. **JE** C73, D52, E41, E43. **KW** Market Games. Money. Secured Lending.

AB We study stationary Markov equilibria for strategic, competitive games, in a market-economy model with one non-durable commodity, fiat money, borrowing/lending through a central bank or a money market, and a continuum of agents.

These use fiat money in order to offset random fluctuations in their endowments of the commodity, are not allowed to borrow more than they can pay back (secured lending), and maximize expected discounted utility from consumption of the commodity. Their aggregate optimal actions determine dynamically prices and/or interest rates for borrowing and lending, in each period of play. In equilibrium, random fluctuations in endowment- and wealth-levels offset each other, and prices and interest rates remain constant. As in our related recent work, KSS (1994), we study in detail the individual agents' dynamic optimization problems, and the invariant measures for the associated, optimally controlled Markov chains. By appropriate aggregation, these individual problems lead to the construction of stationary Markov competitive equilibrium for the economy as a whole. Several examples are studied in detail, fairly general existence theorems are established, and open questions are indicated for further research.

Kejak, Michal

TI The Political Economy of Aggregate Budget Constraints or the A,B,C's of Industrial Restructuring in Russia. **AU** Ruhl, Christof; Serwin, Kenneth; Kejak, Michal.

Kennedy, James E.

TI Are U.S. Investment and Capital Stocks at Optimal Levels? **AU** Cohen, Darrel; Hassett, Kevin A.; Kennedy, James E.

PD August 1995. **TI** An Analysis of Time-Series Estimates of Capacity Utilization. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/37; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 21. **PR** no charge. **JE** E31, D24. **KW** Capacity Utilization. Inflation.

AB The Federal Reserve Board's (FRB) series on capacity utilization constitute an important indicator of resource utilization. However, it is well known that economic capacity is difficult both to define and to measure. This paper considers alternative measures of capacity in which time-series methods are used to extract a permanent component from data on industrial production (IP). For a given industry, all that is needed to estimate the permanent component is the IP index for that industry. The associated utilization measure is calculated as IP divided by its permanent component. These measures have the advantage of being consistently measured over time; also, they are easily reproducible. Measures of resource utilization are primarily useful as indicators of inflation. Accordingly, the FRB series are evaluated relative to the alternatives in terms of their ability to explain both current and future producer price inflation. Data are analyzed for manufacturing as a whole and for a number of disaggregated industries. The results show that the alternative series generally perform as well as or better than the FRB series in terms of their ability to explain or predict inflation.

Kennickell, Arthur B.

PD January 1995. **TI** Households' Deposit Insurance Coverage: Evidence and Analysis of Potential Reforms. **AU** Kennickell, Arthur B.; Kwast, Myron L.; Starr-McCluer, Martha. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/05; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 20. **PR** no charge. **JE** G21, G28, D12. **KW** Deposit Insurance. Household Deposits. Depository Institutions.

AB It is often suggested that reducing deposit insurance would reduce problems of moral hazard in the banking industry. However, little is known about likely effects of proposed reforms on household depositors. This study uses data from the Survey of Consumer Finances to examine the characteristics of household depositors, particularly those with uninsured funds. We find that large depositors tend to have substantial shares of their assets in insured depositories, yet often fail to keep their holdings within insurance limits. Various explanations for these facts are considered. We also simulate the effects of proposed reforms on the pool of uninsured depositors.

PD September 1995. **TI** Saving and Permanent Income: Evidence From the 1992 SCF. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/41; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 16. **PR** no charge. **JE** E21, C82, C81. **KW** Survey Methodology. Consumption. Household Behavior.

AB This paper looks at household saving primarily using a three-level indicator originally developed for the 1992 Survey of Consumer Finances. The paper examines this saving variable in light of other indicators of saving behavior observed in the survey, and uses the variable to model saving behavior. This model contains, among other variables, an indicator of typical saving practices as a control for individual heterogeneity. The model provides interesting results on the role of transitory income, age, expectations, and other factors on saving. These results suggest that indicator variables may provide sufficient information for modeling without severely burdening survey respondents.

PD January 1996. **TI** Saving and Financial Planning: Some Findings From a Focus Group. **AU** Kennickell, Arthur B.; Starr-McCluer, Martha; Sunden, Annika E. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/01; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 12. **PR** no charge. **JE** E21, D12. **KW** Saving. Financial Planning.

AB This paper summarizes the results of a focus group on saving and financial planning. The group consisted of eight individuals with relatively high income and wealth. The savings behavior of such people is of interest partly due to their large contribution to total personal saving. The participants expressed concerns about how their circumstances will change as they age, and about uncertainties in income and health. While these concerns are consistent with theories emphasizing life-cycle and precautionary saving, the idea that saving involves self-control was also mentioned repeatedly.

PD April 1996. **TI** Household Saving and Portfolio Change: Evidence From the 1983-89 SCF Panel. **AU** Kennickell, Arthur B.; Starr-McCluer, Martha.

AA Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/18; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 19. **PR** no charge. **JE** E21, G11, D31. **KW** Household Saving. Portfolios. Panel Data.

AB There are very few sources of high-quality data on the dynamics of wealth accumulation. This paper uses newly-available data from the 1983-89 panel of the Survey of Consumer Finances to examine household saving and portfolio change over the 1980's. The 1983 SCF collected detailed information on households' assets, liabilities, income and other characteristics for a sample of 4,103 families. In 1989, 1,479 of these families were re-interviewed using a similar questionnaire. After describing the sample and methodology of the panel survey, we analyze changes in household wealth over the 1983-89 period. We also investigate changes in the structure of households' assets and debts.

Kiely, Joseph K.

TI Changes in REIT Liquidity 1990-94: Evidence From Intra-Day Transactions. **AU** Bhasin, Vijay; Cole, Rebel A.; Kiely, Joseph K.

Kimball, Miles S.

TI On the Concavity of the Consumption Function. **AU** Carroll, Christopher D.; Kimball, Miles S.

King, Stephen

TI Information Externalities, Share-Price Based Incentives and Managerial Behaviour. **AU** Grant, Simon; King, Stephen; Polak, Ben.

Kishore, Vellore

TI Report on Defaults and Returns on High Yield Bonds: Analysis Through 1994. **AU** Altman, Edward I.; Kishore, Vellore.

TI Special Report on Defaults and Returns on High Yield Bonds: Analysis Through 1995. **AU** Altman, Edward I.; Kishore, Vellore.

TI Recoveries on Defaulted Bonds: By Industry and Debt Seniority. **AU** Altman, Edward I.; Kishore, Vellore.

Kiyotaki, Nobuhiro

PD April 1995. **TI** Credit Cycles. **AU** Kiyotaki, Nobuhiro; Moore, John. **AA** Kiyotaki: University of Minnesota and National Bureau of Economic Research. Moore: London School of Economics. **SR** National Bureau of Economic Research, Working Paper: 5083; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 49. **PR** $5.00. **JE** E32, G12, G21, G24, G32. **KW** Credit Constraints. Business Cycle. Transmission Mechanism. Asset Prices. Durable Assets.

AB This paper is a theoretical study of how credit constraints interact with aggregate economic activity over the business cycle. We construct a model of a dynamic economy in which lenders cannot force borrowers to repay their debts unless the debts are secured. In such an economy, durable assets such as land, buildings and machinery play a dual role: they are not only factors of production, but they also serve as collateral for loans. Borrowers' credit limits are affected by the size of the credit limits. The dynamic interaction between credit limits and asset prices turns out to be a powerful transmission mechanism by which the effects of shocks persist, amplify, and spill over to other sectors. We show that small, temporary shocks to technology or income distribution can generate large, persistent fluctuations in output and asset prices.

Knox, Colin

PD February 1995. **TI** Emerging Consociationalism: Prospects for Power Sharing in Northern Ireland. **AA** University of Western Ontario and University of Ulster. **SR** University of Western Ontario, Papers in Political Economy: 71; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 26. **PR** no charge. **JE** D74, D78. **KW** Political Parties. Northern Ireland.

AB The cessation of violence in Northern Ireland now makes a political "solution" imperative as the terrorists await constitutional developments. One such option, which has been unsuccessfully attempted in the past, is a devolved power sharing executive in the Province. Evidence is emerging, however, from the often neglected forum of local government that a "voluntary coalition" or consociation between the Social Democratic and Labour Party (SDLP) and the Ulster Unionist Party (UUP) has evolved since 1989. This paper addresses the reaction of local political leaders, the electorate and the government to power sharing and assesses whether this development offers a platform for consociationalism at the macro political level.

Kortum, Samuel S.

PD January 1995. **TI** Research and Productivity Growth: Theory and Evidence From Patent Data. **AA** Boston University, National Bureau of Economic Research and Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/02; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 31. **PR** no charge. **JE** O31, O34, O41. **KW** Innovation. Patents. Productivity. Research.

AB I use the aggregate behavior of three indicators of technology (employment of research scientists and engineers, patented inventions, and total factor productivity) to identify a model of endogenous technological change. In the United States and several other developed countries, research employment and total factor productivity have both grown substantially while the rate of patenting has remained relatively flat. One interpretation of these facts is that: (i) patentable inventions are becoming increasingly difficult to discover as the quality of techniques in use increases, (ii) inventions that are patented represent percentage improvements on techniques currently in use, and (iii) the size of the economy is growing, making patents increasingly valuable and justifying increased research efforts devoted to discovering them. I develop a general-equilibrium search-theoretic model of invention to formalize this view. I then fit the model to data for the U.S. economy. The calibrated model implies that as much as 25% of U.S. productivity growth can be attributed to industrial research activity and that the equilibrium fraction of resources devoted to research is less than two-thirds of the level that a social planner would choose.

PD February 1995. **TI** Trade in Ideas: Patenting and

Productivity in the OECD. **AU** Kortum, Samuel S.; Eaton, Jonathan. **AA** Kortum: Boston University and National Bureau of Economic Research. Eaton: Boston University, National Bureau of Economic Research and Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/09; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 27. **PR** no charge. **JE** F43, O14, O31, O34. **KW** Technology. International Diffusion. Innovation. Patents. Productivity.
AB We develop and estimate a model of technological innovation and its contribution to growth at home and abroad. International patents indicate where innovations come from and where they are used. Countries grow at a common steady-state rate. A country's relative productivity depends upon its capacity to absorb technology. We estimate that, except for the United States, OECD countries derive almost all of their productivity growth from abroad.

PD July 1995. **TI** Engines of Growth: Domestic and Foreign Sources of Innovation. **AU** Kortum, Samuel S.; Eaton, Jonathan. **AA** Kortum: Boston University, National Bureau of Economic Research and Board of Governors of the Federal Reserve System. Eaton: Boston University and National Bureau of Economic Research. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/35; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 30. **PR** no charge. **JE** F43, O14, O31, O34. **KW** Technology. International. Diffusion. Innovation. Productivity.
AB We examine productivity growth since World War II in the five leading research economies: West Germany, France, the United Kingdom, Japan, and the United States. Available data on the capital-output ratio suggests that these countries grew as they did because of their ability to adopt more productive technologies, not because of capital deepening per se. We present a multicountry model of technological innovation and diffusion which has the implication that, for a wide relative productivities depending on the speed with which countries adopt technologies developed at home and abroad. Using parameter values that fit a cross section of data on productivity, research, and patenting, we simulate the growth of the five countries, given initial productivity levels in 1950 and research efforts in the subsequent four decades. Based on plausible assumptions about "technology gaps" that existed among these countries in 1950 we can explain their growth experiences quite successfully. Specifically, the simulations capture the magnitude of the slowdown in German, French, and Japanese productivity growth and the relative constancy of U.S. and U.K. growth.

Kotlikoff, Laurence J.

TI The Annuitization of Americans' Resources: A Cohort Analysis. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J.; Sabelhaus, John; Weil, David N.

TI The Annuitization of Americans' Resources: A Cohort Analysis. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J.; Sabelhaus, John; Weil, David N.

TI Generational Accounting in General Equilibrium. **AU** Fehr, Hans; Kotlikoff, Laurence J.

Kozicki, Sharon

TI The Comovement of Output and Labor Productivity in Aggregate Data for Auto Assembly Plants. **AU** Aizcorbe, Ana M.; Kozicki, Sharon.

Kramarz, Francis

TI Product Quality and Worker Quality. **AU** Abowd, John M.; Moreau, Antoine; Kramarz, Francis.

TI Changes in the Relative Structure of Wages and Employment: A Comparison of the United States, Canada, and France. **AU** Card, David; Kramarz, Francis; Lemieux, Thomas.

Krane, Spencer D.

PD September 1995. **TI** The Cyclical Sensitivity of Seasonality in U.S. Employment. **AU** Krane, Spencer D.; Wascher, William L. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/43; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 29. **PR** no charge. **JE** C22, E24. **KW** Seasonality. Business Cycles. Unemployment.
AB This paper investigates seasonality in U.S. payroll employment using a multivariate, unobserved components model. The model allows for interaction between seasonality in industry-level employment and a "common cycle" that captures the comovement in the disaggregated data. The common cycle we estimate exhibits similar business cycle properties, but smaller seasonal variation, than aggregate payroll employment. At the industry level, we often find significant differences across seasons in correlations between employment growth and the common cycle. Nonetheless, our industry-level seasonal factors do not differ much from univariate X-11 seasonals in sample; some noticeable differences arise, however, in out-of-sample experiments.

Krueger, Alan B.

PD October 1995. **TI** Labor Market Effects of Spinal Cord Injuries in the Dawn of the Computer Age. **AU** Krueger, Alan B.; Kruse, Douglas. **AA** Krueger: Princeton University. Kruse: Rutgers University. **SR** Princeton University, Industrial Relations Section, Working Paper: 349; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 34. **PR** $2.00. **JE** J28, J22, J24. **KW** Disability. Spinal Cord Injury. Computers.
AB Has the computer revolution lessened the adverse labor market consequences of severe disabilities? This paper investigates the labor market effects of severe, traumatic disabilities resulting from spinal cord injuries (SCI's). We compare the employment experiences of a sample of individuals with SCI's to those of former co-workers over the same period, and to two random samples of individuals in New Jersey. The analysis is based in large part on a 1994 telephone survey of New Jersey adults who had SCI's within the past ten years. Results indicate tat the occurrence of an SCI causes a steep decline in employment, hours worked, and weekly earnings, but relatively little change in wage rates for those

who work. The computer revolution has the potential to expand employment opportunities for people with disabilities. Our results indicate that having computer skills is associated with higher earnings, and a faster return to work and earnings recovery, for SCI individuals, after holding constant other variables such as education. There is no apparent earnings gap between SCI and non-SCI computer users, whereas among those who do not use computers at work the earnings of SCI employees lag behind those of non-SCI employees. Despite the benefits, individuals with SCI's are less likely to use computers than the general population.

TI Labor Market Effects of School Quality: Theory and Evidence. **AU** Card, David; Krueger, Alan B.

PD February 1996. **TI** A Statistical Analysis of Crime Against Foreigners in Unified Germany. **AU** Krueger, Alan B.; Pischke, Jorn-Steffen. **AA** Krueger: U.S. Department of Labor and Princeton University. Pischke: Massachusetts Institute of Technology. **SR** Princeton University, Industrial Relations Section, Working Paper: 358; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 25. **PR** $1.50. **JE** J15, K42. **KW** Crime. Immigrants. Ethnic Violence.
AB Germany has experienced a high and rising rate of anti-foreigner violence during the early 1990's. To analyze the determinants of crime against foreigners we assembled a new data set on the number and nature of such crimes at the county level based on newspaper reports. We find significant differences in the patterns of violence in the eastern and western parts of the country. The incidence of anti-foreigner crime is higher in the east and rises with distance from the former west German border. Economic variables like unemployment and wages matter little for the level of crime once location in the east is taken into account. The relative number of foreigners in a county has no relationship with the incidence of ethnic crimes in the west, whereas in the east it has a positive association with the number of crimes per resident and a negative association with the number of crimes per foreign resident.

PD April 1996. **TI** Observations on International Labor Standards and Trade. **AA** Princeton University and National Bureau of Economic Research. **SR** Princeton University, Industrial Relations Section, Working Paper: 362; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 31. **PR** $1.50. **JE** J38, F13. **KW** Labor Standards. Child Labor. Political Economy. International Trade.
AB This paper reviews the theoretical arguments for and against linking international labor standards to trade. Based on theory alone it is difficult to generalize about the effect of labor standards on efficiency and equity. Some economists have argued that international labor standards are merely disguised protectionism. An evaluation of determinants of support for legislation that would ban imports to the U.S. of goods made with child labor provides little support for the prevailing political economy view. In particular, Congressmen representing districts with relatively many unskilled workers, who are most likely to compete with child labor, are less likely to support a ban on imports made with child labor. Another finding is that the prevalence of child labor declines sharply with national income. Lastly, an analysis of compulsory schooling laws, which are often suggested as an alternative to prohibiting child labor, finds a tremendous amount of noncompliance in developing nations.

Krueger, Anne O.

PD April 1995. **TI** Free Trade Agreements Versus Customs Unions. **AA** Stanford University and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5084; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** $5.00. **JE** F13, F14. **KW** Customs Unions. Free Trade Agreements. Welfare Analysis. Tariffs.
AB Until NAFTA, analyses of preferential trading arrangements began by assuming a customs union with a common external tariff, and the differences between customs unions and free trade agreements (FTAs) have been little analyzed. This paper points to some of the differences between FTAs and customs unions, and shows that on welfare grounds a customs union is always Pareto-superior to an FTA. Moreover, the political economy of FTAs will lead to more opposition to further multilateral trade liberalization than will customs unions.

Krugman, Paul

PD April 1995. **TI** Globalization and the Inequality of Nations. **AU** Krugman, Paul; Venables, Anthony J. **AA** Krugman: Stanford University and National Bureau of Economic Research. Venables: London School of Economics. **SR** National Bureau of Economic Research, Working Paper: 5098; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 27. **PR** $5.00. **JE** D43, F12, L13, L22 R34. **KW** Monopolistic Competition. Intermediate Goods. Transportation Costs. Manufacturing Agglomeration.
AB A monopolistically competitive manufacturing sector produces goods used for final consumption and as intermediates. Intermediate usage creates cost and demand linkages between firms and a tendency for manufacturing agglomeration. How does globalization affect the location of manufacturing and gains from trade? At high transport costs all countries have some manufacturing, but when transport costs fall below a critical value a core-periphery pattern spontaneously forms, and nations that find themselves in the periphery suffer a decline in real income. At still lower transport costs there is convergence of real incomes, in which peripheral nations gain and core nations may lose.

Kruse, Douglas

TI Labor Market Effects of Spinal Cord Injuries in the Dawn of the Computer Age. **AU** Krueger, Alan B.; Kruse, Douglas.

Krusell, Per

PD March 1994. **TI** Politico-Economic Equilibrium and Economic Growth. **AU** Krusell, Per; Quadrini, Vincenzo; Rios-Rull, Jose-Victor. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/11; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 32. **PR** no charge. **JE** D72, D51, D71, H24. **KW** Political Economy. General Equilibrium. Growth. Taxation.
AB We propose a notion of dynamic politico-economic

equilibrium which builds on two key assumptions: policies are determined sequentially, and agents are fully rational both in their roles as consumers and as voters. Our object of interest is a simple model of endogenous growth and infinitely-lived agents where taxes on income are endogenous, and we show how growth critically depends on the initial distribution of asset holdings. In studying the model economy we relate our equilibrium definition and results to two strands of existing literature. The first is the literature on time-consistency, and we show that our equilibria are time-consistent. Hence, our equilibrium concept is the natural one for all those economies where the current political decisions are not constrained by past decisions. Second, we review the existing literature on political economy and growth and use the growth model we study to compare a number of existing approaches to modeling policy determination. We argue that the choice of equilibrium concept may have large quantitative implications. In particular, we show that equilibrium concepts which either assume that voting only occurs at the beginning of time, or that voters are myopic when they forecast future votes, lead to lower equilibrium tax rates and higher growth than under our approach to policy determination.

TI Long-Run Implications of Investment-Specific Technological Change. **AU** Greenwood, Jeremy; Hercowitz, Zvi; Krusell, Per.

Kupiec, Paul H.

PD March 1995. **TI** The Use of Bank Trading Risk Models for Regulatory Capital Purposes. **AU** Kupiec, Paul H.; O'Brien, James M. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/11; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 17. **PR** no charge. **JE** E42, E58, G21, G28. **KW** Capital Requirements. Risk Management. Market Risk.

AB At present, there is no regulatory capital requirement for the market risk exposures a bank takes in its trading account activities. Alternative approaches are being considered for setting regulatory capital requirements on such risks. One proposal would use a regulatory model for measuring such risks, while a second proposal would use a regulatory model for measuring such risks, while a third proposal would base market risk capital requirements on risk estimates generated by a bank's internal risk measurement model-- the so-called "internal models approach." The first of these proposals suffers from the drawback that there is currently no generally acceptable model for measuring market risks and it is questionable whether an efficient "regulatory standard" model could be developed and maintained over time. In response to criticisms of the first proposal, the "internal models" approach has been developed as an alternative mechanism for setting market risk capital requirements. This paper considers the difficulties inherent in using a bank's internal risk measurement model to estimate the long- horizon risk exposure that determines a regulatory capital requirement for market risk. The analysis suggests that bank internal models are not capable of measuring risk exposures over the relatively lengthy time interval of regulatory interest. These results suggest that an internal models approach for setting market risk capital requirements may be less than ideal if the accuracy of risk exposure estimates and the potential for independent verification are valued aspects of the regulatory capital system.

PD May 1995. **TI** Techniques for Verifying the Accuracy of Risk Measurement Models. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/24; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 28. **PR** no charge. **JE** E42, E58, G21, G28. **KW** Value at Risk. Risk Management. Market Risk. Capital Requirements.

AB Risk exposures are typically quantified in terms of a "value at risk" (VaR) estimate. A VaR estimate corresponds to a specific critical value of a portfolio's potential one-day profit and loss distribution. Given their functions both as internal risk management tools and as potential regulatory measures of risk exposure, it is important to assess and quantify the accuracy of an institution's VaR estimates. This study considers the formal statistical procedures that could be used to assess the accuracy of VaR estimates. The analysis demonstrates that verification of the accuracy of tail probability value estimates becomes substantially more difficult as the cumulative probability estimate being verified becomes smaller. In the extreme, it becomes virtually impossible to verify with any accuracy the potential losses associated with extremely rare events. It does not appear possible for a bank or its supervisor to reliably verify the accuracy of an institution's internal model loss exposure estimates using standard statistical techniques. The results have implications both for bank's that wish to assess the accuracy of their internal risk measurement models as well as for supervisors who must verify the accuracy of an institution's risk exposure estimate reported under an internal models approach to market risk.

PD May 1995. **TI** Noise Traders, Excess Volatility, and a Securities Transactions Tax. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/26; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 25. **PR** no charge. **JE** G11, G12, G18. **KW** Transaction Tax. Excess Volatility. Noise Traders. Securities.

AB Proponents of a securities transactions tax have suggested that such a tax may reduce stock return volatility. The argument is that, to the extent that short term speculative trading volume is the source of excess volatility, a tax that reduces such volume will reduce volatility. In the context of a simple general equilibrium model, it is shown that this partial equilibrium argument is misleading and in large part incorrect. In the absence of a tax, the model generates equilibria in which the risky asset's price exhibits excess volatility and agents engage in excess trading activity owing to the presence of destabilizing noise traders. Within the context of the model, it is shown that, although a transactions tax can reduce the volatility of the risky asset's price, the reduction in price volatility is accompanied by a fall in the asset's price as agents discount the future tax liability associated with risky asset ownership. Consequently, although price volatility may slightly decrease, the fall in equilibrium prices more than compensates, and the volatility of risky asset returns unambiguously increases with the level of the transactions tax.

PD July 1995. **TI** A Pre-Commitment Approach to Capital Requirements for Market Risk. **AU** Kupiec, Paul H.;

O'Brien, James M. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/36; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 23. **PR** no charge. **JE** G21, G28. **KW** Financial Derivatives. Trading Risks. Bank Capital.

AB Currently, there is no regulatory capital requirement that accounts for market risks in banks' trading accounts. Bank regulators are considering a capital charge for such risks based directly on risk estimates from banks' internal models typically used to measure one-day exposures. While an improvement over an earlier proposal that would rely on a regulatory risk measurement system, the internal models approach has significant drawbacks. The models are not appropriate for estimating trading account market risk exposure over a relatively lengthy period of interest to regulators and it is extremely difficult to validate the risk estimate a bank reports. These difficulties are eliminated in an alternative approach developed in this paper, referred to as a "pre-commitment" approach. Under this alternative approach, the bank pre-commits to a maximum loss exposure over a fixed subsequent period that takes into account risk management and trading objectives and allocates capital to cover that exposure. The regulator determines the likelihood of the bank's market trading losses exceeding its capital allocation through the incentive effects of capital penalties or fines imposed in the event of a violation of the commitment.

PD December 1995. **TI** Recent Developments in Bank Capital Regulation of Market Risks. **AU** Kupiec, Paul H.; O'Brien, James M. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/51; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 26. **PR** no charge. **JE** G21, G28. **KW** Banking. Capital Regulation. Market Risks.

AB Bank regulators are developing international capital standards for market risks in bank trading accounts. Two alternative approaches are being proposed. One would use a regulatory standard measure of market risks for trading positions and the other would rely on risk estimates from banks' internal risk measurement models. A third alternative, a concept release by the Federal Reserve Board, would have the bank precommit to a maximum trading loss over a designated horizon which would become its market risk capital charge. If cumulative losses exceed the maximum loss precommitment, a penalty in the form of a fine, capital surcharge, or regulatory discipline would be imposed. The three approaches to setting capital requirements for trading risks are reviewed in this paper. They are then analyzed with an emphasis on bringing out weakness that have provided the impetus for the development of the alternative approaches.

PD February 1996. **TI** Regulatory Competition and the Efficiency of Alternative Derivative Product Margining Systems. **AU** Kupiec, Paul H.; White, A. Patricia. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/11; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 25. **PR** no charge. **JE** G18, G28, L51. **KW** Margin Requirements. Regulatory Competition.

AB At present, two alternative methodologies are used for margining exchange-traded derivative contracts. Customer positions in securities and securities options are margined using a strategy-based approach. Futures, futures-options, and securities-option clearinghouse margins are set using a portfolio margining system. This study evaluates the relative efficiency of these alternative margining techniques using data on S&P 500 futures-option contracts traded on the Chicago Mercantile Exchange. The results indicate that the portfolio margining approach is a much more efficient system for collateralizing the one- day risk exposures of equity derivative portfolios. Given the overwhelming efficiency advantage of the portfolio approach, the simultaneous existence of these alternative margining methods is somewhat puzzling. It is argued that the coexistence of these systems can in part be explained in the context of Kane's (1984) model of regulatory competition. The efficiency comparison also provides insight into other industry and regulatory issues including the design of bilateral collateralization agreements and the efficiency of alternative schemes that have been proposed for setting regulatory capital requirements for market risk in banks and other financial institutions.

Kwast, Myron L.

TI Households' Deposit Insurance Coverage: Evidence and Analysis of Potential Reforms. **AU** Kennickell, Arthur B.; Kwast, Myron L.; Starr-McCluer, Martha.

Labadie, Pamela A.

PD February 1995. **TI** Financial Intermediation and Monetary Policy in a General Equilibrium Banking Model. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/08; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 26. **PR** no charge. **JE** G21, E51. **KW** Banks. Monetary Institutions. Credit Rationing.

AB A general equilibrium model of banking is developed to study the following issue: When does expansionary monetary policy result in an increase in lending and when does the policy simply lead to more inflation? Banks are required to hold nominal reserves and have access to deposit insurance; the financial structure results in a determinate deposit-equity ratio. Monetary policy is implemented by open- market operations and changes in nominal reserves and the policies are linked through the government's budget constraint. In this model, monetary policy has real effects because it can affect the amount of real wealth transferred between savers and dissavers, which in turn affects the lending decisions of banks and, hence, real output. The bank acts as a financial intermediary between producers and savers (households) and the government and households. The intermediation process between producers and savers is based on the Gale and Hellwig (1985) model in which there is credit rationing because of asymmetric information and costly state verification. When banks are able to write state-contingent standard debt contracts and monitoring costs are indexed for inflation, government reserve policy and open market operations have no real effects. This occurs despite reserve requirements, deposit insurance and the determinate deposit-equity ratio.

LaCasse, Chantale

TI Secret Reserve Prices in a Bidding Model With a Re-Sale Option. **AU** Horstmann, Ignatius J.; LaCasse, Chantale.

Lach, Saul

TI Product Innovation and the Business Cycle. **AU** Jovanovic, Boyan; Lach, Saul.

PD October 1995. **TI** R&D, Investment and Industry Dynamics. **AU** Lach, Saul; Rob, Rafael. **AA** Lach: Hebrew University of Jerusalem, Board of Governors of the Federal Reserve System and National Bureau of Economic Research. Rob: INSEAD. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/47; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 21. **PR** no charge. **JE** O32, D24, E22. **KW** Endogenous Innovation. Growth.

AB We present a model of industry evolution where the dynamics are driven by a process of endogenous innovations followed by subsequent embodiments in physical capital. Traditionally, the only distinction between R&D and physical investment was one of labeling: the first process accumulates an intangible stock, knowledge, while the second accumulates physical capital. Both stocks affect output in a symmetric fashion. We argue that the story is not that simple, and that there is more to it than differences in the object of accumulation. Our model stresses the causal relationship between past R&D expenditures and current investments in machinery and equipment. This causality pattern, which is supported by the data, also explains the observed higher volatility of physical investment relative to R&D expenditures.

LaFayette, William C.

PD March 1995. **TI** Endogenous Mortgage Choice, Borrowing Constraints and the Tenure Decision. **AU** LaFayette, William C.; Haurin, Donald R.; Hendershott, Patric H. **AA** LaFayette and Haurin: Ohio State University. Hendershott: Ohio State University and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5074; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 25. **PR** $5.00. **JE** G21, R21. **KW** Credit Constraints. Home Ownership. Loans.

AB Earlier research has shown that lender income and wealth constraint ratios discourage home ownership. This empirical research has been based on home purchasers using an 80 percent loan-to-value (LTV) fixed-rate conventional loan. Employing the same assumption, we find that the constraints lowered the ownership rate of our 1919 young home purchasers by about 20 percentage points. However, households are not restricted to putting 20 percent down and choosing a fixed-rate loan. When we allow households to select the optimal LTV and mortgage type (adjustable or fixed-rate with Federal Housing Administration (FHA) or conventional insurance), the percentage of our sample that is credit constrained declines from 71 to 49. Moreover, the measure impact on the home ownership rate of the constraints falls to only 4 percentage points. Further, FHA loans are estimated to increase home ownership by only 0.1 to 0.2 percentage points.

Lagunoff, Roger D.

PD May 1994. **TI** On the Evolution of Pareto Optimal Behavior in Repeated Coordination Problems. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/12R; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 27. **PR** no charge. **JE** D11, D91. **KW** Coordination Game. Belief Process. Absorbing State.

AB This paper describes an evolutionary dynamic for an ongoing society with a certain demographic structure. Generations of individuals asynchronously supercede their "parents," creating an entry/exit process that allows individuals with possibly different beliefs to enter society. The main result shows that in repeated coordination problems, the Pareto dominant equilibrium is a globally absorbing state of the dynamic process. This result does not involve either of the usual assumptions of myopia or inertial behavior common in evolutionary models. Instead, the beliefs of the individuals that enter this society satisfy three conditions: (1) individuals' forecasts form a self confirming equilibrium (SCE) in the sense of Fudenberg and Levine (1993). This notion requires correct forecasts of an individual only along the realized path during the individual's lifetime; (2) the process admits random and heterogeneous forecasts in the form of mutations of beliefs across generations newborn individuals enter the system; (3) the belief process has maximal support with respect to the first two properties. These conditions are fully compatible, and the first condition need only hold approximately. That is, the result still holds if beliefs come to approximate SCE beliefs with the passage of time.

PD April 1995. **TI** Sufficiently Specialized Economies have Nonempty Cores. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/07; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 14. **PR** no charge. **JE** C62, D51, D52, D11. **KW** General Equilibrium. Core. Production.

AB An economy with a nonempty core may plausibly be regarded as socially stable since there exists allocations against which no group in the economy wishes to "recontract out." Aside from classical economies, it is not generally known what are the primitives of an economy that give rise to a nonempty core. This paper finds a class of perturbations that operate directly on economic primitives to generate a nonempty core. These perturbations are characterized by two properties which have economic content. The first is a notion of specialization -- individuals hold goods and essential inputs to productive processes that are not readily available elsewhere in the economy. The second is a curvature condition. Each agent's preferences must display sufficient curvature so that another person's specialized holdings are valued by that agent. It is shown that for any economy of a general class that includes possibly local nonconvexities and a wide variety of property rights configurations, if the economy is sufficiently specialized and the curvature condition is satisfied, then the corresponding NTU game is balanced. Hence, the economy has a nonempty core.

PD August 1995. **TI** An "Anti-Folk Theorem" for a Class of Asynchronously Repeated Games. **AU** Lagunoff, Roger D.; Matsui, Akihiko. **AA** Lagunoff: University of

Pennsylvania and Virginia Polytechnic Institute and State University. Matsui: University of Pennsylvania and University of Tsukuba. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/15; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 25. **PR** no charge. **JE** C72, C73, C62. **KW** Repeated Games. Repeated Games. Renewal Games. Coordination Games.

AB It is well known from the Folk Theorem that infinitely repeated games admit a multitude of equilibria. This paper demonstrates that in some types of games, the Folk Theorem form of multiplicity is an artifact of the standard representation which assumes perfect synchronization in the timing of actions between the players. We define here a more general family of repeated settings called renewal games. Specifically, a renewal game is a setting in which a stage game is repeated in continuous time, and at certain stochastic points in time determined by an arbitrary renewal process some set of players may be called upon to make a move. A stationary, ergodic Markov process determines who moves at each decision node. We restrict attention in this paper to a natural subclass of renewal games called asynchronously repeated games, in which no two individuals can change their actions simultaneously. Special cases include the alternating move game, and the Poisson revision game. In the latter, each player adjusts his action independently at Poisson distributed times. Our main result concerns asynchronously repeated games of pure coordination (where the payoffs of all players in the stage game are identical up to an affine transformation): given an epsilon greater than or equal to zero, if players are sufficiently patient then every Perfect equilibrium payoff comes within epsilon of the Pareto dominant payoff. We also show that the "Folk wisdom" in the standard model that repetition always expands (weakly) the set of equilibrium payoffs is not true generally in asynchronously repeated games.

Laidler, David E.W

PD November 1995. **TI** Monetary Explanations of the Weimar Republic's Hyperinflation: Some Neglected Contributions in Contemporary German Literature. **AU** Laidler, David E.W.; Stadler, George W. **AA** Laidler: University of Western Ontario. Stadler: University of Newcastle. **SR** University of Western Ontario, Department of Economics, Research Report: 9521; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 34. **PR** $10.00. **JE** E31, E42, E51. **KW** Hyperinflation. Germany.

AB This paper discusses the state of monetary economics in Germany before and shortly after the Great War, stressing the antipathy of the majority of German economists to the quantity theory of money. We then consider the questions which the hyperinflation posed, and the answers which the then-prevailing orthodoxy provided to them. We go on to review Cagan's quantity theoretic analysis of hyperinflation, and then deal with contributions, based upon the quantity theory, made by Bortkiewicz, Hahn and Mises in 1923-1924.

PD January 1996. **TI** Inflation Control and Monetary Policy Rules. **AA** University of Western Ontario and C.D. Howe Institute. **SR** University of Western Ontario, Papers in Political Economy: 66; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 31. **PR** no charge. **JE** E31, E58, D78. **KW** Central Banks. Independence. Inflation.

AB This paper explores the nature of ideas concerning developments in monetary theory and central banking theory, and their relationship to monetarism. It begins with a brief account of monetarism as it stood in the 1960's, just as inflation was beginning to get underway. It goes on to discuss what, with benefit of hindsight, seem to have been important weaknesses in that doctrine: namely, the inadequacy of its theory of money for dealing with normative questions about the cost of inflation, and the initial narrowness of its focus when it came to the treatment of expectations and policy credibility. Finally, the implications for appropriate configuration of monetary policy are outlined.

Lal, Deepak

PD January 1995. **TI** The Minimum Wage. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 723; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 24. **PR** $5.00. **JE** H11, J38. **KW** Minimum Wage. Monopsony. Training.

AB This paper briefly reviews the traditional case for the minimum wage as an instrument of poverty alleviation before examining the theoretical and empirical arguments behind the efficiency case. The paper concludes that the continuing controversy over the minimum wage reflects the continuing hold of certain atavistic impulses combined with the continuing lack of understanding amongst various technocrats of the workings of the actual as compared with an idealized market economy. Despite the passions aroused, the textbook conclusion that the minimum wage is a well-intentioned, though inefficient and inexpert, interference with the mechanisms of supply and demand still stands.

PD May 1995. **TI** Eco-Fundamentalism. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 732; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 22. **PR** $5.00. **JE** F01, Q28, Q38, Q48. **KW** Religion. Environmentalism. Political Economy.

AB The picture which emerges from Huntington's 1993 article and his related work is of the West attempting to promote its values of economic and political freedom against the Rest. The "religious" values of the Rest are being implicitly contrasted with what can be called the secular "classical liberal" values of the West. But in this article I want to argue that this benign view of the West's values overlooks an important secular religious movement in the West (with transnational links), that of the eco-fundamentalists. To establish the "religious" nature of this movement I examine the rational basis for the fears on which an effective end to economic growth -- particularly in the Rest -- is being promoted by the environmentalists, as well as their attempts to introduce a form of eco-protectionism of foreign trade in the West aimed at the Rest.

PD October 1995. **TI** Policies for Economic Development: Why the Wheel Has Come Full Circle. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 744; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 28. **PR** $5.00. **JE** A11, B12, O11, O55. **KW** Policies. Economic Development. Africa. Laissez Faire.

AB The paper shows that the current consensus in development policy echoes the classical prescription set out in Mill's Principles. It provides a critique of "new" arguments for dirigisme, and shows how the classical economic policy package has continuing relevance for Africa.

PD November 1995. **TI** Arms and the Man: The Costs and Benefits of Defense Expenditure. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 747; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 14. **PR** $5.00. **JE** H56, O11, D61, D72. **KW** Nuclear Proliferation. Defense. Development.

AB The paper surveys the literature on the costs and benefits of defense expenditure with particular reference to developing countries. It uses this to provide a simple cost-benefit framework for assessing the opportunity costs of nuclear proliferation in the Third World.

Lamb, Russell L.

PD February 1996. **TI** Why are Estimates of Agricultural Supply Response so Variable? **AU** Lamb, Russell L.; Diebold, Francis X. **AA** Lamb: Board of Governors of the Federal Reserve System. Diebold: University of Pennsylvania and National Bureau of Economic Research. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/08; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 16. **PR** no charge. **JE** C11, C51, Q11. **KW** Agricultural Supply. Bayesian Estimation. MELO Estimation.

AB Estimates of the response of agricultural supply to movements in expected price display curiously large variation across crops, regions and time periods. We argue that this anomaly may be traced, at least in part, to the statistical properties of the commonly-used econometric estimator, which has infinite moments of all orders and may have a bimodal distribution. We propose an alternative minimum-expected-loss estimator, establish its improved sampling properties, and argue for its usefulness in the empirical analysis of agricultural supply response.

Lane, Jan-Erik

PD June 1995. **TI** The Decline of the Swedish Model. **AA** University of Oslo. **SR** University of Western Ontario, Papers in Political Economy: 60; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 12. **PR** no charge. **JE** H11, D72, D78. **KW** Malaise. Corporatism. Sweden. Socialism.

AB The argument in relation to the decline of the Swedish model of a full scale comprehensive welfare state is that the international literature on Sweden has failed to realize the severity of the economic crisis. The Swedish malaise is entirely home made and started much earlier than international commentators realized. The sharp down turn in the performance of the public and private sectors in Sweden is a result of the overemphasis on the public sector, upsetting the earlier established balance between markets and politics. Since 1975 Sweden has been ruled by a distributional coalition that has not yet come up with any systemic reform that can take the country out of its economic difficulties.

Lebow, David E.

PD October 1995. **TI** Inflation, Nominal Wage Rigidity, and the Efficiency of Labor Markets. **AU** Lebow, David E.; Stockton, David J.; Wascher, William L. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 94-45; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 29. **PR** no charge. **JE** E31, E24. **KW** Wage Rigidity. Keynesianism. Inflation.

AB If nominal wages cannot fall, then positive inflation may facilitate real wage adjustment. We examine data on individuals' wage changes and find only limited evidence of such downward nominal rigidity. The shape of the distribution of wage changes is little affected by the rate of inflation. About 8 percent of job stayers have zero nominal wage change, but we estimate that less than half of that spike represents truncation associated with downward nominal rigidity. We estimate that reducing inflation from four percent to zero would result in an additional 1/2 to 1-3/4 percent of people having constrained wages because of downward nominal rigidity, and our estimates of the associated welfare loss center on about five-hundredths of a percent of aggregate output.

Lehrer, Ehud

PD May 1995. **TI** Breaking the Barriers of the Feasible Set: On Repeated Games with Different Time Preferences. **AU** Lehrer, Ehud; Pauzner, Ady. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1072; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** not available. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D91, C72, C73. **KW** Repeated Games. Equilibrium. Folk Theorem. Time Preference.

AB When players have different time preferences, the set of feasible payoffs of a repeated game is typically larger than the convex hull of the underlying stage-game payoffs. In contrast to the case of identical discounting factors, some feasible and individually rational payoffs of the repeated game may not be supported by an equilibrium, even when the time intervals between repetitions become arbitrarily small (or, equivalently, when the discount factors tend to one.) We give a simple geometric characterization of the set of equilibrium outcomes for 2- player repeated games. For n-player games, we provide necessary and sufficient conditions for the set of equilibrium outcomes to exceed the stage-game's feasible set.

TI Calibrated Forecasting and Merging. **AU** Kalai, Ehud; Lehrer, Ehud; Smorodinsky, Rann.

Lemieux, Thomas

TI Labor Market Institutions and the Distribution of Wages, 1973-1992: A Semiparametric Approach. **AU** DiNardo, John; Fortin, Nicole M.; Lemieux, Thomas.

TI Changes in the Relative Structure of Wages and

Employment: A Comparison of the United States, Canada, and France. **AU** Card, David; Kramarz, Francis; Lemieux, Thomas.

LeRoy, Stephen F.

TI Bubbles as Payoffs at Infinity. **AU** Gilles, Christian; LeRoy, Stephen F.

Leusner, John

PD April 1996. **TI** Solving an Empirical Puzzle in the Capital Asset Pricing Model. **AU** Leusner, John; Akhavein, Jalal D.; Swamy, P.A.V.B. **AA** Leusner: University of Chicago. Akhavein: New York University, Wharton Financial Institutions Center and University of Pennsylvania. Swamy: Comptroller of the Currency. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/14; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 24. **PR** no charge. **JE** G12, C81. **KW** Capital Asset Pricing Model. Measurement Errors. Excluded Variables. Class of Functional Forms. Consistent Assumptions.

AB A long standing puzzle in the Capital Asset Pricing Model (CAPM) has been the inability of empirical work to validate it. Roll (1977) was the first to point out this problem, and recently, Fama and French (1992,1993) bolstered Roll's original critique with additional empirical results. Does this mean the CAPM is dead? This paper presents a new empirical approach to estimating the CAPM, taking into account the differences between observable and expected returns for risky assets and for the market portfolio of all traded assets, as well as inherent nonlinearities and the effects of excluded variables. Using this approach, we provide evidence that the CAPM is alive and well.

Levine, K. David

TI When are Non-Anonymous Players Negligible? **AU** Fudenberg, Drew; Levine, K. David; Pesendorfer, Wolfgang.

TI Maintaining a Reputation Against a Long-Lived Opponent. **AU** Celentani, Marco; Fudenberg, Drew; Levine, K. David; Pessendorfer, Wolfgang.

TI Maintaining a Reputation Against a Long-Lived Opponent. **AU** Celentani, Marco; Fudenberg, Drew; Levine, K. David; Pessendorfer, Wolfgang.

Levy, Frank

TI The Growing Importance of Cognitive Skills in Wage Determination. **AU** Murnane, Richard J.; Willett, John B.; Levy, Frank.

Li, Yiting

PD April 1994. **TI** Commodity Money Under Private Information. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/08; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 20. **PR** no charge. **JE** E41, E42, C62. **KW** Commodity Money. Private Information. Uncertainty.

AB In this paper, private information is introduced in terms of qualitative uncertainty concerning the good which would be the unique medium of exchange in the economy with complete information. Producers are allowed to produce high or low quality versions of that good, and people may not always recognize its true quality. It is shown that commodities that suffer from qualitative uncertainty may still be used as the medium of exchange when the private information problem is not too severe and the discount rate is in the proper range. This is so despite the fact that, in some equilibria, there is necessarily some low quality commodity money produced and in circulation. When the information problem is so severe that the good of uncertain quality cannot be the unique money, there can exist an equilibrium with dual commodity monies of which one is the good subject to qualitative uncertainty.

Lightwood, James

TI Cost Optimization in the SIS Model of Infectious Disease With Treatment. **AU** Goldman, Steven M.; Lightwood, James.

Linton, Oliver B.

PD November 1994. **TI** Edgeworth Approximation for MINPIN Estimators in Semiparametric Regression Models. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1086; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 44. **PR** no charge. **JE** C14, C44, C52. **KW** Edgeworth. Semiparametric. U-Statistic.

AB We examine the higher order asymptotic properties of semiparametric regression estimators that were obtained by the general MINPIN method described in Andrews (1989). We derive an order one over n stochastic expansion and give a theorem justifying order n to the negative one power distributional approximation of the Edgeworth type.

PD June 1995. **TI** Adaptive Testing in ARCH Models. **AU** Linton, Oliver B.; Steigerwald, Douglas G. **AA** Linton: Yale University. Steigerwald: University of California, Santa Barbara. **SR** Yale University, Cowles Foundation Discussion Paper: 1105; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 43. **PR** no charge. **JE** C12, C14, C22. **KW** Adaptive Estimation. Efficient. Semiparametric Testing.

AB Existing specification tests for conditional heteroskedasticity are derived under the assumption that the density of the innovation, or standardized error, is Gaussian, despite the fact that many recent empirical studies provide evidence that this density is not Gaussian. We obtain specification tests for conditional heteroskedasticity under the assumption that the innovation density is a member of a general family of densities. Our test statistics maximize asymptotic local power and weighted average power criteria for the general family of densities. We establish both first order and second order theory for our procedures. Monte Carlo simulations indicate that asymptotic power gains are achievable in finite sample. We apply the tests to stock futures data sample at high frequency and find evidence of conditional heteroscedasticity in the residuals from a GARCH (1,1) model, indicating that the standard (1,1) specification is not adequate.

PD June 1995. **TI** A Nonparametric Test of Conditional Independence. **AU** Linton, Oliver B.; Gozalo, Pedro.

AA Linton: Yale University. Gozalo: Brown University. **SR** Yale University, Cowles Foundation Discussion Paper: 1106; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 25. **PR** no charge. **JE** C12, C14, C15, C52. **KW** Conditional Independence. Empirical Distribution. Nonparametric. Smooth Bootstrap.

AB We propose a nonparametric test of conditional independence based on the empirical distribution function. The asymptotic null distribution is a mixture of chi-squareds. A bootstrap procedure is proposed for calculating the critical values. Our test has power against alternatives at distance n to the negative one half power from the null. Monte Carlo simulations provide evidence on size and power. We apply the test to the Boston housing dataset.

PD March 1996. **TI** An Asymptotic Expansion in the GARCH (1,1) Model. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1118; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 29. **PR** no charge. **JE** C12, C14, C22. **KW** Asymptotic Expansions. Bias Reduction. Edgeworth Approximation. Conditional Heteroskedasticity.

AB We develop order T to the negative one power asymptotic expansions for the quasi-maximum likelihood estimator (QMLE) and a two step approximate QMLE in the GARCH(1,1) model. We calculate the approximate mean and skewness and hence the Edgeworth-B distribution function. We suggest several methods of bias reduction based on these approximations.

Lipsey, Robert E.

TI Wages and Foreign Ownership: A Comparative Study of Mexico, Venezuela, and the United States. **AU** Aitken, Brian; Harrison, Ann; Lipsey, Robert E.

TI Wages and Foreign Ownership: A Comparative Study of Mexico, Venezuela, and the United States. **AU** Aitken, Brian; Harrison, Ann; Lipsey, Robert E.

Lisboa, Marcos de Barros

PD April 1994. **TI** Generic Local Uniqueness in the Walrasian Model: A Pedagogical Note. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/09; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 17. **PR** no charge. **JE** C62, D51, A23. **KW** Walras. General Equilibrium. Teaching.

AB This note presents a simplified approach to Debreu's Theorem on Regular Economies. The same approach is also used to extend Debreu's result to two alternative spaces of economies. We prove that the set of regular economies is a generic (open and full measure) subset of the space of endowments with fixed resources (the generalized Edgeworth box). We also prove that, for a given initial distribution of endowments, regular economies are an open and dense subset of the space of von Neumann-Morgenstern utility functions which are not state dependent.

Liu, Xuemei

TI Tests of Seasonal and Non-Seasonal Serial Correlation. **AU** Andrews, Donald W.K.; Liu, Xuemei; Ploberger, Werner.

Lizzeri, Alessandro

PD March 1995. **TI** Existence and Uniqueness of Equilibrium in First Price Auction and War of Attrition With Affiliated Values. **AU** Lizzeri, Alessandro; Persico, Nicola. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1120; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 24. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, D44, D82. **KW** Auctions. Game Theory. Attrition.

AB We prove existence and uniqueness of equilibrium in a 2-bidder asymmetric first price auction with affiliated values. The techniques used to prove uniqueness are different from the ones used in analyses of private values environments. Moreover the proof of existence is constructive. For comparison purposes we also consider the war of attrition and show that there is a continuum of equilibria in that game.

Lopomo, Giuseppe

PD October 1995. **TI** Optimality and Robustness of the English Auction. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/29; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 25. **PR** not available. **JE** D44, C72, D82, D84. **KW** Auctions. Dutch Auction. English Auction. Beliefs.

AB This paper attempts to reconcile the observed popularity of the English auction with the hypothesis that the trading mechanism is chosen with the objective of maximizing the seller's expected revenue. Under the assumptions of Milgrom and Weber's "general symmetric model," I show the following three results. First, the " augmented" English auction, in which the auctioneer sets the reserve price after all but one bidder have dropped out, generates at least as much seller's expected revenue as any ex post incentive-compatible (EPIC) and individually rational (EPIR) direct mechanisms. EPIC and EPIR direct mechanisms correspond to "belief-free" selling procedures. Thus this restriction of the set of feasible selling mechanisms aims at capturing a notion of robustness with respect to perturbations of the buyers' beliefs about their opponents' private information. Second, in the larger set of mechanisms, characterized by the property that "losers do not pay," there exist auctions that generate a higher seller's expected revenue than the (augmented) English auction. Third, with two buyers, for a large class of signals' distributions, the augmented English auction maximizes the seller's expected revenue among all selling procedures where the loser does not pay and each buyer's payment is nondecreasing in his own signal. With private values, these two conditions are satisfied by many equilibria in a class of bidding mechanisms, which includes approximations of both the Dutch auction and the English auction with discrete price increments. With more than two buyers, the English auction is optimal among all ex post efficient mechanisms where the losers do not pay and each buyer's payment is monotone in his signal.

Lusztig, Michael

PD June 1995. **TI** The Limits of Rent-Seeking: Why

Protectionists Become Free Traders. **AA** University of Western Ontario. **SR** University of Western Ontario, Papers in Political Economy: 61; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 25. **PR** no charge. **JE** F13, D72. **KW** Rent-Seeking. Free Trade. Protectionism.

AB A critical issue within international political economy concerns the means by which popularly elected governments overcome domestic political obstacles to trade liberalization. It is broadly accepted that free trade constitutes an "asymmetric" public good, whereby the benefits are widely distributed but latent, while the costs to those how had enjoyed rents derived from the insulation of the domestic market are concentrated and manifest. Insofar as it explains why domestic rent- seekers alter their trade policy demands, this paper demonstrates one way in which governments successfully might overcome an important source of domestic opposition to free trade policies. It develops and applies a model to suggest that under certain conditions, rent-seeking opponents of free trade may actually become free trade supporters.

Lynch, Anthony W.

PD November 1995. **TI** New Evidence on Stock Price Effects Associated With Changes in the S&P 500 Index. **AU** Lynch, Anthony W.; Mendenhall, Richard R. **AA** Lynch: New York University. Mendenhall: University of Notre Dame. **SR** New York University, Salomon Brothers Working Paper: S/96/15; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 29. **PR** not available. **JE** G12, G14. **KW** S&P 500. Stock Demand. Market Efficiency. Volume.

AB Since October 1989, Standard and Poor's has (when possible) announced changes in the composition of the S&P 500 index one week in advance. Because index funds hold S&P 500 stocks to minimize tracking error, index composition changes since this date provide an opportunity to examine market reaction to an anticipated change in the demand for a stock. Using post-October-1989 data, significantly positive (negative) post-announcement abnormal returns are only partially reversed following additions (deletions), indicating temporary price pressure and downward-sloping long-run demand curves for stocks. The temporary price effects for additions and deletions are in contrast to the findings for pre-October 1989 index changes (no temporary effect) and block trades (no temporary effect for buyer-initiated trades). Our findings are also inconsistent with semi-strong from market efficiency. While the largest abnormal return occurs on the announcement day, volume on the day before the change is substantially higher than any other day.

MacDonald, Glenn M.

TI Advertising as a Signal of Product Quality: Compact Disc Players. **AU** Horstmann, Ignatius J.; MacDonald, Glenn M.

Mack, Phillip

TI Will Bank Proprietary Mutual Funds Survive? Assessing Their Viability Via Scope and Scale Estimates. **AU** Collins, Sean; Mack, Phillip.

Macunovich, Diane J.

TI Explaining the Labor Force Participation of Women 20-24. **AU** Fair, Ray C.; Macunovich, Diane J.

Madan, Dilip B.

TI Asset Pricing in an Incomplete Market With a Locally Risky Discount Factor. **AU** Acharya, Sankarshan; Madan, Dilip B.

Mailath, George J.

PD June 1994. **TI** Evolution and Endogenous Interactions. **AU** Mailath, George J.; Samuelson, Larry; Shaked, Avner. **AA** Mailath: University of Pennsylvania. Samuelson: University of Wisconsin. Shaked: University of Bonn. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/13; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 28. **PR** no charge. **JE** C73, C72, C62. **KW** Local Interactions. Correlated Equilibrium. Evolutionary Stability. Networks.

AB We examine an evolutionary model with "local interactions," so that some agents may be more likely to interact than others. We show that equilibrium strategy choices with given local interactions correspond to correlated equilibria of the underlying game, suggesting a new interpretation for correlated equilibrium. We then allow the pattern of interactions itself to be shaped by evolutionary pressures. If agents do not have the ability to avoid unwanted interactions, then heterogeneous outcomes can appear, including outcomes in which different groups play different Pareto ranked equilibria. If agents do have the ability to avoid undesired interactions, then we derive conditions under which outcomes must be not only homogenous but efficient.

PD August 1994. **TI** How Proper is Sequential Equilibrium? **AU** Mailath, George J.; Samuelson, Larry; Swinkels, Jeroen M. **AA** Mailath: University of Pennsylvania. Samuelson: University of Wisconsin. Swinkels: Northwestern University. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/14; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 24. **PR** no charge. **JE** C73, C62, C72. **KW** Refinements. Proper Equilibrium. Sequential Equilibrium. Trembles. Indifferences.

AB How much stronger is proper equilibrium than sequentially, and what is the difference between the two? To answer these questions, we introduce an equilibrium concept -- strategic independence respecting equilibrium (SIRE) -- that is motivated by the same sequential rationality logic as sequential equilibrium. The distinction between SIRE and proper equilibrium can be phrased as: SIRE requires optimality in the limit, while proper requires optimality along the sequence. We show that the difference between SIRE and proper equilibrium revolves around how they treat cases in which players are indifferent between strategies. Proper equilibrium is the most demanding, appealing every case in which a player is indifferent between strategies to a higher level theory about opponents' play. SIRE appeals an indifference to the next level only if it is a structural indifference, or an indifference that arises out of ties in the payoff matrix (as opposed to an indifference created by a fortuitously chosen mixed strategy on the part of opponents). Sequential-in-every-tree appeals an indifference to the next level only if every player in the game is structurally indifferent between the outcomes involved (as opposed to indifference only on the part of the player making the decision).

TI Incorporating Concern for Relative Wealth Into Economic Models. **AU** Cole, Harold L.; Mailath, George J.; Postlewaite, Andrew.

PD September 1995. **TI** Correlated Equilibria and Local Interactions. **AU** Mailath, George J.; Samuelson, Larry; Shaked, Avner. **AA** Mailath: University of Pennsylvania. Samuelson: University of Wisconsin. Shaked: University of Bonn. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/16; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 7. **PR** no charge. **JE** C62, C72, C78. **KW** Nash Equilibrium. Matching Theory.
AB This paper show that Nash equilibria of a local-interaction game are equivalent to correlated equilibria of the underlying game.

Makiya, Kanan

PD October 1994. **TI** Putting Cruelty First. **AA** Harvard University. **SR** University of Western Ontario, Papers in Political Economy: 57; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 21. **PR** no charge. **JE** H11, I18, D63. **KW** Torture. Human Rights. Cruelty.
AB This lecture discusses the importance of seeing cruelty as a great evil.

Makowski, Louis

PD May 1995. **TI** Arbitrage and the Flattening Effect of Large Numbers. **AU** Makowski, Louis; Ostroy, Joseph M. **AA** Makowski: University of California, Davis. Ostroy: University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 737; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 29. **PR** $5.00. **JE** D51, D44. **KW** Arbitrage. Arbitrage Cone. Walrasian Equilibrium. Competitive Equilibrium. Marginalist Revolution.
AB In a model of an exchange economy with a continuum of agents, we show that competitive equilibrium can be regarded as resulting from the elimination of arbitrage possibilities. Arbitrage leads to a phenomenon we call the "flattening effect of large numbers," which provides a precise meaning to the statement that under perfect competition individuals cannot influence prices. There is an attractive geometry associated with arbitrage, which is highlighted in several figures. We compare arbitrage equilibrium in a continuum economy to Walrasian equilibrium, the core, non-cooperative dynamic matching models, and to the existence of equilibrium with unbounded short-selling. We also link the demonstration of equilibrium through arbitrage with the logic of the marginalism.

Malkiel, Burton G.

TI The Predictability of Stock Returns: A Cross-Sectional Simulation. **AU** Fluck, Zsuzsanna; Malkiel, Burton G.; Quandt, Richard E.

Manning, Julian R.A

PD October 1994. **TI** Public Goods and the Oates Decentralization Theorem. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/18; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 16. **PR** no charge. **JE** H41, D61, D62. **KW** Public Goods. Centralization. Local Government. Federalism.
AB For a restrictive class of models Oates theorized that public good provision by local governments is always at least as efficient as that by a central government. We consider a general class of models and attempt to give the weakest conditions under which Oates' claim and the converse hold. Smoothness and convexity are not needed. Some of the assumptions needed on preferences are strong. Weakening these assumptions may lead to radically different results.

PD June 1995. **TI** Budget-Constrained Search. **AU** Manning, Julian R.A.; Manning, Richard. **AA** Manning, J.: University of Pennsylvania. Manning, R.: not available. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/09; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 19. **PR** no charge. **JE** D11, D91, D83. **KW** Search. Intertemporal Choice.
AB A consumer with diminishing marginal utility in consumption, who can search for lower prices, will balance the gains from spreading consumption evenly through time against the benefits of delaying consumption until lower prices are revealed. Optimal programs of consumption, savings and price are characterized for a general formulation of this problem. Intertemporal substitutability is measured by relative-risk aversion. That relative-risk aversion that is small is sufficient for the intuitive solution: As the best current price rises, more search and less consumption is done. The general model is adapted to special cases. Among other things, this shows that linear utility and sequential search implies ex ante calculable reservation prices and consumption only when search stops. However, this characterization is a consequence of the restriction to linear utility. Outside of this context reservation prices and consumption may not be calculable, ex ante.

Manning, Richard

TI Budget-Constrained Search. **AU** Manning, Julian R.A.; Manning, Richard.

Mariger, Randall P.

PD January 1995. **TI** Public Policy Toward Pensions: Why Defined-Contribution Pensions Dominate Government-Insured Defined-Benefit Pensions. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/03; Board of Governors of the Federal

Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 36. **PR** no charge. **JE** H11, J38, J26. **KW** Private Pensions. Risk. Pension Benefit Guarantee Corporation.

AB The Employee Retirement Income Security Act of 1974 (ERISA) mandates government-sponsored insurance for all defined-benefit pensions in the United States. This paper argues that the purpose of ERISA's pension insurance, to reduce income uncertainty in retirement, would be better accomplished with defined-contribution pensions. Specifically, it is shown that: (i) funding statistics for defined-benefit pensions are based on an arbitrary theoretical full funding construct, (ii) accurately accessing the true risks posed by defined-benefit pensions would not be possible even if investment returns, labor turnover, and mortality were completely certain, and (iii) from the prospective of pension plan participants, any given fully funded defined-benefit pension is inferior to a feasible defined-contribution pension.

PD June 1995. **TI** Taxes, Capital Gains Realizations, and Revenues: A Critical Review and Some New Results. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/31; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 28. **PR** no charge. **JE** H21, H25, H24. **KW** Taxation. Capital Gains. Realizations. Revenues.

AB This paper reviews what is known about the relationship between capital gains realizations and the capital gains tax rate for given levels of economic activity, and offers a theoretical framework to guide future empirical research. With regard to the existing empirical evidence, it is concluded that realizations are probably quite responsive to the tax rate in the short run, but that very little is known about the long-run response. It is argued that the key unknown quantity determining long-run realizations is the sensitivity of basis step-up to the capital gains tax rate.

PD July 1995. **TI** Labor Supply and the Tax Reform Act of 1986: Evidence From Panel Data. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/34; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 15. **PR** no charge. **JE** H24, H21, J22. **KW** Labor Supply. Taxes. Tax Reform Act of 1986. TRA86.

AB This paper utilizes data from the recently-released wave XXII of the Panel Study of Income Dynamics to estimate the effects of the Tax Reform Act of 1986 on the change in hours worked between 1986 and 1988. The analysis is limited to married men and women who work at least ten hours per week in each year between 1985 and 1988. For this sample, I find that tax reform is 95 percent certain to have increased hours worked by no more than 2 percent in 1988. This finding is based on separate analysis for men and for women, and does not rule out the possibility that tax reform had large effects on hours worked in years subsequent to 1988.

Marinacci, Massimo

PD December 1995. **TI** Decomposition and Representation of Coalitional Games. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1152; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 22. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C71, D81. **KW** Non-Additive Probabilities. Coalitional Games.

AB A coalitional game is a real-valued set function v defined on an algebra F of subsets of a space X such that v of the null set = 0. We prove the existence of a one-to-one correspondence between coalitional games bounded with respect to the composition norm and countably additive measures defined on an appropriate space.

Marks, Gary

TI European Integration and the State. **AU** Blank, Kermit; Hooghe, Liesbet; Marks, Gary.

Martinelli, Cesar

PD July 1995. **TI** Economic Reforms and Political Constraints on the Time Inconsistency of Gradual Sequencing. **AU** Martinelli, Cesar; Tommasi, Mariano. **AA** Martinelli: Universidad Carlos III, Madrid. Tommasi: University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 736; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 19. **PR** $5.00. **JE** P11, P21, D78. **KW** Sequencing. Economic Reform. Time Consistency. Political Constraints.

AB It has been argued that when there is uncertainty about the outcome of economic reforms, "sequencing" (i.e. waiting to see the results of early reforms before moving on) has lower experimentation costs than does a big bang. In this paper we show that, even when gradualism would be the choice of an unconstrained social planner, time-consistency considerations in a political-economy game may force simultaneous implementation of all possible reforms. In societies with powerful interest groups and characterized by a cobweb of redistributive and distortionary policies (Latin America is a prime example), "optimal" sequential plans will be time inconsistent. Winners from early reforms will oppose later reforms which hurt them. Knowing that, losers from early reforms will oppose the earlier measures. In such an environment, a big bang is the only way of cutting through the Gordian knot of rents implicit in previous policies.

Maruta, Toshimasa

PD March 1995. **TI** On the Relationship Between Risk-Dominance and Stochastic Stability. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1122; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 19. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, C73. **KW** Coordination Games. Equilibrium Selection. Risk Dominance. Stochastic Stability.

AB In a 2 x 2 symmetric game with two symmetric equilibria in pure strategies, one risk-dominates another if and only if the equilibrium strategy is a unique best response to any mixture that gives it at least a probability of one half. In an n x n symmetric game, we call a strategy globally risk-dominant if it is a unique best response to any mixture that gives it at least a probability of one half. We show that if a finite coordination game has a globally risk-dominant equilibrium then this is the one that is selected by the stochastic equilibrium selection processes proposed by Young and by Kandori, Mailath, and Rob.

Maschler, Michael

TI A Demand Adjustment Process. **AU** Bennett, Elaine; Maschler, Michael; Zame, William R.

Mathewson, Frank

TI The Economics of Canadian Deposit Insurance. **AU** Carr, Jack; Mathewson, Frank; Quigley, Neil.

Matsui, Akihiko

PD November 1994. **TI** Specialization of Labor and the Distribution of Income. **AU** Matsui, Akihiko; Postlewaite, Andrew. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/22; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 18. **PR** no charge. **JE** E25, J24. **KW** Income Distribution. Division of Labor.

AB Our aim in this paper is to investigate how specialization my generate gains when workers seem to differ only in absolute advantage. In our model, workers differ in ability, but differences are independent of the activity. We consider a particular production process that consists of a finite number of tasks, each of which contributes a specific amount to the final output and each of which must be done in order for there to be any output. In our model, specialization will be interpreted as dividing a job into tasks with different workers carrying out the tasks. The gains will arise from the possibility of assigning higher ability workers to higher value tasks. Besides characterizing the income distribution for a given division of the activities into tasks, we investigate the effects on income distribution when the technology changes so that there is a finer task division, that is, who wins and who loses when a task is subdivided.

TI An "Anti-Folk Theorem" for a Class of Asynchronously Repeated Games. **AU** Lagunoff, Roger D.; Matsui, Akihiko.

Matsuyama, Kiminori

PD April 1995. **TI** Economic Development as Coordination Problems. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1123; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 30. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** E12, O11, D71. **KW** Coordination Failure. Development. Dirigisme.

AB The economics of coordination failures is widely interpreted, both by its advocates and by its critics alike, as a call for more active government interventions in economic development. The goal of this paper is to explain that, contrary to the common perception, the logic of coordination failures does not justify policy activism or any greater role of the government in coordination.

PD May 1995. **TI** New Goods, Market Formations, and Pitfalls of System Design. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1124; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 28. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** B41, P16, P21. **KW** Methodology. Information. Mechanism Design.

AB The standard practice in economic theory is to assume that all the relevant variables (e.g., the space of all the goods of potential economic value) and all the relevant constraints are known to the policymaker or to the designer of an economic system. This often unstated assumption (or the belief implicitly embodied in it) inadvertently creates an illusion about our ability to design an economic system and control the process of resource allocation. In this paper, a series of examples is developed to illustrate that this modelling approach has the danger of misdirecting our attention when evaluating alternative forms of economic system. Some implications for reforms in the former socialist economies are also drawn.

Mattey, Joe

PD March 1995. **TI** Factor Utilization and Margins for Adjusting Output: Evidence From Manufacturing Plants. **AU** Mattey, Joe; Strongin, Steve. **AA** Mattey: Board of Governors of the Federal Reserve System and U.S. Bureau of the Census. Strongin: Federal Reserve Bank of Chicago. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/12; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 17. **PR** no charge. **JE** D24, E22, E32. **KW** Capacity Utilization. Work Period. Productivity.

AB In this paper we describe patterns of factor utilization and output adjustment at the plant level. A burgeoning literature emphasizes that the dynamics of aggregate economic activity are determined by the interaction of heterogeneous agents who face differing costs of adjusting to aggregate demand shocks. If these costs are of the lump- sum variety, infrequent but large actions will be preferable to continuous reactions, at least along some margins available for adjusting output. Extant empirical work points to a variety of margins where adjustment appears lumpy, including investment in physical capital and changes in employment. We show that plants differ quite a bit in how they accomplish adjustments, depending largely on the shut- down cost aspect of technology; other things equal, assembly-type operations with low shut-down costs primarily vary the work period of the plant, whereas continuous processing plants adjust instantaneous flow rates of production. Empirically, we use micro survey data on the organization of actual and capacity plant operations to identify and describe the hierarchies of adjustment. We also discuss the power of technology groupings along these lines for explaining which plants adjust the most to common demand shocks.

Matthews, Steven A.

PD May 1995. **TI** A Technical Primer on Auction Theory I: Independent Private Values. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1096; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 43. **PR** $3.00 in U.S. and Canada; $5.00 via international mail;

$2.00 for local Northwestern faculty/students. **JE** D44, C62, D61. **KW** Introduction. Auctions. Mechanism Design.

AB This primer rigorously introduces the auction model of "risk neutral bidders with independent private values". The model is central to auction theory, and its structure is the same as a many models used in information economics. Results are derived regarding the nature of equilibria, the effects of entry fees and reserve prices, revenue equivalence, and the design of optimal auctions. Widely applicable concepts are emphasized, such as revealed preference logic, the single- crossing property, and the Revelation Principle. Intended readers are economics graduate and advanced undergraduate students, and all economists who want to examine auction theory in detail.

Matzkin, Rosa L.

TI Testable Restrictions on the Equilibrium Manifold. **AU** Brown, Donald J.; Matzkin, Rosa L.

McCallum, Bennett T.

PD March 1995. **TI** Two Fallacies Concerning Central Bank Independence. **AA** Carnegie Mellon University and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5075; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 8. **PR** $5.00. **JE** E51, E52, E58. **KW** Central Bank. Commitment. Monetary Policy. Independent Institutions.

AB This paper takes issue with two basic conclusions prevalent in the literature on central bank behavior. First, the paper argues that it is inappropriate to presume that central banks will, in the absence of any precommitment technology, necessarily behave in a "discretionary" fashion that implies an inflationary bias. Since there is no functional connection between average rates of money creation (or inflation) and policy responsiveness to cyclical disturbances, it is entirely feasible for the bias to be avoided. In other words, there is no necessary tradeoff between "flexibility and commitment." Second, to the extent that the absence of any absolute precommitment technology is nevertheless a problem, it will apply to a consolidated central bank plus government entity as well as to the central bank alone. Thus contracts between governments and central banks do not overcome the motivation for dynamic inconsistency, they merely relocate it.

McFadden, Daniel

TI Simulation of Multivariate Normal Rectangle Probabilities and Their Derivatives: Theoretical and Computational Results. **AU** Hajivassiliou, Vassilis A.; McFadden, Daniel; Ruud, Paul.

McGarry, Kathleen

PD April 1995. **TI** Transfer Behavior Within the Family: Results From the Asset and Health Dynamics Survey. **AU** McGarry, Kathleen; Schoeni, Robert F. **AA** McGarry: University of California, Los Angeles and National Bureau of Economic Research. Schoeni: RAND Corporation. **SR** National Bureau of Economic Research, Working Paper: 5099; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 13. **PR** $5.00. **JE** I30, D64. **KW** Public Assistance. Financial Assistance. Income Level. Intra-Family Transfers.

AB If an individual falls on hard times, can he rely on his family for financial support? In view of proposed reductions in public assistance programs, it is important to understand the mechanisms through which families provide support for their members. In this paper we provide evidence that intra-family transfers are compensatory, directed disproportionally to less well-off members. These results hold both for the incidence of transfers and for the amounts. Within a given year, adult children in the lowest income category are 6 percentage points more likely to receive a financial transfer from their parents, and on average they receive over $300 more than siblings in the highest income category. The data used in this study, the new Asset and Health Dynamics Survey (AHEAD), contain information on all children in the family. Thus we are able to estimate models which control for unobserved differences across families. Our results are robust to these specifications. Additionally, we do not find evidence that parents provide financial assistance to their children in exchange for caregiving.

McKelvey, Richard D.

PD February 1996. **TI** A Statistical Theory of Equilibrium in Games. **AU** McKelvey, Richard D.; Palfrey, Thomas R. **AA** California Institute of Technology. **SR** Caltech Social Science Working Paper: 955; Division of Humanities and Social Sciences, 228/77, California Institute of Technology, Pasadena, CA 91125. **PG** 27. **PR** no charge. **JE** C62, C72. **KW** Game Theory. Statistical Methods.

AB This paper describes a statistical model of equilibrium behavior in games, which we call Quantal Response Equilibrium (QRE). The key feature of the equilibrium is that individuals do not always play best responses to the strategies of their opponents, but play better strategies with higher probability than worse strategies. We illustrate several different applications of this approach, and establish a number of theoretical properties of this equilibrium concept. We also demonstrate an equivalence between this equilibrium notion and Bayesian games derived from games of complete information with perturbed payoffs.

McKenzie, Evan

PD May 1996. **TI** Homeowner Association Private Governments in the American Political System. **AA** University of Illinois at Chicago. **SR** University of Western Ontario, Papers in Political Economy: 75; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 29. **PR** no charge. **JE** D78, R21, R58. **KW** Private Governments. Housing.

AB This is a review and analysis of public policy approaches in the United States regarding the proliferation and activities of common interest housing developments (CID's) and their residential private governments, known as "homeowner associations," or "HOA's". I begin by setting out basic introductory information on CID housing and the particular policy challenges it presents. Next, I describe CID policies adopted by the Federal Housing Administration and the states of California, New Jersey and Florida. I try to present an overview and survey that reflects the diversity of approaches in different regions and at different levels of government. I also try to set forth the political context which has begun to shape these policy approaches emphasizing the growth of CID related interest groups whose agenda has become very influential. I then consider these existing policies in light of some CID policy approaches suggested by a number of analysts, primarily social scientists, from the early 1960's to the present. These

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suggested approaches provide a historical perspective and a context within which to critically evaluate current practice. I take the position that current policy approaches do not address certain fundamental issues presented by CID housing -- issues which were raised nearly thirty years ago.

Mehran, Hamid

TI The Effect of Changes in Ownership Structure on Performance: Evidence From the Thrift Industry. **AU** Cole, Rebel A.; Mehran, Hamid.

Mei, Jianping

TI Living With the "Enemy": An Analysis of Foreign Investment in the Japanese Equity Market. **AU** Hamao, Yasushi; Mei, Jianping.

Mendenhall, Richard R.

TI New Evidence on Stock Price Effects Associated With Changes in the S&P 500 Index. **AU** Lynch, Anthony W.; Mendenhall, Richard R.

Mendoza, Enrique G.

PD April 1995. **TI** Supply-Side Economics in a Global Economy. **AU** Mendoza, Enrique G.; Tesar, Linda L. **AA** Mendoza: Board of Governors of the Federal Reserve System. Tesar: University of California, Santa Barbara and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5086; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 36. **PR** $5.00. **JE** F31, F32, F41, H21, H23. **KW** Tax Reform. International Externalities. International Games.

AB Recent quantitative studies predict large welfare gains from reducing tax distortions in a closed economy, despite costly transitional dynamics to more efficient tax systems. This paper examines transitional dynamics and gains of tax reforms for countries in a global economy, and it provides numerical solutions for international tax competition games. Tax reforms in a global economy cause cross-country externalities through capital flows in response to consumption-smoothing and debt-servicing effects, with taxes on world payments affecting the distribution of welfare gains. Within the class of time-invariant tax rates, the gains of replacing income taxes with consumption taxes are large and, in the absence of taxes on foreign assets, the monopoly distortion separating cooperative and noncooperative equilibria is negligible. The analysis starts from a benchmark reflecting current G-7 fiscal policies and considers the effects of tax reforms on real exchange rates and interest differentials. Tax-distorted equilibrium dynamics are computed using a modified version of the King-Plosser- Rebelo algorithm augmented with shooting routines.

Merlin, Vincent R.

TI The Copeland Method I; Relationships and the Dictionary. **AU** Saari, Donald G.; Merlin, Vincent R.

PD 1995. **TI** Copeland Method II; Manipulation, Monotonicity, and Paradoxes. **AU** Merlin, Vincent R.; Saari, Donald G. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1112; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 16. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D72, D81. **KW** Copeland. Monotonicity. Voting. Consistency. Strategic Voting.

AB An important issue for economics and the decision sciences is to understand why allocation and decision procedures are plagued by manipulative and paradoxical behavior once there are n greater than or equal 3 alternatives. Valuable insight is obtained by exploiting the relative simplicity of the widely used Copeland method (CM). By use of a geometric approach, we characterize all CM manipulation, monotonicity, consistency, and involvement properties while identifying which profiles are susceptible to these difficulties. For instance, we show for $n = 3$ candidates that the CM reduces the negative aspects of the Gibbard-Satterthwaite theorem.

Merton, Robert C.

PD April 1995. **TI** Financial Innovation and the Management and Regulation of Financial Institutions. **AA** Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5096; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 41. **PR** $5.00. **JE** G10, G28. **KW** Financial Markets. Institutional Change. Risk Management. Regulatory Policy.

AB New security designs, improvements in computer telecommunications technology and advances in the theory of finance have led to revolutionary changes in the structure of financial markets and institutions. This paper provides a functional perspective on the dynamics of institutional change and uses a series of examples to illustrate the breadth and depth of institutional change that is likely to occur. These examples emphasize the role of hedging versus equity capital in managing risk, the need for risk accounting and changes in methods for implementing both regulatory and stabilization public policy.

Michelis, Leo

PD September 1995. **TI** Non-Nested Pretest Tests. **AA** University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9520; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 18. **PR** $10.00. **JE** C12, C52. **KW** Pretesting. Hypothesis Tests.

AB The J and Cox non-nested tests do not follow the usual N(0,1) distribution when the non-nested regression models are nearly uncorrelated or orthogonal. This paper attempts to assess the question of whether or not one can do better (in terms of size and power) than existing tests by using two alternative testing procedures based on the notion of pretesting. The Monte Carlo evidence on this question indicates that the testing procedure of first testing the null of zero correlations among the non-nested regressors in two non-nested models and then using either the J test if the null is rejected or the encompassing F test if the null is not rejected, may outperform the encompassing F test in terms of power especially when the number of regressors in the alternative model is large. Hence, such a procedure may be useful in practical applications.

Miravete, Eugenio J.

PD December 1995. **TI** Screening Consumers Through Alternative Pricing Mechanisms. **AA** Northwestern

University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1145; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 24. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D42, D82, L96. **KW** Tariffs. Telecommunications. Monopoly Pricing.

AB This paper addresses the optimal design of optional nonlinear tariffs. Two particular solutions commonly used in telecommunications and other industries are fully characterized. These optimal outlay schedules illustrate how the tariff design is altered when there exists a time lag between tariff choice and consumption. In this model consumers' uncertainty is resolved in the interim, between the tariff choice and the usage decision, through changes in their types. The paper studies whether the monopolist may profit from screening consumers according to different information sets, and it shows that expected profits are higher under an ex-post tariff if the variance of the ex-ante type distribution is large enough. The paper also shows that no results regarding social efficiency may be obtained in general. Welfare comparison of optional tariffs will be very sensitive to type distributions, how types enter demand specifications, and the relative variance of the type components.

Mishkin, Frederic S.

PD April 1995. **TI** An Empirical Examination of the Fisher Effect in Australia. **AU** Mishkin, Frederic S.; Simon, John. **AA** Mishkin: Federal Reserve Bank of New York and National Bureau of Economic Research. Simon: Reserve Bank of Australia. **SR** National Bureau of Economic Research, Working Paper: 5080; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 17. **PR** $5.00. **JE** C15, C22, E31, E43, E52. **KW** Fisher Effect. Interest Rates. Inflation. Australia. Monte Carlo Simulation.

AB This paper analyzes the Fisher effect in Australia. Initial testing indicates that both interest rates and inflation contain unit roots. Furthermore, there are indications that the variables have non-standard error processes. To overcome problems associated with this and derive the correct small sample distributions of test statistics, we make use of Monte Carlo simulations. These tests indicate that while a long-run Fisher effect seems to exist, there is no evidence of a short-run Fisher effect. This suggests that, while short-run changes in interest rates reflect changes in monetary policy, longer-run levels indicate inflationary expectations. Thus, the longer-run level of interest rates should not be used to characterize the stance of monetary policy.

Moore, John

TI Credit Cycles. **AU** Kiyotaki, Nobuhiro; Moore, John.

Morduch, Jonathan

PD November 1994. **TI** To Have and Have Not: Explaining Inequality in Rural China. **AU** Morduch, Jonathan; Sicular, Terry. **AA** Morduch: Harvard University. Sicular: University of Western Ontario. **SR** University of Western Ontario, Papers in Political Economy: 51; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 24. **PR** no charge. **JE** D63, O53, C81. **KW** China. Inequality. Methodology.

AB We apply a bottom-up approach to a new set of data for a sample of farm households in Zouping, a county in central Shandong Province. Zouping County has seen annual growth of per capita incomes at rates of 8 to 10 percent during the 80's and early 90's. The effect of the reforms on inequality in rural China has been widely discussed in the literature. Our analysis complements these existing studies. Our findings show that both status variables and the usual sorts of household characteristics contribute to inequality. Status variables together contribute to about one-third of overall inequality in our sample. Household characteristics explain about 40 percent.

Moreau, Antoine

TI Product Quality and Worker Quality. **AU** Abowd, John M.; Moreau, Antoine; Kramarz, Francis.

Moreno, Luis

PD January 1996. **TI** Asymmetrical Federalism: Spain in Comparative Perspective. **AA** Instituto de Estudios, Sociales Avanzados, Spain. **SR** University of Western Ontario, Papers in Political Economy: 72; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 18. **PR** no charge. **JE** D71, H11. **KW** Political Economy. Negotiation. Spain.

AB The political and spatial reorganization brought about by the progressive consolidation of the Spanish Estado de las Autonomias ("State of Autonomies") is in line with a model of "multiple ethnoterritorial concurrence" analyzed in this paper. The model relates sociopolitical sub-state ethnic mobilization to the competitive interplay among Spanish regions and nationalities pursuing political and economic power, as well as the achievement of the legitimization of their institutional development. On analyzing the conceptual boundaries of this explanatory model, two "axioms" (conflicting intergovernmental relations, politicizing of ethnoterritorial institutions), two "premises" (differential origin, centralist inertia), three "principles" (democratic decentralization, comparative grievances, inter-territorial solidarity), and three "rules" (spatial centrifugal pressure, ethnoterritorial mimesis, inductive allocation of powers) are distinguished. The absence of a clear-cut constitutional division of powers in the three-tier system of government has made possible in Spain an asymmetrical and open model of decentralization whose federalizing vocation is subject to re-negotiation by both center and periphery forces.

Morgan, Donald P.

PD December 1993. **TI** Bank Loan Commitments and the Lending Channel of Monetary Policy. **AA** Federal Reserve Bank of Kansas City. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/11; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 22. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G21, E52, E51. **KW** Liquidity. Banks. Lending Channel.

AB I argue that smaller firms without commitments will bear the brunt of any lending channel of monetary policy. In support, I find that loans not under commitment promptly decline after policy is tightened while loans under commitment never decline significantly. And while aggregate business loans do not predict economic activity, given monetary growth, the share not under commitment does. These results suggest a lending channel of monetary policy since variation in this share seems to reflect changes in the relative supply of loans to firms without commitments rather than changes in the relative demand for loans by such firms.

PD December 1994. **TI** Bank Monitoring Mitigates Agency Problems: New Evidence Using the Financial Covenants in Bank Loan Commitments. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/12; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 20. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G21, E52, E51, D82. **KW** Liquidity. Agency Problem. Banks.
AB If agency problems force firms to finance investment with internal funds, or liquidity, firms should be less liquidity constrained when they submit to financial covenants designed to control agency problems. Using a sample of small manufacturing firms, I test if liquidity constraints are looser when firms have a bank loan commitment with covenants restricting their dividends, debt issuance, net worth, and working capital. When firms have a loan commitment with all four covenants, they are completely unconstrained. In contrast, when firms have a commitment without covenants, they are just as constrained as when they have no commitment at all. These findings reinforce other recent evidence on the monitoring role of banks.

Morris, Anthony C.

TI Report on the Investment Performance of Defaulted Bonds for 1987- 1995 and Market Outlook. **AU** Altman, Edward I.; Morris, Anthony C.

Morris, Stephen

PD June 1994. **TI** Impact of Public Announcements on Trade in Financial Markets. **AU** Morris, Stephen; Shin, Hyun Song. **AA** Morris: University of Pennsylvania. Shin: University of Southampton. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/16; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 14. **PR** no charge. **JE** C72, C73, D84, D81. **KW** Volume of Trade. Bayesian Games. Common Knowledge.
AB When traders with asymmetric information act strategically, public announcements can convey crucial information concerning the higher order beliefs of other traders. This is so even though the public announcement is uninformative concerning the fundamentals of the market. We exhibit a case of trade which is fragile to the announcement of a fact which is already known to all market participants.

TI Common p-Belief: The General Case. **AU** Kajii, Atsushi; Morris, Stephen.

PD August 1994. **TI** The Rationality and Efficacy of Decisions Under Uncertainty and the Value of an Experiment. **AU** Morris, Stephen; Shin, Hyun Song. **AA** Morris: University of Pennsylvania. Shin: University of Southampton. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/19; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 19. **PR** no charge. **JE** D84, D81, D83. **KW** Uncertainty. Subjective Probability. Value of Information.
AB A decision maker faces a known prior distribution over payoff relevant states. We compare the expected utility of this individual under two scenarios. In the first, the decision maker makes a choice without further information. In the second, the decision maker has access to an experiment before choosing an action. However, the decision maker does not know the true joint distribution over states and messages. The value of the experiment as measured by the difference in the two utility levels can be negative as well as positive. We give a condition which is necessary and sufficient for the experiment to be valuable in our sense, for any decision problem.

TI Payoff Continuity in Incomplete Information Games and Almost Uniform Convergence of Beliefs. **AU** Kajii, Atsushi; Morris, Stephen.

TI On the Form of Transfers to Special Interests. **AU** Coate, Stephen; Morris, Stephen.

TI The Revelation of Information and Self-Fulfilling Beliefs. **AU** Dutta, Jayasri; Morris, Stephen.

PD March 1995. **TI** Justifying Rational Expectations. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/04; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 16. **PR** no charge. **JE** C62, D82, D41, D51. **KW** Rational Expectations. General Equilibrium. Asymmetric Information.
AB In a static economy with symmetric information, the informational requirements for competitive equilibrium are very weak: markets clear and each agent is rational. With asymmetric information, the solution concept of competitive equilibrium has been generalized to rational expectations equilibrium. But now common knowledge of market clearing and rationality is required. This paper proves versions of these results in a formal model of knowledge.

PD March 1995. **TI** Co-Operation and Timing. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/05; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 7. **PR** no charge. **JE** C72, C78, C62, D61. **KW** Game Theory. Nash Equilibrium. Coordination Failure.
AB If players cannot perfectly synchronize their actions in co- ordination games, the efficient equilibrium is never achieved.

PD May 1995. **TI** Speculative Investor Behavior and Learning. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/13; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 28. **PR** no charge. **JE** D83, G12. **KW** Learning. Common

Prior. Initial Public Offering.
AB As traders learn about the true distribution of some asset's dividends, a speculative premium occurs as each trader anticipates the possibility of re-selling the asset to another trader before complete learning has occurred. Reasonable ignorance priors lead to large bubbles during the learning process. This phenomenon explains a paradox concerning the pricing of initial public offerings. The result casts light on the significance of the common prior assumption in economic models.

TI The Robustness of Equilibria to Incomplete Information.
AU Atsushi, Kajii; Morris, Stephen.

TI Policy Persistence. **AU** Coate, Stephen; Morris, Stephen.

Moselle, Boaz

PD March 1996. **TI** Efficiency Wages and the Hours/Unemployment Trade-Off. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1153; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 19. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** E12, E24, J41. **KW** Unemployment. Efficiency Wages.
AB It is commonly argued that reducing the number of hours worked by the employed would lead to lower unemployment, since firms will respond by hiring more workers. This paper examines the relationship between hours worked and unemployment, in the context of an efficiency wage model where involuntary unemployment occurs owing to imperfect monitoring of worker effort. The first part of the paper presents a partial equilibrium model makes standard assumptions about effort costs (i.e., increasing marginal disutility of work), and also allows for the presence of daily "set-up costs" for the worker. It is shown that under these assumptions the equilibrium level of unemployment, viewed as a function of hours worked, is "U- shaped" (or simply increasing, if the set-up costs are zero). The paper then moves to a general equilibrium framework where hours are determined endogenously; it is shown that in this case the free market choice of hours is always greater than the unemployment-minimizing level, so that "work-sharing" could indeed lower unemployment. However the paper also presents a powerful and surprising welfare result: conditional on being unemployed, a representative worker is always best off under the free market outcome. Nonetheless, starting from the free market equilibrium there is always an hours-reduction policy which reduces unemployment and increases the expected utility of a currently unemployed worker. The currently employed are always made worse off by such a policy.

Murnane, Richard J.

PD March 1995. **TI** The Growing Importance of Cognitive Skills in Wage Determination. **AU** Murnane, Richard J.; Willett, John B.; Levy, Frank. **AA** Murnane: Harvard University and National Bureau of Economic Research. Levy: Massachusetts Institute of Technology. Willett: Harvard University. **SR** National Bureau of Economic Research, Working Paper: 5076; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 44. **PR** $5.00. **JE** I21, J24, J31. **KW** Wages. Skills. Education. Cognitive Skills.
AB Using data from two longitudinal surveys of American high school seniors, we show that basic cognitive skills had a larger impact on wages for 24 year old men and women in 1986 than in 1978. For women, the increase in the return to cognitive skills between 1978 and 1986 accounts for all of the increase in the wage premium associated with post-secondary education. We also show that high school seniors' mastery of basic cognitive skills had a much smaller impact on wages two years after graduation than on wages six years after graduation.

Myerson, Roger B.

PD June 1995. **TI** Dual Reduction and Elementary Games. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1133; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 28. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, D84, C73. **KW** Game Theory. Expectations. Solution Methods.
AB Consider the linear incentive constraints that define the correlated equilibria of a game. The duals of these constraints generate Markov chains on the players' strategy sets. The stationary distributions for these Markov chains can be interpreted as the strategies in a reduced game, which is called a dual reduction. Any equilibrium of a dual reduction is an equilibrium of the original game. We say that a game is elementary if all incentive constraints can be satisfied as strict inequalities in a correlated equilibrium. Any game can be reduced to an elementary game by iterative dual reduction.

TI Lobbying and Incentives for Legislative Organization.
AU Diermeier, Daniel; Myerson, Roger B.

PD April 1996. **TI** John Nash's Contribution to Economics. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1154; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 12. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, C73, B31, B21. **KW** Nash. Game Theory. Nobel Prize.
AB The importance of John Nash's contribution to economics is discussed, with reference to the earlier work of Cournot and von Neumann. It is argued that Nash's development of noncooperative game theory was one of the great watershed breakthroughs in the history of social science.

PD April 1996. **TI** Economic Analysis of Political Institutions: An Introduction. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1155; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 27. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D78, D71. **KW** Political Economy. Institutions. Elections. Voting.
AB This paper surveys four game-theoretic models of politics, to offer an introduction to the analysis of political institutions. The first two models focus on electoral competition, to show how successful candidates' equilibrium strategies may differ under different electoral systems. The

other two models probe the consequences of legislative bargaining under different constitutional structures.

Nachbar, John

PD April 1995. **TI** Non-Computable Strategies and Discounted Repeated Games. **AU** Nachbar, John; Zame, William R. **AA** Nachbar: Washington University in St. Louis. Zame: University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 735; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 28. **PR** $5.00. **JE** C72, C73. **KW** Repeated Games. Bounded Rationality. Computable Strategies. Turing Machines.

AB This study evaluates the potential effectiveness of alternative child support policies in reducing welfare program participation. Employing longitudinal data from the Panel Study of Income Dynamics, the analysis addresses the simultaneity of women's decisions regarding welfare participation, labor force participation, and annual hours of work following marital breakup. The estimation framework accounts for the endogeneity of child support payments with female labor supply and for the selection bias due to differential rates of remarriage among divorced/separated women. Results show that higher child support payments would (i) decrease AFDC participation and (ii) increase average hours of work. The empirical estimates are used to assess the potential effects of adopting alternative child support policies such as the Wisconsin child support assurance system. These results suggest that large potential AFDC cost savings are attainable but significant reductions in welfare participation rates would only be achieved through substantial improvements in child support enforcement or through government-assured child support payments.

Nakamura, Leonard I.

TI Branch Banking and the Geography of Bank Pricing. **AU** Calem, Paul; Nakamura, Leonard I.

Neme, Alejandro

TI Strategy-Proof Allotment Rules. **AU** Barbera, Salvador; Jackson, Matthew O.; Neme, Alejandro.

Neumark, David

PD February 1995. **TI** Minimum Wage Effects on School and Work Transitions of Teenagers. **AU** Neumark, David; Wascher, William L. **AA** Neumark: Michigan State University and National Bureau of Economic Research. Wascher: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/07; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 9. **PR** no charge. **JE** J38, J21. **KW** Employment. Minimum Wage. School Enrollment.

AB Minimum wages increase the probability that teenagers leave school to become employed or work more hours, and increase the probability that they leave school and become non-enrolled and non- employed. Minimum wages also increase the probability that lower-wage employed teenagers become non- enrolled and non-employed. This evidence suggests that the competitive model of minimum wage effects is largely correct: With heterogeneous workers, only those with a market wage at or near the minimum should be disemployed by a higher minimum wage, and the net disemployment effect for all teenagers may be small if there is substitution toward higher-wage teenage workers.

PD April 1995. **TI** The Effects of Minimum Wages on Teenage Employment and Enrollment: Evidence From Matched CPS Surveys. **AU** Neumark, David; Wascher, William L. **AA** Neumark: Michigan State University and National Bureau of Economic Research. Wascher: Board of Governors of the Federal Reserve System. **SR** National Bureau of Economic Research, Working Paper: 5092; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 34. **PR** $5.00. **JE** J21, J31, J49. **KW** Minimum Wage. Teenage Employment. Labor Market. Labor Skills.

AB The recent debate over minimum wages raises two questions. First, should policy makers no longer believe that minimum wages entail negative consequences for teenagers? Second, should economists discard the competitive labor market model? Our evidence for teenagers, using matched CPS surveys, suggests that the answer to both of these questions is no. We find that although increases in minimum wages have small net effects on overall teen employment rates, such increases raise the probability that more-skilled teenagers leave school and displace lower- skilled workers from their jobs. These findings are consistent with the predictions of a competitive labor market model that recognizes skill differences among workers. In addition, we find that the displaced lower-skilled workers are more likely to end up non-enrolled and non- employed. Thus, despite the small net disemployment effects for teenagers as a group, there are significant enrollment and employment shifts associated with minimum wage change that should be of concern to policy makers.

PD December 1995. **TI** Reconciling the Evidence on Employment Effects of Minimum Wages: A Review of Our Research Findings. **AU** Neumark, David; Wascher, William L. **AA** Neumark: Michigan State University and National Bureau of Economic Research. Wascher: Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/53; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 23. **PR** no charge. **JE** J23, J38. **KW** Minimum Wages. Employment. Labor Demand.

AB In this paper, we review the evidence that we have accumulated on the employment effects of minimum wages. We point out specific areas of agreement and disagreement between our research and that of others, and where possible, offer our reconciliation of the conflicting results. Our conclusion is that the revisionist view that minimum wages do not reduce employment is not compelling, and that much of the conflicting evidence can be reconciled with the competitive view of minimum wages and low-wage labor markets.

Noe, Thomas

TI Debtor-in-Possession Financing and the Resolution of Uncertainty in Chapter 11 Reorganizations. **AU** Dhillon, Upinder S.; Noe, Thomas; Ramirez, Gabriel.

TI Bond Calls, Credible Commitment, and Equity Dilution: A Theoretical and Clinical Analysis of Simultaneous Tender and Call (STAC) Offers. **AU** Dhillon, Upinder S.; Noe, Thomas; Ramirez, Gabriel.

Nordhaus, William D.

PD May 1995. **TI** How Should We Measure Sustainable Income? **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1101; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 32. **PR** no charge. **JE** E13, E12, O11. **KW** Sustainable Income. Social Income.

AB Growing concerns about long-run economic growth has led to calls for measures of "sustainable income." Traditional analyses rely on Hicksian income, which is consumption plus net investment. The present paper shows that Hicksian income corresponds to sustainable income only under implausibly limited circumstances. We define sustainable income and estimate its magnitude for the United States. The analysis and empirical estimates indicate, first, that consumption has historically been far below sustainable income; second, that conventional Hicksian measures of national income are poor proxies for sustainable income; and, third, that the true savings rate has declined significantly in the last two decades.

PD March 1996. **TI** What is the Value of Scientific Knowledge? **AU** Nordhaus, William D.; Popp, David. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1117; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 49. **PR** no charge. **JE** D62, O33, D83. **KW** Climate Change. Information. Uncertainty.

AB Governments must cope with the enormous uncertainties about both future climate change as well as the costs and benefits of slowing climate change. This study analyses the value of improved information about a variety of geophysical and economic processes. The value of information is estimated using the "PRICE model" which is a probabilistic extension of earlier models of the economics of global warming. The study uses five different approaches to estimating the value of information about all uncertain parameters and about individual parameters. It is estimated that the value of early information is between $1.5 and $2 billion for each year that resolution of uncertainty is moved toward the present. We estimate that the most important uncertain variables are the damages of climate change and the costs of reducing greenhouse gas emissions. Resolving the uncertainties about these two parameters would contribute 75 percent of the value of improved knowledge.

Nychka, Douglas

TI Fitting the Term Structure of Interest Rates With Smoothing Splines. **AU** Fisher, Mark; Nychka, Douglas; Zervos, David.

Nye, Richard B.

PD September 1995. **TI** Event Investing. **AU** Nye, Richard B.; Smith, Roy C. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/27; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 15. **PR** not available. **JE** G14, G12, D84. **KW** Event Investing. Arbitrage. Risk. Securities.

AB "Event investing" is an investment strategy that focuses on securities of companies undergoing major structural change, whether by merger, or acquisition or reorganization. It does not involve judgments about markets or the economy. In the past this strategy was more commonly known as "risk arbitrage." Classic arbitrage typically refers to investments (historically in precious metals and currencies) that attempt to take advantage of disparate pricing between two similar but geographically different markets for the same commodity. In contrast, risk arbitrage is a bet on a specific event. In a typical situation, shares of a reorganizing company are bought with the intention of tendering them for cash or exchanging them for other securities at a later date at a higher price. When successful the operation will produce for the arbitrageur a return that is not only satisfactory but also uncorrelated to the performance of the broad equity or stock markets. Therefore, while the market risk per se may be of some concern, the key to surviving in the business over any length of time is understanding and managing the various aspects of "deal risk," or the risk that an announced deal will not be completed.

O'Brien, James M.

TI The Use of Bank Trading Risk Models for Regulatory Capital Purposes. **AU** Kupiec, Paul H.; O'Brien, James M.

TI A Pre-Commitment Approach to Capital Requirements for Market Risk. **AU** Kupiec, Paul H.; O'Brien, James M.

TI Recent Developments in Bank Capital Regulation of Market Risks. **AU** Kupiec, Paul H.; O'Brien, James M.

O'Donoghue, Ted

PD October 1995. **TI** Patent Breadth, Patent Life and the Pace of Technological Improvement. **AU** O'Donoghue, Ted; Scotchmer, Suzanne; Thisse, Jacques-Francois. **AA** O'Donoghue and Scotchmer: University of California, Berkeley. Thisse: Universite de Paris and CERAS. **SR** University of California, Berkeley, Working Paper in Economics: 95/242; IBER, 156 Barrows Hall, University of California, Berkeley, CA 94720. **PG** 31. **PR** $3.50 U.S. and Canada; $7.00 foreign. **JE** O31, O32, L15. **KW** R&D. Patent Breadth. Differentiation. Products.

AB In active investment climates where firms sequentially improve each other's products, a patent can terminate either because it expires or because a noninfringing innovation displaces it in the market. The patent breadth and patent life together determine which of these occurs first. We distinguish "lagging" breadth, which protects against imitation, from "leading" breadth, which protects against new improved products. We show that if ideas for improvements are frequent than leading breadth is a necessary supplement to lagging breadth. We compare two types of patent policy with leading breadth: (i) patents are finite but very broad, so that the effective life of a patent coincides with its statutory life, and (ii) patents are long but narrow, so that the effective life of a patent ends when a better product replaces it. The former policy improves the diffusion of new products, but the latter has lower R&D costs.

O'Regan, Katherine M.

PD July 1995. **TI** Teenage Employment and the Spatial Isolation of Minority and Poverty Households. **AU** O'Regan, Katherine M.; Quigley, John M. **AA** O'Regan: Yale School of Management. Quigley: University of California, Berkeley. **SR** University of California, Berkeley, Working Paper in

Economics: 95/239; IBER, 156 Barrows Hall, University of California, Berkeley, CA 94720. **PG** 15. **PR** $3.50 U.S. and Canada; $7.00 foreign. **JE** J34, R23. **KW** Youth Employment. Spatial Isolation. Poverty.

AB Using micro data from the U.S. Census, this paper tests the importance of the spatial isolation of minority and poverty households for youth employment in the largest U.S. metropolitan areas. We first estimate a model relating youth employment probabilities to individual and family characteristics, race, and metropolitan location. We then investigate the determinants of the systematic differences in employment probabilities by race and metropolitan area. We find that a substantial fraction of differences in youth employment can be attributed to the isolation of minorities and poor households. Minority youth residing in cities in which minorities are more segregated or in which minorities have less contact with non-poor households have lower employment probabilities than otherwise identical youth living in similar but less segregated metropolitan areas. Simulations suggest that the magnitude of these spatial effects is not small. It may explain a substantial fraction of the existing differences in youth employment rates for white, black and Hispanic youth.

PD March 1996. **TI** Spatial Effects Upon Employment Outcomes: The Case of New Jersey Teenagers. **AU** O'Regan, Katherine M.; Quigley, John M. **AA** O'Regan: Yale University. Quigley: University of California, Berkeley. **SR** University of California, Berkeley, Working Paper in Economics: 96/247; 156 Barrows Hall, University of California, Berkeley, CA 94720. **PG** 28. **PR** $3.50 U.S. and Canada; $7.00 foreign. **JE** I32, J71, J64, R12. **KW** Spatial Mismatch. Neighborhood Effects. Employment Access.

AB Theories about the importance of space in urban labor markets have emphasized the role of employment access, on the one hand, and neighborhood composition, on the other hand, in affecting employment outcomes. This paper presents an empirical analysis which considers both of these factors, together with individual human capital characteristics and household attributes in affecting youth employment. The analysis is based upon an unusually rich sample of micro data on youth in four New Jersey metropolitan areas. The empirical analysis is based on a sample of some 18,000 at-home youth, matched to detailed census tract demographic information and specially constructed measures of employment access. The research includes a comparison of the importance of neighborhood access in affecting youth employment when individual and household attributes are also measured. The results demonstrate the overall importance of these spatial factors (particularly neighborhood composition) in affecting youth employment in urban areas.

O'Rourke, Kevin

PD May 1995. **TI** Open Economy Forces and Late 19th Century Scandinavian Catch-up. **AU** O'Rourke, Kevin; Williamson, Jeffrey G. **AA** O'Rourke: University College Dublin. Williamson: Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5112; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** $5.00. **JE** F15, F41, F43. **KW** Growth Rates. Open Economy. Convergence.

AB Scandinavia recorded very high growth rates between 1870 and 1914, catching up with the leaders. This paper estimates that about two-thirds of the Scandinavian catching up on Britain was due to the open economy forces of global factor and commodity market integration. All of the Scandinavian catching up on America was due to the same open economy forces. The question for the economist is: Why does the new growth theory spend so little time dealing with these open economy forces? The question for the economic historian is: Can the breakdown of global factor and commodity markets after 1914 explain a large share of the cessation of convergence up to 1950? Can the spectacular OECD convergence achieved after 1950 be explained by the resumption of the pre-1914 open economy conditions that contributed so much to Scandinavian catch-up?.

Ofek, Eli

TI Investor Valuation of the Abandonment Option. **AU** Berger, Philip G.; Ofek, Eli; Swary, Itzhak.

TI Managerial Entrenchment and Capital Structure Decisions. **AU** Berger, Philip G.; Ofek, Eli; Yermack, David L.

Oi, Jean C.

PD October 1994. **TI** Cadre Networks, Information Diffusion, and Market Production in Coastal China. **AA** Harvard University. **SR** University of Western Ontario, Papers in Political Economy: 52; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 33. **PR** no charge. **JE** O53, D82, O12. **KW** China. Information. Development.

AB A recent World Bank study of coastal provinces by Mody and Wang found a wave-like synchronization of product development across regions in China. The authors hypothesized that this patter of growth could be accounted for by 1) shifts in buyer preference; 2) industry-wide technology improvements rapidly transmitted along the coast; and 3) the diffusion of strategies among decision makers for promoting sector growth. Of the three, buyer preference was considered least likely, though the hypothesis couldn't be tested due to lack of micro-level data. The current study follows up this prior work. It is based on interviews in coastal provinces and Beijing with officials at the central, provincial, county , township, and village levels, as well as factory managers and owners. The findings suggest that the diffusion of strategy explanation best fist the observed data.

Orphanides, Athanasios

TI Inflation, Volatility and Growth. **AU** Judson, Ruth; Orphanides, Athanasios.

PD May 1996. **TI** Compensation Incentives and Risk Taking Behavior: Evidence From Mutual Funds. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/21; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 18. **PR** no charge. **JE** D81, G11, J33. **KW** Risk Taking. Compensation Incentives. Mutual Funds.

AB This paper examines the role of compensation contracts in determining risk taking decisions by money managers in the financial industry. A methodology is developed for empirically testing and assessing the magnitude of the effect that incentive contracts have on risk taking in the mutual fund industry using panel data. The methodology exploits the within-year cross sectional variation in the performance of mutual funds to identify systematic time series variation in risk taking. Growth and growth and income mutual funds in the 1976 to 1993 period are examined. The evidence suggests that incentive compensation has substantial influence on risk decisions. A strong seasonal component on average risk is present with risk reaching a peak in the first quarter of the year. However the relationship between within-year performance, especially towards year-end, appears to have changed over time. For losing managers, excess risk taking appears early in the sample but not in later years. For winning managers, reductions in risk taking appears towards year-end in later years but not early in the sample.

Osborne, Evan

TI The Legal Battle. **AU** Hirshleifer, Jack; Osborne, Evan.

Ostroy, Joseph M.

TI Arbitrage and the Flattening Effect of Large Numbers. **AU** Makowski, Louis; Ostroy, Joseph M.

Overland, Jody

TI Saving and Growth With Habit Formation. **AU** Carroll, Christopher D.; Overland, Jody; Weil, David N.

Owen, Ann L.

PD November 1995. **TI** International Trade and the Accumulation of Human Capital. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/49; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 22. **PR** no charge. **JE** F11, J24, O41. **KW** International Trade. Income Distribution. Human Capital. Overlapping Generations.

AB Changes in the terms of trade affect both the incentives and the ability of individuals to purchase education in a credit-constrained economy. A model is developed that shows how individual decision- making is affected in a small economy when it opens up to trade. Empirical results indicate that credit constraints are an important factor influencing school enrollment rates. As a result, countries with low human capital stocks tend to increase their accumulation of human capital and countries with high human capital stocks tend to decrease their accumulation of human capital as they increase their openness to trade.

Oyer, Paul

PD November 1995. **TI** The Effect of Sales Incentives on Business Seasonality. **AA** Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 354; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 28. **PR** $2.00. **JE** J33, L14, L22. **KW** Compensation. Incentive Contracts. Seasonality. Fiscal Year. Salespeople.

AB This paper shows that, in addition to varying with the calendar business cycle, manufacturing firms' sales are significantly higher at the end of the fiscal year, and lower at the beginning, than they are in the middle. The causes of these fiscal-year effects are investigated, emphasizing the role of salespeople and their motivation to meet quotas and earn a bonus. In many industries firms have substantially lower average prices toward the end of fiscal years, but price changes cannot explain all the effect of fiscal years on revenue seasonality. It is shown that the industry variation in the fiscal year revenue and price effects are correlated with type of product, distribution method, and the industry average salesperson turnover rate. The results are consistent with a sales quota model of fiscal seasonality, where all salespeople can vary their effort throughout the fiscal year but only some salespeople can influence the timing of their customers' purchases.

Paarsch, Harry J.

TI Access, Utilization, and Equity in Canada and the U.S.: An Empirical Model of Physician Visits. **AU** Hamilton, Barton H.; Hamilton, Vivian H.; Paarsch, Harry J.

Palfrey, Thomas R.

PD September 1995. **TI** Implementation Theory. **AA** California Institute of Technology. **SR** Caltech Social Science Working Paper: 912; Division of Humanities and Social Sciences, 228/77, California Institute of Technology, Pasadena, CA 91125. **PG** 57. **PR** no charge. **JE** C72, C73, D23. **KW** Implementation Theory. Mechanism Design. Game Theory. Social Choice.

AB This surveys the branch of implementation theory initiated by Maskin (1977). Results for both complete and incomplete information environments are covered.

TI A Statistical Theory of Equilibrium in Games. **AU** McKelvey, Richard D.; Palfrey, Thomas R.

Palia, Darius

TI Benefits of Control, Managerial Ownership, and the Stock Returns of Acquiring Firms. **AU** Hubbard, R. Glenn; Palia, Darius.

TI The Political Economy of Branching Restrictions and Deposit Insurance: A Model of Monopolistic Competition Among Small and Large Banks. **AU** Economides, Nicholas; Hubbard, R. Glenn; Palia, Darius.

Parent, Daniel

PD November 1995. **TI** Industry-Specific Capital and Wage Profile: Evidence From the NLSY and the PSID. **AA** Universite de Sherbrooke and Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 350; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 11. **PR** $1.50. **JE** J31, J41. **KW** Tenure Effect. Industry-Specific Capital.

AB Using data from the NLSY (1979-1991) and from the PSID (1981-1987), I seek to determine whether there is any net positive return to tenure with the current employer once we control for industry-specific capital. Using data from the PSID, Topel (JPE 1991) concluded that 10 years of seniority with an employer translated into a net return of about 25%. However, once I include total experience in the industry as an additional explanatory variable, the return to seniority is markedly reduced when I use GLS while it virtually disappears when I use IV-GLS, although this conclusion varies somewhat according to the occupation category. Note also that this result holds whether the analysis is carried out at the 1-digit or 3-digit levels. Therefore, it seems that what matters most for the wage profile in terms of human capital is not so much firm-specificity but industry-specificity. In other words, for these two samples of workers, the wage formation process appears to be quite competitive.

PD November 1995. **TI** Matching, Human Capital, and the Covariance Structure of Earnings. **AA** Universite de Sherbrooke and Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 351; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 35. **PR** $1.50. **JE** J23, J24, J31. **KW** Human Capital. Matching. Education. Tenure.
AB Using method of moments techniques (Chamberlain (1984), Gallant and Jorgenson (1979)), this paper's objective is to test the predictions of the theory of job-matching and the theory of human capital pertaining to the covariance structure of residuals from a typical Mincer log earnings equation. The selection process implicit to job matching is such that we should observe a decrease in the contribution of the variance of the job-match component when we follow the workers as they acquire tenure in their job. Results are generally in agreement with these predicted patterns, especially in the case of more educated workers. On the other hand, if jobs are considered as pure experience goods, the predicted increase in the variance at the start of the employment relationship is not supported by the data, except perhaps for less educated workers. Turning next to human capital theory, the predicted tradeoff between the job-specific intercept and slope parameters is strongly supported by the data, especially in the case of workers having at least a high school diploma.

Park, James M.

TI Do Managed Futures Make Good Investments? **AU** Edwards, Franklin R.; Park, James M.

Passmore, Wayne

PD March 1995. **TI** Putting the Squeeze on a Market for Lemons: Government-Sponsored Mortgage Securitization. **AU** Passmore, Wayne; Sparks, Roger. **AA** Passmore: Board of Governors of the Federal Reserve System. Sparks: Mills College. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/13; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 25. **PR** no charge. **JE** G21, D82. **KW** Mortgage Securitization. Government Enterprise. Adverse Selection. Mortgages. Asymmetric Information.
AB Lenders either sell or have insured many of the mortgages they originate in order to reduce credit risk and enhance liquidity. An overwhelming majority of the mortgages sold are purchased by government- sponsored enterprises (GSE's). The prevailing view is that government-sponsorship of mortgage securitization causes mortgage rates to be lower than they would be otherwise. Using a model that incorporates asymmetric information and adverse selection, we provide an example where government- sponsored mortgage securitization raises the mortgage rate.

Pauzner, Ady

TI Breaking the Barriers of the Feasible Set: On Repeated Games with Different Time Preferences. **AU** Lehrer, Ehud; Pauzner, Ady.

Pazgal, Amit I.

TI A Linear Programming Framework for Network Games. **AU** Gamble, A.B.; Pazgal, Amit I.

PD May 1995. **TI** Satisficing Leads to Cooperation in Mutual Interests Games. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1126; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 18. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, C44. **KW** Satisficing. Aspiration Level. Mutual Interests. Trembles. Repeated Games.
AB We study the play of mutual interests games by satisficing decision makers. We show that, for a high enough initial aspiration level, and under certain assumptions of "tremble," there is a high probability (close to unity) of convergence to the Pareto dominant cooperative outcome. Simulations indicate that the theoretical result is robust with respect to the "trembling" mechanism.

TI History Dependent Brand Switching: Theory and Evidence. **AU** Gilboa, Itzhak; Pazgal, Amit I.

Penalva-Zuasti, Jose

TI Intertemporal Insurance. **AU** Ellickson, Bryan; Penalva-Zuasti, Jose.

Persico, Nicola

TI Existence and Uniqueness of Equilibrium in First Price Auction and War of Attrition With Affiliated Values. **AU** Lizzeri, Alessandro; Persico, Nicola.

PD February 1996. **TI** Information Acquisition in Affiliated Decision Problems. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1149; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 36. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C44, D83, D81. **KW** Decision Theory. Signals. Learning.
AB This paper investigates information acquisition in decision problems. We introduce a new notion of "better information", Accuracy- order (A-order), defined on continuous families of signals. Accuracy formalizes the idea that "a signal that is more correlated with the unknown random variable is better." This concept is indigenous to an economically interesting subset of all decision problems, those where signals are affiliated and the payoff function satisfies the single-crossing property. On this subset, this notion is found to be "tight", in the sense that A-order is an if-and-only-if condition for better information. Thus, a Blackwell-type result is obtained. On the subset, it is shown that Blackwell's Sufficiency is a special case of Accuracy. Finally, a comparative statics result is obtained, about which decision problem will induce more information acquisition.

Pesendorfer, Wolfgang

TI Voting Behavior and Information Aggregation in

Elections With Private Information. **AU** Feddersen, Timothy; Pesendorfer, Wolfgang.

TI When are Non-Anonymous Players Negligible? **AU** Fudenberg, Drew; Levine, K. David; Pesendorfer, Wolfgang.

TI Reputation in Dynamic Games. **AU** Celentani, Marco; Pesendorfer, Wolfgang.

PD December 1995. **TI** The Loser's Curse and Information Aggregation in Common Value Auctions. **AU** Pesendorfer, Wolfgang; Swinkels, Jeroen M. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1147; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 35. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C43, D44. **KW** Information Aggregation. Common Value. Auctions.
AB We consider an auction in which k identical objects of unknown value are auctioned off to n bidders. The k highest bidders get an object and pay the k + 1 to the s times t power bid. Bidders receive a signal that provides information about the value of the object. We characterize the unique symmetric equilibrium of this auction. We then consider a sequence of auctions A sub r with n sub r bidders and k sub r objects. We show that price converges in probability to the true value of the object if and only if both k sub r goes to infinity and n sub r minus k sub r goes to infinity, i.e., the number of objects and the number of bidders who do not receive an object in equilibrium go to infinity.

Phillips, Peter C.B

PD May 1995. **TI** Impulse Response and Forecast Error Variance Asymptotics in Nonstationary VAR's. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1102; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 30. **PR** no charge. **JE** C32, C53. **KW** Error Correction. Forecast Error. Variance Decomposition. Impulse Response. Reduced Rank.
AB Impulse response and forecast error variance matrix asymptotics are developed for VAR models with some roots at or near unity and some cointegration. For such models, it is shown that impulse responses that are estimated from an unrestricted VAR are inconsistent at long horizons and tend to random variables rather than the true impulse responses in the limit. The asymmetric distribution of the limit variates helps to explain the asymmetry of the finite sample distributions of the estimated impulse responses that is often found in simulations. VAR regressions also give inconsistent estimates of the forecast error variance of the optimal predictor at long horizons, and have a tendency to understate this variance. Moreover, predictions from an unrestricted nonstationary VAR are not optimal in the sense that they do not converge to the optimal predictors, at least over long forecast horizons. In these respects, the asymptotic theory of prediction and policy analysis for nonstationary VAR's is very different from that which applies in stationary VAR's. By contrast, in a reduced rank regression (RRR) the impulse response and forecast error variance matrix estimates are consistent and predictions from the fitted RRR model are asymptotically optimal, all provided the cointegrating rank is correctly specified or consistently estimated. Some simulations are reported which show these findings to be relevant in finite samples, and which assess the sensitivity of forecasting performance and policy analysis to certain design features of models in the VAR class.

PD June 1995. **TI** Automated Forecasts of Asia-Pacific Economic Activity. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1103; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 11. **PR** no charge. **JE** C32, C52. **KW** Time Series. Cointegration. Model Selection. Nonstationarity. Posterior Information.
AB This paper reports quarterly ex ante forecasts of macroeconomic activity for the U.S.A., Japan and Australia for the period 1995 - 1997. The forecasts are based on automated time series models of vector autoregressions (VAR's), reduced rank regressions (RRR's), error correction models (ECM's) and Bayesian vector autoregressions (BVAR's). The models are automated by using an asymptotic predictive form of the model selection criterion PIC to determine autoregressive lag order, cointegrating rank and trend degree in the VAR's, RRR's, and ECM's. The same criterion is used to find optimal values of the hyperparameters in the BVAR's. The forecasts are graphed and tabulated. In the case of the U.S.A., the results are compared with forecasts from the Fair model, a structural econometric model of the U.S. economy.

PD June 1995. **TI** Unit Root Tests. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1104; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 22. **PR** no charge. **JE** C22, C52. **KW** Unit Root. Brownian Motion. Central Limit. Integrated Processes. Model Selection.
AB Classical and Bayesian unit root test procedures are reviewed, with an emphasis on testing principles and recent developments. A numerical illustration and annotated references and bibliography are provided.

Pischke, Jorn-Steffen

TI A Statistical Analysis of Crime Against Foreigners in Unified Germany. **AU** Krueger, Alan B.; Pischke, Jorn-Steffen.

Ploberger, Werner

TI Tests of Seasonal and Non-Seasonal Serial Correlation. **AU** Andrews, Donald W.K.; Liu, Xuemei; Ploberger, Werner.

Plott, Charles R.

PD November 1995. **TI** Local Telephone Exchanges, Regulation and Entry. **AU** Plott, Charles R.; Wilkie, Simon. **AA** California Institute of Technology. **SR** Caltech Social Science Working Paper: 941; Division of Humanities and Social Sciences, 228/77, California Institute of Technology, Pasadena, CA 91125. **PG** 34. **PR** no charge. **JE** D43, L43, L51. **KW** Telephone. Regulation. Networks.
AB This paper explores the relationship between technology and the policies that govern competition in the local telephone business. Analysis of competition policies requires a "long run" modeling perspective in which not only the entry and exit of firms are allowed but also allowed are changes in the nature of the investment in the underlying network technology such as network backbone and its topology. This long run perspective

requires a focus on the sources and conditions of joint production and public goods that exist in the production process and how they are influenced by the finance of the business and the constraints policies place on firms to provide services that are not profitable.

Poitevin, Michel

PD July 1995. **TI** Contract Renegotiation and Organizational Design. **AA** University of Montreal, CIRANO and Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1135; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 49. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** C72, L22. **KW** Asymmetric Information. Contract Renegotiation. Organizational Form. Decentralization.

AB This paper studies the implications of non-commitment for organizational design. An organizational form must trade off between the coordination benefits associated with the centralization of information and its associated costs in terms of renegotiation. The analysis makes precise what these benefits and costs are. First, I characterize renegotiation-proof allocations for organizational forms that differ in the amount of decentralization that they support. Second, I compare these different organizational forms. The analysis shows that (1) complete decentralization of decision-making is always weakly dominated by a more centralized structures when information is dispersed in the organization; (2) the player with the most important or relevant information should be the decision-maker.

Polak, Ben

TI Banks Versus Bonds: A Simple Theory of Comparative Financial Institutions. **AU** Baliga, Sandeep; Polak, Ben.

TI Information Externalities, Share-Price Based Incentives and Managerial Behaviour. **AU** Grant, Simon; King, Stephen; Polak, Ben.

TI Preference for Information. **AU** Grant, Simon; Kajii, Atsushi; Polak, Ben.

Popp, David

TI What is the Value of Scientific Knowledge? **AU** Nordhaus, William D.; Popp, David.

Postlewaite, Andrew

TI Specialization of Labor and the Distribution of Income. **AU** Matsui, Akihiko; Postlewaite, Andrew.

TI Incorporating Concern for Relative Wealth Into Economic Models. **AU** Cole, Harold L.; Mailath, George J.; Postlewaite, Andrew.

Pugel, Thomas A.

TI Performance of the U.S. Property-Casualty Insurance Company. **AU** Chidambaran, N.K.; Pugel, Thomas A.; Saunders, Anthony.

Quadrini, Vincenzo

TI Politico-Economic Equilibrium and Economic Growth. **AU** Krusell, Per; Quadrini, Vincenzo; Rios-Rull, Jose-Victor.

Quandt, Richard E.

TI The Predictability of Stock Returns: A Cross-Sectional Simulation. **AU** Fluck, Zsuzsanna; Malkiel, Burton G.; Quandt, Richard E.

Quigley, John M.

TI Teenage Employment and the Spatial Isolation of Minority and Poverty Households. **AU** O'Regan, Katherine M.; Quigley, John M.

TI Spatial Effects Upon Employment Outcomes: The Case of New Jersey Teenagers. **AU** O'Regan, Katherine M.; Quigley, John M.

Quigley, Neil

TI The Economics of Canadian Deposit Insurance. **AU** Carr, Jack; Mathewson, Frank; Quigley, Neil.

Quint, Thomas

PD October 1994. **TI** A Model of Migration. **AU** Quint, Thomas; Shubik, Martin. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1088; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 12. **PR** no charge. **JE** C72, F22. **KW** Noncooperative Games. Migration. Potential Games.

AB A simple game-theoretic model of migration is proposed, in which the players are animals, the strategies are territories in a landscape to which they may migrate, and the payoffs for each animal are determined by its ultimate location and the number of other animals there. If the payoff to an animal is a decreasing function of the number of other animals sharing its territory, we show the resultant game has a pure strategy Nash equilibrium (PSNE). Furthermore, this PSNE is generated via "natural" myopic behavior on the part of the animals. Finally, we compare this type of game with congestion games and potential games.

PD December 1994. **TI** On the Number of Nash Equilibria in Bimatrix Game. **AU** Quint, Thomas; Shubik, Martin. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1089; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 16. **PR** no charge. **JE** C72, C62. **KW** Noncooperative Games. Nash Equilibrium. Game Theory.

AB We show that if y is an odd integer between 1 and 2 to the n power minus 1, there is an n x n bimatrix game with exactly y Nash equilibria (NE). We conjecture that this 2 to the n power minus 1 is a tight upper bound on the number of NE's in a "nondegenerate" n x n game. We prove the conjecture for n less than or equal to 3, and provide bounds on the number of NE's in m x n nondegenerate games when min (m,n) is less than or equal to 4.

PD January 1995. **TI** A Bound on the Number of Nash Equilibria in a Coordination Game. **AU** Quint, Thomas; Shubik, Martin. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1095; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 8. **PR** no charge. **JE** D72, D82. **KW** Game Theory. Noncooperative Equilibria.

AB We prove that a "nondegenerate" m x n coordination game can have at most 2 to the m power minus 1 Nash equilibria, where M = min(m,n).

PD February 1995. **TI** Dumb Bugs and Bright Noncooperative Players: Games, Context and Behavior. **AU** Quint, Thomas; Shubik, Martin; Yan, Dicky. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1094; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 31. **PR** no charge. **JE** C72, C73. **KW** Noncooperative Equilibrium. Learning. Dynamic Games.
AB Consider a repeated bimatrix game. We define "bugs" as players whose "strategy" is to react myopically to whatever the opponent did on the previous iteration. We believe that in some contexts this is a more realistic model of behavior than the standard "supremely rational" noncooperative game player. We consider possible outcome paths that can occur as the result of bugs playing a game. We also compare how bugs fare over a suitable "universe of games," as compared with standard "Nash" players and "maximum" players.

Rabin, Matthew

PD August 1995. **TI** Moral Preferences, Moral Constraints, and Self-Serving Biases. **AA** University of California, Berkeley. **SR** University of California, Berkeley, Working Paper in Economics: 95/241; IBER, 156 Barrows Hall, University of California, Berkeley, CA 94720. **PG** 40. **PR** $3.50 U.S. and Canada; $7.00 foreign. **JE** A12, B49, C91, D63, D83. **KW** Altruism. Fairness. Morality. Non-Expected Utility. Reciprocal Altruism.
AB Economists have formally modeled moral dispositions by directly incorporating into utility analysis concern for the well-being of others. But sometimes moral dispositions are not preferences, as connoted by utility analysis, but rather are ingrained as (internal) constraints. I present a model fleshing out this distinction: If moral dispositions are internal constraints on a person's real goal of pursuing her self- interest, she will be keen to self-servingly gather, avoid, and interpret relevant evidence, for the purpose of relaxing this constraint and pursuing her self interest. This gives rise to self-serving biases in moral reasoning. I show that this alternative model has some implications different from a standard utility model. Specifically, because a person seeks to avoid information that interferes with her self interest, the scope for social influence in moral conduct is greater than it is in the conventional model. Outside parties can improve a person's moral conduct by a) forcing her to receive certain information, b) discouraging her from (selectively) thinking about other information, or c) encouraging her to think through moral principles before she knows where her self interest lies.

Ramesh, M.

PD June 1995. **TI** Social Security in the ASEAN: Is There a Southeast Asian Model of Welfare Capitalism? **AA** University of Western Ontario. **SR** University of Western Ontario, Papers in Political Economy: 62; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 20. **PR** no charge. **JE** I38, H11, H55. **KW** Social Security. Southeast Asia. Welfare Programs.
AB While the ASEAN countries have a broad range of social security programs for their citizens, the programs are for the most part inadequately funded and leave a large proportion of the population uncovered. The existing theoretical literature on social security does not adequately explain the evolution or character of social security in the ASEAN. But it does indicate that aging of the population and spread of democracy will foster pressures for strengthening the social security system. These pressures will conflict with the need to keep taxes low to maintain investors' confidence. How the conflicts are resolved will depend on domestic political circumstances in each ASEAN country. However, it is unlikely that the pressures for or against expanding social security will be uniquely Southeast Asian in character.

Ramey, Garey

TI Dynamic Retail Price and Investment Competition. **AU** Bagwell, Kyle; Ramey, Garey; Spulber, Daniel F.

TI Capacity, Entry and Forward Induction. **AU** Bagwell, Kyle; Ramey, Garey.

TI Coordination Economies, Sequential Search and Advertising. **AU** Bagwell, Kyle; Ramey, Garey.

Ramirez, Gabriel

TI Debtor-in-Possession Financing and the Resolution of Uncertainty in Chapter 11 Reorganizations. **AU** Dhillon, Upinder S.; Noe, Thomas; Ramirez, Gabriel.

TI Bond Calls, Credible Commitment, and Equity Dilution: A Theoretical and Clinical Analysis of Simultaneous Tender and Call (STAC) Offers. **AU** Dhillon, Upinder S.; Noe, Thomas; Ramirez, Gabriel.

Reiter, Stanley

PD May 1995. **TI** Coordination and the Structure of Firms. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1121; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 51. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D21, D23, L22, D82. **KW** Coase Theorem. Transaction Costs. Information.
AB The aim of this paper is to take a step toward formulating a theory of the firm's existence. In this step the constraints arising from incentives are ignored. The focus is on the effects of the "prime source of transaction costs," namely the fact that information processing takes time and effort. This fact arises from limitations on the capacities of individuals to process information. This leaves us with the problem of solving for firms as optimal adaptations to the bounds on the rationality of individuals. This problem, though not the full story, is a substantial one, with significant practical implications.

Richardson, J. David

PD April 1995. **TI** Sectoral Growth Across U.S. States: Factor Content, Linkages, and Trade. **AU** Richardson, J. David; Smith, Pamela J. **AA** Richardson: Syracuse University and National Bureau of Economic Research. Smith: University of Delaware. **SR** National Bureau of Economic Research, Working Paper: 5094; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 21. **PR** $5.00. **JE** D62, E25, O41, O47. **KW** Factor Content. Sectoral Growth. Factor Endowments. Productivity. Externalities.

AB Employing a "factor-content" model that relates sectoral growth to regional factor endowments, we find: (1) that U.S. state factor endowments are reasonably strong correlates of cross-state sectoral growth in value-added, with patterns that accord well with intuition; (2) that inter-sectoral differences in productivity change are marked -- estimates range from negative to annual rates over 10 percent; (3) little evidence of unusual growth linkages either from sector to sector or state to state, such as might be expected from recent discussions of externalities; (4) little evidence of correlation between unusually strong sectoral growth and unusual levels of export dependence, another putative channel of externalities. Our principle data set is a 1987-89 panel of: sector-by-sector, state-by-state value added and international exports, as well as state endowments of patents, structural capital, and as many as six types of labor. "Unusual" growth and exports are defined as the residual growth and international exports left unexplained by endowments.

Riddell, W. Craig

TI Unemployment in Canada and the United States: A Further Analysis. **AU** Card, David; Riddell, W. Craig.

Rios-Rull, Jose-Victor

TI Politico-Economic Equilibrium and Economic Growth. **AU** Krusell, Per; Quadrini, Vincenzo; Rios-Rull, Jose-Victor.

Rob, Rafael

TI R&D, Investment and Industry Dynamics. **AU** Lach, Saul; Rob, Rafael.

TI The Impact of Capital-Based Regulation on Bank Risk-Taking: A Dynamic Model. **AU** Calem, Paul; Rob, Rafael.

Robins, Philip K.

TI Do Financial Incentives Encourage Welfare Recipients to Work? Early Findings From the Canadian Self Sufficiency Project. **AU** Card, David; Robins, Philip K.

Root, Hilton L.

TI Information Aggregation and Economic Development: The Case of East Asia. **AU** Campos, Ed; Root, Hilton L.

Rosen Richard

TI Banks and Derivatives. **AU** Gorton, Gary; Rosen Richard.

Roubini, Nouriel

TI Liquidity and Exchange Rates: Puzzling Evidence From the G-7 Countries. **AU** Grilli, Vittorio; Roubini, Nouriel.

TI Liquidity Models in Open Economies: Theory and Empirical Evidence. **AU** Grilli, Vittorio; Roubini, Nouriel.

Rouse, Cecilia Elena

TI Intraschool Variation in Class Size: Patterns and Implications. **AU** Boozer, Michael; Rouse, Cecilia Elena.

TI The Underrepresentation of Women in Economics: A Study of Undergraduate Economics Students. **AU** Dynan, Karen E.; Rouse, Cecilia Elena.

Ruhl, Christof

PD May 1995. **TI** The Political Economy of Aggregate Budget Constraints or the A,B,C's of Industrial Restructuring in Russia. **AU** Ruhl, Christof; Serwin, Kenneth; Kejak, Michal. **AA** Ruhl and Serwin: University of California, Los Angeles. Kejak: Center for Economic Research and Graduate Education, Economics Institute, Prague. **SR** University of Western Ontario, Papers in Political Economy: 76; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 26. **PR** no charge. **JE** P21, L32, L33. **KW** Privatization. Shock Therapy. Gradualism. Russia.

AB This paper summarizes the most important features of recent reforms in Russia and relates them to the problems imposed by the industrial structure. It then translates these stylized facts into the assumptions used to model the industrial structure formally.

Ruud, Paul

TI Simulation of Multivariate Normal Rectangle Probabilities and Their Derivatives: Theoretical and Computational Results. **AU** Hajivassiliou, Vassilis A.; McFadden, Daniel; Ruud, Paul.

Ryoo, Jaewoo

PD March 1995. **TI** Statistical Discrimination, Affirmative Action, and Mismatch. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/06; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 31. **PR** no charge. **JE** J71, J78, J24, J15. **KW** Affirmative Action. Discrimination. Human Capital.

AB This paper analyzes the economic consequences of affirmative action in the presence of statistical discrimination. In the model, workers with differing abilities have comparative advantages in jobs with differing complexities. Employers, having a biased belief on the ability of minority workers, require higher credentials when promoting them to more productive jobs, which discourages their human capital investment. When affirmative action policy is enforced, some under- qualified minority workers are promoted to difficult jobs. Those workers, as well as some majority workers who are over-qualified for, but have to take, easy jobs lose because their comparative advantages are not utilized. This inefficiency due to mismatch is not necessarily outweighed by the long term gain brought about by the policy, if groups differ substantially in their human capital investment costs. Appropriately reinterpreted, the model explains why drop-out rates and the returns to college education differ between blacks who attend black and non-black colleges.

Saari, Donald G.

PD 1995. **TI** The Copeland Method I; Relationships and the Dictionary. **AU** Saari, Donald G.; Merlin, Vincent R. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1111; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 23. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D72, D81. **KW** Voting. Political Economy. Elections.

AB A central political and decision science issue is to understand how election outcomes can change with the choice of a procedure or the slate of candidates. These questions are answered for the important Copeland Method (CM) where, with a geometric approach, we characterize all relationships among the rankings of positional voting methods and the CM. Then, we characterize all ways CM rankings can vary as candidates enter or leave the election. In this manner new CM strengths and flaws are detected.

TI Copeland Method II; Manipulation, Monotonicity, and Paradoxes. **AU** Merlin, Vincent R.; Saari, Donald G.

PD 1995. **TI** The Generic Existence of a Core for q-Rules. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1113; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 30. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** Voting. Political Economy. Elections. **KW** D72, C62, C61.

AB A q-rule is where, for n-voters, a winning coalition consists of q or more voters. An important question is to determine when, generically, core points exist; that is, when the core exists in other than highly contrived settings. As known, the answer depends upon the dimension of issue space. McKelvey and Schofield found bounds on these dimensions, but Banks found a subtle, but critical error in their proofs. The sharp dimensional values along with results about the structure of the core are derived.

PD June 1995. **TI** Connecting and Resolving Sen's and Arrow's Theorems. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1132; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 13. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D11, D71, D61. **KW** Impossibility Theorem. Arrow. Sen.

AB As shown, the source of Sen's and Arrow's impossibility theorems is that Sen's Liberal condition and Arrow's IIA counter the critical assumption that voters' have transitive preferences. As this allows transitive and certain cyclic preferences to become indistinguishable, the Pareto condition forces cycles. Once the common cause of these perplexing conclusions is understood, resolutions are immediate.

Saita, Francesco

PD June 1995. **TI** Payment Process Costs, Innovation, and the Role of Banks as Payment Intermediaries. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/20; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 20. **PR** not available. **JE** G21, D23, L23, L22. **KW** Institutions. Transaction Costs. Banks. Financial Services.

AB The linkage between deposit-taking, lending and the provision of payment services is at the heart of the definition of banking. Nevertheless, the elements that justify why a financial intermediary has been jointly carrying on these activities, and why at the same time payment services business has been recently entered by so many non-bank firms, have not generally been thoroughly analyzed. The paper identifies payment process frictions; therefore, it is made clear why and when product and institutional innovation in payment services can arise. Demand, the level of financial and information technology, and agency costs are found to be the key factors explaining both banks' past dominance and present uncertain perspectives in the business. Regulation impact is also discussed. Scope economies between deposit- taking and lending on one side and payment services on the other side therefore not enough to draw conclusions about banks' role in the provision of payment services.

Samuelson, Larry

TI Evolution and Endogenous Interactions. **AU** Mailath, George J.; Samuelson, Larry; Shaked, Avner.

TI How Proper is Sequential Equilibrium? **AU** Mailath, George J.; Samuelson, Larry; Swinkels, Jeroen M.

TI Correlated Equilibria and Local Interactions. **AU** Mailath, George J.; Samuelson, Larry; Shaked, Avner.

Sandroni, Alvaro

PD December 1994. **TI** Does Rational Learning Lead to Nash Equilibrium in Finitely Repeated Games? **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 94/20; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 37. **PR** no charge. **JE** D83, C73, C62. **KW** Game Theory. Nash Equilibrium. Learning.

AB A stage game is played by n players for a large number of periods. Suppose that each player chooses actions that maximize discounted expected payoffs given beliefs about his opponents' strategies. After observing the outcomes of the game, players update their beliefs in a Bayesian fashion and choose next period's actions. For the case of infinitely repeated games, Kalai and Lehrer provide a compatibility assumption on beliefs and optimal strategies that ensures that rational learning leads to Nash equilibrium. Their condition, however, does not imply Nash equilibrium (or even approximate Nash equilibrium) play in games of long (but finite) horizon. We present a compatibility condition that is equivalent to the one presented by Kalai and Lehrer in infinitely repeated games, but is also sufficient to ensure convergence to Nash equilibrium in finite horizon games.

PD June 1995. **TI** Necessary and Sufficient Conditions for Convergence to Nash Equilibrium: The Almost Absolute Continuity Hypothesis. **AA** University of Pennsylvania. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 95/08; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 27. **PR** no charge. **JE** C62, C72, C73, D84. **KW** Repeated Games. Bayesian Learning. Almost Absolute Continuity.

AB Kalai and Lehrer have shown that if players' beliefs about the future evolution of play is absolutely continuous with respect to play induced by optimal strategies then Bayesian updating eventually leads to Nash equilibrium. In this paper, we present the first set of necessary and sufficient conditions that ensure that Bayesian updating eventually leads to Nash equilibrium. More important, we show that absolute continuity does not rule out any observable behavior that is asymptotically consistent with Nash equilibrium.

Saunders, Anthony

TI A Theory of Bank Regulation and Management Compensation. **AU** John, Kose; Saunders, Anthony; Senbet, Lemma W.

TI Performance of the U.S. Property-Casualty Insurance Company. **AU** Chidambaran, N.K.; Pugel, Thomas A.; Saunders, Anthony.

TI European Financial Market Integration: Clearance and Settlement Issues. **AU** Giddy, Ian; Saunders, Anthony; Walter, Ingo.

Scarf, Herbert E.

TI The Topological Structure of Maximal Lattice Free Convex Bodies: The General Case. **AU** Barany, I.; Scarf, Herbert E.; Shallcross, D.

TI Matrices with Identical Sets of Neighbors. **AU** Barany, I.; Scarf, Herbert E.

Schafgans, Marcia M.A

TI Semiparametric Estimation of a Sample Selection Model. **AU** Andrews, Donald W.K.; Schafgans, Marcia M.A.

Schmeidler, David

TI Case-Based Knowledge and Planning. **AU** Gilboa, Itzhak; Schmeidler, David.

Schmidt, Vivien A.

PD June 1995. **TI** The New World Order, Incorporated: The Rise of Business and the Decline of the Nation-State. **AA** University of Western Ontario. **SR** University of Western Ontario, Papers in Political Economy: 63; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 35. **PR** no charge. **JE** F01, F02, F13, D63. **KW** New World Order. Political Economy. Lobbying.

AB What are the consequences of the liberalized new world order for the nation-state? In this article it is argues that however beneficial it may be for global prosperity and business, the jury is still out regarding its effects on global democracy and government generally. The result is a strengthening of business, with transnational corporations less tied to nations and national interests, and the weakening of the nation-state overall, in particular the voice of the people through legislatures and non-business, societal interests.

Schmitt-Grohe, Stephanie

PD January 1995. **TI** The International Transmission of Economic Fluctuations: Effects of U.S. Business Cycles on the Canadian Economy. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/06; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 27. **PR** no charge. **JE** E32, F41, L12. **KW** Business Cycles. International Transmission. Imperfect Competition.

AB This paper examines whether asset and goods market trade alone can explain the transmission of short- term economic fluctuations across national economies. Empirically testable quantitative models of the effects on Canadian output, investment, employment, exports, imports and the terms of trade of shocks to the U.S. economy are developed. The empirical success of three transmission mechanisms (interest rate variations, exports demand variations, and markup variations) is tested by comparing impulse responses estimated from vector autoregressions to the quantitative predictions of the theoretical models. The results suggest that trade alone cannot quantitatively explain the joint behavior of real variables and the terms of trade.

PD April 1995. **TI** Comparing Four Models of Aggregate Fluctuations Due to Self- Fulfilling Expectations. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/17; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 30. **PR** no charge. **JE** E32, D43. **KW** Sunspot Equilibria. Endogenous Fluctuations. Business Cycles.

AB This paper compares four models which allow for aggregate fluctuations due to self-fulfilling expectations. Necessary and sufficient conditions for the existence of stationary sunspot equilibria are derived analytically. I find that models with countercyclical markups require lower average markups to allow for endogenous fluctuations than do models with fixed markups. Numerical examples demonstrate that endogenous fluctuations occur only for markup values in the upper range of available empirical estimates and that persistent output fluctuations are not a necessary property of these models of the business cycle when the only source of fluctuations are changes in people's expectations about the future path of the economy.

PD October 1995. **TI** Balanced-Budget Rules, Distortionary Taxes, and Aggregate Instability. **AU** Schmitt-Grohe, Stephanie; Uribe, Martin. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/44; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 20. **PR** no charge. **JE** E62, E32. **KW** Balanced Budget. Income Taxes. Expectations.

AB A common argument against a balanced-budget fiscal policy rule is that it would tend to amplify business cycles, inducing tax increases and public expenditure cuts during recessions and inducing the reverse during booms. This paper suggests an additional source of instability that may arise from this type of fiscal policy rule. It shows, within the standard neoclassical growth model, that a balanced-budget rule can make expectations of higher tax rates self-fulfilling if the fiscal authority relies heavily on changes in labor income taxes to eliminate short-run fiscal imbalances. Calibrated versions of the model show that this result is empirically plausible for the U.S. economy and other G-7 countries.

Schneider, Ryan

TI Labor Income Indices Designed for Use in Contracts Promoting Income Risk Management. **AU** Shiller, Robert J.; Schneider, Ryan.

Schoeni, Robert F.

TI Transfer Behavior Within the Family: Results From the Asset and Health Dynamics Survey. **AU** McGarry, Kathleen; Schoeni, Robert F.

Scotchmer, Suzanne

TI Patent Breadth, Patent Life and the Pace of Technological Improvement. **AU** O'Donoghue, Ted; Scotchmer, Suzanne; Thisse, Jacques-Francois.

TI Decentralization in Replicated Club Economies With Multiple Private Goods. **AU** Gilles, Robert P.; Scotchmer, Suzanne.

PD March 1996. **TI** Externality Pricing in Club Economies. **AA** University of California, Berkeley. **SR** University of California, Berkeley, Working Paper in Economics: 96/246; IBER, 156 Barrows Hall, University of California, Berkeley, CA 94720. **PG** 21. **PR** $3.50 U.S. and Canada; $7.00 foreign. **JE** D71, D62, H41. **KW** Clubs. Externalities. Attributes. Characteristics.

AB The paper shows that competitive forces in club economies lead to admissions prices that can be decomposed as linear prices on externality-producing attributes, where each member pays the same amount per unit attribute contributed. The externalities prices are sufficient to cover the costs of services provided within the club.

Segal, Uzi

PD November 1995. **TI** Dynamic Consistency and Reference Points. **AA** University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9517; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 11. **PR** $10.00. **JE** C73, C61, D11. **KW** Dynamic Consistency. Preference Relations.

AB This note aims to answer the following question. Is it possible to define a set of preference relations, one for each node of a decision tree, such that these preferences satisfy the reduction of compound lotteries axiom, they are dynamically consistent in the sense that is the decision maker plans to use a certain strategy at a future node N, then once he reaches this node, his current preferences will be to use the planned strategy, and such that they do not converge to expected utility. The key idea is that as uncertainty unfolds, preferences evolve so that the indifference curve through the planned choice at each choice node agrees with the induced preferences from the past. In particular, it follows that this indifference curve is affine. It is argued that the updated preferences are relevant whenever the decision maker has to depart from his original plan. The quadratic model is consistent with one affine indifference curve, thus admitting a natural concept of reference points. It implies randomization aversion for lotteries that are worse than the planned holding X but randomization seeking for lotteries that are better than X.

TI Preferences Over Solutions to the Bargaining Problem. **AU** Border, Kim C.; Segal, Uzi.

PD November 1995. **TI** First-Order Risk Aversion and Non-Differentiability. **AU** Segal, Uzi; Spivak, Avia. **AA** Segal: University of Western Ontario. Spivak: Ben Gurion University. **SR** University of Western Ontario, Department of Economics, Research Report: 9519; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 6. **PR** $10.00. **JE** D81, D11. **KW** Risk Aversion. Preference Relations. Uncertainty.

AB First-order risk aversion happens when the risk premium a decision maker is willing to pay to avoid an expected zero-sum lottery is proportional to the amount of the gamble. We show that first-order risk aversion is equivalent to a certain non-differentiability of some of the local utility functions.

Senbet, Lemma W.

TI A Theory of Bank Regulation and Management Compensation. **AU** John, Kose; Saunders, Anthony; Senbet, Lemma W.

Serwin, Kenneth

TI The Political Economy of Aggregate Budget Constraints or the A,B,C's of Industrial Restructuring in Russia. **AU** Ruhl, Christof; Serwin, Kenneth; Kejak, Michal.

Shaked, Avner

TI Evolution and Endogenous Interactions. **AU** Mailath, George J.; Samuelson, Larry; Shaked, Avner.

TI Correlated Equilibria and Local Interactions. **AU** Mailath, George J.; Samuelson, Larry; Shaked, Avner.

Shallcross, D.

TI The Topological Structure of Maximal Lattice Free Convex Bodies: The General Case. **AU** Barany, I.; Scarf, Herbert E.; Shallcross, D.

Shannon, Chris

TI Strict Monotonicity in Comparative Statics. **AU** Edlin, Aaron S.; Shannon, Chris.

Sharpe, Steven A.

PD May 1995. **TI** Bank Capitalization, Regulation, and the Credit Crunch: A Critical Review of the Research Findings. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/20; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 33. **PR** no charge. **JE** G28, E51. **KW** Credit Crunch. Bank Capital. Regulatory Capital.

AB Over the past few years, much research has attempted to determine why bank lending weakened so sharply just prior to the 1990-91 recession and remained anemic for several years thereafter. In particular, this research has tried to assess whether there was a "credit crunch" caused by increased capital requirements, more stringent regulatory practices, or the widespread deterioration in bank balance sheets. At the disaggregated level, a robust link is found between loan growth and both loan performance and bank profitability, though the interpretation of such findings remains ambiguous. Also, with the exception of some work focusing on regulatory disciplinary actions in New England, the research to date fails to convincingly tie the drop in aggregate lending to changes in capital standards or regulatory behavior.

Shavell, Steven

PD September 1995. **TI** Threats Without Binding

Commitment. **AU** Shavell, Steven; Spier, Kathryn. **AA** Shavell: Harvard University. Spier: Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1139; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 15. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** K42, C78, D74. **KW** Threats. Commitment. Bargaining. Blackmail. Extortion.

AB This paper explores the power of threats in the absence of binding commitment. The threatener cannot commit to carry out the threat if the victim refuses payment, and cannot commit not to carry out the threat if payment is made. If exercising the threat would benefit the threatener, however, then the threat's success depends upon whether the threat may be repeated. In the equilibrium of a finite-period game, the threat is carried out and the victim makes no payments. In an infinite- horizon game, however, it is an equilibrium for the victim to make a stream of payments over time. The expectation of future payments keeps the threatener from exercising the threat.

Shi, Shouyong

TI Bargaining-Induced Transaction Demand for Fiat Money.
AU Engineer, Merwan; Shi, Shouyong.

Shiller, Robert J.

PD February 1995. **TI** Conversation, Information, and Herd Behavior. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1092; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 15. **PR** no charge. **JE** D84, D82. **KW** Informational Cascades. Herd Externality. Communications. Social Pressure. Social Cognition.

AB Experimental evidence shows that an important reason why people tend to imitate others, to exhibit " herd behavior," is that they assume that the others have information that justifies their actions. The informational cascade models of Banerjee (1992) and Bikhchandani et al. (1992) are significant developments in showing some general equilibrium and welfare effects of such rational imitative behavior. But these models as specified may be of limited applicability since they assert that differences across groups in herd behavior can be attributed to the random decisions of first movers. Differences across groups in herd behavior might be explained more often in terms of different modes of interpersonal information transmission. Patterns of human conversation imply great selectivity to the kinds of information transmitted within groups.

PD April 1995. **TI** World Income Components: Measuring and Exploiting International Risk Sharing Opportunities. **AU** Shiller, Robert J.; Athanasoulis, Stefano. **AA** Shiller: Yale University. Athanasoulis: Iowa State University. **SR** Yale University, Cowles Foundation Discussion Paper: 1097; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 72. **PR** no charge. **JE** G15, F21. **KW** International Diversification. Hedging. National Income. Principal Components. Derivative Markets.

AB We provide methods of decomposing the variance of world national incomes into components in such a way as to indicate the most important risk-sharing opportunities, and, therefore, the most important missing international risk markets to establish. One method uses a total variance reduction criterion, and identifies risk-sharing opportunities in terms of eigenvectors of a variance matrix of residuals produced when country incomes are regressed on world income. Another method uses a mean-variance utility- maximizing criterion and identifies risk- sharing opportunities in terms of eigenvectors of a variance matrix of deviations of country incomes from their respective contract-year shares of world income. The two methods are applied using Summers- Heston (1991) data on national incomes for large countries 1950- 1990, each using two different methods of estimating variances. While these data are not sufficient to provide accurate estimates of the requisite variance matrices of (transformed) national incomes, the results are suggestive of important new markets that could actually be created, and show that there may be large welfare gains to creating some of these markets.

TI Mortgage Default Risk and Real Estate Prices: The Use of Index-Based Futures and Options in Real Estate. **AU** Case, Karl E.; Shiller, Robert J.; Weiss, Allan N.

TI Mortgage Default Risk and Real Estate Prices: The Use of Index-Based Futures and Options in Real Estate. **AU** Case, Karl E.; Shiller, Robert J.; Weiss, Allan N.

PD April 1995. **TI** World Income Components: Measuring and Exploiting International Risk Sharing Opportunities. **AU** Shiller, Robert J.; Athanasoulis, Stefano. **AA** Shiller: Yale University and National Bureau of Economic Research. Athanasoulis: Iowa State University. **SR** National Bureau of Economic Research, Working Paper: 5095; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 62. **PR** $5.00. **JE** C51, F41. **KW** Risk Markets. International Outcomes. Variance Estimation.

AB We provide methods of decomposing the variance of world national incomes into components in such a way as to indicate the most important risk-sharing opportunities, and therefore, the most important missing international risk markets to establish. One method uses a total variance reduction criterion and identifies risk-sharing opportunities in terms of eigenvectors of a variance matrix of residuals produced when country incomes are regressed on world income. Another method uses a mean-variance utility-maximizing criterion and identifies risk-sharing opportunities in terms of eigenvectors of a variance matrix of deviations of country incomes from their respective contract-year shares of world income. The two methods are applied using Summers-Heston (1991) data on national incomes for large countries from 1950-1990, each using two different methods of estimating variances. While these data are not sufficient to provide accurate estimates of the requisite variance matrices of (transformed) national incomes, the results are suggestive of important new markets that could actually be created and show that there may be large welfare gains to creating some of these markets.

PD August 1995. **TI** Labor Income Indices Designed for Use in Contracts Promoting Income Risk Management. **AU** Shiller, Robert J.; Schneider, Ryan. **AA** Shiller: Yale University. Schneider: McKinsey & Co. **SR** Yale University, Cowles Foundation Discussion Paper: 1110; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 38. **PR** no charge. **JE** J31, C43. **KW** Employment Costs. Indexes. Labor Contracts. Disability Insurance. Life Insurance.

AB Labor income indices are created for groupings of individuals, using data from the Panel Study of Income Dynamics. People are grouped by a clustering algorithm based on an estimated transition matrix between jobs, by education level, and by skill category. The groupings are defined so that relatively few people move between them. For each of the groupings, we generate a labor income index using a hedonic repeated-measures regression methodology. Similarities between pairs of indices and between indices and individual labor incomes are described. It is argued that indices like those presented here might someday be used in settlement formulae in contracts promoting income risk management.

PD March 1996. **TI** Why Do People Dislike Inflation? **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1115; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 63. **PR** no charge. **JE** E31, P16. **KW** Inflation. Survey. Brazil. Germany.

AB A questionnaire survey was conducted to explore how people think about inflation, and what real problems they see it as causing. With results from 677 people, comparisons were made among people in the U.S., Germany, and Brazil, between young and old, and between economists and non-economists. Among non-economists in all countries, the largest concern with inflation appears to be that it lowers people's standard of living. Non-economists in all countries, the largest concern with inflation appears to be that it lowers people's standard of living. Non-economists appear often to believe in a sort of sticky- wage model, by which wages do not respond to inflationary shocks, shocks which are themselves perceived as caused by certain people or institutions acting badly. This standard of living effect is not the only perceived cost of inflation among non-economists: other perceived costs are tied up with issues of exploitation, political instability, loss of morale, and damage to national prestige. The most striking differences between groups studied were between economists and non-economists. There were also important international and intergenerational differences. The U.S. - Germany differences (on questions not just about information) were usually less strong than the intergenerational differences.

TI A Scorecard for Indexed Government Debt. **AU** Campbell, John Y.; Shiller, Robert J.

Shin, Hyun Song

TI Impact of Public Announcements on Trade in Financial Markets. **AU** Morris, Stephen; Shin, Hyun Song.

TI The Rationality and Efficacy of Decisions Under Uncertainty and the Value of an Experiment. **AU** Morris, Stephen; Shin, Hyun Song.

Shore-Sheppard, Lara D.

PD April 1996. **TI** Stemming the Tide? The Effect of Expanding Medicaid Eligibility on Health Insurance Coverage. **AA** Princeton University. **SR** Princeton University, Industrial Relations Section, Working Paper: 361; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 30. **PR** $2.00. **JE** I18, I38. **KW** Medicaid. Health Insurance. Children.

AB Federal legislation passed in the late 1980's greatly expanded the potential coverage of the Medicaid program. Whereas in 1985 Medicaid was essentially limited to mothers and children on AFDC, by the early 1990's eligibility was expanded to include all children born after 1983 in poor families, regardless of family structure or income sources. In this paper, I evaluate the effects of these expansions on Medicaid coverage and overall health insurance coverage of low-income children. Growth in Medicaid enrollment between 1988 and 1993 is decomposed into three underlying sources: changes in the eligibility rules of the program; changes in the eligibility characteristics of the population; and changes in takeup among the eligible. I find that about 68 percent of the 6.7 percentage point rise in coverage rates is attributable to the expanded eligibility rules. While the expansion of Medicaid eligibility may have increased Medicaid enrollment, an important question is whether the increase represented a net gain in health insurance coverage, or a substitution from private to publicly-provided coverage. I find little evidence of crowding out: instead, the Medicaid expansions seem to have maintained overall health insurance coverage rates against a backdrop of declining private coverage.

Shubik, Martin

TI A Model of Migration. **AU** Quint, Thomas; Shubik, Martin.

TI On the Number of Nash Equilibria in Bimatrix Game. **AU** Quint, Thomas; Shubik, Martin.

TI A Bound on the Number of Nash Equilibria in a Coordination Game. **AU** Quint, Thomas; Shubik, Martin.

TI Dumb Bugs and Bright Noncooperative Players: Games, Context and Behavior. **AU** Quint, Thomas; Shubik, Martin; Yan, Dicky.

TI A Strategic Market Game With Secured Lending. **AU** Karatzas, Ioannis; Shubik, Martin; Sudderth, William D.

PD October 1995. **TI** Time and Money. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1112; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 21. **PR** no charge. **JE** C72, D58, E49. **KW** Time. Money. Credit.

AB General equilibrium is timeless, and without outside money, the price system is homogeneous of order zero. Some finite horizon strategic market game models are considered with an initial issue of fiat money held as an asset. For any arbitrary finite horizon, the solution is time-dependent. In the infinite horizon, time disappears with the initial issue of fiat money present as circulating capital in the fully stationary state and the price level is determined.

Sicherman, Nachum

TI Technological Change and the Skill Acquisition of Young Workers. **AU** Bartel, Ann P.; Sicherman, Nachum.

TI Technological Change and the Skill Acquisition of Young Workers. **AU** Bartel, Ann P.; Sicherman, Nachum.

Sicular, Terry

TI To Have and Have Not: Explaining Inequality in Rural China. **AU** Morduch, Jonathan; Sicular, Terry.

Simon, Bobe E.

TI Report on the Investment Performance of Defaulted Bonds for 1994 and 1987-1994. **AU** Altman, Edward I.;

Simon, Bobe E.

Simon, John

TI An Empirical Examination of the Fisher Effect in Australia. **AU** Mishkin, Frederic S.; Simon, John.

Sims, Christopher A.

PD October 1994. **TI** Error Bands for Impulse Responses. **AU** Sims, Christopher A.; Zha, Tao. **AA** Sims: Yale University. Zha: University of Saskatchewan. **SR** Yale University, Cowles Foundation Discussion Paper: 1085; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 26. **PR** no charge. **JE** C32, C11, C15. **KW** Bootstrap. Impulse Responses. Vector Autoregression. Bayesian Methods.

AB Econometricians have provided error bands for the impulse responses of multiple-equation linear time series models by using asymptotic approximations, by simulation methods based on bootstrap reasoning, and by likelihood or Bayesian methods that also use simulation in computations. Impulse responses are highly nonlinear functions of estimated parameters, and in non-stationary or near-non-stationary regions of the parameter space the distribution of estimated impulse responses varies by more than a simple location shift as the parameters shift. These two facts mean that the asymptotic approximation and the bootstrap methods can run seriously astray. Also, an apparently natural extension of likelihood-based methods from reduced from models to over- identified structural models turns out to be incorrect. This paper describes these pitfalls and demonstrates their quantitative importance with examples.

Skinner, Frank S.

PD June 1995. **TI** Alternate Hedge for Bonds Subject to Credit Risk. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S-95 -16; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 16. **PR** not available. **JE** G12, D84. **KW** Hedging. Bonds. Debt. Risk.

AB To date there is no satisfactory way to measure and control interest rate risk for bonds subject to high levels of credit risk. In addressing this gap, this work develops the survival measure, a new measure of interest rate sensitivity for corporate bonds. An acid test of a sensitivity measure is its use as a hedge ratio. The hedge ratio based on a particular sensitivity measure that minimizes cash portfolio losses in response to an unexpected change in interest rates will be the "best" measure of interest rate risk. Accordingly, nine alternate hedge ratios, seven of which are new, are developed and examined. Considerable variations in the size of alternate hedge ratios suggest that improvements in hedging strategies may be available, depending on whether credit risky bonds have a consistently greater (less) response to a change in the level of interest than that suggested by the Macaulay duration based hedge ratio now used in practice. Some preliminary evidence suggests that the survival interest rate sensitivity measure developed here can improve hedging performance and therefore is a better measure of interest rate sensitivity for corporate bonds than Macaulay duration.

Smith, Jeffrey A.

TI Ashenfelter's Dip and the Determinants of Participation in a Social Program: Implications for Simple Program Evaluation Strategies. **AU** Heckman, James J.; Smith, Jeffrey A.

TI The Performance of Performance Standards: The Effects of JTPA Performance Standards on Efficiency, Equity and Participant Outcomes. **AU** Heckman, James J.; Smith, Jeffrey A.

Smith, Pamela J.

TI Sectoral Growth Across U.S. States: Factor Content, Linkages, and Trade. **AU** Richardson, J. David; Smith, Pamela J.

Smith, Roy C.

PD 1995. **TI** Rethinking Emerging Markets. **AU** Smith, Roy C.; Walter, Ingo. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/23; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 28. **PR** not available. **JE** O16, O11. **KW** Development. Developing Markets. Stocks. Financial Markets.

AB In this paper, we take the view that the emerging market investment boom was not so much ill founded as it was excessive. The surge of investments into these markets had many characteristics of a tulip bulb mania, that is, the prices got out of line with reality. Now the market has had its reality check and will not behave foolishly again.

TI Event Investing. **AU** Nye, Richard B.; Smith, Roy C.

Smith, Vernon L.

TI Experimental Tests of the Paradox of Power. **AU** Durham, Yvonne; Hirshleifer, Jack; Smith, Vernon L.

Smorodinsky, Rann

TI Calibrated Forecasting and Merging. **AU** Kalai, Ehud; Lehrer, Ehud; Smorodinsky, Rann.

Somers, Harold M.

PD February 1995. **TI** Retroactive Taxation: A Triumph of Law Over Economics? **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 726; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 16. **PR** $5.00. **JE** H24, K34, P16, P35. **KW** Law and Economics. Courts. Judiciary. Retroactive Taxation.

AB A significant 9-0 decision on retroactive taxation was handed down by the U.S. Supreme Court in June, 1994 in United States v. Carlton. It did not deal with the retroactivity of the 1993 law but it would, in appearance, be highly pertinent to any challenge to that law; yet factual peculiarities of the 1994 case and the reasoning used by the respective Justices suggest that it would not be controlling on tax retroactivity in general. This conclusion stems from the economic rationale underlying each of the opinions written in the case.

PD October 1995. **TI** Taxing Multinationals While Minimizing Economic Distortion. **AA** University of

California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 743; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 29. **PR** $5.00. **JE** H25, K34, F23. **KW** Taxation. Multinational. International Trade.

AB The emphasis on international trade implied by NAFTA, GATT and the WTO draws attention to the taxation of multinational companies, whether domiciled in this country or elsewhere. The states of the United States particularly have problems in that regard because of the difficulty of finding the right income to tax. The United States Supreme Court addressed these matters in the Barclays decision in 1994 and reviewed the law on the subject. The Barclays case evidently played a part in inducing California to make separate accounting a realistic option. It is less likely to distort business decisions than the compulsory use of an arbitrary formula. New York has also shown some flexibility in this regard. The transfer pricing problems remain; hence, intense surveillance by tax authorities will undoubtedly persist. Paradoxically, the Barclays decision, in the context of the revised tax code that prevailed at the time, was a victory for the State but not a major defeat for the taxpaying companies: Within the prescribed limits, the multinationals can minimize economic distortion by selecting the tax method that is to their advantage.

Sparks, Roger

TI Putting the Squeeze on a Market for Lemons: Government-Sponsored Mortgage Securitization. **AU** Passmore, Wayne; Sparks, Roger.

Spier, Kathryn

TI Threats Without Binding Commitment. **AU** Shavell, Steven; Spier, Kathryn.

Spivak, Avia

TI First-Order Risk Aversion and Non-Differentiability. **AU** Segal, Uzi; Spivak, Avia.

Spulber, Daniel F.

TI Dynamic Retail Price and Investment Competition. **AU** Bagwell, Kyle; Ramey, Garey; Spulber, Daniel F.

Stadler, George W.

TI Monetary Explanations of the Weimar Republic's Hyperinflation: Some Neglected Contributions in Contemporary German Literature. **AU** Laidler, David E.W.; Stadler, George W.

Staiger, Robert W.

TI Collusion Over the Business Cycle. **AU** Bagwell, Kyle; Staiger, Robert W.

TI Protection and the Business Cycle. **AU** Bagwell, Kyle; Staiger, Robert W.

TI Reciprocal Trade Liberalization. **AU** Bagwell, Kyle; Staiger, Robert W.

TI Strategic Export Subsidies and Reciprocal Trade Agreements: The Natural Monopoly Case. **AU** Bagwell, Kyle; Staiger, Robert W.

Stapleton, Richard C.

TI The Valuation of American Options With Stochastic Interest Rates: A Generalization of the Geske- Johnson Technique. **AU** Ho, T.S.; Stapleton, Richard C.; Subrahmanyam, Marti G.

Starr-McCluer, Martha

TI Households' Deposit Insurance Coverage: Evidence and Analysis of Potential Reforms. **AU** Kennickell, Arthur B.; Kwast, Myron L.; Starr-McCluer, Martha.

TI Saving and Financial Planning: Some Findings From a Focus Group. **AU** Kennickell, Arthur B.; Starr-McCluer, Martha; Sunden, Annika E.

TI Household Saving and Portfolio Change: Evidence From the 1983-89 SCF Panel. **AU** Kennickell, Arthur B.; Starr-McCluer, Martha.

Stasiulis, Daiva K.

TI Making the Match: Domestic Placement Agencies and the Racialization of Women's Household Work. **AU** Bakan, Abigail B.; Stasiulis, Daiva K.

Steigerwald, Douglas G.

TI Adaptive Testing in ARCH Models. **AU** Linton, Oliver B.; Steigerwald, Douglas G.

Stein, Jeremy C.

PD May 1995. **TI** Internal Capital Markets and the Competition for Corporate Resources. **AA** Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5101; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 38. **PR** $5.00. **JE** G31, L23. **KW** Internal Capital Markets. Corporate Headquarters. Winner Picking. Credit Constraints.

AB This paper examines the role of corporate headquarters in allocating scarce resources to competing projects in an internal capital market. Unlike a bank lender, headquarters has control rights that give it both the authority and the incentive to engage in "winner-picking" -- the practice of actively shifting funds from one project to another. By doing a good job in the winner-picking dimension, headquarters can create value even when its own relationship with the outside capital market is fraught with agency problems and it therefore cannot help at all to relax overall firm-wide credit constraints. One implication of the model developed here is that internal capital markets may function more efficiently when companies choose relatively focused strategies.

Steinberg, Richard

PD January 1996. **TI** The Clash of Values in Civil Society. **AA** Indiana University and Purdue University. **SR** University of Western Ontario, Papers in Political Economy: 67; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 16. **PR** no charge. **JE** D63, L31. **KW** Nonprofit Institutions. Political Economy.

AB Nonprofit organizations can serve as a countervailing power to limit abuses by government. Thus, reformers in Eastern and Central Europe promote the growth of a viable and truly independent sector. In other nations, nonprofit organizations are under attack for that very independence and consequent waste, excessive compensation, and lack of accountability. Each is seeking an appropriate balance of competing values. In this essay, I describe some necessary tradeoffs between competing values (universalism vs. particularism; expression of the voluntary impulse vs. professionalism), illustrate these conflicts with several recent U.S. policy controversies, and sketch a tentative proposal to postpone the need for a values tradeoff.

Stockton, David J.

TI Inflation, Nominal Wage Rigidity, and the Efficiency of Labor Markets. **AU** Lebow, David E.; Stockton, David J.; Wascher, William L.

Strongin, Steve

TI Factor Utilization and Margins for Adjusting Output: Evidence From Manufacturing Plants. **AU** Mattey, Joe; Strongin, Steve.

Subrahmanyam, Marti G.

TI Pricing and Hedging American Options: A Recursive Integration Method. **AU** Huang, Jing-zhi; Subrahmanyam, Marti G.; Yu, G. George.

PD March 1996. **TI** The Term Structure of Interest Rates: Alternative Approaches and Their Implications for the Valuation of Contingent Claims. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/4; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 26. **PR** not available. **JE** E43, G13, G12. **KW** Bonds. Debt. Term Structure.

AB This paper overviews five seminal models in the area of term structure that provide the foundation for further work. A brief review of the empirical issues in the area and a summary of the main conclusions is given, and an attempt is made to synthesize the work by defining issues where there appears to be general agreement.

TI The Valuation of American Options With Stochastic Interest Rates: A Generalization of the Geske- Johnson Technique. **AU** Ho, T.S.; Stapleton, Richard C.; Subrahmanyam, Marti G.

Sudderth, William D.

TI A Strategic Market Game With Secured Lending. **AU** Karatzas, Ioannis; Shubik, Martin; Sudderth, William D.

Sunden, Annika E.

TI Saving and Financial Planning: Some Findings From a Focus Group. **AU** Kennickell, Arthur B.; Starr-McCluer, Martha; Sunden, Annika E.

Suominen, Matti

TI Word-of-Mouth Communication and Community Enforcement. **AU** Ahn, Illtae; Suominen, Matti.

Swamy, P.A.V.B

PD May 1995. **TI** Determinants of U.S. Commercial Bank Performance: Regulatory and Econometric Issues. **AU** Swamy, P.A.V.B.; Barth, James R.; Chou, Ray Y.; Jahera, John S. Jr. **AA** Swamy: Board of Governors of the Federal Reserve System. Barth and Jahera: Auburn University. Chou: Georgia Institute of Technology. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/29; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 29. **PR** no charge. **JE** G21, G31, G32. **KW** Banks. Return on Equity. Return on Assets. Risk. Loans.

AB The purpose of this paper is to identify important determinants of the performance of commercial banks. Two profitability measures and one measure of loss are used as indicators of performance. Each of these measures is related to different types of bank assets and other variables. The choice of these measures and variables is justified by citing several previous studies in the area. Various arguments are also presented to show that these relationships are not linear, have unknown functional forms, and are not stable. To avoid the risk of misspecifying the functional form of the relationships, a wide class of functional forms is employed that may embody the true functional form as a special case even when the specific functional forms considered in previous studies are false. The empirical results obtained from the class approach are compared with those obtained by assuming linear and specific functional forms. The effects of excluded variables and of errors in measurement are also accounted for in the class approach.

TI Solving an Empirical Puzzle in the Capital Asset Pricing Model. **AU** Leusner, John; Akhavein, Jalal D.; Swamy, P.A.V.B.

Swary, Itzhak

TI Investor Valuation of the Abandonment Option. **AU** Berger, Philip G.; Ofek, Eli; Swary, Itzhak.

Swinkels, Jeroen M.

TI How Proper is Sequential Equilibrium? **AU** Mailath, George J.; Samuelson, Larry; Swinkels, Jeroen M.

TI The Loser's Curse and Information Aggregation in Common Value Auctions. **AU** Pesendorfer, Wolfgang; Swinkels, Jeroen M.

Szego, Giorgio

TI The Role of Capital in Financial Institutions. **AU** Berger, Allen N.; Herring, Richard J.; Szego, Giorgio.

Tesar, Linda L.

TI Supply-Side Economics in a Global Economy. **AU** Mendoza, Enrique G.; Tesar, Linda L.

Tevlin, Stacey

TI The Role of Profits in Wage Determination: Evidence From U.S. Manufacturing. **AU** Estevao, Marcello; Tevlin, Stacey.

Thisse, Jacques-Francois

TI Patent Breadth, Patent Life and the Pace of Technological Improvement. **AU** O'Donoghue, Ted; Scotchmer, Suzanne; Thisse, Jacques-Francois.

Thompson, Earl A.

PD August 1995. **TI** Exchange Controls and

Hyperinflation as Efficient Governmental Responses to Externally Imposed Trade Liberalization. **AU** Thompson, Earl A.; Hickson, Charles R. **AA** Thompson: University of California, Los Angeles. Hickson: Queens University, Belfast. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 739; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 35. **PR** $5.00. **JE** F11, F31, E31, F02. **KW** Inflation. Political Economy. Colonialism. Hegel.

AB The purpose of this paper, beyond attempting to supply and simple framework within which we may understand the entire set of novel international economic institutions introduced during the 20th century, is to provide a theoretical and empirical model predicting the economic effects of imposing policies based upon Western economic ideology on its economically dependent nations. Our model will clearly support the charge of neo-colonialism, the claim that the self-professed post-WWI Western paternalists have been "exploiting" (i.e., inefficiently redistributing from) their poorer national dependents. Nevertheless, in sharp contrast to the Marxian beliefs and revolutionary political goals of other critics, our Hegelian belief is that the Western powers, once informed of the genuinely exploitative effects of their imposed trade- liberalizations, will voluntarily adopt simple policy reforms completely eliminating the unconscious redistribution, or at least alter the policies of our international agencies so as to increase the welfare of all of the concerned nations.

PD November 1995. **TI** Why World Oil Monopolization Lowers Oil Prices: A Theory of Involuntary Cartelization. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 746; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 22. **PR** $5.00. **JE** D42, D92, F23, L13. **KW** Monopoly. Natural Resources. Oil Paradox. Cartelization. Time- Consistency.

AB Economists have long been aware, at least since the pioneering work of Schelling on bilateral monopoly and Coase on durable-goods monopoly, that monopolists generally face a "time-inconsistency", i.e., a future- optimal pricing plan that contradicts their presently optimal pricing over the same span of future time. But only rarely do we find economic discussions in which such time-inconsistencies are resolved in order to inform us as to how actual decision makers behave. We submit that the peculiarities, paradoxes, and inconsistencies arising in the study of the world oil market can all be eliminated by a simple resolution of a fundamental time-inconsistency facing any monopolistic owner of an exhaustible natural resource.

Tobin, James

PD February 1995. **TI** An Overview of the General Theory. **AA** Yale University. **SR** Yale University, Cowles Foundation Discussion Paper: 1093; Yale University, Cowles Foundation for Research in Economics, 30 Hillhouse Ave., Box 2125 Yale Station, New Haven, CT 06520. **PG** 41. **PR** no charge. **JE** E12, B22. **KW** Keynes. Unemployment. Market-Clearing. Effective Demand.

AB This paper will be one chapter in a multi-author "Second Edition" of Keynes's General Theory, edited by Harcourt and Riach. Each chapter consists of Part I, supposedly what Keynes himself would have written in the 1940's, and Part II, the writer's own view fifty years later. The major macroeconomic issue, then and now, is the role of aggregate real effective demand as the source of fluctuations of output and employment. I argue, as did Keynes, that because labor and product markets are frequently not cleared by nominal wages and prices, effective demand is the major source of business cycles.

Tommasi, Mariano

TI Why Does it Take a Nixon to go to China? **AU** Cukierman, Alex; Tommasi, Mariano.

PD May 1995. **TI** Where Are We in the Political Economy of Reform? **AU** Tommasi, Mariano; Velasco, Andres. **AA** Tommasi: University of California, Los Angeles. Velasco: New York University and National Bureau of Economic Research. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 733; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 52. **PR** $5.00. **JE** D82, D83, N46, O19. **KW** Political Economy. Economic Reform.

AB We review the experiences of developing countries with market- oriented reforms, using the tools of modern political economy. We impose intellectual discipline by requiring that actors behave rationally using available information and that basic economic relationships such as budget constraints be accounted for. We attempt to integrate two approaches, one based on dynamic games played by interest groups, with one that focuses on limited information and the dynamics of learning. We describe the "starting point" as the set of "old" policies and we attempt to explain the dynamics (political, economic and informational) that lead to reform. We then analyze strategies for reformers subject to political constraints. We next evaluate the aggregate and distributional costs of reforms, emphasizing the importance of looking at the right counterfactuals. We conclude by pointing to the challenges ahead: the second-stage institutional reforms necessary to take off from underdevelopment.

TI Economic Reforms and Political Constraints on the Time Inconsistency of Gradual Sequencing. **AU** Martinelli, Cesar; Tommasi, Mariano.

Tornell, Aaron

PD May 1995. **TI** Fixed Versus Flexible Exchange Rates: Which Provides More Fiscal Discipline? **AU** Tornell, Aaron; Velasco, Andres. **AA** Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research, Working Paper: 5108; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $5.00. **JE** E62, F31, F41. **KW** Fiscal Discipline. Exchange Rates.

AB In recent years the conventional wisdom had held that fixed rates provide more fiscal discipline than do flexible rates. In this paper we show that this wisdom need not hold in a standard model in which fiscal policy is endogenously determined by a maximizing fiscal authority. The claim that fixed rates induce more discipline stresses that sustained adoption of lax fiscal policies must eventually lead to an exhaustion of reserves and thus to a politically costly collapse of the peg. Hence, under fixed rates bad behavior today leads to punishment tomorrow. Under flexible rates bad behavior has costs as well. The difference is in the intertemporal distribution of the costs: flexible rates allow the effects of unsound fiscal policies to manifest themselves immediately through movements in the exchange rate. Hence, bad behavior today leads to punishment today. If fiscal authorities are impatient, flexible rates, by forcing the costs to be paid up-front, provide more fiscal discipline and higher welfare for the representative private agent. The recent experience of Sub-Saharan countries supplies some preliminary evidence that matches the predictions of the model.

Tracy, Joseph S.

TI The Effect of Collective Bargaining Legislation on Strikes and Wages. **AU** Cramton, Peter C.; Gunderson, Morley; Tracy, Joseph S.

TI The Use of Replacement Workers in Union Contract Negotiations: The U.S. Experience, 1980-1989. **AU** Cramton, Peter C.; Tracy, Joseph S.

Tvede, Mich

PD January 1996. **TI** Multiplicity of Equilibria. **AU** Tvede, Mich; Ghiglino, Christian. **AA** Tvede: University of Copenhagen. Ghiglino: University of Geneva. **SR** University of Pennsylvania, Center for Analytic Research in Economics and Social Science (CARESS), Working Paper: 96/01; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 16. **PR** no charge. **JE** D51, C62. **KW** General Equilibrium. Multiple Equilibria.

AB In the present paper a pure exchange, general equilibrium model is considered and the equilibrium set is studied.

Udell, Gregory F.

TI Relationship Lending and Lines of Credit in Small Firm Finance. **AU** Berger, Allen N.; Udell, Gregory F.

TI Universal Banking and the Future of Small Business Lending. **AU** Berger, Allen N.; Udell, Gregory F.

TI Universal Banking and the Future of Small Business Lending. **AU** Berger, Allen N.; Udell, Gregory F.

Uribe, Martin

TI Balanced-Budget Rules, Distortionary Taxes, and Aggregate Instability. **AU** Schmitt-Grohe, Stephanie; Uribe, Martin.

Valimaki, Juuso

TI Learning and Strategic Pricing. **AU** Bergemann, Dirk; Valimaki, Juuso.

TI Market Experimentation and Pricing. **AU** Bergemann, Dirk; Valimaki, Juuso.

Vassalou, Maria

PD November 1995. **TI** Tests of Alternative International Asset Pricing Models. **AA** Columbia University. **SR** Columbia University, PaineWebber Working Paper Series in Money, Economics, and Finance: PW/95/27; PaineWebber Series, 6N Uris Hall, Columbia University, New York, NY 10027. **PG** 29. **PR** $5.00 academics and non-profit institutions; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G12, G15. **KW** Equity Premium. Inflation. Uncertainty.

AB Previous studies have concluded that equity returns do not carry unconditional risk premia for exchange rate and inflation risks. We decompose changes in exchange rates into a component common across different exchange rates, and an idiosyncratic component. This approach allows the estimation of unconditional exchange rate premia on a large number of exchange rates. We also estimate both domestic and foreign inflation risk premia. Our analysis, carried out in the context of three alternative international asset pricing models and using stock returns from ten industrial countries, strongly rejects the hypotheses that equities carry a zero common or idiosyncratic exchange rate risk premium, or a zero domestic or foreign inflation risk premium. We find that an asset pricing model that accounts for the pricing of exchange rate and inflation risk, can explain cross country differences in asset returns reasonably well.

Velasco, Andres

TI Where Are We in the Political Economy of Reform? **AU** Tommasi, Mariano; Velasco, Andres.

TI Fixed Versus Flexible Exchange Rates: Which Provides More Fiscal Discipline? **AU** Tornell, Aaron; Velasco, Andres.

Venables, Anthony J.

TI Globalization and the Inequality of Nations. **AU** Krugman, Paul; Venables, Anthony J.

Villanacci, Antonio

TI Constrained Suboptimality in Incomplete Markets: A General Approach and Two Applications. **AU** Citanna, Alessandro; Kajii, Atsushi; Villanacci, Antonio.

TI Financial Innovation and Expectations. Endogenous Incompleteness and Real Indeterminacy. **AU** Citanna, Alessandro; Villanacci, Antonio.

TI Underemployment of Resources and Self-Confirming Beliefs. **AU** Citanna, Alessandro; Cres, Herve; Villanacci, Antonio.

Walder, Andrew G.

PD September 1994. **TI** Local Governments as Industrial Corporations: An Organizational Analysis of China's Transitional Economy. **AA** Harvard University. **SR** University of Western Ontario, Papers in Political Economy: 53; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 32. **PR** no charge. **JE** P21, O53, L32. **KW** China. Public Enterprises.

AB Privatization is widely seen as the only viable solution to industrial stagnation in statist economies. Yet China's transitional economy has achieved dynamic industrial growth in its still-dominant public enterprise not by privatizing government assets, but by reallocating selected property rights downward within bureaucratic hierarchies, and by strengthening the rights of local governments to income flows from assets they administer. The institutional argument for privatization, based largely on the Hungarian reform experience, failed to predict such an outcome because organizational incentives and constraints it treats as given in fact vary with the size of a government jurisdiction's industrial base; and in a political economy the size of China's such variation is enormous. Organizational variables explain differences in the growth and efficiency of publicly owned and operated industry in two ways: by affecting the extent to which competitive pressures bear on the decisions of local governments as owners, and by affecting the capacity of local governments to monitor and control their industrial assets. Variations in monitoring capacities and the prevalence of bilateral monopoly within local industrial bureaucracies, not the spread of market allocation alone or the stripping of property rights from governments, is central to this explanation.

Walter, Ingo

PD 1995. **TI** Global Competition and Market Access in the Securities Industry. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/12; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 65. **PR** not available. **JE** F23, G15. **KW** Securities. Oligopoly. International Finance. Market Access.

AB The objective of this paper is to identify problems of market access in the securities industry, to consider the adequacy of the approaches taken under regional and global financial services liberalization negotiations, and to suggest residual market access issues that remain to be addressed. The first section places the securities industry in the context of the financial intermediation process, explaining the dynamics of that process and its impact on the securities industry. Next we enumerate the scope of activities normally encompassed by the securities industry and their international dimensions, including the volume and location of transactions-flows, and reviews available evidence on the apparent performance of firms home-based in various countries. Then we survey the role of financial regulation, and evidence regarding explicit and implicit barriers to market access faced by securities firms, and the extent to which these have been addressed in both regional and global trade liberalization efforts. The final section of the paper presents some conclusions regarding outstanding market-access issues.

TI Rethinking Emerging Markets. **AU** Smith, Roy C.; Walter, Ingo.

TI European Financial Market Integration: Clearance and Settlement Issues. **AU** Giddy, Ian; Saunders, Anthony; Walter, Ingo.

Wascher, William L.

TI Minimum Wage Effects on School and Work Transitions of Teenagers. **AU** Neumark, David; Wascher, William L.

TI The Effects of Minimum Wages on Teenage Employment and Enrollment: Evidence From Matched CPS Surveys. **AU** Neumark, David; Wascher, William L.

TI The Cyclical Sensitivity of Seasonality in U.S. Employment. **AU** Krane, Spencer D.; Wascher, William L.

TI Inflation, Nominal Wage Rigidity, and the Efficiency of Labor Markets. **AU** Lebow, David E.; Stockton, David J.; Wascher, William L.

TI Reconciling the Evidence on Employment Effects of Minimum Wages: A Review of Our Research Findings. **AU** Neumark, David; Wascher, William L.

Weil, David N.

TI Saving and Growth With Habit Formation. **AU** Carroll, Christopher D.; Overland, Jody; Weil, David N.

Weiss, Allan N.

TI Mortgage Default Risk and Real Estate Prices: The Use of Index-Based Futures and Options in Real Estate. **AU** Case, Karl E.; Shiller, Robert J.; Weiss, Allan N.

TI Mortgage Default Risk and Real Estate Prices: The Use of Index-Based Futures and Options in Real Estate. **AU** Case, Karl E.; Shiller, Robert J.; Weiss, Allan N.

Weiss, Mary A.

TI The Coexistence of Multiple Distribution Systems for Financial Services: The Case of Property- Liability Insurance. **AU** Berger, Allen N.; Cummins, J. David; Weiss, Mary A.

Werner, J.

TI Hedging with Derivatives in Incomplete Markets. **AU** Aliprantis, C.D.; Brown, Donald J.; Werner, J.

White, A. Patricia

TI Regulatory Competition and the Efficiency of Alternative Derivative Product Margining Systems. **AU** Kupiec, Paul H.; White, A. Patricia.

White, Lawrence J.

PD 1995. **TI** The NAIC Model Investment Law: A Missed Opportunity. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/95/18; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 9. **PR** not available. **JE** G28, K23. **KW** Insurance Commissioners. Regulatory Law.

AB The National Association of Insurance Commissioners (NAIC) currently has a once-in-a-lifetime opportunity: to start with a clean slate and write a "model investment law" that would provide detailed guidance for the 50 state insurance regulatory authorities. If written sensibly, this model law could enhance the safety and soundness of insurance companies, while allowing the necessary flexibility to compete efficiently in the ever-widening markets for financial services -- in the U.S. and abroad. Alas, the draft that the NAIC staff has produces thus far has largely missed this opportunity. It ignores most of the basic lessons of modern finance theory. It ignores the existence of the risk-based capital requirements promulgated by the NAIC. The NAIC still has the opportunity to withdraw its draft and start over. By doing so, it could preserve this unique opportunity and pursue and sensible path of safety-and-soundness regulation.

TI Access and Interconnection Pricing: How Efficient is the "Efficient Component Pricing Rule?" **AU** Economides, Nicholas; White, Lawrence J.

PD 1996. **TI** Banking, Mergers, and Antitrust: Historical Perspectives, and the Research Tasks Ahead. **AA** New York University. **SR** New York University, Salomon Brothers Working Paper: S/96/3; Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, 90 Trinity Place, New York, NY 10006. **PG** 16. **PR** not available. **JE** L41,

L13, D43. **KW** Banks. Mergers. Antitrust. Oligopoly.
AB The United States economy is currently experiencing a major wave of bank mergers. Hundreds of bank mergers are occurring annually and will surely continue to do so for the next few years. Some of these mergers are "mega-deals" involving tens of billions of dollars of assets and nationally prominent banks; others involve "mere" tens of millions of dollars and small rural banks with names that few individuals outside their local communities will recognize. Also, though less frequent, important mergers among automated teller machine networks are occurring. The crucial forces underlying both types of mergers involve dramatic improvements in data processing and telecommunications -- the fundamental technologies underlying financial services -- and changes in state and national laws, with the Riegle-Neal Interstate Banking and Branching Act of 1994 occupying a prominent place among them. Though most of these mergers do not raise anti-competitive concerns, some clearly do, and others may. Accordingly, an understanding of antitrust principles and their application to banking -- historically, as well as currently -- is worthwhile.

TI The Inefficiency of the ECPR Yet Again: A Reply to Larson. **AU** Economides, Nicholas; White, Lawrence J.

Whitesell, William

PD February 1996. **TI** A Minor Redefinition of M2. **AU** Whitesell, William; Collins, Sean. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/07; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 23. **PR** no charge. **JE** E51, C82. **KW** M2. Definition of Money.
AB This paper recommends redefining M2 by shifting overnight wholesale RPs and overnight Eurodollars from non-M1 M2 to non-M2 M3. The overnight components are quite volatile and difficult to measure accurately. Their movements no longer exhibit the negative correlation with demand deposits that had been observed in 1980, when these components were originally included in M2. The redefinition does not affect the quarterly and annual behavior of M2, nor its relationship to interest rates and income.

Wieland, Volker

PD January 1996. **TI** Learning by Doing and the Value of Optimal Experimentation. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/05; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 33. **PR** no charge. **JE** C61, D83. **KW** Optimal Control. Learning by Doing. Experimentation. Dynamic Programming.
AB Research on the implications of learning by doing has typically been restricted to specifications of the agent's decision problem for which estimation and control can be treated separately. Recent work has provided the limit properties of beliefs and actions for learning problems under more general conditions, for which experimentation is an important aspect of optimal control. However under these conditions the optimal policy cannot be derived analytically, because Bayesian learning introduces a nonlinearity in the dynamic programming problem. This paper utilizes numerical algorithms to characterize the optimal policy function for such a general learning-by-doing problem. In contrast to previous work on calculating such policies, we find that the optimal policy incorporates a substantial degree of experimentation under a wide range of initial beliefs about the unknown parameters. Dynamic simulations indicate that optimal experimentation dramatically improves the speed of learning and the stream of future payoffs. Furthermore, dynamic simulations reveal that a policy, which separates control and estimation and does not incorporate experimentation, frequently induces a long-lasting bias in the control and target variables.

Wildman, Steven S.

TI Monopolistic Competition With Two-Part Tariffs. **AU** Economides, Nicholas; Wildman, Steven S.

Wilkie, Simon

TI Local Telephone Exchanges, Regulation and Entry. **AU** Plott, Charles R.; Wilkie, Simon.

Willett, John B.

TI The Growing Importance of Cognitive Skills in Wage Determination. **AU** Murnane, Richard J.; Willett, John B.; Levy, Frank.

Williams, John C.

PD May 1995. **TI** The Limits to "Growing an Economy." **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/30; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 25. **PR** no charge. **JE** O38, O41. **KW** Endogenous Growth. R&D. Research. Development.
AB In existing endogenous growth models the growth rate is increasing in "scale" variables, such as the size of the market. The empirical evidence, however, appears to contradict this prediction. Theory and evidence can be reconciled if there are diminishing returns to R&D. We analyze the behavior of an R&D- based growth model calibrated to U.S. data and find that, although policy has no effect on the long run growth rate, along the transition path there are first-order welfare and growth effects which are close in magnitude to those generated by standard R&D-based growth models.

PD August 1995. **TI** Too Much of a Good Thing? The Economics of Investment in R&D. **AU** Williams, John C.; Jones, Charles I. **AA** Williams: Board of Governors of the Federal Reserve System. Jones: Stanford University. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 95/39; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 33. **PR** no charge. **JE** O32, O41. **KW** Endogenous Growth. R&D. Productivity.
AB Empirical research in the micro productivity literature consistently supports the notion that there is too little R&D. However, the methodology of this literature, based on the neoclassical growth model, is challenged by new growth theory, which emphasizes a richer description of the relationship between R&D and productivity. We incorporate

several distortions to R&D into a general equilibrium growth model that provides a framework for the analytical and empirical analysis of the degree of over- or underinvestment in R&D. We derive the relationship between the social rate of return to R&D and the parameters typically estimated in the productivity literature. Surprisingly, our results indicate that estimates in the productivity literature represent lower bounds on the social rate of return to R&D and that the bias is limited to the overall growth rate of the economy. Additional supporting evidence for underinvestment is provided by a calibrated version of the theoretical model.

Williamson, Jeffrey G.

TI Open Economy Forces and Late 19th Century Scandinavian Catch-up. **AU** O'Rourke, Kevin; Williamson, Jeffrey G.

Wolinsky, Asher

PD December 1994. **TI** Regulation of Duopoly: Managed Competition vs. Regulated Monopolies. **AA** Northwestern University. **SR** Northwestern University, Center for Mathematical Studies in Economics and Management Science, Discussion Paper: 1116; Northwestern University, 2001 Sheridan Road, 371 Leverone Hall, Evanston, IL 60208- 2014. **PG** 24. **PR** $3.00 in U.S. and Canada; $5.00 via international mail; $2.00 for local Northwestern faculty/students. **JE** D43, L13, L51, L15. **KW** Regulation. Oligopoly. Product Quality.

AB This paper discusses the regulation of oligopolistic differentiated product industries. The regulator can control the prices, and impose quantity restrictions, but cannot control effectively the quality choices of the firms. We inquire about the optimal choice of regulatory regime -- whether and under what conditions managed competition or segmentation of the market between regulated monopolies achieves better results. In the spatial duopoly model analyzed here, unhindered competition will generally result in an inefficient allocation. When the regulator knows the technologies, optimal managed competition results in distortion of the quality choice, but an optimal regulated monopolies regime achieves the first best outcome. When the regulator is uncertain about the technologies neither of these methods will yield the first best outcome. The regulated monopolies regime still tends to produce better quality choices, but managed competition tends to be more effective at extracting rents from the firms. The overall comparison depends on some finer details of the environment.

Yan, Dicky

TI Dumb Bugs and Bright Noncooperative Players: Games, Context and Behavior. **AU** Quint, Thomas; Shubik, Martin; Yan, Dicky.

Yelowitz, Aaron S.

PD August 1995. **TI** The Medicaid Notch, Labor Supply and Welfare Participation: Evidence From Eligibility Expansions. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 738; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 21. **PR** $5.00. **JE** I38, J22. **KW** Medicaid. AFDC.

AB I assess the impact of losing public health insurance on labor market decisions of women by examining a series of Medicaid eligibility expansions targeted towards young children. These targeted expansions severed the historical tie between AFDC and Medicaid eligibility. The reforms allowed a mother's earnings to increase without losing public health insurance for her young children. Increasing the income limit for Medicaid resulted in a decrease in AFDC participation and an increase in labor force participation among these women. The effects were large for ever-married women, and negligible for never-married women.

PD February 1996. **TI** Why Did the SSI-Disabled Program Grow So Much? Disentangling the Effect of Medicaid. **AA** University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 748; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 25. **PR** $5.00. **JE** I38, H53. **KW** Supplemental Security Income. Medicaid. Welfare.

AB The participation rate for working age adults in the Supplemental Security Income (SSI) program increased by 37 percent from 1987 to 1993. This paper examines the role of public health insurance provided through Medicaid on the SSI participation decision. I use the rapid growth in Medicaid expenditure across states and over time as a proxy for its value. The fact that the standards for disability determination were easing complicates the estimation. If the marginal individual who entered SSI under these easier standards was healthier than the average participant, then average Medicaid expenditure would fall. Thus, conventional OLS estimates could lead to a spurious negative correlation between average Medicaid expenditure and SSI participation. I therefore apply two-stage least squares (TSLS) to estimate Medicaid's effect. I use Medicaid expenditure for blind and elderly SSI recipients, and adult and child AFDC recipients, as instruments for disabled Medicaid expenditure. The TSLS estimates indicate that rising Medicaid expenditure significantly increased the SSI participation for whites, but had little effect on African-Americans. Among whites, the rising value of Medicaid explains one-third of the growth in SSI participation.

Yermack, David L.

TI Managerial Entrenchment and Capital Structure Decisions. **AU** Berger, Philip G.; Ofek, Eli; Yermack, David L.

Yorukoglu, Mehmet

TI The Replacement Problem. **AU** Cooley, Thomas F.; Greenwood, Jeremy; Yorukoglu, Mehmet.

Yosha, Oved

TI Evaluating the Probability of Failure of a Banking Firm. **AU** Buchinsky, Moshe; Yosha, Oved.

Young, Robert A.

PD September 1994. **TI** How Do Peaceful Secessions Happen? **AA** University of Western Ontario. **SR** University of Western Ontario, Papers in Political Economy: 58.; Department of Economics, Social Science Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA,. **PG** 23. **PR** no charge. **JE** D63, D73, D74. **KW** Secession. Federalism.

AB The central purpose of this paper is to arrive at empirical generalizations about the politics of the process of secession. The objective is not to investigate the causes or consequences of secession; it is not to formulate theories about the relations between economic and social factors and political events; nor, finally, is it to predict when and how secessions have occurred in the past, and to search for general patters in the political dynamics.

TI Why Do People Vote? An Experiment in Rationality. **AU** Blais, Andre; Young, Robert A.

Yu, G. George

TI Pricing and Hedging American Options: A Recursive Integration Method. **AU** Huang, Jing-zhi; Subrahmanyam, Marti G.; Yu, G. George.

Zame, William R.

PD October 1994. **TI** A Representation Theorem for Riesz Spaces and its Applications to Economics. **AU** Zame, William R.; Abramovich, Y.A.; Aliprantis, C.D. **AA** Zame and Abramovich: IUPUI. Aliprantis: University of California, Los Angeles. **SR** University of California, Los Angeles, Department of Economics, Working Paper: 725; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 9. **PR** $5.00. **JE** D51, C62. **KW** Riesz Spaces. Infinite-Dimensions.

AB We show that a Dedekind complete Riesz space which contains a weak unit e and admits a strictly positive order continuous linear functional can be represented as a subspace of the space L sub 1 of integral functions on a probability measure space in such a way that the order ideal generated by e is carried onto L sub infinity. As a consequence, we obtain a characterization of abstract M-spaces that are isomorphic to concrete L sub infinity-spaces. Although these results are implicit in the literature on representation of Riesz spaces, they are not available in this form. This research is motivated by, and has applications in, general equilibrium theory in infinite dimensional spaces.

TI A Demand Adjustment Process. **AU** Bennett, Elaine; Maschler, Michael; Zame, William R.

TI Non-Computable Strategies and Discounted Repeated Games. **AU** Nachbar, John; Zame, William R.

Zeng, Jinli

PD September 1994. **TI** Innovation vs. Imitative R&D and Economic Growth. **AA** University of Western Ontario. **SR** University of Western Ontario, Department of Economics, Research Report: 9506; Department of Economics, Social Sciences Center, University of Western Ontario, London, Ontario N6A 5C2, CANADA. **PG** 34. **PR** $10.00. **JE** O31, H21, H25. **KW** Economic Growth. R&D. Taxes. Rent-Seeking. Innovation. Imitation.

AB The paper presents a multi-sector dynamic general equilibrium growth model, in which resource allocation between innovative and imitative R&D is the key to the speed of economic growth. In this model, innovations and imitations can occur in the same sector at the same time and economic growth is driven by innovation through its interactions with imitation. We discuss two types of imitations: rent-seeking imitations and productive imitations. We identify the channels through which innovation and imitation interact with each other. In the case where imitations are of the rent-seeking type, we show that subsidizing innovation is not necessarily equivalent to taxing imitation: while taxing imitative R&D always induces more investment in innovative R&D and less in imitative R&D, subsidizing innovative R&D always encourages innovation but it discourages imitation only if the effective employment in innovative R&D is relatively low, then subsidizing innovation also attracts imitation. In both cases, we show that a subsidy to innovative R&D always speeds up economic growth while a subsidy to imitative R&D always does the opposite, but the effects on welfare of both subsidies are ambiguous.

Zervos, David

TI Fitting the Term Structure of Interest Rates With Smoothing Splines. **AU** Fisher, Mark; Nychka, Douglas; Zervos, David.

Zha, Tao

TI Error Bands for Impulse Responses. **AU** Sims, Christopher A.; Zha, Tao.

Zhang, Junsen

TI Measuring Marginal Income Tax Rates for Individuals in Canada: Averages and Distributions Over Time. **AU** Davies, James B.; Zhang, Junsen.

Zhou, Chunsheng

PD January 1996. **TI** Stock Market Fluctuations and the Term Structure. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/03; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 26. **PR** no charge. **JE** G12, E43. **KW** Stock Market. Term Structure. Comovement.

AB This paper uses the term structure of interest rates to explain the variations of stock prices and stock returns. It shows that interest rates have an important impact on stock returns, especially at long horizons. The hypothesis that expected stock returns move one-for-one with ex ante interest rates, which has been rejected strongly in other studies using short horizon data, is supported by long horizon data. The paper proposes, for the first time, a single measure--the present value of forward interest rates--to summarize the information of the term structure that is useful in characterizing the comovements of the equity market and the bond market, and finds that such a single measure explains a significant part of variation in dividend- price ratios. The paper also suggests that the high volatility of the stock market is related to the high volatility of long-term bond yields and may be accounted for by changing forecasts of discount rates.

PD January 1996. **TI** Forecasting Long- and Short-Horizon Stock Returns in a Unified Framework. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series: 96/04; Board of Governors of the Federal Reserve System, C/O Sharon Kozicki, Mail Stop 61, Federal Reserve Board, Washington, DC 20551. **PG** 14. **PR** no charge. **JE** G14, G12. **KW** Stock returns. State-Space Model.

AB If stock prices do not follow random walks, what processes do they follow? This question is important not only for forecasting purpose, but also for theoretical analyses and derivative pricing where a tractable model of the movement of underlying stock prices is needed. Although several models have been proposed to capture the predictability of stock returns, their empirical performances have not been evaluated. This paper evaluates some popular models using a Kalman Filter technique and finds that they have serious flaws. The paper then proposes an alternative parsimonious state-space model in which state variables characterize the stochastic movements of stock returns. Using equal-weighted CRSP monthly index, the paper shows that (1) this model fits the autocorrelations of returns well over both short and longer horizons and (2) although the forecasts obtained with the state-space model are based solely on past returns, they subsume the information in other potential predictor variables such as dividend yields.

Zhou, Ruilin

TI A Rudimentary Model of Search With Divisible Money and Prices. **AU** Green, Edward J.; Zhou, Ruilin.