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 June 1992. **TI** Exact Solutions for Expected Rates of Return Under Markov Regime Switching: Implications for the Equity Premium Puzzle. **AA** University of Pennsylvania and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4110; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 25. **PR** $3.00. **JE** G12. **KW** Asset Markets. Expected Returns.

AB This paper derives simple closed-form solutions for expected rates of return on stocks and riskless one-period bills under the assumption that shocks to the growth rates of consumption and dividends are generated by a Markov regime-switching process. These closed-form solutions are used to show that the Markov regime-switching process exacerbates the equity premium puzzle and the risk-free rate puzzle. Three empirical examples illustrate the magnitude of the effects of Markov regime switching on equilibrium expected returns.

Acemoglu, Daron

PD January 1992. **TI** Incomplete Information Bargaining and Business Cycles. **AA** London School of Economics. **SR** Centre for Economic Performance Discussion Paper: 60; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 38. **PR** no charge. **JE** E32. **KW** Bargaining. Asymmetric Information. Real Business Cycles.

AB This paper present a one-sided incomplete (asymmetric) information bargaining game in a dynamic general equilibrium framework. The model predicts business cycle movements in the economy with persistence mechanism arising from asymmetric information and search. The employment level is procyclical without the help of unusually high values of intertemporal elasticity of substitution, the real wage is procyclical but rigid. In addition, quits are procyclical and lay-offs countercyclical. The paper also discusses the efficiency issue. Firstly, contracts are shown to be more efficient than bargaining. Secondly, the decentralized equilibrium does not exploit the informational externalities that exist and the resulting sequence of equilibria are not only first-best inefficient but also second-best inefficient.

PD January 1992. **TI** An Endogenous Skill Loss Model of Long-Term Unemployment. **AA** Centre for Economic Performance. **SR** Centre for Economic Performance Discussion Paper: 61; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 24. **PR** no charge. **JE** D82, J64, J71. **KW** Skill Loss. Unemployment. Discrimination.

AB This paper considers a model in which the unemployed have to incur a cost to maintain their skills. If whether they have done so or not is not observable, the economy has multiple equilibria supported by self-fulfilling beliefs on the part of the employers. There is a unique steady state equilibrium associated with each of these. In the first equilibrium, which we call the Skill Loss Equilibrium, the long-term unemployed do not incur the cost and lose their skills; there is duration dependence and the exit probability of the long-term unemployed is lower. It is shown that in this equilibrium unemployment and long-term unemployment are higher, and, welfare and profits are lower than the No Skill Loss Equilibrium.

PD June 1992. **TI** Learning About Others' Actions and the Investment Accelerator. **AA** London School of Economics. **SR** London School of Economics Centre for Economic Performance Discussion Paper: 72; Centre for Economic Performance, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 20. **PR** no charge. **JE** E22, D83, D51. **KW** Aggregate Output. Private Information.

AB A General Equilibrium model of investment is constructed in which the payoffs of firms depend on each other's actions. It is shown that when these actions are unobservable but aggregate output is in the information set of the agents, it acts as a signal. The implication is that output will lead investment over the business cycle. This gives a theory of the Rational Expectations Investment Accelerator. Learning also changes the cyclical behavior of the endogenous variables and leads to a loss of output and efficiency. The inefficiency depends on the amount of noise in the system, thus reducing fluctuations can have first-order welfare effects. It is also shown that the introduction of a stock market will not alter the qualitative conclusions of the paper. The intuition of this paper for the investment accelerator also suggests that an "employment accelerator" might exist. An econometric investigation of the U.S. and U.K. data gives support to these accelerators.

PD July 1992. **TI** Delegation Through Managerial Contracts: Is Hiring a Manager a Good Idea? **AA** London School of Economics. **SR** London School of Economics Centre for Economic Performance Discussion Paper: 82; Centre for Economic Performance, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 33. **PR** no charge. **JE** G14, D82, M11. **KW** Financial Contracts. Managers. Financial Markets.

AB Why would an entrepreneur hire a manager? It could be because managers are particularly talented people. This paper suggests another reason. We consider a model with asymmetric information between financiers and entrepreneurs which gives rise to sizable inefficiencies: Under simple conditions, both the debt and the equity markets collapse and no project is financed. Or else, all projects are financed and there is overinvestment. However when the entrepreneurs can hire managers and write publicly observable contracts leaving the financing and investment decisions to the manager, first-best efficiency is restored. We argue that this is an example of a more general phenomenon that delegation of control through observable and enforceable contracts to a third party will often increase efficiency in a principal-agent type relationship.

Acharya, Sankarshan

PD June 1992. **TI** Value of Latent Information: Alternative Event Study Methods. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 202; C/O Stephen A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 17. **PR** no charge. **JE** C12, D82, G12. **KW** Corporate Events. Inference.

AB This paper presents an econometric model to value latent information underlying corporate events. This model computes the market's inference of the value of latent information from the probability of an event, conditional on firm-specific, pre-event information. It provides a convenient framework for testing significance of pre-event information variables, such as accounting attributes and lagged stock return. Simulations show that this model, when applied to both event and pre-event period data, can decrease the incidence of bias in event studies. If restricted to only event period data, this model reduces to a truncated regression and does not perform as well as standard procedures.

Adams, Charles

PD May 1992. **TI** Growth, Productivity, and the Rate of Return on Capital. **AU** Adams, Charles; Chadha, Bankim. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/35; International Monetary Fund, Washington, DC 20431. **PG** 24. **PR** not available. **JE** O40, C52. **KW** Growth Models. Investment.

AB This paper examines the ability of alternative classes of growth models to explain the historical experience of the U.S. economy. The potential returns to the U.S. from raising its investment rate in terms of both the level and growth rate of future output are then quantified. The long-run growth performance of the U.S. economy is found to be broadly consistent with the predictions of the neoclassical growth model. Endogenous growth models, which suggest a larger contribution of capital to growth and long-run effects of investment on the growth rate, do not seem to be supported by the data.

Agenor, Pierre-Richard

PD May 1992. **TI** Anticipated Exchange Rate Reforms. **AU** Agenor, Pierre-Richard; Flood, Robert P. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/32; International Monetary Fund, Washington, DC 20431. **PG** 16. **PR** not available. **JE** F31, F41. **KW** Foreign Exchange. Policy Announcement. Parallel Rate.

AB Exchange rate reforms in developing countries have often aimed at floating the exchange rate in an attempt to unify the official and parallel markets for foreign exchange. This paper examines the anticipatory dynamics associated with such reforms. The analysis shows that if the future unified exchange rate is more depreciated than the prevailing official rate, a pre-announced reform will lead to a depreciation of the parallel rate upon announcement and, during the transition period, a rising premium, an increase in the rate of reserve losses, and possibly to an output contraction and an appreciation of the real exchange rate.

Aghion, Philippe

PD May 1992. **TI** The Economics of Bankruptcy Reform. **AU** Aghion, Philippe; Hart, Oliver; Moore, John. **AA** Aghion: European Bank for Reconstruction and Development, and DELTA. Hart: Massachusetts Institute of Technology. Moore: London School of Economics and Princeton University. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 92-11; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 48. **PR** not available. **JE** G33, K22, G38. **KW** Chapter 7. Chapter 11. Reorganization.

AB See other entry.

PD June 1992. **TI** The Economics of Bankruptcy Reform. **AU** Aghion, Philippe; Moore, John; Hart, Oliver. **AA** Aghion: European Bank for Reconstruction and Development and DELTA, Paris. Moore: London School of Economics and Princeton University. Hart: Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4097; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 50. **PR** $3.00. **JE** G33, G38, K22. **KW** Chapter 11. Chapter 7. Reorganization.

AB We propose a new bankruptcy procedure. Initially, a firm's debts are canceled, and cash and non-cash bids are solicited for the "new" (all-equity) firm. Former claimants are given shares, or options to buy shares, in the new firm on the basis of absolute priority. Options are exercised once the bids are in. Finally, a shareholder vote is taken to select one of the bids. In essence, our procedure is a variant on the U.S. Chapter 7, in which non-cash bids are possible; this allows for reorganization. We believe our scheme is superior to Chapter 11 since it is simpler, quicker, market-based, avoids conflicts, and places appropriate discipline on management.

Aizenman, Joshua

PD March 1992. **TI** Exchange Rate Flexibility, Volatility and the Patterns of Domestic and Foreign Direct Investment. **AA** Dartmouth College and National Bureau of Economic Research. **SR** International Monetary Fund Working Paper: WP/92/20; International Monetary Fund, Washington, DC 20431. **PG** 19. **PR** not available. **JE** F40, F15, F21, F36. **KW** Exchange Rate Regimes. Foreign Investment.

AB This paper investigates the factors determining the impact of exchange rate regimes on the behavior of domestic investment and foreign direct investment (FDI). Producers may diversify internationally in order to increase the flexibility of production. We characterize the possible equilibria in a macro model that allows for the presence of a short-run Phillips curve. It is shown that a fixed exchange rate regime is more conducive to FDI relative to a flexible exchange rate, and this conclusion applies for both real and nominal shocks. If the dominant shocks are nominal (real) we will observe a negative (a positive) correlation between exchange rate volatility and the level of investment.

PD May 1992. **TI** A Theory of Optimum Currency Areas: Revisited. **AU** Aizenman, Joshua; Flood, Robert P. **AA** Aizenman: Dartmouth College. Flood: International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/39; International Monetary Fund, Washington, DC 20431. **PG** 10. **PR** not available. **JE** F33, F31, F41. **KW** International Monetary Arrangements.

AB Starting with Friedman and Mundell the academic literature has conducted a high level debate concerning the design of cross-country monetary arrangements. That debate has become very complex and the data requirements necessary for appropriate application of the principles developed are far beyond the means of the very nations for which the principles might be valuable. In this paper we return to the simplicity of the early arguments and formalize them in a way that may be helpful for currency area decisions where little is known about economic structure.

PD June 1992. **TI** Foreign Direct Investment as a Commitment Mechanism in the Presence of Managed Trade. **AA** Dartmouth College and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4102; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $3.00. **JE** F12, F21. **KW** Monopolistic Competition. International Trade. Capital Mobility.

AB The purpose of this paper is to evaluate the degree to which the threat of managed trade leads to foreign direct investment (FDI) in a time-consistent manner. We study the role of capital mobility in a two-countries world economy characterized by monopolistic competition. International trade among the countries is the outcome of either free or managed trade. An endogenous switch from free to managed trade may occur ex-post as the outcome of a cost-benefit assessment of the two countries. We identify time-inconsistent patterns of managed trade in the absence of capital mobility. Ex-post, one country will have the incentive to induce a switch to managed trade, the outcome of which is to reduce the expected welfare ex-ante. We demonstrate that capital mobility and the diversification of production achieved by the FDI alleviates this time inconsistency by reducing the ex-post incentive of one country to switch to managed trade.

Allen, Beth

PD March 1992. **TI** Incentives in Market Games with Asymmetric Information: Approximate (NTU) Cores in Large Economies. **AA** University of Pennsylvania. **SR** University of Pennsylvania CARESS Working Paper: 92-05; 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** C71, C72. **KW** Incentive Compatibility.

AB Although incentive compatibility constraints can give rise to nonconvexities so that the cores of such exchange economies may be empty, large replica economies with incentives always have nonempty approximate cores which contain allocations satisfying the equal treatment property.

Altig, David

PD February 1991. **TI** Inflation, Personal Taxes and Real Output: A Dynamic Analysis. **AU** Altig, David; Carlstrom, Charles T. **AA** Federal Reserve Bank of Cleveland. **SR** Federal Reserve Bank of Cleveland Working Paper: 9102; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 28. **PR** not available. **JE** E31, E32, E62. **KW** Business Cycles. Inflation. Taxation.

AB We originally set out to uncover possible business cycle effects that might arise from inflation/personal-tax interactions working through capital-income mismeasurement in inflationary environments. We suspected that we would find substantial variation in capital accumulation arising from this channel. We did not. Instead, we found effects in an unexpected place - - the behavior of aggregate hours. We fully believe that understanding the cyclical behavior of labor will involve enriching models in ways not considered here (as in Christiano and Eichenbaum (1990), for instance). Based on our experiments, we suggest another element that may be useful in developing an understanding of the dynamic behavior of aggregate hours - - labor supply distortions that arise specifically through distortions associated with both the direct effects of capital-income mismeasurement and the more indirect effects of bracket creep.

PD June 1991. **TI** Bracket Creep in the Age of Indexing: Have We Solved the Problem? **AU** Altig, David; Carlstrom, Charles T. **AA** Federal Reserve Bank of Cleveland. **SR** Federal Reserve Bank of Cleveland Working Paper: 9108 ; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 15. **PR** not available. **JE** H20, H22, H24. **KW** Taxation. Tax Code.

AB Indexation of the personal tax code for price-level changes represents one of the most significant elements of U.S. tax legislation in the 1980's. However, because the indexation provisions do not adjust personal tax-rate schedules contemporaneously, bracket indexation remains incomplete. This paper argues that, even ignoring the remaining problems associated with capital-income measurement, depreciation provisions, and so on, the potential distortionary costs of inflation/tax-system interactions remain high.

Altman, Edward I.

PD May 1992. **TI** Valuation, Loss Reserves and Pricing of Commercial Loans. **AU** Altman, Edward I.; Haldeman, Robert G. **AA** Altman: New York University. Haldeman: Zeta Services Inc. **SR** New York University Salomon Brothers Working Paper: S-92-39; 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** $5.00. **JE** G21, G32. **KW** Distress Classification. Loan Valuation.

AB A number of prior works on distress classification and prediction models, e.g., Z-score (1968) and Zeta (1977) can now be combined with related mortality rate studies, e.g., Altman(1989) and Lucas and Lonski (1990), to provide important guidelines in the commercial lending process. In particular, these techniques can be used to value public and private company loans, to establish guidelines for loss reserves on new of existing loans, and finally for the pricing decision on new loans. The following discussion will outline our proposal for the steps and linkages that can achieve a logical analytical approach to these important areas.

Altshuler, Rosanne

PD April 1992. **TI** Dynamic Effects of Foreign Tax Credits on Multinational Corporations. **AU** Altshuler, Rosanne; Fulghieri, P. **AA** Altshuler: Columbia University and National Bureau of Economic Research. Fulghieri: Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-92-11; Columbia University, Graduate School of Business, First Boston Series, New York, NY 10027. USA. **PG** 23. **PR** $5.00 academics and non-profit institution; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** H25, F23. **KW** Tax Code. Multinational Corporations. Foreign Tax Credits.

AB The U.S. tax code allows multinational corporations to credit tax payments made to foreign treasuries against domestic tax obligations, up to their U.S. tax liability on foreign source income. If foreign tax payments exceed the U.S. tax liability on foreign source income the corporation is said to be in "excess credits." In this paper, we consider how investment incentives change as multinational corporations switch into and out of "excess credits." We derive an explicit expression for the cost of capital for a marginal investment of an all equity financed foreign subsidiary. We find that if the foreign tax credit position and/or the dividend policy of a parent corporation changes over time the cost of capital will be a function of domestic and foreign country tax rates and the dividend repatriation policy of the subsidiary.

Andersen, Torben M.

PD April 1992. **TI** Aggregate Demand, Multipliers and Coordination Failures. **AA** University of Aarhus. **SR** Aarhus Institute of Economics Memo: 1992-5; Institute of Economics, University of Aarhus, Building 350, Universitetsparken, DK-8000 Aarhus C, DENMARK. **PG** 25. **PR** no charge. **JE** E32. **KW** Coordination Failure. Walrasian Model. Involuntary Unemployment.

AB The interdependence between production, income and demand is considered as a source of coordination failures. The first part of the paper shows that this interdependence can be found in multi-sectoral Walrasian models leading to multiplier effects which are important for the adjustment process but not associated with any inefficiencies. In the second part incomplete information is introduced as a cause for coordination failures and it is shown how a form of involuntary unemployment may arise because production and consumption plans are not coordinated.

Andreoni, James

PD February 1992. **TI** Do Government Subsidies Increase the Private Supply of Public Goods? **AU** Andreoni, James; Bergstrom, Ted. **AA** Andreoni: University of Wisconsin. Bergstrom: University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory, (CREST), Working Paper: 92-11; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 10. **PR** not available. **JE** H41, H20. **KW** Private Contribution. Public Goods.

AB We study three different models in which public goods are supplied by private contributions. In one of these models, tax-financed government subsidies to private contributions will definitely increase the equilibrium supply of public goods. In the other two models, small changes in tax rates and in government provision of public goods are neutralized by offsetting changes in private contributions. We explain why it is that these models lead to opposite conclusions and we argue on the basis of our first model that a government that wants to use taxes and subsidies to increase total provision of public goods will be able to do so, even with small changes in tax rates and subsidies. Indeed, our model yields a surprisingly decisive comparative statics result. If public goods and private goods are both normal goods, then increases in the subsidy rate necessarily increase the equilibrium supply of public goods.

Andrews, Donald W. K.

PD May 1992. **TI** An Introduction to Econometric Applications of Functional Limit Theory for Dependent Random Variables. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 1020; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PG** 35. **PR** no charge. **JE** C12, C14. **KW** Hypothesis Tests. Semiparametric Estimation.

AB This paper discusses some uses econometrics of functional limit theory for dependent random variables. Attention is focused on empirical process-type results rather than partial sum results that are prevalent in unit root econometrics. Examples considered include nonstandard parametric hypotheses tests and semiparametric estimation. The application of bracketing functional limit results is discussed in some detail.

Angrist, Joshua D.

PD May 1992. **TI** Estimating the Payoff to Schooling Using the Vietnam-Era Draft Lottery. **AU** Angrist, Joshua D.; Krueger, Alan B. **AA** Angrist: Hebrew University and National Bureau of Economic Research. Krueger: Princeton University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4067; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 19. **PR** $5.00. **JE** I21, J24. **KW** Vietnam Draft. Educational Deferment. Return to Education.

AB Between 1970 and 1973 priority for military service was randomly assigned to draft-age men in a series of lotteries. Many men who were at risk of being drafted managed to avoid military service by enrolling in school and obtaining an educational deferment. This paper uses the draft lottery as a natural experiment to estimate the return to education and the veteran premium. Estimates are based on special extracts of the Current Population Survey for 1979 and 1981-85. The results suggest that an extra year of schooling acquired in response to the lottery is associated with 6.6 percent higher weekly earnings. Our findings are robust to a variety of assumptions about the effect of veteran status on earnings.

Aragones, Enriqueta

PD April 1992. **TI** A Solution to the Envy-Free Selection Problem in Economies with Indivisible Goods. **AA** Northwestern University. **SR** Northwestern University Center for Mathematical Studies in Economics and Management Science Discussion Paper: 984; J.L. Kellogg Graduate School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208. **PG** 42. **PR** $3.00 U.S. and Canada; $5.00 via International mail. **JE** D63, D50. **KW** Envy. Allocation. Selection.

AB We consider the problem of selecting envy-free allocations in economies with indivisible objects and quasi-linear utility functions. We study the set of envy-free allocations for these economies and characterize the minimal amount of money necessary for its nonemptiness when negative distributions of money are not allowed. We also find that, when this is precisely the available amount of money, there is a unique way to combine objects and money such that these bundles may form an envy-free allocation. Based on this property, we propose a solution that selects a unique utility profile for any economy. When there is more money than is needed to solve the envy-free problem, our solution allocates it equally and we retain the uniqueness of the utility profile.

Ardeni, Pier-Giorgio

PD September 1990. **TI** Alternative Subsidy Reduction Paths: The Role of Fiscal and Monetary Policy Linkages. **AU** Ardeni, Pier-Giorgio; Rausser, Gordon C. **AA** Ardeni: University of Urbino. Rausser: University of California, Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics Working Paper: 566; Department of Agricultural and Resource Economics, 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 50. **PR** $14.00. **JE** E52, Q17, Q18, F31, C15. **KW** Agricultural Policy. Policy Simulation.

AB In the case of U.S. agricultural policy, this paper shows how governmental intervention can be formally incorporated in a conditional-vector-error-correcting model. From the resulting theoretical framework and empirical analysis, formal hypotheses are tested regarding both forward and backward linkages among money, exchange rates, and agricultural and nonagricultural markets. Consistent with the current Uruguay Round of the GATT negotiations, a number of policy simulations are conducted with the constructed empirical model. Phased reductions in the degree of subsidization in the U.S. agricultural sector are shown, through these policy simulations, to alter the feedback effects from money to prices as well as the dynamic path for exchange rates.

Armstrong, Mark

PD April 1992. **TI** Price Discrimination, Competition and Regulation. **AU** Armstrong, Mark; Vickers, John. **AA** University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 140; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 27. **PR** not available. **JE** L41, L51. **KW** Entry Deterrence. Public Policy.

AB The paper analyzes the positive and normative effects of price discrimination policy when a dominant incumbent firm faces an endogenous degree of competition in one of the markets that it serves. In the model there is a potential entrant which chooses, in the light of policy on price discrimination, whether to enter, and if so on what scale, and thereafter acts as a price taker. Banning price discrimination tends to encourage more entry, the welfare consequences of which are positive if the entrant is as efficient as the incumbent but are ambiguous more generally. It is possible that prices in both markets will fall. If in addition the incumbent's average price level is regulated, then allowing price discrimination may lead to very aggressive pricing - below marginal cost - in the competitive market because of the ability to raise price in the captive market as a result.

Arthur, W. Brian

PD May 1992. **TI** On Learning and Adaptation in the Economy. **AA** Stanford University. **SR** Queen's Institute for Economic Research Discussion Paper: 854; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 24. **PR** $3.00 Canada; $3.50 U.S. and elsewhere. **JE** D83, D10. **KW** Learning. Adaption. Financial Markets.

AB The standard mode of theorizing assumed in economics is deductive--it assumes that human agents derive their conclusions by logical processes from complete, consistent and well-defined premises in a given problem. This works well in simple problems, but it breaks down beyond a "problem complexity boundary" where human computational abilities are exceeded or the assumption of deductive rationality cannot be relied upon to hold. The paper draws upon what is known in psychology to argue that beyond this problem complexity boundary humans continue to reason well, but by using induction rather than deduction. That is, in difficult or complex decision problems, humans transfer experience from other, similar problems they have faced before' they look for patterns and analogies that help them construct internal models of and hypotheses about the situation they are in; and they act more or less deductively on the basis of these.

Ashenfelter, Orley

PD June 1992. **TI** Estimates of the Economic Return to Schooling from a New Sample of Twins. **AU** Ashenfelter, Orley; Krueger, Alan B. **AA** Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 304; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 18. **PR** $1.50. **JE** J31, J24, C81. **KW** Returns to Education. Measurement Error.

AB This paper uses a new survey to contrast the wages of genetically identical twins with different schooling levels. Multiple measurements of schooling levels were also collected to assess the effect of reporting error on the estimated economic returns to schooling. The data indicate that omitted ability variables do not bias the estimated return to schooling upward, but that measurement error does bias it downward. Adjustment for measurement error indicates that an additional year of schooling increases wages by 16%, a higher estimate of the economic returns to schooling than has been previously found.

Ashton, David J.

PD May 1992. **TI** Can You Beat the Stock-Market? An Inaugural Lecture. **AA** Ashton: University of Bristol. **SR** University of Bristol Discussion Paper: 92/328; Department of Economics, University of Bristol, 8 Woodlands Road, BRISTOL, BS8 ITN, IRELAND. **PG** 34. **PR** no charge. **JE** G14, G23, G32, G00. **KW** Market Efficiency. Financing.

AB This inaugural lecture explores two distinct themes or questions. The first theme or question is - "Can someone who understands and diligently analyses financial information make higher returns from investing in the stock-market than someone who merely adopts a passive investment strategy and tracks a broadly based index?" The second theme or question is : "Can you beat the market in the sense, can you devise a better system for allocating resources to U.K. industry?".

Atkinson, A. C.

PD May 1992. **TI** Deletion Diagnostics and Transformations for Time Series. **AU** Atkinson, A. C.; Shephard, Neil G. **AA** Atkinson: London School of Economics. Shephard: Nuffield College, Oxford. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: EM/92/245; Suntory-Toyota International Centre for Economics and Related Disciplines, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 11. **PR** no charge. **JE** C32, C82. **KW** Deleted Observations. Missing Data.

AB Deletion diagnostics are developed for structural time series models. These show the effect of the deletion of individual observations on residuals and on the estimates of regression parameters. The methods are extended to the transformation of time series through regression on a constructed variable. Index plots of the diagnostic quantities are shown to be highly informative.

Attanasio, Orazio P.

PD December 1991. **TI** On the Aggregation of Euler Equations for Consumption in Simple OLG Models. **AU** Attanasio, Orazio P.; Weber, Guglielmo. **AA** Attanasio: Stanford University and Centre for Economic Policy Research. Weber: University of College London, IGIER and Institute for Fiscal Studies. **SR** Institute for Fiscal Studies (IFS) Working Paper: W92/11; Institute for Fiscal Studies, 7 Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 15. **PR** 3 pounds. **JE** D52, D91, E21, C15. **KW** Overlapping Generations. Aggregate Consumption.

AB Simple Overlapping Generations models with productivity shocks generate an Euler equation for aggregate consumption which involves terms reflecting entries and exits. In this paper we solve for the general equilibrium interest rate and sign its covariance with these terms. We also use Monte Carlo experiments to evaluate the econometric consequences of omitting them in estimation. Under plausible assumptions on capital-labor substitutability, the estimate of the elasticity of intertemporal substitution is downward biased, and there is excess sensitivity to expected labor income growth.

Auerbach, Alan J.

PD March 1991. **TI** Generational Accounts: A Meaningful Alternative to Deficit Accounting. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J. **AA** Auerbach: University of Pennsylvania and National Bureau of Economic Research. Gokhale: Federal Reserve Bank of Cleveland. Kotlikoff: Boston University and National Bureau of Economic Research. **SR** Federal Reserve Bank of Cleveland Working Paper: 9103; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 36. **PR** not available. **JE** H61, H62, H63. **KW** Intergenerational Policy. Deficit.

AB This paper presents a set of generational accounts that can be used to assess the fiscal burden that current generations are placing on future generations. The generational accounts indicate, in present value, the net amount that current and future generations are projected to pay to the government now and in the future. These accounts can be understood in terms of the government's intertemporal (long-run) budget constraint. This constraint requires that the sum of generational accounts of all current and future generations plus existing government net wealth be sufficient to finance the present value of current and future government consumption. The generational accounting system represents an alternative to using the federal budget deficit to gauge intergenerational policy.

PD May 1991. **TI** Generational Accounting: A New Approach for Understanding the Effects of Fiscal Policy on Saving. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J. **AA** Auerbach: University of Pennsylvania and National Bureau of Economic Research. Gokhale: Federal Reserve Bank of Cleveland. Kotlikoff: Boston University and National Bureau of Economic Research. **SR** Federal Reserve Bank of Cleveland Working Paper: 9107; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 25. **PR** not available. **JE** H62, E21. **KW** Intergenerational Policy. Savings.

AB This paper discusses an alternative to the deficit -generational accounting- and its use in assessing fiscal policy, particularly in regard to the impact on saving. Generational accounting indicates how changes in policies alter different generations' present expected values of their remaining lifetime net payments to the government.

PD April 1992. **TI** Social Security and Medicare Policy from the Perspective of Generational Accounting. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J. **AA** Auerbach: University of Pennsylvania and National Bureau of Economic Research. Gokhale: Federal Reserve Bank of Cleveland. Kotlikoff: Boston University and National Bureau of Economic Research. **SR** Federal Reserve Bank of Cleveland Working Paper: 9206; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 19. **PR** not available. **JE** H50, H53, E62. **KW** Generational Accounting. Intergenerational Policy.

AB Our previous study (Auerbach, Gokhale, and Kotlikoff [1991] introduced the concept of generational accounting, a method of determining how the burden of fiscal policy falls on different generations. It found that U.S. fiscal policy is out of balance in terms of projected generational burdens. This means that either current generations will bear a larger share (than we project under current law) of the burden of the government's spending, or that future generations will have to pay, on average, at least 21 percent more on a growth-adjusted basis than will those generations who have just been born. These conclusions were based on relatively optimistic assumptions about the path of Social Security of Medicare policies. In this paper we simulate the effects of realistic alternative paths for Social Security and Medicare. Our results suggest that such alternative policies could greatly increase the imbalance in generational policy.

Auerbach, Paul

PD February 1992. **TI** Secondary Currencies and High Inflation: Implications for Monetary Theory and Policy. **AU** Auerbach, Paul.; Davison Geoffrey.; Rostowksi, Jacek. **AA** Auerbach and Davison: Kingston Polytechnic. Rostowksi: University of London. **SR** Centre for Economic Performance Discussion Paper: 58; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 28. **PR** no charge. **JE** E42, E40, E50. **KW** High Inflation. Secondary Currency. Dollarization.

AB Existing economic models treat secondary currencies as damaging during an inflationary period. Such an approach emerges from the perspective of a "normal" economy with a single, relatively stable currency. During periods of high inflation, however, this perspective is deceptive, with the widespread emergence of commodity "monies" as substitutes for the primary currency. In the economic dislocation associated with high inflation, the use of secondary currencies facilitates the preservation of real economic activity. Furthermore, governmental acquiescence to the public's use of secondary currencies adds to the credibility of official promises to defend the value of the primary currency.

Avery, Robert B.

PD December 1990. **TI** Risk-Based Capital and Deposit Insurance. **AU** Avery, Robert B.; Berger, Allen N. **AA** Avery: Cornell University and Federal Reserve Bank of Cleveland. Berger: Board of Governors of the Federal Reserve System. **SR** Federal Reserve Bank of Cleveland Working Paper: 9101; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 28. **PR** not available. **JE** K22, G21, G28. **KW** Bank Standards. Bank Performance.

AB Risk-based capital (RBC) is an important component of deposit insurance reform. This paper provides an empirical analysis of the new 1992 RBC bank standards, applying them to data on virtually all U.S. banks from 1982 to 1989. The data reveal strong associations between several measures of future bank performance (including bankruptcy) and the RBC relative risk weights. These associations suggest that the weights constitute a significant improvement over the old capital standards, although there are several instances in which the weights for specific categories appear to be out of line with the performance results. Tests of the informational value of passing or failing the new and old capital standards show that both have independent information, but that the new RBC standards better predict future bank performance problems.

Baban, Roy C.

PD July 1992. **TI** The Export of Sub-Saharan Africa, 1970-90: A Survey. **AU** Baban, Roy C.; Greene, Joshua E. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: 92/135; International Monetary Fund, Washington, DC 20431. **PG** 42. **PR** not available. **JE** F14, O13, O55. **KW** Export Performance. Balance of Payments.

AB The export performance of Sub-Saharn Africa has lagged behind that of developing countries in other regions for the past two decades, and total export proceeds have fallen significantly since 1980. Many factors explain this outcome, including continued concentration in slowly-growing non-fuel primary commodities and domestic economic policies that have discouraged new investment that could promote diversification and increased production of traditional crops. Diversification into new agricultural products and light manufactures could boost export earnings, but only if the region can compete successfully with existing producers elsewhere. In most countries this will require major structural reforms to create a more attractive economic environment.

Backus, David K.

PD April 1992. **TI** Theoretical Relations Between Risk Premiums and Conditional Variances. **AU** Backus, David K.; Gregory, Allan W. **AA** Backus: New York University. Gregory: Queen's University. **SR** New York University Salomon Brothers Working Paper: S-92-25; 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** 17. **PR** $5.00. **JE** G12, G13. **KW** Arch-in-Mean. Asset Pricing.

AB Many statistical models of time-varying risk premiums, including the ARCH-in-mean, attempt to exploit a relation between risk premiums and conditional variances or covariances of asset returns. We examine this relation in numerical versions of a dynamic asset-pricing theory and show that it can be increasing, decreasing, flat, or nonmonotonic. Its shape depends on both the preferences of the representative agent and the stochastic structure of the economy. Without additional structure, the theory does not provide either a general foundation for ARCH-in-mean specifications or a simple interpretation of their parameters.

PD April 1992. **TI** Accounting for Forward Rates in Markets for Foreign Currency. **AU** Backus, David K.; Gregory, Allan W.; Telmer, Chris I. **AA** Backus: New York University. Gregory: Queen's University. Telmer: Queen's University and Carnegie Mellon University. **SR** New York University Salomon Brothers Working Paper: S-92-26; 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** 21. **PR** $5.00. **JE** F31, G15. **KW** Exchange Rates. Contingent Claims Pricing.

AB Forward and spot exchange rates between major currencies imply large standard deviations of both predictable returns from currency speculation and of the equilibrium price measure (the intertemporal marginal rate of substitution). Representative agent theory with time-additive preferences cannot account for either of these properties. We show that the theory does considerably better along these dimensions when the representative agent's preferences exhibit habit persistence, but that the theory fails to reproduce some of the other properties of the data - - in particular, the strong autorcorrelation of forward premiums.

Bacon, Robert W.

PD April 1992. **TI** Retail Rents and Market Areas. **AA** University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 133; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 21. **PR** not available. **JE** L11, C21. **KW** Market Size. Shop Rents.

AB A model of the equilibrium spatial size of a market, where shop rents are determined endogenously, is constructed on the lines of previous studies of market areas. Two cases are considered: the first models shop rents as being determined by competition with the housing sector, while the second models the licensing of sites for retail use by a planning authority landlord which has as its aim the maximization of its receipts from all shops in the town. The models developed are solved for a range of parameter values. It is shown that allowing for the endogeneity of shop rents, as opposed to treating them as a fixed cost, reverses some well established comparative static results - when income is increased market area increases with an endogenous planning authority, while with endogenous shop rents the market area decreases. Differences are also established for variations in population density and the costs of the travel to shop.

Bagnoli, Mark

PD April 1992. **TI** Intertemporal Self-Selection with Multiple Buyers Under Complete and Incomplete Information. **AU** Bagnoli, Mark; Salant, Stephen; Swierzbinski, Joseph E. **AA** Bagnoli: Indiana University. Salant and Swierzbinski: University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory, (CREST), Working Paper: 92-05; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 20. **PR** not available. **JE** D42, D40. **KW** Quality Discrimination.

AB We consider a monopolist selling durable goods to consumers with unit demands but different preferences for quality. The seller can offer items of different quality at the same time to induce buyers to self-select, as in Mussa-Rosen (1978), but is not artificially constrained to offer only one such menu. Instead the seller can offer without precommitment a sequence of menus over time. As we show, even if the seller has incomplete information about the realized distribution of buyer types, he still may obtain higher expected profits (sometimes the entire surplus) by making a sequence of offers rather than a single offer.

Baillie, Richard T.

PD July 1991. **TI** The Risk Premium in Forward Foreign Exchange Markets and G-3 Central Bank Intervention: Evidence of Daily Effects, 1985-1990. **AU** Baillie, Richard T.; Osterberg, William P. **AA** Baillie: Michigan State University. Osterberg: Federal Reserve Bank of Cleveland. **SR** Federal Reserve Bank of Cleveland Working Paper: 9109; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 13. **PR** not available. **JE** F31, G13. **KW** Exchange Rates. Risk Premia.

AB Evidence that forward rates for foreign exchange are not unbiased forecasts of future spot rates suggests a time-varying risk premium. However, there is little evidence that the forecast error is related to fundamentals, although most investigations have lacked high-frequency data. In this paper, we use daily exchange-rate and official Federal Reserve Intervention data to test for an impact of intervention on the forecast error. This paper extends recent analyses of daily changes in exchange rates by Baillie and Bollersev (1989) and Hsieh (1989) to the daily forward-rate forecast errors for the dm/US$ and yen/US$ rates. We find that 1) U.S. purchase of dollars on day t-1 affects. the day t forecast error, 2) there are day-of-the-week effects in the conditional variance, and 3) for the yen/US$ rate, there is GARCH-in-mean. These findings provide some support for considering intervention as a channel through which fundamentals influence risk premia.

PD February 1992. **TI** Post-Louvre Intervention: Did Target Zones Stabilize the Dollar? **AU** Baillie, Richard T.; Humpage, Owen F. **AA** Baillie: Michigan State University. Humpage: Federal Reserve Bank of Cleveland. **SR** Federal Reserve Bank of Cleveland Working Paper: 9203; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 24. **PR** not available. **JE** F30, F31. **KW** Exchange Rates. Target Zones.

AB This paper investigates claims that the G3 (Germany, Japan, and the United States) successfully maintained target zones following the Louvre meeting. We use daily, official intervention data and simultaneous-equation techniques to estimate Probit reaction functions and GARCH exchange rate equations. From the reaction functions, which include variables for target zones and market disorder, we construct Mill's ratios to serve as instruments for intervention. We introduce the Mill's ratios into both the conditional mean and conditional variance of the exchange-rate equations. The results suggest that the G3 reacted to exchange-rate movements in a manner broadly consistent with maintaining target zones. With some notable exceptions, however, we do not find evidence that the intervention successfully influenced subsequent exchange-rate movements.

Balduzzi, Pierluigi

PD January 1992. **TI** Asset Price Nonlinearities and Coordinated Noise Trading. **AU** Balduzzi, Pierluigi; Bertola, Giuseppe; Foresi, Silverio. **AA** Balduzzi and Foresi: New York University. Bertola: Princeton University, National Bureau of Economic Research and Center for Economic Policy Research. **SR** New York University Salomon Brothers Working Paper: S-92-30; 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** 18. **PR** $5.00. **JE** G12, G13. **KW** Noise Trade. Asset Price Dynamics.

AB We model equilibrium asset price determination in an economy where "noise" trade induces infrequent discrete shifts in the portfolio of risky and riskless assets held by a class of utility-maximizing "speculators." Assuming that such trades take place at common-knowledge points in the economy's state space, we discuss fundamental valuation equations and we propose an explicit solution method for realistic functional forms. The prices of safe and risky assets reflect risk-adjusted expectations not only of cash flows, but also of risk-adjusted capital gains or losses. Asset price dynamics are then driven by expected and realized trading as well as by the underlying dividend process, and the models have relevant implications for serial correlation and heteroskedasticity in stock returns.

Ball, Laurence

PD June 1992. **TI** Asymmetric Price Adjustment and Economic Fluctuations. **AU** Ball, Laurence; Mankiw, N. Gregory. **AA** Ball: Princeton University and National Bureau of Economic Research. Mankiw: Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4089; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** $3.00. **JE** E12, E32, D21. **KW** Menu-Cost Model.

AB This paper considers a possible explanation for asymmetric adjustment of nominal prices. We present a menu-cost model in which positive trend inflation causes firms' relative prices to decline automatically between price adjustments. In this environment, shocks that raise firms' desired prices trigger larger price responses than shocks that lower desired prices. We use this model of asymmetric adjustment to address three issues in macroeconomics: the effects of aggregate demand, the effects of sectoral shocks, and the optimal rate of inflation.

Banerji, Rukmini

PD March 1992. **TI** Agricultural Conditions and Children's Work and Schooling in Rural India: A District Level Analysis. **AA** University of Chicago. **SR** Economics

Research Center/NORC Population Research Center Discussion Paper: 92-4; Librarian, Economics Research Center/NORC, 1155 E. 60th St., Chicago, IL 60637. **PG** 33. **PR** $2.00. **JE** Q12, O53. **KW** Education. Agriculture--India.

AB In the last several decades, India has witnessed major social and economic changes. Two important developments have been a rapid expansion of the education system and dramatic increases in overall agricultural production. This paper focuses on rural India, and uses district level data from 1971 to examine patterns of children's school attendance and participation in different work activities in the context of wide variations in production and stratification conditions in the agricultural sector, and in government expenditures on education across the country. The paper finds that rural children's participation in work and attendance in school varies considerably by gender. The evidence confirms that children's schooling and work patterns differ significantly between agriculturally poor regions and agriculturally prosperous regions in rural India. The analysis here also indicates that policies that directly tackle problems of rural production, income or employment, also have consequences, intended or unintended, for children.

Bardhan, Pranab

PD June 1992. **TI** Economics of Development and the Development of Economics. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 92-196; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 16. **PR** $3.50 plus applicable sales tax. **JE** A10, O10. **KW** Development Economics. Dynamic Externalities.

AB In this paper we go over several ideas originating in the area of development economics which have enriched the general body of economic theory, to an extent unappreciated by many economic theorists.

Barham, Vicky

PD January 1992. **TI** Education and the Poverty Trap. **AU** Barham, Vicky; Boadway, Robin; Marchand, Maurice; Pestieau, Pierre. **AA** Barham and Boadway: Queen's University. Marchand: Universite Catholique de Louvain. Pestieau: Universite de Liege. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9210; Universite Catholique de Louvain Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 24. **PR** not available. **JE** I21, I22. **KW** Educational Attainment. Stationary State Equilibria. Wealth.

AB An overlapping generations model is constructed in which individual wealth is related to educational attainment, and in which liquidity constraints may induce children to invest in a sub-optimal level of education given their ability. Borrowing for educational attainment is obtained from within the family. Abilities differ among children and may be related to parental ability. Stationary state equilibria are found to exist in which children of poorer families are caught in a poverty trap because of an inability to finance their education. The role of redistributive policy is studied in this context.

Barrionuevo, Jose M.

PD June 1992. **TI** A Simple Forecasting Accuracy Criterion under Rational Expectations: Evidence from the World Economic Growth Outlook and Time Series Models. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/48; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** not available. **JE** E27, C52, C22, E31. **KW** Forecast Accuracy. Inflation Forecasts. Growth Forecasts.

AB A simple criterion based on the properties of the forecast error is presented to evaluate the accuracy of forecasts. The efficiency conditions of an optimization problem are used to show that under rational expectations the standard statistical conditions are necessary, but not sufficient to ensure efficiency. This criterion is used to examine the accuracy of the World Economic Outlook projections of growth and inflation for the seven major industrial countries. Time series models are then estimated and the efficiency of the World Economic Outlook projections relative to a benchmark time series model is examined. A number of empirical tests suggest that the year ahead projections of growth and inflation in the World Economic Outlook are unbiased after 1982.

Barros, Fatima

PD March 1992. **TI** Effects of Imperfect Competition on Contractual Design in the Presence of Private Information. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9215; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 23. **PR** not available. **JE** D82, L13, L22, L31. **KW** Mixed Oligopoly. Delegation. Asymmetric Information.

AB The present work analyzes the effect of competition on managerial incentives when agents have private information about the firms productivities. Two types of firms are considered: managerial firms (delegation) and entrepreneurial firms (no delegation). Due to the asymmetry of information managerial firms are less efficient (productive efficiency) than entrepreneurial firms and entrepreneurial firms competition may actually reduce the managerial firms' productive inefficiency.

Bartolini, Leonardo

PD March 1992. **TI** Target Zones and Forward Rates In a Model With Repeated Realignments. **AU** Bartolini, Leonardo; Bodnar, Gordon M. **AA** Bartolini: International Monetary Fund. Bodnar: University of Rochester. **SR** International Monetary Fund Working Paper: WP/92/22; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** not available. **JE** F31, F33, G15. **KW** Exchange Rate Regimes. Credibility.

AB This paper studies the implications of the imperfect credibility of an exchange rate target zone on the term structure of forward premia. The relationship between spot and forward exchange rates of different maturities reflects the possibility of repeated realignments of the exchange rate band. The credibility of the commitment to the target zone implicit in forward market data can be extracted by estimating the model. Application to French/German data indicates that the model is capable of matching observed patterns of interest rate differentials during the EMS, while yielding estimates of the credibility parameters that accord with the experience of the FF/DM exchange rate during the 1980s.

PD April 1992. **TI** An Analysis of the Process of Capital Liberalization in Italy. **AU** Bartolini, Leonardo; Bodnar, Gordon M. **AA** Bartolini: International Monetary Fund. Bodnar: University of Rochester. **SR** International Monetary

Fund Working Paper: WP/92/27; International Monetary Fund, Washington, DC 20431. **PG** 16. **PR** not available. **JE** F31, F36. **KW** Capital Liberalization. Exchange Rate Mechanism.

AB Beginning in 1985 Italy embarked on a path of progressive removal of its system of controls on portfolio investment, a process formally completed with the abolition of all remaining restrictions in 1990. In this paper we review this policy of capital liberalization and integrate the analysis with an examination of the process of stabilization of the lira exchange rate in the 1980s. Various indicators of capital controls' effectiveness and target zone credibility are used to identify the temporal relations among capital liberalization, exchange rate stabilization, and capital flows.

Bauer, Paul W.

PD October 1991. **TI** Local Banking Markets and Firm Location. **AU** Bauer, Paul W.; Cromwell, Brian A. **AA** Bauer: Federal Reserve Bank of Cleveland. Cromwell: Federal Reserve Bank of San Francisco. **SR** Federal Reserve Bank of Cleveland Working Paper: 9114; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 15. **PR** not available. **JE** R30, R51, G30. **KW** Banking Activity. Regional Development. Financial Structure.

AB This study presents evidence on the effects of bank structure and profitability on the births of new firms. The attraction of new firms is an important goal of local economic development policies, which often provide public-sector financial incentives. Private-sector financial structure, however, potentially influences firm location through the price and availability of credit from commercial banks. The empirical analysis examines the relationship between banking activity and regional development during two periods, 1980-82 and 1984-86. Using bank-level data, we construct measures of lending, profitability, concentration, size, and entry in the banking sectors of 252 SMSAs. Measures of bank structure are included in a standard model of firm location in order to test for independent effects of banking on regional growth as measured by firm births.

PD December 1991. **TI** Inefficiency and Productivity Growth in Banking: A Comparison of Stochastic Econometric and Thick Frontier Methods. **AU** Bauer, Paul W.; Berger, Allen N.; Humphrey, David B. **AA** Bauer: Federal Reserve Bank of Cleveland. Berger: Board of Governors of Federal Reserve System. Humphrey: Florida State University. **SR** Federal Reserve Bank of Cleveland Working Paper: 9117; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 20. **PR** not available. **JE** G21, G20. **KW** Efficiency Measurement. Bank Costs. Banking.

AB Until recently, bank cost studies focused almost exclusively on scale and product mix (scope) economies. While the approach has been useful, a potentially more important dimension of bank cost economies appears to be differences in efficiency. Recent studies have estimated inefficiencies of 20 percent or more of costs, even for banks of similar scale and product mix effects, which usually average 5 percent or less. Our purposes in this paper are twofold. First, we apply two methods of efficiency measurement that have been employed in extant efficiency literature and contrasts the results across methodologies. The second purpose of the paper is the measurement of the growth of total factor productivity (TFP) in banking, which incorporates both technical change and scale economies.

Bayoumi, Tamim A.

PD July 1992. **TI** Using an EC-Wide Monetary Aggregate in Stage Two of EMU. **AU** Bayoumi, Tamim A.; Kenen, Peter B. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: 92/56; International Monetary Fund, Washington, DC 20431. **PG** 14. **PR** not available. **JE** E42, E52, F36. **KW** Money Supply. Inflation. Growth.

AB This paper looks at whether the aggregate ERM money supply has been a useful predictor of short-term changes in inflation and growth, and long-term trends in price levels among the core ERM countries. The evidence suggests that over the period since 1987, when there have been no realignments, the ERM money supply performs at least as well, and arguably better, than the individual national aggregates in predicting nominal aggregates such as inflation and the price level, while neither money supply is a good predictor of real activity.

Bean, Charles R.

PD March 1992. **TI** European Unemployment: A Survey. **AA** London School of Economics. **SR** Centre for Economic Performance Discussion Paper: 71; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 81. **PR** no charge. **JE** E24, J31, J64. **KW** Unemployment. Labor Demand. Wages.

AB This paper surveys the literature on the causes of high European Unemployment. It begins with a discussion of the real wage gap methodology and its limitations. The cross-country evidence on the role of the counterinflationary policies of the eighties, terms of trade movements and similar factors are then discussed. The role of institutional differences in the labor market structures is also considered. Finally the papers surveys the numerous propagation mechanisms that different authors have advanced to explain the persistence of unemployment over time.

Bebchuk, Lucian Arye

PD May 1992. **TI** Optimal Sanctions when the Probability of Apprehension Varies Among Individuals. **AU** Bebchuk, Lucian Arye; Kaplow, Louis. **AA** Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4078; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 10. **PR** $3.00. **JE** D78, D82. **KW** Optimal Enforcement.

AB This paper explores how optimal enforcement is affected by the fact that not all individuals are equally easy to apprehend. When the probability of apprehension is the same for all individuals, optimal sanctions will be maximal: as Gary Becker (1968) suggested, raising sanctions and reducing the probability of apprehension saves enforcement resources. This argument necessarily holds only when the enforcement authority knows how difficult an individual will be to apprehend before expending any investigative resources. When differences among individuals exist and can be observed only after apprehension, or not at all, optimal enforcement may involve less than maximal sanctions.

PD May 1992. **TI** Optimal Sanctions When Individuals are Imperfectly Informed About the Probability of Apprehension. **AU** Bebchuk, Lucian Arye; Kaplow, Louis. **AA** Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4079; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 6. **PR** $3.00. **JE** D78, D82. **KW** Optimal Enforcement. Imperfect Information.

AB This paper considers optimal enforcement when individuals may be imperfectly informed about the probability of apprehension. When individuals are perfectly informed, optimal sanctions are maximal because, as Gary Becker (1968) suggested, society can economize on enforcement resources by reducing the probability of apprehension while increasing sanctions. But when individuals imperfectly observe the probability of apprehension, it may be optimal to apply lower sanctions while expending more enforcement resources.

Beim, David O.

PD April 1992. **TI** Estimating Bond Liquidity. **AA** Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-92-08; Columbia University, Graduate School of Business, First Boston Series, New York, NY 10027, USA. **PG** 17. **PR** $5.00 academics and non-profit institution; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G12, H60. **KW** Bond Liquidity. Bond Prices.

AB Liquidity significantly affects bond prices, yet this variable remains little understood. This paper gives a definition and measure of bond liquidity, and shows why it tends to decay over time. A model of bid-ask spreads as a function of term, price and liquidity is then developed. It is used to estimate the liquidity of individual U.S. Treasury bond issues outstanding during 1987-1990. The pattern of liquidity decay is illuminated by regressing these estimates on age and quantity outstanding.

Benhabib, Jess

PD May 1992. **TI** The Role of Human Capital and Political Instability in Economic Development. **AU** Benhabib, Jess; Spiegel, Mark. **AA** New York University. **SR** New York University Economic Research Reports: 92-24; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 34. **PR** no charge. **JE** O41, D24. **KW** Growth. Capital Accumulation.

AB We use cross-country estimates of physical and human capital accumulation to run the growth accounting regressions implied by an aggregate production function based upon a Cobb-Douglas technology in which human capital enters as a factor of production. Our results indicate that human capital either enters insignificantly in explaining per capita growth rates, or with the incorrect sign. We next entertain alternative roles for human capital in economic growth. We specify a growth model in which the Solow residual, or the growth rate of total factor productivity, depends on a nation's human capital stock. Tests of the specification implied by this model do indeed indicate a positive role for human capital, as well as a negative role for economic distortions. In addition, we examine the determinants of physical capital accumulation, which plays an important role in determining growth rates. Our results suggest that the presence of human capital increases the investment in physical capital, while political instabilities may deter it.

Bennett, Elaine

PD June 1992. **TI** Odd Man Out: Bargaining Among Three Players. **AU** Bennett, Elaine; Houba, Harold. **AA** Bennett: University of California, Los Angeles and Virginia Polytechnic Institute. Houba: Free University, Amsterdam. **SR** University of California at Los Angeles Department of Economics Working Paper: 662; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 58. **PR** $2.50; checks payable to U.C. Regents. **JE** C78, C71, C72. **KW** Bargaining. Cooperative Game Theory.

AB This paper considers three-player bargaining problems in which only the two-player coalitions can achieve any gains. The paper presents a cooperative model (the multilateral Nash solution of Bennett (1991a)) and a noncooperative model (the proposal-making model with discounting), and characterizes the cooperative and noncooperative solutions. These solutions are mutually reinforcing: For certain parameter values, the cooperative and noncooperative solutions coincide. For the remaining parameter values, the cooperative solutions form an interval; the noncooperative solution is one endpoint of this interval, and Binmore's (1985) market demand solution is the other endpoint of this interval.

Bensaid, Bernard

PD December 1991. **TI** An Exact Formula for the Lion's Share: A Model of Pre-Play Negotiation. **AU** Bensaid, Bernard; Gary-Bobo, Robert J. **AA** Bensaid: Banque de France. Gary-Bobo: Universite de Paris. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9159; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 30. **PR** not available. **JE** C78, D43. **KW** Bargaining. Collusion.

AB We study a game-theoretic model of pre-play negotiation with three players, A,B, and C. Player A (the leader) can sequentially offer a finite number T of contracts to the other players before his choice of an action affecting B and C's payoffs. The bargaining procedure is a game in extensive form with perfect and complete information. We compute the subgame perfect equilibria of this game, and provide explicit formulas for equilibrium payoffs. It is shown that if T=2, player A will contract with B and C sequentially, but that equilibrium actions are not necessarily Pareto-efficient. Equilibria become efficient when T=3. Finally, player A's equilibrium payoff reaches a maximum when T=4. We show that the model has many economic applications and can be used as a building block to solve more complex problems in which preplay negotiation takes place.

Berck, Peter

PD June 1992. **TI** Resource Management under Uncertainty: Some Informational Issues. **AA** University of California, Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics Working Paper: 625; Department of Agricultural and Resource Economics, 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 16. **PR** $5.00. **JE** Q20, D81. **KW** Natural Resources. Risk.

AB In this paper I will discuss five related topics about information and resource systems. The paper begins with a discussion of how to live with uncertainty, which is the classical approach that many others on this program will speak about, and a discussion of how to make others live with your uncertainty, which is a newer approach. A very different strand of the information problem is estimation. The equations used for predictions are typically estimated assuming that the agents possess information that the econometrician does not. The succeeding section examines how lack of information by the decision-making agents changes the econometrician's estimation. In the same vein, the last substantive section shows how economic information can be used to infer information about the natural world.

Berger, Allen N.

TI Risk-Based Capital and Deposit Insurance. **AU** Avery, Robert B.; Berger, Allen N.

TI Inefficiency and Productivity Growth in Banking: A Comparison of Stochastic Econometric and Thick Frontier Methods. **AU** Bauer, Paul W.; Berger, Allen N.; Humphrey, David B.

PD June 1992. **TI** Megamergers in Banking and the Use of Cost Efficiency as an Antitrust Defense. **AU** Berger, Allen N.; Humphrey, David B. **AA** Berger: Board of Governors of the Federal Reserve System. Humphrey: Florida State University. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 203; C/O Stephen A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 42. **PR** no charge. **JE** G21, G34, L44, K21. **KW** Bank Merger. Antitrust Policy.
AB This study provides an empirical examination of the cost efficiency effects of banking megamergers of the 1980's, and whether and when these effects appear to justify relaxation of antitrust concerns. The data suggest that there are substantial potential cost efficiency gains from megamergers that dominate the minor anticompetitive pricing effects from most bank mergers found elsewhere. These potential gains come primarily from improvements in X-efficiency, or superior management of resources, rather than from improvements in scale efficiency, since large banks are usually already in the scale diseconomy region. Despite this potential, we find that megamergers did not result in significant cost efficiency gains on average. Our results suggest (i) that the cost efficiency benefits from megamergers have not been sufficient to justify their use as a general antitrust defense; and (ii) that it is difficult to find simple rules based on prior performance or market overlap to form an effective cost-based antitrust defense.

Bergstrom, Ted

TI Do Government Subsidies Increase the Private Supply of Public Goods? **AU** Andreoni, James; Bergstrom, Ted.

PD March 1992. **TI** Income Prospects and Age at Marriage. **AU** Bergstrom, Ted; Schoeni, Robert. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory, (CREST), Working Paper: 92-10; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 12. **PR** not available. **JE** J12, J16, J31. **KW** Marriage. Lifetime Income.
AB With striking universality, across time and nations, males tend to marry later in life than females. In a study conducted by the United Nations, the average age of marriage for males exceeded that for females in each of 90 countries and in every time period studied between 1950 and 1985. In a paper called "Courtship as a Waiting Game", Mark Bagnoli and Ted Bergstrom (1991) proposed a theory to explain this difference in behavior between the sexes. This paper investigates the empirical relationship between age-at-first marriage and lifetime income for males and females. We then relate our findings to existing empirical work and the relationship between marital status and income.

Berlin, Mitchell

PD May 1992. **TI** Debt Covenants and Renegotiation. **AU** Berlin, Mitchell; Mester, Loretta J. **AA** Berlin: New York University. Mester: Federal Reserve Bank of Philadelphia. **SR** Federal Reserve Bank of Philadelphia Research Working Paper: 92-9; Working Papers, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, PA 19106. **PG** 24. **PR** no charge except overseas airmail, $2.00; checks/money orders in U.S. funds payable to Federal Reserve Bank of Philadelphia. **JE** G32, G21, G10. **KW** Debt Contracts. Bank Loans. Public Debt.
AB We analyze the value to firms of being able to renegotiate covenants in their debt contracts. Covenants control agency problems, but also reduce firms' flexibility to pursue profitable investments. Initial covenants will be more severe for renegotiable contracts, because they can be relaxed selectively when the lender believes they pose an inefficient constraint. We show firms with high ex ante credit risk find the option to renegotiate most valuable. The model is used to explain why bank loans and privately placed debt typically have harsher covenants than public debt and to predict which firms will borrow using closely held debt.

Bernanke, Ben

PD May 1992. **TI** Central Bank Behavior and the Strategy of Monetary Policy: Observations from Six Industrialized Countries. **AU** Bernanke, Ben; Mishkin, Frederic. **AA** Bernanke: Princeton University and National Bureau of Economic Research. Mishkin: Columbia University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4082; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 53. **PR** $3.00. **JE** E52, E58. **KW** Money Growth Target. Central Banks.
AB Using a simple case study approach, this paper compares the conduct and performance of monetary policy in six industrialized countries since the breakup of the Bretton Woods system. Our purpose is to develop fruitful hypotheses that might usefully be explored in subsequent, more formal research. From a positive perspective, a frequently observed pattern in the case studies is that central banks adopt money growth targets when inflation threatens to get out of control. Central banks appear to use money growth targets both as guideposts for assessing the stance of policy and as a means of signaling their intentions to the public; however, no central bank adheres strictly to targets in the short run. More normatively, the case studies also suggest that money growth targets might be useful in providing a medium-term framework for monetary policy, if the targeting is done in a clear and straightforward manner and if targets can be adjusted for changes in the link between target and goal variables.

Bertola, Giuseppe

TI Asset Price Nonlinearities and Coordinated Noise Trading. **AU** Balduzzi, Pierluigi; Bertola, Giuseppe; Foresi, Silverio.

Bianconi, Marcelo

TI The International Transmission of Tax Policies in a Dynamic World Economy. **AU** Turnovsky, Stephen J.; Bianconi, Marcelo.

Blanchflower, David G.

PD June 1992. **TI** Training at Work: A Comparison of U.S. and British Youths. **AU** Blanchflower, David G.; Lynch, Lisa M. **AA** Blanchflower: Dartmouth College, CEP-LSE, and National Bureau of Economic Research. Lynch: Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** London School of Economics Centre for Economic Performance Discussion Paper: 78; Centre for Economic Performance, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 20. **PR** no charge. **JE** I21, I28, J31. **KW** Job Training. Vocational Training.

AB This paper compares and contrasts the structure of post school training for young non-university graduates in Britain and the United States. We utilize two unique longitudinal surveys in these countries on young people to examine four issues: the extent of post school training in Britain and the U.S. and the wage gains associated with it; the link between formal training and further qualifications in Britain and the return to this on wages; differentials in the training experience by gender in the two countries; and the possible implications for skill development in Britain of dismantling significant elements of the traditional apprenticeship system.

Boadway, Robin

TI Education and the Poverty Trap. **AU** Barham, Vicky; Boadway, Robin; Marchand, Maurice; Pestieau, Pierre.

PD March 1992. **TI** Towards a Theory of the Direct-Indirect Tax Mix. **AU** Boadway, Robin; Marchand, Maurice; Pestieau, Pierre. **AA** Boadway: Queen's University. Marchand: CORE and University Catholique de Louvain; Pestieau: Universite de Liege and CORE. **SR** Queen's Institute for Economic Research Discussion Paper: 853; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 18. **PR** $3.00 Canada; $3.50 U.S. and elsewhere. **JE** H21, H24, H26. **KW** Tax Mix. Indirect Tax.

AB Despite the fact that all developed economies levy broadly-based indirect taxes alongside direct taxes, little theory is devoted to explaining the direct-indirect tax mix. Our purpose is to show that if different taxes have different evasion characteristics, some optimal tax mix emerges naturally. Assuming that only income tax can be evaded and focusing on a two-class economy, we analyze the case for supplementing optimal (nonlinear) income taxation with commodity taxation, and we develop conditions under which the latter should or should not be uniform.

PD March 1992. **TI** Public Goods, Self-Selection and Optimal Income Taxation. **AU** Boadway, Robin; Keen, Michael. **AA** Boadway: Queen's University. Keen: University of Essex, Queen's University and Institute for Fiscal Studies. **SR** Institute for Fiscal Studies (IFS) Working Paper: W92/10; Institute for Fiscal Studies, 7 Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 17. **PR** 3 pounds. **JE** H21, H41. **KW** Income Tax. Optimal Tax Policy. Samuelson Rule.

AB Using the self-selection approach to tax analysis, this paper derives a modified Samuelson Rule for the provision of public goods when the government deploys an optimal non-linear income tax. This approach gives a straightforward interpretation of the central result in this area, generalizes it, and provides a simple characterization of optimal policy in a wide range of circumstances. The analysis also emphasizes and clarifies the significance of the choice of numeraire for the optimality of "decentralizing" public spending decisions.

Bodnar, Gordon M.

TI Target Zones and Forward Rates In a Model With Repeated Realignments. **AU** Bartolini, Leonardo; Bodnar, Gordon M.

TI An Analysis of the Process of Capital Liberalization in Italy. **AU** Bartolini, Leonardo; Bodnar, Gordon M.

Bollerslev, Tim

PD June 1992. **TI** Financial Market Efficiency Tests. **AU** Bollerslev, Tim; Hodrick, Robert J. **AA** Northwestern University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4108; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 49. **PR** $3.00. **JE** G14, C51, C52, C15. **KW** Financial Markets. Efficient Markets. Model Selection.

AB This paper provides a selective survey of the voluminous literature on tests for market efficiency. The ideas discussed include standard autocorrelation tests, multi-period regression tests and volatility tests. The formulation and estimation of models for time-varying volatility are also considered. Dependence in second-order moments plays an important role in implementing and understanding tests for market efficiency. The distributions of the test statistics under various alternatives, including fads and bubbles, are illustrated through the use of Monte Carlo methods. In addition to the standard constant discount rate present value model, we postulate and simulate a new fundamental price relationship that accounts for the time-varying uncertainty in the monthly dividend growth rates.

Bonanno, Giacomo

PD June 1992. **TI** Information, Rational Beliefs and Equilibrium Refinements. **AA** University of California, Davis. **SR** University of California at Davis Economics Department Working Paper: 401; Department of Economics, University of California at Davis, Davis, CA 95616-8578. **PG** 25. **PR** $3.00 U.S. and Canada. $4.00 International. **JE** C72. **KW** Nash Equilibrium. Subgame Perfect Equilibrium. Rationality.

AB We challenge the view that (granted that each refinement of Nash equilibrium incorporates a well-defined notion of rationality) what is involved in moving from one solution concept to a refinement of it is a strengthening of the underlying notion of rationality. We begin with an axiomatic definition of rationality, which is formulated independently of the notion of strategy (and therefore of Nash equilibrium). We then show that this notion yields different solution concepts (Nash, subgame-perfect, "perfect Bayesian") when applied to different members of the normal-form equivalence class of a given extensive game. The paper makes use of the notions of information and rational beliefs introduced by Bonanno (1992a,b).

Boozer, Michael A.

PD June 1992. **TI** Race and School Quality Since Brown vs. Board of Education. **AU** Boozer, Michael A.; Wolkon, Shari; Krueger, Alan B. **AA** Boozer: Princeton University. Wolkon: Cornell University. Krueger: Princeton University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4109; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 48. **PR** $3.00. **JE** I21, J15. **KW** Racial Segregation. Education.

AB This paper presents evidence on the quality of schooling by race and ethnic origin in the United States. Although substantial racial segregation across schools exists, the average pupil-teacher ratio is approximately the same for black and white students. Hispanic students, however, on average have 10 percent more students per teacher. Relative to whites, blacks and Hispanics are less likely to use computers at school and at work. The implications of these differences in school quality for labor market outcomes are examined. We conclude by examining reasons for the increase in the black-white earnings gap since the mid-1970's.

Bordo, Michael D.

PD March 1992. **TI** The Gold Standard as a Rule. **AU** Bordo, Michael D.; Kydland, Finn E. **AA** Bordo: Rutgers University and National Bureau of Economic Research. Kydland: Carnegie-Mellon University. **SR** Federal Reserve Bank of Cleveland Working Paper: 9205; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 35. **PR** not available. **JE** E50, E52, E58. **KW** Gold Standard. Monetary Rules.

AB In this paper, we show that the monetary rule followed by a number of key countries before 1914 represented a commitment technology preventing the monetary authorities from changing planned future policy. The experiences of these major countries suggest that the gold standard was intended as a contingent rule. By that, we mean that the authorities could temporarily abandon the fixed price of gold during a wartime emergency on the understanding that convertibility at the original price of gold would be restored when the emergency passed.

Bossaerts, Peter

PD June 1992. **TI** Lower Bounds on Asset Return Comovement. **AA** California Institute of Technology. **SR** Caltech Social Science Working Paper: 797; Division of Humanities and Social Sciences, 228-77, California Institute of Technology, Pasadena, CA 91125. **PG** 15. **PR** no charge. **JE** G12, G13, F31. **KW** Dynamic Asset Pricing. Foreign Exchange Market. Options.

AB Under standard assumptions from dynamic asset pricing theory (value additivity, complete markets, rational expectations, and strict stationarity and ergodicity) and absence of arbitrage, lower bounds on the conditional and unconditional cross-moments of the returns on two assets are derived. They are expressed in terms of the second moment of a linear combination of option premia. The restrictions are probed with data from the foreign exchange market covering the period 1983-1991. Assuming that the value of the economy's benchmark payoff never exceeds one, and substituting linear projection for conditional expectation, several violations of the conditional lower bounds are discovered. The violations are attributed to unit roots in the data.

Boudoukh, Jacob (Kobi)

PD July 1991. **TI** An Equilibrium Model of Nominal Bond Prices with Inflation-Output Correlation and Stochastic Volatility. **AA** New York University. **SR** New York University Salomon Brothers Working Paper: S-92-28; 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** 33. **PR** $5.00. **JE** G12, G13, E21, E31. **KW** Consumption Growth. Bond Prices. Inflation.

AB A vector autoregressive model is used to describe the joint dynamics of consumption growth and inflation. Motivated by empirical evidence, the vector autoregression is extended to allow for time variations in the volatility of inflation, driven by an unobservable autoregressive factor. Bond prices, the conditional expectation of a function of these factors, are approximated. We show that the order of magnitude of the mean, variance, and autocorrelation of yields is captured relatively well by the dynamic system specified for inflation and consumption. The co-dependencies of consumption and inflation are shown to be important determinants for both real and nominal rates.

PD October 1991. **TI** Liquidity as a Choice Variable: A Lesson from the Japanese Government Bond Market. **AU** Boudoukh, Jacob (Kobi); Whitelaw, Robert F. **AA** Boudoukh: New York University. Whitelaw: Stanford University. **SR** New York University Salomon Brothers Working Paper: S-92-27; 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** 26. **PR** $5.00. **JE** G12, G13, G20. **KW** Liquidity. Bond Pricing. Financial Institutions.

AB In Japan, almost identical government bonds can trade at large price differentials. Motivated by this phenomenon, this paper examines the issue of the value of liquidity in markets for riskless securities. We develop a model of an issuer of bonds, a market maker and heterogeneous investors trading in an incomplete market. We consider the appropriateness of the assumptions of the theoretical model in relation to the institutional features of the Japanese government bond market, and explain why and how price segregation occurs within the model. We show not only that divergent prices can be sustained in a rational expectations equilibrium, but also that this divergence may be optimal from the perspective of the issuer/market maker.

Brainard, S. Lael

PD May 1992. **TI** Strategic Trade Policy with Incompletely Informed Policymakers. **AU** Brainard, S. Lael; Martimort, David. **AA** Brainard: Massachusetts Institute of Technology and National Bureau of Economic Research. Martimort: Universite des Sciences Sociales. **SR** National Bureau of Economic Research Working Paper: 4069; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** $5.00. **JE** D82, F10, F13. **KW** Trade Policy. Incomplete Information. Precommitment.

AB Ever since the inception of research on strategic trade policy, economists have warned that the informational requirements are high, and unlikely to be met in practice. This paper investigates the implications of incomplete information for a simple, rent-shifting trade policy of the type proposed in Brander-Spencer (1985). We find that asymmetric information undermines the precommitment effect of unilateral government intervention. This "screening" effect induces a downward distortion in the optimal subsidy. Finally, when a nonintervention-profit participation constraint is substituted for the conventional zero-profit participation constraint to take into account the special relationship between firms and policymakers in trade, the government eschews intervention altogether for high levels of uncertainty.

Brams, Steven J.

TI Putting the Other Side "On Notice" Can Induce Compliance in Arms Control. **AU** Kilgour, D. Marc; Brams, Steven J.

Brandolini, Andrea

PD July 1992. **TI** Nonlinear Dynamics, Entitlement Rules, and the Cyclical Behaviour of the Personal Income Distribution. **AA** London School of Economics. **SR** London School of Economics Centre for Economic Performance Discussion Paper: 84; Centre for Economic Performance, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 36. **PR** no charge. **JE** E32, D31. **KW** Business Cycles.

AB This paper attempts to analyze, in a theoretical perspective, the effects of economic fluctuations on the personal distribution of incomes. The framework developed here is logically separated into two building blocks. The first is a macrodynamic model determining wages and profits, i.e. the functional income distribution. The second is a set of "entitlement rules", regulating the assignment of wages and profits to people and, hence, the personal income distribution. This admittedly artificial separation has the advantage of providing an approach that can, in principle, be applied to different models of the trade cycle, and of highlighting the arbitrariness of the choice of the entitlement rules, whose main determinants are social and historical factors. This analytical framework is applied to Goodwin's growth-cycle model.

Braun, Phillip A.

PD June 1992. **TI** Time Nonseparability in Aggregate Consumption: International Evidence. **AU** Braun, Phillip A.; Ferson, Wayne E.; Constantinides, George M. **AA** Braun: Northwestern University. Ferson: University of Washington. Constantinides: University of Chicago and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4104; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 22. **PR** $3.00. **JE** E21, G12, C51, C52. **KW** Asset Pricing. Time Separability.

AB We study consumption-based asset pricing models which allow for both habit persistence and durability of consumption goods, using quarterly consumption and asset return data for six countries. We estimate the parameters representing habit persistence or durability, risk aversion and time preference for each of the countries. We find that time-nonseparable preferences improve the fit of the model. When the nonseparability parameter is statistically significant, its magnitude indicates that the effect of habit persistence dominates the effect of durability in consumption expenditures. However, the international evidence for habit persistence is weaker than it is for the United States. The results indicate that the simple model of time nonseparability does not provide a satisfactory explanation of consumption and asset returns.

Bregman, Arie

PD May 1992. **TI** The Production and Cost Structure of Israeli Industry: Evidence from Individual Firm Data. **AU** Bregman, Arie; Regev, Haim; Fuss, Melvyn. **AA** Bregman: Bank of Israel. Regev: Israel Central Bureau of Statistics. Fuss: University of Toronto and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4072; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 27. **PR** $3.00. **JE** D20, O53, C33. **KW** Israel. Production Function. Cost Function.

AB The main purpose of this paper is to present estimates of production and cost functions obtained from using a time-series, cross-section data set pertaining to Israeli industry. We include a detailed list of heterogeneity controls in the specifications which substantially enhances the explanatory power of the models and contributes to our understanding of the nature of Israeli industry. Econometric problems which arise in attempting to estimate production and cost functions from panel data, such as sample selectivity, serial correlation due to unobserved firm effects, and endogeneity are addressed.

Bresnahan, Timothy F.

PD June 1992. **TI** Output Fluctuations at the Plant Level. **AU** Bresnahan, Timothy F.; Ramey, Valerie A. **AA** Bresnahan: Stanford University and National Bureau of Economic Research. Ramey: University of California, San Diego and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4105; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** $3.00. **JE** L62, L23. **KW** Automobile Industry. Production Adjustment.

AB This paper studies weekly output fluctuations from 1972 to 1983 at fifty final assembly plants in the U.S. automobile industry. The study makes use of a new data set that contains detailed information on plant operations. The main findings of the paper are: (1) Even at the simplest fabrication and assembly plant, there are a variety of margins on which production quantities are adjusted; (2) The production adjustment margins appear to have very different dynamic characteristics; and (3) The analysis of plant level data can lead to conclusions that are dramatically different from those reached using aggregated data, even though the data are driven by industry-wide shocks.

PD August 1992. **TI** General Purpose Technologies: "Engines of Growth?" **AU** Bresnahan, Timothy F.; Trajtenberg, Manuel. **AA** Bresnahan: Stanford University. Trajtenberg: Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 16/92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, ISRAEL. **PG** 33. **PR** no charge. **JE** O33, O41. **KW** Technology. Technological Growth. Innovation.

AB Whole eras of technical progress and economic growth appear to be driven by a few key technologies, which we call General Purpose Technologies (GPT's). Thus the steam engine and the electric motor may have played such a role in the past, whereas semiconductors and computers may be doing as much in our era. GPT's are characterized by pervasiveness (they are used as inputs by many downstream sectors), inherent potential for technical improvements, and "innovational complementarities", meaning that the productivity of R&D in downstream sectors increases as a consequence of innovation in the GPT. Our analysis shows that the characteristics of GPT's imply a sort of increasing returns to scale phenomenon, and that this may have a large role to play in determining the rate of technical advance; on the other hand this phenomenon makes it difficult for a decentralized economy to fully exploit the growth opportunities offered by evolving GPT's.

Breton, Raymond

PD December 1991. **TI** The Non-State-Non-Market Component of the Social Order and the Production of Social Capital. **AA** University of Toronto. **SR** Papers in Political Economy Political Economy Research Group, University of Western Ontario: 17; Department of Economics, Social Science Centre, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 31. **PR** no charge. **JE** A13, Z10. **KW** Social Organization. Value System.

AB Three dimensions of the non-state-non-market component of the social order are identified and discussed: the civil, cultural and communal dimensions. These, it should be emphasized, are not separate sectors; they are facets of the social organization of society. They are distinguished for analytical purposes, but, in reality, they are intertwined in complex ways. This essay attempts to identity various dimensions of the social order. In particular, it emphasizes that the communal dimension refers to the social and normative infrastructure of society; it is not a separate sector. The institutions in the various domains of activity depend on this infrastructure for their effective functioning. No institution functions independently of the networks of social relations, of the content and character of these relations, and of their underlying system of values and norms.

Bronfman, Corinne

PD January 1992. **TI** Price Discovery Noise. **AU** Bronfman, Corinne; Schwartz, Robert. **AA** Bronfman: The Commodity Futures Trading Commission and the University of Arizona. Schwartz: New York University. **SR** New York University Salomon Brothers Working Paper: S-92-29; 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** 13. **PR** $5.00. **JE** G12, G14, G10. **KW** Stock Price Volatility. Stock Market Opening.

AB This paper analyzes the link between investor trading decisions and price discovery errors that may be a source of inflated price volatility at the opening, and inflated volume in the first half hour of the trading day on the New York Stock Exchange. Specifically, we seek insight into a phenomenon that we refer to as "price discovery noise." Our analysis suggests that price discovery noise at the market opening reflects the fact that, when risk averse public investors face transaction costs and uncertainty concerning the current price at which shares might trade, opening prices do not attain equilibrium values precisely. We show how the optimal price and and size of an investor's order may be specified, given the agent's risk aversion, initial shareholdings, and expectations concerning the transaction price in the current period and at the end of a holding period.

Brown, Stephen J.

PD April 1992. **TI** Exchange Rate Volatility and Equity Returns. **AU** Brown, Stephen J.; Otsuki, Toshiyuki. **AA** Brown: New York University. Otsuki: International University of Japan. **SR** New York University Salomon Brothers Working Paper: S-92-35; 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** $5.00. **JE** G12, G13. **KW** Arbitrage Pricing Theory. Risk Premia.

AB We study the effect of exchange rate changes on equity returns in the context of a multiperiod Arbitrage Pricing Theory model of global equity markets. The increasing integration of international asset markets suggest that a few variables might be sufficient to explain expected return differences and risk exposures across countries. Allowing risk premia to change through time in response to global macroeconomic factors, we find there is a significant premium due to exchange rate risk exposure.

Brugiavini, Agar

PD July 1992. **TI** Durable and Nondurable Consumption: Evidence from Italian Household Data. **AU** Brugiavini, Agar; Weber, Guglielmo. **AA** Brugiavini: Universita di Venezia. Weber: University College London, IGIER, and Institute for Fiscal Studies. **SR** Institute for Fiscal Studies (IFS) Working Paper: W92/13; Institute for Fiscal Studies, 7 Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 19. **PR** 3 pounds. **JE** D12, D91, C51, C52. **KW** Durable Goods. Consumer Credit.

AB This paper uses survey information on a cross section of Italian households to investigate the effects of credit availability on the choice between expenditure on durable goods (vehicles) and nondurable goods. On the basis of simple regressions, we establish two stylized facts: nondurable expenditure strongly correlates with the value of vehicles stock; and reported credit availability has major, ambiguous effects on this tradeoff. We show that both findings can be explained in a utility consistent, forward-looking framework, where the durable stock can be used as collateral for credit. We then argue that estimating the structural relations predicted by this model is preferable to estimating simple regressions. Our structural estimates broadly confirm the existence of credit-market effects, and reveal much variability of elasticities within the sample.

Bruno, Michael

PD May 1992. **TI** Stabilization and Reform in Eastern Europe: A Preliminary Evaluation. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/30; International Monetary Fund, Washington, DC 20431. **PG** 32. **PR** not available. **JE** E63, E65, F41. **KW** Structural Change. Privatization.

AB The paper analyzes common issues emerging from the recent experience with Fund-supported programs in Hungary, Poland, Czechoslovakia, Bulgaria and Romania. These comprise the initial price-overshooting and the output collapse, fiscal sustainability as well as the financial and structural problems associated with bad loan portfolios and sluggish implementation of privatization programs. Substantial success, in varying degrees, has been achieved in the initial macro-stabilization and opening-up effort. At the same time mounting difficulties with fiscal and monetary control may be emerging, as a result of social and political pressures and insufficiently clear policy signals on the micro-issues involving the sharp structural transformation of the productive and financial systems.

Bryan, Michael F.

PD December 1991. **TI** A Different Kind of Money Illusion: The Case of Long and Variable Lags. **AU** Bryan, Michael F.; Gavin, William T. **AA** Federal Reserve Bank of Cleveland. **SR** Federal Reserve Bank of Cleveland Working Paper: 9122; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 11. **PR** not available. **JE** E30, E31, E40, E52. **KW** Inflation. Money Growth. Monetary Transmission Mechanism.

AB The purpose of this paper is twofold. First, it is to show that the observed correlations between inflation and current and past money growth may be long even when the structural lags in the monetary transmission mechanism are not, as in the case of an economy with flexible prices. This point should be obvious to those familiar with the literature on real business cycles or the rational expectations critique of econometric analysis. Yet we note that many economists, both in research and policy arenas, continue to operate as if the implications of these models are not practically relevant. Our second purpose is to show why we think they are. We use a simple rational expectations model with flexible prices to explain why the lag between inflation and money growth appeared to be long before 1980 and why it has since disappeared.

Buiter, Willem H.

PD May 1992. **TI** Government Solvency, Ponzi Finance and the Redundancy and Usefulness of Public Debt. **AU** Buiter, Willem H.; Kletzer, Kenneth M. **AA** Buiter: Yale University and National Bureau of Economic Research. Kletzer: Yale University. **SR** National Bureau of Economic Research Working Paper: 4076; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 38. **PR** $3.00. **JE** H63, H20, D78. **KW** Government Debt. Taxation. Transfer Payments.

AB We investigate how the ability of the government to depart from budget balance and issue debt expands the set of equilibria that can be supported using lump-sum tax-transfer instruments. We show how this depends on the restrictions that exist on the capacity to tax and make transfer payments, and what these restrictions imply for the government's ability to issue debt. Central to our analysis is the definition of solvency for an infinite-lived government in an infinite-lived economy with overlapping generations of finite-lived households. With unrestricted taxes and transfers Ponzi finance is always possible but "inessential": it does not expand the set of equilibria that can be supported. Ponzi finance can be "essential" when taxes and transfers are restricted. The paper establishes a number of results that demonstrate how the government's ability to issue debt allows restricted tax-transfer schemes to support all equilibria attainable using unrestricted taxes and transfers.

Burda, Michael

PD May 1992. **TI** Trade Unions, Wages and Structural Adjustment in the New German States. **AU** Burda, Michael; Funke, Michael. **AA** Burda: INSEAD. Funke: Centre for Economic Policy Research. **SR** INSEAD Working Papers: 92/32/EP; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 26. **PR** not available. **JE** J31, J51, O15. **KW** German Unification. Structural Change.

AB The rapid wage increases observed in Eastern Germany over the past two years have important implications for the direction taken by structural change in this region. These implications are not solely negative, and remain controversial in the public debate. This paper discusses four aspects of a "high wage policy" on the economic transformation in the East and evaluates the economic assumptions necessary to generate them.

Burgess, Simon M.

PD March 1992. **TI** Matching and Unemployment Dynamics in a Model of Competition between Employed and Unemployed Job Searchers. **AA** Dartmouth College, Bristol University, and London School of Economics. **SR** Centre for Economic Performance Discussion Paper: 70; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 20. **PR** no charge. **JE** J64, E32. **KW** Job Search. Unemployment Dynamics.

AB This paper considers the dynamics of the labor market from a matching perspective, but allows for job search by the employed. In particular, the endogeneity of employed job search is shown to be important and significantly alters the nature of the labor market dynamics implied by the model. We discuss implications for transition rates into jobs and optimally chosen search intensity. We show that empirical estimates of matching functions need to be reinterpreted under this assumption, and show the interrelationships between the labor market flows and job creation and destruction to be rich and complex.

Caballero, Ricardo J.

PD June 1992. **TI** Microeconomic Adjustment Hazards and Aggregate Dynamics. **AU** Caballero, Ricardo J.; Engel, Eduardo M. R. A. **AA** Caballero: National Bureau of Economic Research and Massachusetts Institute of Technology. Engel: Massachusetts Institute of Technology and Universidad de Chile. **SR** National Bureau of Economic Research Working Paper: 4090; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 21. **PR** $3.00. **JE** E12, D21. **KW** Non-Constant Adjustment. Lumpy Behavior.

AB The basic premise of this paper is that understanding aggregate dynamics requires considering that agents are heterogeneous and that they do not adjust continuously to the shocks they perceive. We provide a general characterization of lumpy behavior at the microeconomic level in terms of an adjustment hazard function, that relates the probability that a unit adjusts to the deviation of its state variable from what would be its optimal level if frictions were momentarily removed. We argue that adjustment hazards that are eventually increasing with respect to the magnitude of this deviation are likely to be realistic. This allows for testable restrictions and a simple comparison with the partial adjustment model, which corresponds to the constant hazard case. We show how non-constant hazards generate non-linearities and history dependence in aggregate equations. We present an example based on U.S. Manufacturing employment and job flows, and find that increasing hazard models outperform partial adjustment models in describing aggregate employment dynamics.

PD June 1992. **TI** Price Rigidities, Asymmetries, and Output Fluctuations. **AU** Caballero, Ricardo J.; Engel, Eduardo M. R. A. **AA** Caballero: National Bureau of Economic Research and Massachusetts Institute of Technology. Engel: Massachusetts Institute of Technology and Universidad de Chile. **SR** National Bureau of Economic Research Working Paper: 4091; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 21. **PR** $3.00. **JE** E12, E23. **KW** Aggregate Uncertainty. Asymmetries.

AB In this paper we characterize the average response of output to aggregate demand shocks in an economy where individual firms follow state-dependent pricing rules. We find that: (i) the average response of output to aggregate uncertainty, (ii) there is an asymmetry in the response of output to aggregate demand expansions and contractions, which increases with core inflation and decreases with aggregate uncertainty, and (iii) this asymmetry also rises with the degree of asymmetry of aggregate demand shocks. Using annual data from 37 moderate-low inflation countries for the period 1960-1982, we find support for the basic implications of the model.

Cadot, Olivier

PD May 1992. **TI** Environmental Regulation and Innovation. **AU** Cadot, Olivier; Sinclair-Desgagne, Bernard. **AA** INSEAD. **SR** INSEAD Working Papers: 92/28/EP; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 19. **PR** not available. **JE** D78, L52, Q28. **KW** Incentive Scheme. Product Development.

AB The paper considers a case where the threat of environmental regulation can be used by a government to induce a domestic firm to engage in a socially desirable product-development effort. We use a stochastic game to show that even if the government is restricted to Markov strategies, a non-trivial, self-enforcing incentive scheme can be devised. More efficient outcomes can be implemented by equilibria using strategies that condition on the payoff-irrelevant history. We give an example of such an equilibrium.

Calem, Paul S.

PD July 1992. **TI** Reputation Acquisition and Persistence of Moral Hazard in Credit Markets. **AA** Federal Reserve Bank of Philadelphia. **SR** Federal Reserve Bank of Philadelphia Research Working Paper: 92-12; Working Papers, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, PA 19106. **PG** 21. **PR** no charge except overseas airmail, $2.00; checks/money orders in U.S. funds payable to Federal Reserve Bank of Philadelphia. **JE** G14, E51, O82. **KW** Credit Markets. Persistence.

AB The present paper explores the conditions under which moral hazard tends to persist in credit markets despite reputation effects, building on the model of Diamond (1989). Specifically, we derive necessary and/or sufficient conditions for persistence, given that borrowers may post collateral or down payment; that "safe" projects (projects having nonnegative expected net present value) may involve some risk of default, and that the expected return on a safe project may vary (in some predictable pattern) from period to period. Thus, we derive some new and interesting relationships between reputation and moral hazard in credit markets.

Calvo, Guillermo A.

PD May 1992. **TI** Currency Substitution in Developing Countries: An Introduction. **AU** Calvo, Guillermo A.; Vegh, Carlos A. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/40; International Monetary Fund, Washington, DC 20431. **PG** 27. **PR** not available. **JE** F41. **KW** Dollarization. Monetary Policy.

AB This paper reviews the main policy and analytical issues related to currency substitution in developing countries. The paper discusses, first, whether currency substitution should be encouraged or not; second, how the presence of currency substitution affects the choice of nominal anchors in inflation stabilization programs; third, the effects of changes in the rate of growth of the money supply on the real exchange rate; rate; fourth, the interaction between inflationary finance and currency substitution; and, finally, issues related to the empirical verification of the currency substitution hypothesis.

Card, David

PD May 1992. **TI** Bargaining Power, Strike Duration, and Wage Outcomes: An Analysis of Strikes in the 1880s. **AU** Card, David; Olson, Craig A. **AA** Card: Princeton University and National Bureau of Economic Research. Olson: Princeton University and University of Wisconsin, Madison. **SR** National Bureau of Economic Research Working Paper: 4075; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 37. **PR** $3.00. **JE** J52, N31. **KW** Labor Unions. Collective Bargaining.

AB We study strike durations and outcomes for some 2000 disputes that occurred between 1881 and 1886. Most post-strike bargaining settlements in the 1880s fell into one of two categories: either a union "victory", characterized by a significant wage gain or hours cut, or a union "defeat", characterized by the resumption of work at the previous terms of employment. We find a strong negative relation between strike duration and the value of the settlement to workers, reflecting the declining probability of a union victory among longer strikes. For the subset of strikes over wage increases we estimate a structural model that includes equations for the capitulation times of the two parties and a specification of the wage increase conditional on a union victory. This framework provides a simple index of employees' relative bargaining power, based on the relative time to a union capitulation.

Carlstrom, Charles T.

TI Inflation, Personal Taxes and Real Output: A Dynamic Analysis. **AU** Altig, David; Carlstrom, Charles T.

PD April 1991. **TI** Magnification Effects and Acyclical Real Wages. **AU** Carlstrom, Charles T.; Gamber, Edward N. **AA** Carlstrom: Federal Reserve Bank of Cleveland. Gamber: University of Missouri. **SR** Federal Reserve Bank of Cleveland Working Paper: 9105; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 19. **PR** not available. **JE** E32, E24. **KW** Real Business Cycles. Wages.

AB Real business cycle (RBC) theory has been successful in simulating the variability of and comovements among aggregate variables, such as output, consumption, and investment. However, in order to generate the observed movements in employment over the business cycle, RBC models have had to produce highly procyclical real wages. This is inconsistent with data showing that real wages are either slightly procyclical or acyclical. This paper presents a one-period, two-sector model that reconciles large movements in employment and output with acyclical real wages.

TI Bracket Creep in the Age of Indexing: Have We Solved the Problem? **AU** Altig, David; Carlstrom, Charles T.

PD October 1991. **TI** Zero Inflation: Transition Costs and Shoe-Leather Benefits. **AU** Carlstrom, Charles T.; Gavin, William T. **AA** Federal Reserve Bank of Cleveland. **SR** Federal Reserve Bank of Cleveland Working Paper: 9113; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 15. **PR** not available. **JE** E30, E31, E60. **KW** Disinflation. Inflation Costs.

AB In this paper we show that the loss associated with a money-induced recession is actually of the same order of magnitude as the gain attributable to reduced shoe-leather costs if the inflation rate were reduced from 4 percent to zero. This result is important because the transition costs associated with ending inflation are thought to be large, capturing the main costs of a disinflation policy, while the shoe-leather costs are generally thought to be only a small, insignificant share of the total costs of inflation.

Cave, Jonathan

PD February 1992. **TI** Cartel Quotas Under Majority Rule. **AU** Cave, Jonathan; Salant, Stephen. **AA** Cave: Rand Corporation. Salant: University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory, (CREST), Working Paper: 92-04; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 17. **PR** not available. **JE** D43, L13, L10. **KW** Cartels. Quota Selection.

AB We examine the choice of quotas by legal volume-restricting organizations. Legal cartels have published regulations and broad enforcement capabilities. Differences in costs and size among cartel members make quota selection contentious. Conflicts over quotas are typically resolved by voting. Cartel regulations usually require that quotas be chosen in the following manner: a scalar (depending on context capacity, inventory, historical output or historical exports) is assigned to each entity subject to regulation. Cartel members then vote on the common percentage of each scalar which is the maximum the entity may sell. Side-payments to influence votes are prohibited. We examine the predicted effects of this real-world institution on prices and welfare and compare the equilibrium outcomes to what would occur is joint profits were instead maximized. We also show the economic consequences of exogenous political changes such as alternations in the voting weights or in the identity of the voters.

Chadha, Bankim

TI Growth, Productivity, and the Rate of Return on Capital. **AU** Adams, Charles; Chadha, Bankim.

Chalkley, Martin

PD not available. **TI** A Note on the Approximation of Models of Hysteresis. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9211; Department of Economics, University of Southampton, Southampton 509 5NH, ENGLAND. **PG** 11. **PR** no charge. **JE** C61. **KW** Menu Costs.

AB Following the recent work of Dixit (1991) this paper presents a simple stochastic menu cost model that can be solved exactly in the limit as discounting is ignored. Dixit's approximate analytic solutions are confirmed for this model and generalized to allow both for arbitrary magnitudes of menu costs and arbitrary flow costs of deviations. In particular the conjecture that small menu costs generate a range of inertia two orders of magnitude greater than the power of the flow cost of deviation function are confirmed. The method used in approximating a discounted problem by a simpler and more intuitive average cost problem has many further applications.

Chan, K. C.

PD May 1992. **TI** Global Financial Markets and the Risk Premium on U.S. Equity. **AU** Chan, K. C.; Stulz, Rene M.; Karolyi, G. Andrew. **AA** Chan and Karolyi: Ohio State University. Stulz: Ohio State University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4074; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $3.00. **JE** G15, C22. **KW** International Financial Markets. Asset Pricing.

AB We document that there is a significant foreign influence on the risk premium of U.S. assets. Using a bivariate GARCH-in-mean process for conditional expected excess returns, we find that the conditional expected excess return on U.S. stocks is positively related to the conditional covariance of the return of these stocks with the return on a foreign index but is not related to its own conditional variance. Further, we are unable to reject the international version of the CAPM. Evidence is presented for different model specifications, multiple-day returns and alternative proxies of foreign stock returns including the Nikkei 225 Stock Average, Morgan Stanley Japan and Morgan Stanley EAFE indices.

Chand, Sheetal K.

PD May 1992. **TI** Fiscal Impulses and Their Fiscal Impact. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/38; International Monetary Fund, Washington, DC 20431. **PG** 13. **PR** not available. **JE** H61, C82. **KW** Fiscal Impulse Measure. Budget.

AB Fiscal impulse measures are used in the World Economic Outlook and elsewhere to indicate the changing impact of the budget on the economy. Such measures are intended to provide more accurate indications of whether the budget is becoming more or less expansionary than would just observing moments in the actual budget balance. However, they have been criticized for lacking an analytical rationale. This paper uses a simple framework to show that the fiscal impulse measure can be analytically derived. While this removes one source of criticism, the measure, nevertheless, should be used carefully when making inferences of fiscal impact.

Chang, Pamela H.

PD 1992. **TI** Time-Varying Risk Premium in the Foreign Exchange Market: Assessing Specification Tests and Measuring Model-Noise Error. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9212; Department of Economics, University of Southampton, Southampton S09 5NH, ENGLAND. **PG** 25. **PR** no charge. **JE** F31, G14, G15. **KW** Market Efficiency. Signal-Extraction. Risk Premia.

AB This paper is an examination of the efficiency of the foreign exchange market using a signal-extraction approach. Many economists have tested the idea of "simple efficiency" in the foreign exchange market which requires that the investors have unbiased rational expectations and that the risk premium be non-existent. Rejection of these tests has led to the belief that there may exist an exchange rate risk premium. The signal-extraction framework shifts the emphasis away from merely testing for specification error, and thus rejecting the null, to measuring the deviation from the null model. The results from this analysis are consistent with the more recent empirical work in rejecting the null hypothesis of market efficiency under the specification of the consumption capital asset pricing model. Using a typical information set, the variance of model-noise error appears to capture over 20 percent of the variance in the forecast errors. The inclusion of risk-averse behavior does not appear to alter this finding.

Chaykowski, Richard

TI Male Jobs, Female Jobs, and Gender Gaps in Benefits Coverage. **AU** Currie, Janet; Chaykowski, Richard.

Cho, In-Koo

PD May 1992. **TI** Induction and Bounded Rationality in Repeated Games. **AU** Cho, In-Koo; Matsui, Akihiko. **AA** Cho: University of Chicago. Matsui: University of Pennsylvania. **SR** University of Pennsylvania CARESS Working Paper: 92-16; 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, C70. **KW** Bounded Rationality. Inductive Schemes. Belief Functions.

AB This paper investigates the set of equilibria in infinitely repeated two-by-two bimatrix games with a restricted strategy space. We restrict the strategy space to the set of inductive schemes. The decision rules that we consider are what we call threshold decision rules. A threshold decision rules is a function with at most one threshold at which the value is changed. Modelling bounded rationality in this way, we show that the only Nash equilibria in a repeated prisoner's dilemma are the repetition of (C,C) and repetition of (D,D).

PD June 1992. **TI** Learning and the Ramsey Policy. **AU** Cho, In-Koo; Matsui, Akihiko. **AA** Cho: University of Chicago. Matsui: University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and Social Science (CARESS) Working Paper: 92-18; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 22. **PR** no charge. **JE** C73, D83. **KW** Repeated Game. Bounded Rationality.

AB We examine the classic policy problem of Ramsey [1927] modeled as an infinitely repeated game (Stokey [1991]) between the government and the private sector where the private sector consists of a continuum of identical households. We assume that the private sector is boundedly rational in the sense that its behavior is dictated by a learning scheme which is "inductive" and "naive". Instead of assigning a particular learning scheme to the players, we let each player choose a learning scheme from the class of "inductive" and "naive" learning schemes. By focusing on the actions dictated by learning schemes selected by the player, we can identify the Ramsey policy as the unique solution of the game where players do not discount future payoffs.

Choi, Frederick D. S.

PD January 1992. **TI** Effects of Alternative Goodwill Treatments on Merger Premia: Further Empirical Evidence. **AU** Choi, Frederick D. S.; Lee, Changwoo. **AA** New York University. **SR** New York University Salomon Brothers Working Paper: S-92-36; 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** $5.00. **JE** M41, G34. **KW** Accounting Practices. Mergers. Acquisitions.

AB While much attention has been devoted to documenting international differences in accounting practices, little has been devoted to documenting the impacts of such differences on market decisions. In this study, we examine accounting issues associated with international mergers and acquisitions, and in particular, whether national differences in the treatment of purchased goodwill are associated with differences in premia offered by non-U.S. as opposed to U.S. acquirors of U.S. target companies. We find merger premia offered by foreign acquirors who enjoy advantageous accounting or tax treatments relative to U.S. acquirors to be higher, on average, than those offered by U.S. acquirors.

PD May 1992. **TI** Corporate Disclosure Policy in an Asymmetric World. **AA** New York University. **SR** New York University Salomon Brothers Working Paper: S-92-37; 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** $5.00. **JE** M41, G32. **KW** Accounting Practices. Capital Markets.

AB Today we are witnessing a renewed interest in developing an international set of accounting standards that will serve as a universal language for international commerce and finance. This effort stems from the asymmetry between business decisions that are increasingly global in orientation versus financial information that is premised on a diverse set of national accounting standards and practices. Far from being an international language, accounting remains a babble of heterogeneous dialects. In this paper, I marshall recent empirical evidence on the capital market effects of international accounting and reporting differences. The policy implications of these findings for market regulators and corporate issuers in Japan are then discussed.

Chordia, Tarun

PD April 1992. **TI** Decimal Stock Trading and "Off-Floor" Market Making. **AU** Chordia, Tarun; Subrahmanyam, Avanidhar. **AA** Chordia: University of California, Los Angeles. Subrahmanyam: Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-92-15; Columbia University, Graduate School of Business, First Boston Series, New York, NY 10027. USA. **PG** 12. **PR** $5.00 academics and non-profit institution; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G10, G14, G18. **KW** Adverse Selection. Inventory Effects. Exchange Volume.

AB This paper presents a simple model of market making which incorporates both adverse selection and inventory effects, and derives equilibrium price schedules under specific parameterizations. The paper then analyzes the effect of a move from a finite "tick" size to decimal (continuous price) trading.

The tick size is shown to expose on-floor market makers to competition from other off-floor agents. It is shown that even if the off-floor continuous price schedule is dominated by the on-floor continuous price schedule (e.g., because of differences in the inventories or the risk aversion of off-floor and on-floor market makers), the minimum tick size regulation causes small orders to flow to off-flow market makers and large orders to flow to the exchange floor in equilibrium.

Choudhry, Nurun N.

PD March 1992. **TI** Fiscal Revenue, Inflationary Finance and Growth. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/23; International Monetary Fund, Washington, DC 20431. **PG** 18. **PR** not available. **JE** C61, E13, E63. **KW** Monetary Expansion. Inflationary Finance.

AB This paper analyzes the optimal rate of monetary expansion when government resorts to inflationary finance to generate additional investment for enhancing growth. If there are lags in tax collection, an increase in inflation erodes real fiscal revenue, thereby worsening the current balance while reducing government investment. This impedes capital accumulation as well as increases the welfare cost of inflation. As such, the optimal rate of monetary expansion, equilibrium capital-labor ratio, and output are lower while the marginal cost of inflationary finance is higher than they would be without collection lags. Simulations are performed to highlight empirical implications.

Christopeit, Norbert

PD May 1992. **TI** On the Existence and Characterization of Arbitrage-free Measures in Contingent Claim Valuation. **AU** Christopeit, Norbert; Musiela, Marek. **AA** Christopeit: University of Bonn. Musiela: University of New South Wales. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: B-214; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 19. **PR** no charge. **JE** G13. **KW** Option Prices. Portfolio Choice. Martingale Measures.

AB The pricing of options should be based on non-arbitrage considerations rather than on preference-related concepts such as expected values. The idea is to replicate a derivative security by a dynamic portfolio strategy whose initial value will then give the "fair" price of the contingent claim. Basically, the ingredients for a theory of option pricing are a price process X for some risky asset as well as the price. The problem is then to find a dynamical portfolio strategy such that its value process V(t) coincides at the expiration date T with the contingent claim to be priced. The initial amount V(0) will then give the fair or non-arbitrage price p of the contingent claim. p may most conveniently be calculated by evaluating the expected value of V(T) under a probability measure which is equivalent to the basic reference measure and under which X is a martingale. A problem of both practical and theoretical importance is to a) obtain a criterion of whether a given model for the price process X allows for an equivalent martingale measure or not; b) provide a method of constructing such a measure. These two question are addressed in the present paper.

Clark, Andrew

PD April 1992. **TI** Trade Union Utility Functions: A Survey of Union Leaders' Views. **AU** Clark, Andrew; Oswald, Andrew. **AA** Clark: Dartmouth College. Oswald: Dartmouth College, National Bureau of Economic Research, Centre for Economic Performance, University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 132; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 23. **PR** not available. **JE** J51. **KW** Union Objectives. Employment. Rent Maximization.

AB Although the assumption of a utility-maximizing trade union now appears in hundreds of economics papers, there is little empirical evidence on the nature of unions' preferences. This paper reports the results of a survey of British trade union leaders' views about their own union's objectives. It argues that the results provide evidence consistent with the small econometric literature: union preferences appear to be more heavily weighted towards employment than would be implied by so-called "rent maximization" (the assumption that the union cares about the sum of its members' income).

Clements, Michael P.

PD April 1992. **TI** On the Limitations of Comparing Mean Square Forecast Errors. **AU** Clements, Michael P.; Hendry, David F. **AA** University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 138; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 17. **PR** not available. **JE** C52, C15. **KW** Forecasting. Linear Models. Linear Transformations.

AB Linear models are invariant under non-singular, scale-preserving linear transformations, whereas mean square forecast errors (MSFEs) are not. Different rankings may result across models or methods from choosing alternative yet isomorphic representations of a process. One approach can dominate others for comparisons in levels, yet lose to another for differences, to a second for cointegrating vectors and to a third for combinations of variables. The potential for switches in ranking is related to criticisms of the inadequacy of MSFE against encompassing criteria, which are invariant under linear transforms and entail MSFE dominance. An invariant evaluation criterion which avoids misleading outcomes is examined in a Monte Carlo study of forecasting methods.

PD April 1992. **TI** Forecasting in Cointegrated Systems. **AU** Clements, Michael P.; Hendry, David F. **AA** University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 139; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 24. **PR** not available. **JE** C32, C52, C15. **KW** Cointegration. Forecast Error.

AB We consider the implications for forecasting accuracy of imposing unit roots and cointegrating restrictions in linear systems of I(1) variables in levels, differences and cointegrated combinations. Asymptotic formulae are obtained for multi-step forecast error variances for each representation. Alternative measures of forecast accuracy are discussed. Finite sample behavior in a bivariate model is studied by Monte Carlo using the preferred invariant measure of forecast accuracy, the generalized second moment of forecast errors. Forecast accuracy at medium step ahead horizons can be related to the design parameters specifying the data generating process.

Cochrane, John H.

PD June 1992. **TI** Asset Pricing Explorations for Macroeconomics. **AU** Cochrane, John H.; Hansen, Lars Peter. **AA** University of Chicago, National Bureau of

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Economic Research, and NORC. **SR** National Bureau of Economic Research Working Paper: 4088; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 56. **PR** $3.00. **JE** E10, G12, C82. **KW** Macro Models. Model Evaluation. Asset Market Data.

AB In this paper we argue that financial data are a useful proving ground for macroeconomic models, and we explore the channels that link asset market data to such models. We use Hansen and Jagannathan's bounds on the mean and standard deviation of discount factors to survey several asset pricing puzzles. We then extend the bounds to reflect the correlation of discount factors with asset returns and to characterize conditional moments of discount factors. These characterizations help us to understand the behavior of a variety of models studied in the literature. We also incorporate borrowing constraints into the calculations. The borrowing constraints loosen the required properties of aggregate measurements of intertemporal marginal rates of substitution, but also sharpen the implications of asset market data for the marginal rates of substitution of unconstrained individuals.

Collins, Susan M.

PD May 1992. **TI** The Expected Timing of EMS Realignments: 1979-83. **AA** Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4068; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** $5.00. **JE** F30, F31. **KW** Exchange Rate Realignment. Foreign Exchange Reserves.

AB This paper develops and estimates a model of the time at which market participants expected the French franc to be devalued relative to the German deutschemark during the early years of the European Monetary System. The model assumes that the expected time of exchange rate realignment is determined by the time at which foreign exchange reserves in the Banque de France first fall below a critical threshold level, and that reserves are a Brownian motion process with a drift that depends on current conditions. The empirical analysis uses the term structure of forward exchange rate premia to form indicators of perceived probabilities of realignment over various time horizons. The model fits quite well, especially prior to the March 1983 realignment. The estimation suggests that the expected timing of realignments was quite sensitive to the level of reserves in France and to factors that affect the mean rate of change of reserves.

Congleton, Roger D.

PD October 1991. **TI** Rational Ignorance, Rational Expectations, and Fiscal Illusion. **AA** George Mason University. **SR** Papers in Political Economy Political Economy Research Group, University of Western Ontario: 21; Department of Economics, Social Science Centre, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 29. **PR** no charge. **JE** D84, D83, H50. **KW** Optimal Information Acquisition. Biased Expectations.

AB The existence of fiscal illusion is generally argued to be a consequence of the process of optimal information acquisition. However, there has never been a careful statement of the conditions required for the process of information acquisition to generate biased expectations. This paper develops sufficient conditions for the existence of fiscal illusion in a context where the rational expectations hypothesis is used as a first approximation of individual expectations for policy matters on which they are at least partially informed. In this case, the only areas in which individuals could possibly have biased expectations are those in which they are completely ignorant. The paper characterizes conditions under which individuals will choose to remain completely ignorant of at least some policy matters and demonstrates such rational ignorance is a sufficient condition for the existence of fiscal illusion.

Constantinides, George M.

TI Time Nonseparability in Aggregate Consumption: International Evidence. **AU** Braun, Phillip A.; Ferson, Wayne E.; Constantinides, George M.

Cook, Phillip J.

TI Winner-Take-All Markets. **AU** Frank, Robert H.; Cook, Phillip J.

Cooper, Andrew F.

PD May 1992. **TI** Two Level Games and the Political Economy of Adjustment: Comparing Australian and Canadian Approaches Towards the Cairns Group and Agricultural Trade in the Uruguay Round. **AU** Cooper, Andrew F.; Higgott, Richard. **AA** Cooper: University of Waterloo. Higgott: Australian National University. **SR** Papers in Political Economy Political Economy Research Group, University of Western Ontario: 22; Department of Economics, Social Science Centre, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 29. **PR** no charge. **JE** Q17, F02, F13. **KW** Trade Negotiations. Agricultural Trade.

AB The emergence of the Cairns Group, and its role in the Uruguay Trade Round, is of some considerable interest for students in international relations, particularly students of international political economy. Progress in the agenda setting and in the negotiating process has been significantly facilitated by the activities of the Cairns Group as a constructive bridge builder and consensus seeker in the tense and often conflictual relationship not only between the major actors, but also between the major actors and some of the secondary actors with a high stake in the agricultural negotiations. Prominent within the group are Australia and Canada, two countries which have traditionally shared a number of common values and goals in the international system. Australia, and Canada have been joined by a variety of "unlike" countries, such as Brazil, Hungary and Indonesia. However, it was the tensions between Australia and Canada rather than the divisions between the developed and developing countries which caused the most problems.

Cooper, Russell

PD June 1992. **TI** Autos and the National Industrial Recovery Act: Evidence on Industry Complementarities. **AU** Cooper, Russell; Haltiwanger, John. **AA** Cooper: Boston University and National Bureau of Economic Research. Haltiwanger: University of Maryland. **SR** National Bureau of Economic Research Working Paper: 4100; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 65. **PR** $3.00. **JE** L62, L51, K23. **KW** Automobile Industry. Regulation. Production Cycles.

AB This paper investigates the motivations for, and implications of, the Automobile Industry code under the National Industrial Recovery Act. The amended code contained a provision calling for automobile producers to alter the timing of new model introductions and the annual automobile show as a means of regularizing employment in the industry. After documenting key features of the automobile industry during the 1920's and 1930's and outlining the provisions of the automobile code, we analyze two models of the annual automobile cycle to explain the observations. In one model, the NIRA code simply codified a change in industry behavior that would have taken place anyway due to a change in fundamentals in the economy during the early 1930's. The competing model introduces a coordination problem into the determination of the equilibrium timing of new model introductions.

Corbett, Charles

PD April 1992. **TI** The Natural Drift (What Happened to Operational Research?). **AU** Corbett, Charles; Van Wassenhove, Luk. **AA** INSEAD. **SR** INSEAD Working Papers: 92/25/TM; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 22. **PR** not available. **JE** M11, C44. **KW** Management Science. Operations Research.

AB The aim of this paper is to provide a critical view on the growing number of writings about the "crisis" in the OR/MS community. In contrast to most writings found in the OR/MS literature, however, this paper also considers articles from the Harvard Business Review, in order to provide a managerial perspective. Six main issues appearing in the debate are distinguished: the scientific versus technological nature of OR/MS, customer relations with users of OR/MS, the learning effect of an OR/MS study, tactical versus strategic importance of OR/MS, tool versus problem-orientation in OR/Ms, and the interdisciplinary character of OR/MS. We believe that the problems signaled are due to a phenomenon of "natural drift" between the scientific and the technological natures of OR/MS, as a result of which some fundamental aspects of OR remain underdeveloped. Finding better ways of managing the natural drift is needed to turn the so-called crisis into an opportunity.

Cowan, Robin A.

PD April 1992. **TI** Fundamental Issues in the Justification of Profits. **AU** Cowan, Robin A.; Rizzo, Mario J. **AA** Cowan: University of Western Ontario. Rizzo: New York University. **SR** New York University Economic Research Reports: 92-18; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 26. **PR** no charge. **JE** A13, P16. **KW** Morality. Profit Theory--Normative.

AB This paper discusses some of the more prominent arguments for and against the justification of profits. Early in the paper several different types of profit are distinguished to set the stage for the normative evaluation. Then arguments like utilitarianism and Pareto efficiency, evolutionism, rights and free exchange, fair exchange, "sweat-of-the-brow", and discovery are analyzed. The paper raises the important issues with which any normative theory of profits must deal.

Crabbe, Leland

PD May 1992. **TI** Yields and Tax Rates on Corporate, Municipal and Industrial Revenue Bonds: Testing Market Integration and the Miller Hypothesis with Micro-Data. **AU** Crabbe, Leland; Turner, Christopher M. **AA** Federal Reserve Board. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 200; C/O Stephen A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 18. **PR** no charge. **JE** E43, G12. **KW** Bond Market. Integrated Markets.

AB This study uses micro-data to examine relationships among yields on corporate, municipal, and industrial revenue bonds. Industrial revenue bonds are unique hybrid securities that have the tax advantages of municipal bonds and the default risk of corporate bonds. For the sample period 1986-90, the results suggest that offering features are priced equally in the three bond markets. In addition, corporate bonds and industrial revenue bonds appear to have the same default risk characteristics. These results are consistent with the hypothesis that the tax-exempt and taxable bond markets are integrated. The estimated federal tax rate of the marginal bond holder is significantly less than the rate suggested under the strong version of the Miller hypothesis. Variation in municipal yields across states is significantly related to state tax rates.

Craine, Roger

PD April 1992. **TI** Are Futures Margins Adequate? **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 92-192; IBER 156 Barrows Hall, University of California at Berkeley, Berkeley CA 94720. **PG** 31. **PR** $3.50 plus applicable sales tax. **JE** G13, G18. **KW** Margin. Default Option. Futures.

AB This paper presents an analytic derivation of the market value of the clearinghouse performance guarantee and an empirical evaluation of the adequacy of the futures market margin system. I examine the adequacy of the futures market margins on the December S&P 500 futures contract during October 1991 and October 1987. October 1991 is a "typical" month. In October 1991 the value of the default option equals zero. October 1987 is not a typical month. In October 1987 the market experienced the greatest price volatility since the Chicago Mercantile Exchange opened in 1919. The results indicate that the margin polices are sound. Zero, or very low values, of the default option are consistent with the fact that there has never been a clearinghouse failure.

Creedy, John

PD March 1992. **TI** Pensions and Income Redistribution with Endogenous Labour Supply. **AA** University of Melbourne. **SR** Institute for Fiscal Studies (IFS) Working Paper: W92/8; Institute for Fiscal Studies, 7 Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 11. **PR** 3 pounds. **JE** J22, J30, H52. **KW** Pensions. Labor Supply.

AB This paper examines the nature of the trade-offs involved in alternative state pension schemes. Comparisons are made of flat-rate and earnings-related pensions, in each case financed using a proportional tax on earnings. Earnings-related pensions are modelled as a two-tier scheme, as in the British state pensions scheme where there is a basic pension plus a second tier equal to a proportion of pensionable earnings in excess of the basic pension. Such schemes were compared in Creedy (1982) using a two-period model in which the first period corresponds to the working life and the second period corresponds to retirement, but it was assumed that earnings remain fixed irrespective of the pension and tax scheme. The present paper extends that analysis by allowing for labour supply responses, and adding a negative income tax in the first (working) period.

Cromwell, Brian A.

TI Local Banking Markets and Firm Location. **AU** Bauer, Paul W.; Cromwell, Brian A.

Cuevas, Alfredo

PD April 1992. **TI** The Invisible Grip of Anti-Dumping Laws: A Model of "Reciprocal Anti-dumping" Enforcement. **AA** Princeton University. **SR** Princeton Woodrow Wilson School Discussion Paper in Economics: 161; Woodrow Wilson School, Robertson Hall, Princeton University, Princeton, NJ 08544. **PG** 21. **PR** no charge. **JE** F12, F13. **KW** Anti-Dumping Policy. Commercial Policy. Price Competition.

AB Most forms of protection through trade policy are market-specific, and are targeted at markets where trade takes place or is expected to take place in the absence of the policy. To that extent, we can have a good idea of where the main effects of those policies will occur. However, anti-dumping codes are not market-specific. Any firm can file a complaint against allegedly dumped imports. This gives rise to the possibility that such form of protection may have undesirable "invisible" effects, that is, effects upon sectors where there is no trade in absence of the policy, and where, once the anti-dumping code is in place, either we continue to witness no trade, or we see an increase in expected import levels. These effects are the result of the impact of anti-dumping legislation upon potential foreign competitors.

Currie, Janet

PD June 1992. **TI** Male Jobs, Female Jobs, and Gender Gaps in Benefits Coverage. **AU** Currie, Janet; Chaykowski, Richard. **AA** Currie: Massachusetts Institute of Technology and National Bureau of Economic Research. Chaykowski: Queen's University. **SR** National Bureau of Economic Research Working Paper: 4106; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 21. **PR** $3.00. **JE** J16, J32, C31. **KW** Pensions. Labor Contracts.

AB Using contract-level data from the Canadian province of Ontario, we show that workers in predominately female bargaining units have more generous leave provisions but are less likely to have pension coverage than workers in similar predominantly male bargaining units. These differences persist when wages in the bargaining unit are controlled for. We explore the gender differences in pension coverage using a large cross-section of individual-level data and show that for women, lack of pension coverage is explained by gender gaps in wages and tenure which are themselves associated with marriage and child bearing. Finally, we assess the extent to which these findings are consistent with two alternative models of sex-segregation: Labor market discrimination, or a model in which segregation arises because women bear the chief responsibility for household production and tend to hold jobs which are compatible with that role.

Danthine, Jean-Pierre

PD March 1992. **TI** The Equity Premium and the Allocation of Income Risk. **AU** Danthine, Jean-Pierre; Donaldson, John B.; Mehra, Rajnish. **AA** Danthine: Universite de Lausanne and CEPR. Donaldson: Columbia University. Mehra: University of California, Santa Barbara. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-92-09; Columbia University, Graduate School of Business, First Boston Series, New York, NY 10027. USA. **PG** 27. **PR** $5.00 academics and non-profit institution; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** E32, G12. **KW** Equity Premium. Risk Sharing. Volatility.

AB This paper examines the extent to which the equity premium puzzle can be resolved by taking account of the fact that stockholders bear a disproportionate share of output uncertainty. We do this in the context of a non-Walrasian RBC model where risk reallocation is justified by borrowing restrictions. The risk shifting mechanism we propose has the same effect as would arise from a substantial increase in the risk aversion parameter of the representative agent and thus contributes to a significant rise in the equity premium. As with more standard RBC models, it remains that our model is unable to replicate key financial statistics. In particular, the observation that the equity return is more variable than national product cannot be accounted for under standard technology assumptions.

PD March 1992. **TI** The Equity Premium and the Allocation of Income Risk. **AU** Danthine, Jean-Pierre; Donaldson, John B.; Mehra, Rajnish. **AA** Danthine: Universite de Lausanne and CEPR. Donaldson: Columbia University. Mehra: University of California, Santa Barbara. **SR** Universite de Lausanne, Cahiers de Recherches Economiques: 9203; Departement d'Econometrie et d'Economie Politique, Univerite de Lausanne, BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. **PG** 27. **PR** no charge. **JE** E32, G12. **KW** Real Business Cycles. Output Uncertainty.

AB See other entry.

PD May 1992. **TI** Wage Bargaining Structure, Employment and Economic Integration. **AU** Danthine, Jean-Pierre; Hunt, Jennifer. **AA** Danthine: University of Lausanne. Hunt: Yale University. **SR** Universite de Lausanne, Cahiers de Recherches Economiques: 9204; Departement d'Econometrie et d'Economie Politique, Univerite de Lausanne, BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. **PG** 24. **PR** no charge. **JE** F15, J31, J61. **KW** European Integration. Labor Markets.

AB It is widely believed that the integration of European economies will have little impact on labor mobility. This does not mean, however, that European labor markets will be unaffected by the process of economic integration. In this paper we show that, with increased competition resulting from closer economic integration, the hump-shaped pattern summarizing the relationship between economic performance and the degree of centralization in wage bargaining (Calmfors and Driffill, 1988) flattens out. As a consequence, the importance of where a particular economy stands on the wage bargaining scale diminishes. However, we find that the post-integration wage-price structure is closer to the configuration familiar to decentralized economies. One can infer that the adjustment to the new environment could be more difficult for economies characterized by centralized wage bargaining.

Davidson, James

PD May 1992. **TI** An L1-Convergence Theorem for Heterogeneous Mixingale Arrays with Trending Moments. **AA** London School of Economics. **SR** London School of Economics Suntory-Toyota International Centre for Economics and Related Disciplines Working Paper: EM/92/242; Suntory-

Toyota International Centre for Economics and Related Disciplines, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 5. **PR** no charge. **JE** C60. **KW** Convergence Theorems.

AB This paper gives a generalization of an L1-convergence theorem for dependent processes due to Andrews (1988). Among the cases covered by this result are weak laws of large numbers for random sequences {X(t)} having moments tending to either infinity or zero as t goes to infinity.

PD May 1992. **TI** The Central Limit Theorem for Globally Nonstationary Near-Epoch Dependent Functions of Mixing Processes: The Asymptotically Degenerate Case. **AA** London School of Economics. **SR** London School of Economics Suntory-Toyota International Centre for Economics and Related Disciplines Working Paper: EM/92/243; Suntory-Toyota International Centre for Economics and Related Disciplines, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 10. **PR** no charge. **JE** C32. **KW** Mixing Process. Martingale Difference Process.

AB The central limit theorem in Davidson (1992a) is extended to allow cases where the variances of sequence coordinates can be tending to zero. A trade off is demonstrated between the degree of dependence (mixing size) and the rate of degeneration. For the martingale difference case, it is sufficient for the sum of the variances to diverge at the rate of log n.

Davis, Steven J.

PD June 1992. **TI** Cross-Country Patterns of Change in Relative Wages. **AA** University of Chicago, National Bureau of Economic Research and Federal Reserve Bank of Chicago. **SR** National Bureau of Economic Research Working Paper: 4085; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 28. **PR** $3.00. **JE** J31. **KW** Wage Inequality. Wage Structure.

AB This paper investigates movements in relative wages and wage inequality across thirteen of the world's major economies. Focusing on wages received by full-time male workers during the 1980's, the investigation uncovers several empirical regularities: (1) Most advanced industrialized economies show increases, often large, in wage inequality. In contrast, three of four middle income countries considered here show sharply declining wage inequality. (2) The advanced economies show large and persistent increases in the wages of prime age men relative to the wages of less experienced men. (3) Following a period of sharply declining education differentials, the advanced economies show rising or flat education differentials after 1980. Education differentials fell moderately to sharply in the middle income countries. (4) Wage inequality among observationally similar workers rose sharply in most advanced economies. (5) The structure of relative industry wages in the manufacturing sector became increasingly dissimilar across the advanced economies. The paper discusses several alternative interpretations of wage structure developments in the United States and other countries in the light of these empirical regularities.

Davison Geoffrey

TI *Secondary Currencies and High Inflation: Implications for Monetary Theory and Policy.* **AU** Auerbach, Paul.; Davison Geoffrey.; Rostowksi, Jacek.

De Gregorio, Jose

PD March 1992. **TI** Theories of Policy Accommodation: The Persistence of Inflation and Gradual Stabilizations. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/19; International Monetary Fund, Washington, DC 20431. **PG** 17. **PR** not available. **JE** E31, E50, E58. **KW** Inflation. Accommodation.

AB Persistent inflation and slow stabilization are usually the result of policy accommodation resorted to in an attempt to avoid the recessionary costs of a sharp reduction of inflation. This paper reviews three explanations for why policymakers, despite their dislike of inflation, may nevertheless choose to adopt accommodative policies. It emphasizes the role of indexation, uncertainty about policymakers' preferences, and the existence of fixed costs associated with the implementation of a stabilization program. The paper also presents some evidence on the extent of persistence of inflation across countries.

de Groote, Xavier

PD February 1992. **TI** An Approach to Single Parameter Process Design. **AU** de Groote, Xavier; Porteus, Evan L. **AA** de Groote: INSEAD. Porteus: Stanford University. **SR** INSEAD Working Papers: 92/17/TM; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 10. **PR** not available. **JE** C61, C63. **KW** Transformation. Affine Problem.

AB This paper presents an approach to the analysis of single parameter process design problems such as the problem of setup reduction formulated by van Beek (84), Porteus (1985), and van Beek and van Putten (87). The problems considered typically entail minimizing the sum of a convex and a concave function, and are therefore potentially difficult to solve. The approach consists of transforming such problems into equivalent affine problems involving the tradeoff between fixed and variable costs. The transformation enables the derivation of necessary and sufficient conditions for the quasi-convexity and the quasi-concavity of the original problem. Various structural properties and solution methods are discussed, including an algorithm for the finite case. The use of the approach is illustrated by a number of applications.

PD March 1992. **TI** Information Disclosure and Technology Choice. **AA** INSEAD. **SR** INSEAD Working Papers: 92/18/TM; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 16. **PR** not available. **JE** D21, D82. **KW** Strategic Decisions. Cost Structure. Private Information.

AB Is it in the interest of a firm to disclose information on its technology or cost structure? Should another firm take such information into account in its market decisions? In what kind of industry should we expect firms to exchange information on their costs? How does it affect the firms' initial choice of technology? These are the questions that are addressed below. The crucial difference with previous work on this problem - Fried (1984), Gal-Or (1986), Li (1985) and Shapiro (1986) - is that a firm's cost structure, instead of being exogenously given, results from a strategic decision. This leads to radically different predictions.

de la Rica, Sara

PD June 1992. **TI** Displaced Workers in Mass Layoffs: Pre-Displacement Earnings Losses and the Unions Effect.

AA University of the Basque Country and Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 303; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 21. **PR** $1.50. **JE** J31, J51. **KW** Job Separation. Wage Gap. Female Workers.

AB In the first part of the paper, I compare the pre-displacement earnings of workers displaced from distressed firms to the wages of non-displaced workers. The results suggest that displaced workers suffer losses that amount to 11% of their earnings before the actual separation occurs. The second part of the paper concerns union effects on wages in situations of long-run declining demand. The findings suggest that for females unions "harvest" the quasi-rents of declining firms by raising the union-nonunion wage gap.

De Souza, C. C.

PD December 1991. **TI** Some New Classes of Facets for the Equicut Polytope. **AU** De Souza, C. C.; Laurent, M. **AA** De Souza: Universite Catholique de Louvain. Laurent: LAMSADE, Universite Paris Dauphine. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9157; Universite Catholique de Louvain Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 35. **PR** not available. **JE** C60. **KW** Graph Theory. Equicut Polytope.

AB Given a graph G=(V,E) a cut in G that partitions V into two sets with two particular nodes is called an equicut. Assigning weights to the edges in E, the problem of finding a minimum weight equicut in G is known to be NP-hard. The convex hull of incidence vectors of equicuts in G is the equicut polytope Psub-EC (G). Here we describe several generalizations of a facet defining inequality introduced by Conforti et al. (1990a,b). Most of our inequalities have the interesting feature that their support graphs are planar but for some of them both planarity and connectivity properties are lost. Finally, we extend our results to obtain several new classes of facets for the cut polytope.

Debets, F. J. C.

PD January 1992. **TI** A Guided Tour Through Applications of OR-Techniques to Environmental Problems. **AU** Debets, F. J. C.; Van Wassenhove, Luk. **AA** INSEAD. **SR** INSEAD Working Papers: 92/24/TM; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 18. **PR** not available. **JE** C44, Q20. **KW** Operational Research. Environment.

AB This paper discusses how Operational Research (OR) techniques can be used in environmental problem solving. It is based on a restricted literature search and subsequent analysis of some 50 papers. We did not have the time nor the resources to perform an exhaustive literature study. Our only intentions were to roughly divide the field into topical areas, to provide an example problem for each and to point to some references for further reading. In short, the sole ambition of this paper is to give the reader a guided tour through "OR and Environment" land. We would be very pleased if it would contribute to making the "environmental world" interested in OR or the "OR world" interested in environmental problems.

DeGennaro, Ramon P.

TI On Flexibility, Capital Structure, and Investment Decisions for the Insured Bank. **AU** Ritchken, Peter; Thomson, James B.; DeGennaro, Ramon P.; Li, Anlong. **PD** September 1991. **TI** Troubled Savings and Loan Institutions: Voluntary Restructuring Under Insolvency. **AU** DeGennaro, Ramon P.; Lang, Larry H. P.; Thomson, James B. **AA** DeGennaro: University of Tennessee. Lang: New York University; Thomson: Federal Reserve Bank of Cleveland. **SR** Federal Reserve Bank of Cleveland Working Paper: 9112; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 26. **PR** not available. **JE** G20, G21, G28. **KW** Bank Regulation. Thrifts.

AB Regulatory agencies are unwilling or unable to close thrift institutions immediately upon insolvency. Instead, they have progressively reduced the thrift capital requirement, refrained from enforcing that requirement, and allowed thrifts to hold more nonmortgage loans in the hope that the industry would recover. According to this study, only 13 percent of the largest 300 firms eventually recovered between the end of 1979 and the end of 1989. When the thrift crisis surfaced in the early 1980's, the firms that ultimately recovered operated in a fashion similar to those that eventually failed. But in the mid-1980's, recovered thrifts pursued a risk-minimizing strategy. We find no evidence that managers of unsuccessful firms consumed more perquisites than their successful counterparts.

Demirguc-Kunt, Asli

PD March 1991. **TI** On the Valuation of Deposit Institutions. **AA** World Bank, Washington D.C. **SR** Federal Reserve Bank of Cleveland Working Paper: 9104; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 30. **PR** not available. **JE** G20, M41, G21. **KW** Deposit Institutions. Capital Valuation.

AB This paper seeks to develop a model for valuing the capital of deposit institutions. A concept of regulatory capital developed by Kane (1989) is modeled and estimated for a sample of failed and nonfailed institutions. Using data of failed institutions is helpful in highlighting the risk-taking incentives of low-capital institutions. Results confirm the importance of enforcing timely closure rules.

PD April 1991. **TI** Principal-Agent Problems in Commercial-Bank Failure Decisions. **AA** World Bank, Washington D.C. **SR** Federal Reserve Bank of Cleveland Working Paper: 9106; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 34. **PR** not available. **JE** G21, G28. **KW** Bank Regulation. Bank Failure.

AB The model developed in this paper seeks to express the regulator's failure decision process. Developing a theoretical model of failure decision-making makes it possible to incorporate explicitly into the empirical model the regulatory constraint and incentive effects. The results obtained from the empirical failure model shed light on various issues. First, regulatory constraints and incentives significantly influence the failure decision. The economic insolvency of an institution is also an important determinant of the failure decision, indicating that regulators are conflicted, rather than completely self-interested, agents of the taxpayer.

Dermine, Jean

PD March 1992. **TI** Deposit Insurance, Credit Risk and Capital Adequacy: a Note. **AA** INSEAD. **SR** INSEAD Working Papers: 92/19/FIN; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 14.

PR not available. JE G21, G22, G28. KW Bank Lending. Risk. Banking Regulation.
AB Previous research on deposit insurance and capital adequacy has modeled the bank as a corporate firm with risky assets and insured liabilities. No attempt was made to analyze explicitly the risk characteristics of bank assets. The purpose of the this paper is to model bank lending and calculate credit-risk sensitive insurance premia. The lending function of banks creates the need to model equity as a "capped" call option. Previous estimates of insurance premia which are based on a "naked" call assumption could be biased. Moreover, it is shown that the Modigliani-Miller capital structure irrelevance theorem implies the ineffectiveness of bank capital regulations.

Deza, Michel

PD January 1992. TI Hypermetric Graphs. AU Deza, Michel; Grishukhin, Viatcheslav P. AA Deza: University of Bonn and University of Paris. Grishukhin: Academy of Sciences of Russia. SR Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-92 751-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. PG 36. PR no charge. JE C44. KW Graph Theory. Path Distance.
AB Continuing [DGL1,2], we study here hypermetric graphs. Extreme hypermetric graphs (i.e. such that their path-distance matrix lies on an extreme ray of the cone of all hypermetrics) are classified as isometric subgraphs of the 1-skeleton of the Gosset polytope 3 sub 21; so there are only finitely many of them. Any hypermetric regular graph of diameter 2 is either code graph (i.e. an isometric subgraph of a halved cube) or an mx2 Cocktail Party graph K, or an extreme graph from the list, given in [BCS] of 187 exceptional regular graphs with least eigenvalue -2. Any hypermetric graph of this list, which is not code graph, is extreme. For example, all 9 maximal graphs of the list are extreme: the graphs NN148-152, 3 Chang graphs NN161-163 and the Shiafli graph N184.

PD February 1992. TI l sub 1-Rigid Graphs. AU Deza, Michel; Laurent, M. AA Deza: University of Paris. Laurent: University of Bonn and University of Paris. SR Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-92 743-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. PG 18. PR no charge. JE C44. KW Graph Theory. Isometric Subgraphs.
AB We show that many interesting graphs, when they are isometrically embeddable in some l sub 1-space, either have a unique l sub 1-embedding, or the variety of their l sub 1-embeddings comes from that of the complete graph.

Dick, Andrew

PD June 1992. TI Forecasting Nursing Home Utilization of Elderly Americans. AU Dick, Andrew; MaCurdy, Thomas; Garber, Alan M. AA Dick: Stanford University. Garber and MaCurdy: Stanford University and National Bureau of Economic Research. SR National Bureau of Economic Research Working Paper: 4107; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 33. PR $3.00. JE I11, J14, D81. KW Health Care. Elder Care.
AB Remarkably little is known about the amount of time that an elderly American can expect to spend in a nursing home, largely because available data are inadequate. We develop a transition probability model to infer the patterns and duration of nursing home stays experienced by representative men and women upon reaching the age of 65. We estimate the model using data form the 1982 and 1984 National Long Term Care Survey and the 1985 National Nursing Home Survey. According to our estimates, the risk that a 65 year-old will ever enter a nursing home is 35%. Most nursing home admissions are brief, but the few people who have long admissions account for most utilization. The modest but non-negligible risk of institutionalization lasting for years indicates that there may be an important role for insurance for catastrophic nursing home expenditures.

Dickens, William T.

TI Labor Market Segmentation, Wage Dispersion and Unemployment. AU Lang, Kevin; Dickens, William T.

PD June 1992. TI Labor Market Segmentation Theory: Reconsidering the Evidence. AU Dickens, William T.; Lang, Kevin. AA Dickens: University of California, Berkeley and National Bureau of Economic Research. Lang: Boston University and National Bureau of Economic Research. SR National Bureau of Economic Research Working Paper: 4087; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. PG 64. PR $3.00. JE J42, B41. KW Segmented Labor Markets.
AB We argue that Labor Market Segmentation theory is a good alternative to standard views of the labor market. Since it is sometimes argued that labor market segmentation theory is untestable, we first consider the uses of theory and the attributes of a good theory. We then argue that labor market segmentation has these attributes. It is internally consistent and is based on plausible assumptions about behavior and technology. More significantly, many of the predictions of the theory have been tested and confirmed. Further, from a dynamic view the theory has done quite well. When the theory has suggested new tests, far more often than not the predictions have been validated. We argue that further exploration of the implications of the theory for unemployment, trade policy and income distribution will provide useful insights and further tests of the theory.

Doms, Mark E.

PD May 1992. TI Estimating Capital Efficiency Schedules Within Production Functions. AA U.S. Bureau of the Census. SR Bureau of the Census Center for Economic Studies Discussion Paper: 92-4; Center for Economic Studies, Bureau of the Census, Washington, DC 20233. PG 24. PR not available. JE C82, C23, E22, L60. KW Capital Stock. Investment.
AB The appropriate method for aggregating capital goods across vintage to produce a single capital stock measure has long been a contentious issue, and the literature covering this topic is quite extensive. This paper presents a methodology that estimates efficiency schedules within a production function, allowing the data to reveal how the efficiency of capital good evolve as they age. Specifically we insert a parameterized investment stream into the position of a capital variable in a production function, and then estimate the parameters of the production function simultaneously with the parameters of the investment stream. Plant level panel data for a select group of steel plants employing a common technology are used to estimate the model. Our primary finding is that when using a simple Cobb Douglas production function, the estimated

efficiency schedules appear to follow a geometric pattern, which is consistent with the estimates of economic depreciation of Hulten and Wykoff (1981).

Donaldson, John B.

TI The Equity Premium and the Allocation of Income Risk. **AU** Danthine, Jean-Pierre; Donaldson, John B.; Mehra, Rajnish.

TI The Equity Premium and the Allocation of Income Risk. **AU** Danthine, Jean-Pierre; Donaldson, John B.; Mehra, Rajnish.

Dooley, Michael

PD March 1992. **TI** A Note on Burden Sharing Among Creditors. **AU** Dooley, Michael; Haas, Richard D.; Symansky, Steven. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/21; International Monetary Fund, Washington, DC 20431. **PG** 11. **PR** not available. **JE** F34. **KW** Debtor Countries. International Debt Problems.

AB This paper presents a framework for evaluating the relative contributions of different creditors in cases where only partial payments can be made by the debtor country. A methodology is developed to calculate partial payments--or alternatively put--determine residual financing. By focusing on the relative seniority of creditors and expectations of the debtor's ability to repay, alternative sharing rules are quantified. The measure is based on the expected present value of payments. Creditors earning a below-market rate of return suffer a burden; creditors earning the same rate of return are said to share the burden equally.

PD July 1992. **TI** Exchange Rates, Country Preferences, and Gold. **AU** Dooley, Michael; Isard, Peter; Taylor, Mark P. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: 92/51; International Monetary Fund, Washington, DC 20431. **PG** 23. **PR** not available. **JE** F31. **KW** Exchange Rates.

AB This paper provides indirect tests of the hypothesis that exchange rate movements may be largely coterminous with changes in preferences for holding claims on different countries. It is argued that changes in country preferences will be reflected systematically in the price of gold and hence, that gold price movements, under the maintained hypothesis, should have explanatory power with respect to exchange rate movements over and above the effects of monetary shocks. The paper applies multivariate vector autoregression and cointegration modeling techniques to test for the short-and long-run influence of gold prices on exchange rates conditional on other monetary and real macroeconomic variables, and applies the resulting error correction exchange rate equation to out-of-sample forecasting exercises.

PD July 1992. **TI** Endogenous Creditor Seniority and External Debt Values. **AU** Dooley, Michael; Stone, Mark R. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: 92/57; International Monetary Fund, Washington, DC 20431. **PG** 14. **PR** not available. **JE** E62, F34. **KW** Fiscal Financing. International Debt.

AB A new aggregation scheme used to measure the sources of fiscal financing of indebted countries suggests that there was a fundamental improvement in the seniority of domestic debt at the expense of foreign bank debt during the late 1980's. We argue that this was the revenue maximizing response of governments to internal and external capital flight that drained the domestic financial "tax base" subject to indirect taxation. Empirical analysis indicates that the profile of the sources of fiscal financing influenced external debt values. The econometric analysis also implies that previous studies have neglected an important reason for the decline in loan values from 1985 to 1989: the increase in international interest rates.

Dreze, Jacques H.

PD January 1992. **TI** Can Varying Social Insurance Contributions Improve Labour Market Efficiency? **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper:9206; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 40. **PR** not available. **JE** D81, H50, J38. **KW** Risk-Sharing. Social Insurance. Wages.

AB This paper, prepared for an IEA Conference in honor of James Meade on the Economics of Partnership, analyses the rationale and prospects for using cyclical variations in Social Insurance Contributions (SIC) as a means to reconcile wage flexibility with efficient risk-sharing between capital and labor. The idea of cyclical variations in SIC was introduced by Meade in 1938 with the objective of reconciling wage flexibility with stability of aggregate demand. The emphasis here is placed instead on the (complementary) risk-sharing aspect. A minimal theoretical model of a productive economy with a stock market is used to characterize wages compatible with efficient risk-sharing.

Drottboom, Michael

PD June 1992. **TI** On the Scope of Indirect Regulation of Monopolies in the Presence of Large Entry Cost. **AU** Drottboom, Michael; Leininger, Wolfgang. **AA** Drottboom: Fernuniversitaet Hagen; Leininger: Universitat Dortmund and Boston University. **SR** Boston University Industry Studies Program Discussion Paper: 31; Department of Economics, Boston University, Boston, MA 02215. **PG** 20. **PR** no charge. **JE** D42, L12, L51. **KW** Monopoly. Entry Deterrence. Regulation.

AB The paper reexamines the "costless" - indirect regulation mechanisms for monopolies proposed by Buruovsky and Zang (1991). This mechanism features a government agency, which announces entry subsidies in order to lower entry barriers and in order to induce the monopolist to entry-deferring behavior (as actual entry is socially not desirable). We point to a crucial commitment assumption in the set-up of the mechanism, which might give rise to a serious credibility (or "non-perfection") problem of equilibrium. Relaxation of this assumption is shown to lead to a new (incentive compatibility) constraint for the mechanisms designer. If binding, this constraint seriously limits the scope of the regulation scheme.

Dubin, Jeffrey A.

PD July 1992. **TI** Market Barriers to Conservation: Are Implicit Discount Rates Too High? **AA** California Institute of Technology. **SR** Caltech Social Science Working Paper: 802; Division of Humanities and Social Sciences, 228-77, California Institute of Technology, Pasadena, CA 91125. **PG** 12. **PR** no charge. **JE** D12, D91, Q41. **KW** Housing Market. Hedonic Regression.

AB This paper reconsiders whether implicit discount rates, generally cited as a market barrier to conservation, are really

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too high, and demonstrates that probabilistic choice studies of consumer durable purchases and hedonic housing price regression studies measure similar but non-identical discount factors. Four hedonic regression studies are reviewed which attempt to ascertain whether and to what extent the housing market capitalizes energy conservation investments. A theoretical model is presented which links the probabilistic choice and hedonic regression methods and shows how using results from both studies allows measurement of individual discount rates without bias. The paper identifies several factors which cause the degree of capitalization to differ from unity, resulting in consumer decisions which are rational from the individual perspective, but which can lead to low levels of social conservation.

Duncan, Alan

PD February 1992. **TI** NP-REG: An Interactive Package for Kernel Density Estimation and Non-Parametric Regression. **AU** Duncan, Alan; Jones, Andrew. **AA** Duncan: Institute for Fiscal Studies and University of York. Jones: University of Manchester. **SR** Institute for Fiscal Studies (IFS) Working Paper: W92/7; Institute for Fiscal Studies, Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 40. **PR** 3 pounds. **JE** C14, C87. **KW** Kernel Density. Nonparametric Regression.

AB The purpose of this paper is to act as a guide to the software NP-REG. It describes the methods of non-parametric density and regression estimation available in NP-REG, and demonstrates the graphical capability of the package. To put the software in context the paper also discusses the methodological issues raised by non-parametric estimation, reviews the statistical properties of the estimators, and gives some economic applications.

Dunne, Timothy

PD June 1992. **TI** Costs, Demand, and Imperfect Competition as Determinants of Plant-Level Output Prices. **AU** Dunne, Timothy; Roberts, Mark J. **AA** Dunne: U.S. Bureau of the Census. Roberts: Pennsylvania State University. **SR** Bureau of the Census Center for Economic Studies Discussion Paper: 92-5; Center for Economic Studies, Bureau of the Census, Washington, DC 20233. **PG** 23. **PR** not available. **JE** L66, D40. **KW** Product Differentiation. Bread Production. Price Competition.

AB The empirical modeling of imperfectly competitive markets has been constrained by the difficulty of obtaining micro data on individual producer prices, outputs, and costs. In this paper we utilize micro data collected from the 1977 Census of Manufactures to study the determinants of plant-level output prices among U.S. bread producers. A theoretical model of short-run price competition among plants producing differentiated products is used to specify reduced-form equations indicate that the main determinants of both the plant's output level and output price are the plant's own cost variables, particularly its capital stock and the prices of material inputs. The number of rival producers faced by the plant, the production costs of these rivals, and the demand conditions faced by the plant play no role in price or output determination. The results are not consistent with either oligopolistic competition or monopoly behavior, but rather are consistent with price-taking behavior by individual producers combined with output quality differentials across producers.

Dutta, Soumitra

PD **TI** Generalization With Neural Networks: An Application in the Financial Domain. **AU** Dutta, Soumitra; Shekhar, Shashi. **AA** Dutta: INSEAD. Shekhar: University of Minnesota. **SR** INSEAD Working Papers: 92/30/TM/FIN; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 20. **PR** not available. **JE** C63, G14. **KW** Neural Net. Bond Ratings.

AB Neural networks have traditionally been applied for the problem of recognizing patterns in data. More recently, researchers are exploring the use of neural networks for learning a domain model from training data, and then using the learned domain model to generalize about the problem domain. The benefits of using neural networks for generalization are high, especially in domains lacking well defined models. This paper explores the use of neural networks for generalization in the problem of predicting corporate bond ratings. The task of assigning ratings to corporate bonds is poorly understood, and lacks a well defined mathematical or heuristic model. A comparison is made between the effectiveness of neural network models and conventional statistical models. Our results indicate that neural networks can be used profitably for generalization problems.

PD 1992. **TI** Decision Support in Non-Conservative Domains: Generalization with Neural Networks. **AU** Dutta, Soumitra; Shekhar, Shashi; Wong, W. Y. **AA** Dutta: INSEAD. Shekhar and Wong: University of Minnesota. **SR** INSEAD Working Papers: 92/31/TM; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 21. **PR** not available. **JE** C63, C90. **KW** Decision Support Systems. Neural Net.

AB Models in conventional decision support systems (DSSs) are best suited for problem solutions in domains with well defined/structured (mathematical) or partially defined/semi-structured (heuristic) domain models. Non-conservative/unstructured domains are those which either lack a known model or have a poorly defined domain model. Neural networks (NNs) represent an alternative modeling technique which can be useful in such domains. NNs autonomously learn the underlying domain model from examples and have the ability to generalize, i.e., use the learned model to respond correctly to previously unseen inputs. This paper describes three different experiments to explore the use of NNs for providing decision support by generalization in non-conservative/unstructured domains. Our results indicate that NNs have the potential to provide adequate decision support in non-conservative/unstructured domains.

Eberts, Randall W.

PD January 1992. **TI** Wagner's Hypothesis: A Local Perspective. **AU** Eberts, Randall W.; Gronberg, Timothy J. **AA** Eberts: Federal Reserve Bank of Cleveland. Gronberg: Texas A&M University. **SR** Federal Reserve Bank of Cleveland Working Paper: 9202; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 15. **PR** not available. **JE** H10, H50, O10. **KW** Public Sector. Government Expenditure. Economic Development.

AB Wagner's hypothesis of an expanding public sector as an economy develops is tested using pooled time-series cross-sectional data for U.S. states from 1964 to 1986. Comparing government size among fiscal jurisdictions within a single nation reduces the problems of data comparability and of controlling for cultural and institutional differences that plague the more common international tests of this theory. Our results are inconsistent with Wagner's hypothesis, yielding a negative relationship between public-sector size and output. However, some empirical support is found in the protective services and public welfare components of government activity.

Eckstein, Zvi

PD July 1992. **TI** Duration to First Job and the Return to Schooling: Estimates from a Search-Matching Model. **AU** Eckstein, Zvi; Wolpin, Kenneth, I. **AA** Eckstein: Tel Aviv University and Boston University. Wolpin: University of Minnesota. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 13/92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, ISRAEL. **PG** 25. **PR** no charge. **JE** J64, C33. **KW** Unemployment. Job Search.

AB We use a search-matching-bargaining model to provide an interpretation of the observations on duration to first job and accepted wages that differentiates between behavioral influences and market fundamentals in determining the accepted wage-schooling relationship. We assume that the value of a sampled match is divided between the worker and the firm according to a Nash axiomatic bargaining rule, where the disagreement value is determined by the value of the option to continue to search for an alternative match. Furthermore, workers and firms decide on their search effort, recognizing that effort is costly and affects the probability of a meeting between a firm and a worker.

Edmonds, Graham J.

PD 1992. **TI** Unit Root Tests and Mean Shifts. **AU** Edmonds, Graham J.; O'Brien, R. J.; Podivinsky, Jan M. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9215; Department of Economics, University of Southampton, Southampton S09 5NH, ENGLAND. **PG** 12. **PR** no charge. **JE** C22, C12. **KW** Unit Roots. Test Statistics.

AB A mean shift can cause tests for a unit root to erroneously fail to reject the null hypothesis of the existence of a unit root. Perron (1990) and Hendry and Neale (1991) provide simulation evidence of this for (augmented) Dickey-Fuller tests in models without a time trend. This paper extends these analyses by considering a wider range of test statistics (including statistics proposed by Bhargava (1986) applied to models (possibly including a time trend) subject to a shift in mean. Our simulation results show that, at least for alternatives close to the unit root, either an appropriate Bhargava test statistic or the suitably normalized OLS estimator of the unit root has higher power than the Dickey-Fuller or augmented Dickey-Fuller t-tests. In particular, in models with a trend an increase in the mean shift does not reduce the power of Bhargava's R2 test as much as it reduces the power of the other tests.

Edwards, Sebastian

PD June 1992. **TI** Sequencing and Welfare: Labor Markets and Agriculture. **AA** University of California, Los Angeles and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4095; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 35. **PR** $3.00. **JE** O11, O13, D61. **KW** Economic Reform. Reform Sequence.

AB Recent discussions on structural adjustment and market-oriented reforms in developing and Eastern European nations have addressed the issue of the appropriate sequencing of these reforms. Most of the traditional work on the subject has concluded that the preferred sequencing should include, as a first step, the opening up of the trade account. This "trade account first" literature, however, has been mostly macroeconomic in nature, without explicitly exploring the microeconomic and welfare consequences of alternative sequencing strategies. In this paper I develop a formal intertemporal model to investigate the welfare effects of different reform sequences. More specifically, I analyze whether the "trade account first" recommendation can be backed theoretically by welfare considerations. The analysis focuses on the role of labor market distortions and of the agricultural sector. I find that there are very weak welfare-based arguments in favor of the "trade account first" sequencing.

Ehrenberg, Ronald G.

PD May 1992. **TI** Do Doctoral Students' Financial Support Patterns Affect Their Times-to-Degree and Completion Probabilities. **AU** Ehrenberg, Ronald G.; Mavros, Panagiotis G. **AA** Ehrenberg: Cornell University and National Bureau of Economic Research. Mavros: Cornell University. **SR** National Bureau of Economic Research Working Paper: 4070; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 23. **PR** $3.00. **JE** I22. **KW** Doctorate Completion. Education Finance.

AB American college graduates are much less likely to receive doctorates today than they were 20 years ago. Two important factors in this decline may be the increase in the length of time necessary for doctorate students to complete their programs that occurred over the period and the low completion rates of entrants into doctoral programs. Among the policies urged to prevent future Ph.D. shortages are increasing support for graduate students. Our paper uses data on all graduate students who entered Ph.D. programs in four fields during a 25-year period at a single major doctorate producing university to estimate how graduate student financial support patterns influence these outcomes. We find that completion rates and mean durations of times-to-completion are sensitive to the types of financial support the students received. A major finding is that the impact of financial support patterns on the fraction of students who complete programs is much larger than its impact on mean durations of times-to-degree.

Eichengreen, Barry

PD February 1992. **TI** Three Perspectives on the Bretton Woods System. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 92-191; IBER 156 Barrows Hall, University of California at Berkeley, Berkeley CA 94720. **PG** 35. **PR** $3.50 plus applicable sales tax. **JE** F00, F30. **KW** Exchange Rates. Bretton Woods.

AB Historians following too close on the heels of events, it is said, risk getting kicked in the teeth. Twenty years since the collapse of the Bretton Woods System is sufficient distance, one hopes, to safely assess the operation of the post-World War II exchange-rate regime. This chapter approaches the history and historiography of Bretton Woods from three perspectives. First, I ask how the questions posed today about the operation of Bretton Woods differ from those asked twenty years ago. Second, I explore how today's answers to familiar questions differ from the answers offered in the past. Third, I examine the implications of Bretton Woods experience for international monetary reform. In doing so I summarize the contributions of the papers presented to the NBER Conference, "A Retrospective on the Bretton Woods System.".

PD July 1992. **TI** A Consumer's Guide to EMU. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 92-200; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley CA 94720. **PG** 76. **PR** $3.50 plus applicable sales tax. **JE** F33, F41. **KW** European Monetary Unification. Common Currency. Financial Integration.
AB In the wake of the Maastricht summit, some form of European monetary unification seems increasingly likely by the end of the present century. Decisions currently being reached in Europe thus promise to transform the continent's monetary and economic landscape. Not surprisingly, analyzing EMU has become a growth industry for economists. This paper takes stock of that substantial and rapidly-expanding literature. I ask what questions have been raised by economic analyses to date and which if any have been adequately answered. I consider what issues have been neglected by previous analyses and suggest an agenda for research.

Ellis, Randall P.

PD June 1992. **TI** Hospital Cost Function Estimation When Firms May Not Try to Minimize Total Costs. **AA** Boston University. **SR** Boston University Industry Studies Program Discussion Paper: 29; Department of Economics, Boston University, Boston, MA 02215. **PG** 25. **PR** no charge. **JE** I11. **KW** Hospital Costs. Health Economics.
AB This paper examines some of the issues involved with estimation of hospital cost functions, with particular focus on the implications of the frequently made observation that decisionmakers that determine the inputs used and outputs produced may have objectives other than minimizing costs. The paper begins with a discussion of some of the difficulties related to measurement of the large number of outputs, aggregation across outputs, and measurement of output quality. A stylized model of hospital production and costs is then developed in order to highlight the role that payments policy and intermediate outputs plays in hospital behavior. The paper ends by considering the implications of the model for cost function estimation and interpretation, and making a few suggestions for future research.

Ellison, Glenn

PD June 1992. **TI** Rules of Thumb for Social Learning. **AU** Ellison, Glenn; Fudenberg, Drew. **AA** Ellison: Harvard University. Fudenberg: Massachusetts Institute of Technology and IDEI. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 92-12; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 41. **PR** not available. **JE** D83, C70, O33. **KW** New Technology. Technology Adoption.
AB This paper considers agents who use the experiences of their neighbors in deciding which of two technologies to use. We consider two learning environments, one where the same technology is optimal for all players and the other where each technology is better for some of them. In both environments, we suppose that players use exogenously specified rules of thumb that ignore all historical data but which may incorporate a tendency to use the more popular technology. These naive rules can lead to fairly efficient decisions in the long run, but adjustment can be quite slow when a superior technology is first introduced.

Elton, Edwin J.

PD February 1992. **TI** Return Generating Process and the Determinants of Term Premiums. **AU** Elton, Edwin J.; Gruber, Martin J.; Mei, Jianping. **AA** New York University. **SR** New York University Salomon Brothers Working Paper: S-92-34; 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** $5.00. **JE** G12. **KW** Asset Pricing. Bond Returns.
AB This paper examines asset pricing theories for treasury bonds using the full range of maturities with a simply multi-factor model. We allow bond factor loadings to vary over time according to term structure variables. The model characterizes not only the time variation in the expected return of bonds but also their unexpected returns. A nonlinear cross-equation restriction test is designed to test the arbitrage condition. We find that pure expectation theory of the term structure of interest rates is rejected by the data. Our empirical study of a two-factor model finds substantial evidence of time-varying term-premiums and factor loadings but the model is not rejected by the data.

Engel, Eduardo M. R. A.

TI Microeconomic Adjustment Hazards and Aggregate Dynamics. **AU** Caballero, Ricardo J.; Engel, Eduardo M. R. A.

TI Price Rigidities, Asymmetries, and Output Fluctuations. **AU** Caballero, Ricardo J.; Engel, Eduardo M. R. A.

Engel, Joachim

TI Model Estimation in Nonlinear Regression under Shape Invariance. **AU** Kneip, Alois; Engel, Joachim.

Engl, Greg

PD July 1992. **TI** The Core and the Hedonic Core: Equivalence and Comparative Statics. **AU** Engl, Greg; Scotchmer, Suzanne. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 92-197; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 27. **PR** $3.50 plus applicable sales tax. **JE** D50, C71. **KW** Monotonicity. Core Convergence. Cooperative Games.
AB For cooperative games in which players are identified with their attributes, we introduce the notion of the "hedonic core": there is a linear function on attributes that describes the payoff of each player or group of players. We show that for a class of large games with transferable utility, the hedonic core approximates the core. Equivalence of the core and the hedonic core has two implications: (i) Nontrivial groups of players whose attributes are close will have core payoffs that are close. (ii) The payoff received by a nontrivial group of players with given attributes must be similar in any two utility vectors in the

core. Using the notion that a game "exhausts blocking opportunities", we show that if this condition is satisfied in each of two finite games drawn according to distributions of attributes that weight a particular attribute differently, the hedonic payoff to that attribute is larger (no smaller) in the game that gives it less weight.

Estrin, Saul

PD March 1992. **TI** Banking in Transition: Development and Current Problems in Hungary. **AU** Estrin, Saul; Hare, Paul; Suranyi, Marta. **AA** Estrin: London School of Economics and London Business School. Hare: Edinburgh University and London School of Economics. Suranyi: Morgan-Stanley International, London. **SR** Centre for Economic Performance Discussion Paper: 68; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 51. **PR** no charge. **JE** E52, G21. **KW** Banking. Monetary Policy. Reforms. Eastern Europe.

AB Banking reform is one of the crucial components of a successful program of transition to the market. In Hungary, the banking system was highly centralized and based on supporting the central planning system from about 1950, though some decentralization was undertaken well before other countries in Eastern Europe. Commercial banks were split off from the central bank in 1987 and several joint venture, mainly private banks were established. The paper analyses the main features of reforms in Hungary's banking system, and the conduct of monetary policy in a rapidly evolving banking environment. The important interactions between economic reform, politics, and the banking system are also examined, including the impact of such phenomena as "queueing" and discussion of recent banking legislation.

Evans, Martin D. D.

PD July 1992. **TI** Trends in Expected Returns in Currency and Bond Markets. **AU** Evans, Martin D. D.; Lewis, Karen K. **AA** Evans: New York University. Lewis: University of Pennsylvania and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4116; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 25. **PR** $5.00. **JE** G12, F31. **KW** Excess Returns. Foreign Exchange. Asset Prices.

AB Under conventional notions about rational expectations and market efficiency, expected returns differ from the actual ex post returns by a forecast error that is uncorrelated with current information. In this paper, we describe how small departures from conventional notions of rational expectations and market efficiency can produce trends in excess returns. These trends are in addition to the trends typically found in the level of asset prices themselves. We report strong evidence from the presence of additional trends in excess foreign exchange and bond returns. We also estimate the additional trend component in excess returns on foreign exchange and find that it varied between -8% and 1% for one month.

Fanizza, Domenico

PD May 1992. **TI** Price Liberalization in a Reforming Socialist Economy: A Search Equilibrium Approach. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/44; International Monetary Fund, Washington, DC 20431. **PG** 16. **PR** not available. **JE** P22, D83. **KW** Socialist Reform. Bilateral Search.

AB A bilateral search model of the commodity market is formulated to study the effects of liberalizing prices in a reforming socialist economy. The main result is that if the competitive structure of the economy is not quickly modified to eliminate supply rents, price liberalization may be accompanied by substantial output losses. A role for tax policy in limiting output losses is identified.

Farazli, Jeannine M.

PD March 1992. **TI** Risk Premia in the Sovereign Loan Market. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 850; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 24. **PR** $3.00 Canada; $3.50 U.S. and elsewhere. **JE** F34. **KW** International Debt Problems. Contracts. International Organizations.

AB This paper offers an explanation of how risk premia emerge in the sovereign loan market. The economy is composed of countries which borrow each period from private banks. In the event of default, the bank imposes a penalty by seizing the country's overseas assets. The country may also choose to appeal to an international authority, such as the IMF, which determines whether the country must repay the loan or pay the penalty. This process takes one period to be completed and its outcome is stochastic. In an environment with a deterministic penalty to default, the supply of funds schedule is upward sloping. The interest rate on sovereign loans is greater than the prime rate charged on private loans, implying the existence of risk premia.

Farber, Henry S.

PD August 1992. **TI** Union Membership in the United States: The Decline Continues. **AU** Farber, Henry S.; Krueger, Alan B. **AA** Princeton University. **SR** Princeton Industrial Relations Section Working Paper: 306; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 28. **PR** $1.50. **JE** J50. **KW** Demand for Unions. Unions--U. S. Unions--Canada.

AB We use a demand/supply framework to analyze 1) the decline in union membership since 1977 in the United States and 2) the difference in unionization rates between the United States and Canada. We find that virtually all of the decline in union membership in the United States between 1977 and 1991 is due to a decline in worker demand for union representation. Next, we find that all of the higher unionization rate in the U.S. public sector in 1984 can be accounted for by higher demand for unionization and that there is actually more frustrated demand for union representation in the public sector. Finally, we tentatively conclude that the difference in unionization rates between the U.S. and Canada is accounted for roughly in equal measure by differences in demand and in supply.

Feenstra, Robert C.

PD July 1992. **TI** Accounting for Growth with New Inputs. **AU** Feenstra, Robert C.; Markusen, James R. **AA** Feenstra: University of California, Davis and National Bureau of Economic Research. Markusen: University of Colorado and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4114; National Bureau of Economic Research, 1050

Massachusetts Avenue, Cambridge, MA 02138. **PG** 21. **PR** $5.00. **JE** O41, O30, O33. **KW** Growth. Technological Change. Productivity.
AB In this paper we examine how to account for growth when new inputs are being created. In particular, we obtain a decomposition of growth into that due to a higher quantity of existing inputs, and that due to a greater range of inputs. This decomposition is first obtained for a single firm, with a CES production function. We then generalize to the GNP function of an economy, and again show how a decomposition of growth in GNP can be obtained. An example is presented of a two-sector economy, where new inputs are endogenously created each period, and a simple aggregate production function exists. Data for this economy are simulated, and the GNP function is estimated using various different measures of the factor inputs.

Ferrall, Christopher N.

PD June 1992. **TI** Earnings Inequality Within and Between Levels of Responsibility in Engineering. **AA** Queen's University. **SR** Queen's Institute for Economic Research Discussion Paper: 855; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 11. **PR** $3.00 Canada; $3.50 U.S. and elsewhere. **JE** J30, J40. **KW** Wage Distribution. Skill Distribution. Firm Hierarchy.
AB Responsibility is a scarce resource - - we can't all be chiefs. This paper tudies how responsibility was allocated among engineers between 1961 and 986 using the Current Population Survey and a Bureau of Labor Statistics alary survey that classifies workers by level within their firm. The ercentage of engineers assigned to low levels fell until 1976 and rose hereafter. This pattern follows the distribution of experience in the rofession, as measured in the CPS. Overall earnings inequality rose during wo periods, the early 1970's and 1980's. Inequality within level, however, teadily fell after 1976, so the later and sharper increase in inequality eflects a widening gap between job levels. This suggests that firms are etter able to assign workers responsibility when the profession is elatively young.

Ferson, Wayne E.

TI Time Nonseparability in Aggregate Consumption: International Evidence. **AU** Braun, Phillip A.; Ferson, Wayne E.; Constantinides, George M.

Fischer, Stanley

PD May 1992. **TI** Russia and the Soviet Union Then and Now. **AA** Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4077; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 48. **PR** $3.00. **JE** O11, O52, F13. **KW** Economic Restructuring. Soviet Collapse.
AB The main focus of this paper is on the process and progress of economic reform in Russia. But I start with historical questions that bear on the current situation. How advanced was Russia in 1913? What role did Gorbachev's policies play in bringing about the final collapse of the Soviet Union? I then turn to the close links between macroeconomic stabilization and enterprise restructuring that have emerged in the Russian political process, and analyze the need for an explicit industrial restructuring policy that goes beyond privatization. The paper concludes with a discussion of the interrelated questions of inter-republican trade, payments, and new currencies. I describe and evaluate the case for an inter-republican payments union or the more modest type of organization, an inter-republican payments mechanism, that is likely to emerge.

Fisher, Anthony C.

PD June 1992. **TI** Nonconvexity, Efficiency and Equilibrium in Exhaustible Resource Depletion. **AU** Fisher, Anthony C.; Karp, Larry S. **AA** University of California, Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics Working Paper: 574 rev.; Department of Agricultural and Resource Economics, 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 11. **PR** $5.00. **JE** Q31, C62. **KW** Nonconvex Costs. Backstop Technology.
AB We reconsider the problem of inefficiency and nonexistence of a competitive equilibrium in exhaustible resource markets where extraction costs are nonconvex. The existence of a backstop technology (which induces a flat portion of the industry demand curve) restores both existence and efficiency, provided that the backstop price is sufficiently low. If firms face even a small amount of uncertainty regarding their rivals' stocks, a backstop technology is sufficient to restore existence of competitive equilibrium, even if the backstop price is very high. In this case, however, the competitive equilibrium is not efficient.

PD June 1992. **TI** Assessing Climate Change Risks: Valuation of Effects. **AU** Fisher, Anthony C.; Hanemann, W. Michael. **AA** University of California, Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics Working Paper: 628; Department of Agricultural and Resource Economics, 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 32. **PR** $9.00. **JE** Q20, Q18. **KW** Global Warming. Cost-Benefit. Agriculture.
AB Other papers have discussed and documented the many and varied impacts from projected global warming and the uncertainties about the importance of the impacts. We do not propose to contribute anything of substance to this discussion. Instead, it will be the purpose of this paper to speculate about some of the implications for economic valuation. Our emphasis will be on ways of thinking about and dealing with major impacts, even, or perhaps especially, where there remains disagreement about magnitude and timing. In doing so, we are not necessarily coming down on the side of those who foresee the gravest impacts. Rather, the question we wish to address is, what if they are right? What are the implications for valuation? For that matter, what if there is a reasonable chance they are right? How does this affect valuation?.

PD June 1992. **TI** Optimal Response to Periodic Shortage: Engineering/ Economic Analysis for a Large Urban Water District. **AU** Fisher, Anthony C.; Fullerton, David; Hatch, Nile; Reinelt, Peter. **AA** University of California, Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics Working Paper: 629; Department of Agricultural and Resource Economics, 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 48. **PR** $20.75. **JE** Q25. **KW** Water Supply. Drought.
AB The problem addressed by this study is how a large urban water district can best respond to a drought or the prospect of a

drought. Specifically, what is the least-cost combination of alternatives to meet periodic shortages? A solution to this problem may involve structural approaches (such as developing new local storage capacity), a mix of structural and nonstructural (such as conjunctive use combined with water exchanges or sales), or purely nonstructural approaches (such as changes in water pricing). The application is to the East Bay Municipal Utility District (EBMUD), which includes portions of Alameda and Contra Costa counties on the east side of San Francisco Bay, but the concepts and methods (and some of the findings) will be relevant to other districts.

Flood, Robert P.

TI Anticipated Exchange Rate Reforms. **AU** Agenor, Pierre-Richard; Flood, Robert P.

TI A Theory of Optimum Currency Areas: Revisited. **AU** Aizenman, Joshua; Flood, Robert P.

Fogel, Robert W.

PD June 1992. **TI** Early Indicators of Later Work Levels, Disease, and Death. **AU** Fogel, Robert W.; Wimmer, Larry T. **AA** Fogel: University of Chicago and National Bureau of Economic Research. Wimmer: Brigham Young University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper Series on Historical Factors in Long Run Growth: 38; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. **PG** 34. **PR** $3.00. **JE** N31, C81, I12. **KW** Aging. Disease Incidence. Labor Force Participation.

AB This paper summarizes a collaborative project designed to create a public-use tape suitable for a prospective study of aging among a random sample of 39,616 men mustered into 331 companies of the Union Army. The aim of the project is to measure the effect of socioeconomics and biomedical factors during childhood and early adulthood on the development of specific chronic disease at middle and late ages, on labor force participation at these later ages, and on elapsed time to death. This paper surveys the nature of and quality of the data and data sources to be included in the study, discusses the characteristics of a subsample of recruits from 20 companies recently recruited, looks at questions of representativeness of Union Army recruits to the Northern white male population.

Foresi, Silverio

TI Asset Price Nonlinearities and Coordinated Noise Trading. **AU** Balduzzi, Pierluigi; Bertola, Giuseppe; Foresi, Silverio.

Forker, John

PD May 1992. **TI** Long Term Contracts and the EC Fourth Directive. **AU** Forker, John; Greenwood, Margaret. **AA** University of Bristol. **SR** University of Bristol Discussion Paper: 92/333; Department of Economics, University of Bristol, 8 Woodlands Road, BRISTOL, BS8 ITN, IRELAND. **PG** 19. **PR** no charge. **JE** M41. **KW** Accounting Practices. Compliance.

AB As a hybrid of the percentage of completion and contract completion accounting techniques the SSAP9 (1975) method of accounting for long term contract work in progress maximized the value of stock relief and resulted in a pattern of measurement characteristics similar to those observed for U.S. GAAP by Staubus (1985). This occurred at the expense of non-compliance with the fundamental accounting concepts of matching and consistency. To accounting policy makers in finding a balance between the interests of pressure groups and good accounting practice this paper applies the analysis of transactions costs and contractual governance to explain the importance of the matching concepts and investigates the response of firms to the different mandated measurement and disclosure requirements applicable to long term contracts in the period 1981-1990.

Frank, Andras

PD April 1992. **TI** Tree-Representation of Directed Circuits. **AU** Frank, Andras; Jordan, Tibor. **AA** Frank: University of Bonn and University of Budapest. Jordan: University of Budapest. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-92 754-OR Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 7. **PR** no charge. **JE** C44. **KW** Graph Theory.

AB We prove that a strongly connected directed graph G = (V,E) has a spanning tree T so that each fundamental circuit belonging to T is a directed circuit if and only if G has precisely |E|-|V|+1 directed circuits. Another characterization of such directed graphs will also be provided in terms of forbidden minors.

Frank, Robert H.

PD December 1991. **TI** Winner-Take-All Markets. **AU** Frank, Robert H.; Cook, Phillip J. **AA** Frank: Cornell University. Cook: Duke University. **SR** Papers in Political Economy Political Economy Research Group, University of Western Ontario: 18; Department of Economics, Social Science Centre, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 28. **PR** no charge. **JE** J41, J31. **KW** Wage Distribution. Economic Efficiency.

AB We describe the "winner-take-all" effect, a situation where a handful of the top participants in a market reap a disproportionate share of the total rewards. Such patterns are observed in entertainment fields, the arts, professional sports, law and medicine. This paper is organized in three parts: First, we examine the behavioral and economic causes of winner-take-all effects, and discuss several examples suggesting that these effects have been increasing over time and are by no means confined to celebrity labor markets. Second, we develop a series of simple models in which we explore the consequences of winner-take-all processes for economic efficiency. And finally, we examine the distributional implications of winner-take-all effects.

Franke, Gunter

PD April 1992. **TI** Idiosyncratic Risk, Sharing Rules and the Theory of Risk Bearing. **AU** Franke, Gunter; Stapleton, Richard C.; Subrahmanyam, Marti G. **AA** Franke: University of Konstanz. Stapleton: Lancaster University. Subrahmanyam: New York University and INSEAD. **SR** INSEAD Working Papers: 92/34/FIN; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 30. **PR** not available. **JE** G11, D81. **KW** Portfolio Choice. Income Uncertainty. Non-insurable Risk.

AB It has been recognized in the literature that the choice of an agent between risky and riskless assets is complicated by the existence of other unavoidable risks [Ross (1981), Kihlstrom, Romer and Williams (1981), Nachman (1982) and Pratt and

Zeckhauser (1987)]. For instance, the purchase of assets by an individual investor may be made in the context of uncertain wage income. In this paper, we are concerned with the response of the agent to the existence of additional non-insurable income risk. In particular, the agent chooses state-dependent shares of aggregate marketable income (a sharing rule) to provide a partial hedge against the idiosyncratic risk. We focus on the form of the sharing rule in order to determine whether and when the agent is a buyer/seller of insurance. Since our emphasis is on the sensitivity of the optimal allocation decision with respect to the non-insurable risk, we need a measure to define the behavior of the marginal utility function. These are the concepts of absolute prudence and the precautionary premium proposed by Kimball (1990).

Friedman, Andrew L.

PD May 1992. **TI** The Stages Model and the Phases of the IS Field. **AA** University of Bristol. **SR** University of Bristol Discussion Paper: 92/330; Department of Economics, University of Bristol, 8 Woodlands Road, BRISTOL, BS8 ITN, IRELAND. **PG** 25. **PR** no charge. **JE** L86. **KW** Technology Field. Information Systems.

AB We argue that the organization's internal time-path of computer usage should be located in a context of changes in the IS field as a whole A model of the history of information systems management within user organizations is presented here, which specifies a series of phases the IS field has gone through. Each phase is defined by a critical problem or set of constraints. The phases model can be used to predict new pressures on IS executives and new directions for focusing research and education resources as well as supplementing Nolan's stages model of computer usage within organizations..

Froot, Kenneth A.

PD May 1992. **TI** Risk Management: Coordinating Corporate Investment and Financing Policies. **AU** Froot, Kenneth A.; Stein, Jeremy C.; Scharfstein, David S. **AA** Froot: Harvard University and National Bureau of Economic Research. Stein and Scharfstein: Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4084; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** $3.00. **JE** G32, D81. **KW** Corporate Finance. Hedging.

AB This paper develops a general framework for analyzing corporate risk management policies. We begin by observing that if external sources of finance are more costly to corporations than internally generated funds, there will typically be a benefit to hedging: hedging adds value to the extent that it helps ensure that a corporation has sufficient internal funds available to take advantage of attractive investment opportunities. We then argue that this simple observation has wide-ranging implications for the design of risk management strategies. We delineate how these strategies should depend on such factors as shocks to investment and financing opportunities. We also discuss exchange-rate hedging strategies for multinationals, as well as strategies involving "nonlinear" instruments like options.

Fudenberg, Drew

TI Rules of Thumb for Social Learning. **AU** Ellison, Glenn; Fudenberg, Drew.

Fulghieri, P.

PD February 1992. **TI** On the Strategic Role of High Leverage in Entry Deterrence. **AU** Fulghieri, P.; Nagarajan, S. **AA** Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-92-10; Columbia University, Graduate School of Business, First Boston Series, New York, NY 10027. USA. **PG** 15. **PR** $5.00 academics and non-profit institution; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G32, G33, D42. **KW** Entry Deterrence. Debt Financing.

AB This paper examines the strategic role of high levels of debt and bankruptcy threats in deterring entry into monopolistic markets. In the context of an infinite horizon entry game, we show that if a potential entrant has access to debt financing with limited liability, the unique subgame perfect equilibrium involves the entrant successfully issuing a high level of debt, entering the market and being met with cooperation. If, in addition to the entrant, the incumbent also has access to debt with limited liability, it will be highly levered and will completely pre-empt any entry in equilibrium. Finally, if the incumbent faces a variety of potential entrants with differing abilities to capture market shares, its optimal capital structure will help pre-empt the entry of the tougher entrants, while allowing the weaker ones to share the market. The empirical implications and possible application to LBOs and high leverage industries such as airlines and retailing are briefly discussed.

TI Dynamic Effects of Foreign Tax Credits on Multinational Corporations. **AU** Altshuler, Rosanne; Fulghieri, P.

Fullerton, David

TI Optimal Response to Periodic Shortage: Engineering/ Economic Analysis for a Large Urban Water District. **AU** Fisher, Anthony C.; Fullerton, David; Hatch, Nile; Reinelt, Peter.

Funke, Michael

TI Trade Unions, Wages and Structural Adjustment in the New German States. **AU** Burda, Michael; Funke, Michael.

Fuss, Melvyn

TI The Production and Cost Structure of Israeli Industry: Evidence from Individual Firm Data. **AU** Bregman, Arie; Regev, Haim; Fuss, Melvyn.

Gale, Douglas

PD June 1992. **TI** Price and Quality Cycles for Experience Goods. **AU** Gale, Douglas; Rosenthal, Robert W. **AA** Boston University. **SR** Boston University Industry Studies Program Discussion Paper: 35; Department of Economics, Boston University, Boston, MA 02215. **PG** 28. **PR** no charge. **JE** D40, D82, D83, L14, L15. **KW** Experience Goods. Quality Pricing. Reputation.

AB A dynamic, competitive model for experience goods is explored, and an equilibrium for it is studied in which firms plan initially to produce high quality at low price, then high quality at high price, then low quality at high price. Each consumer is aware that all firms eventually intend to run down their reputations at customer's expense, yet he rationally chooses to wait for direct evidence that the firm to which he is attached has already entered into the exploitative phase.

Gali, Jordi

PD April 1992. **TI** Local Externalities, Convex Adjustment Costs and Sunspot Equilibria. **AA** Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-92-07; Columbia University, Graduate School of Business, First Boston Series, New York, NY 10027, USA. **PG** 13. **PR** $5.00 academics and non-profit institution; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** D51, D62, D50. **KW** Productive Externalities. Adjustment Costs.

AB We study the possibility of random changes in the allocation of resources across regions/sectors in the presence of local productive externalities, in an environment without intrinsic uncertainty. We show that "positive" externalities over some range of activity are a necessary condition for existence of such sunspot equilibria. For the two-state sunspot case, we derive sufficient conditions for existence of sunspot equilibria, in terms of the properties of adjustment costs, private technologies, and externalities.

Gamber, Edward N.

TI Magnification Effects and Acyclical Real Wages. **AU** Carlstrom, Charles T.; Gamber, Edward N.

Gandal, Neil

PD August 1992. **TI** Hedonic Price Indexes for Spreadsheets and an Empirical Test of the Network Externalities Hypothesis. **AA** Tel-Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 18-92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 19. **PR** no charge. **JE** L86, O40, L13. **KW** Compatibility. Network Externalities. Hedonic Price Index.

AB In this paper, I first estimate and interpret hedonic price equations for computer spreadsheet programs and then use the analysis to empirically test whether network externalities exist in this industry. The results from this study are that consumers are willing to pay a significant premium for spreadsheets that are compatible with the Lotus platform and for spreadsheets that offer links to external data bases, and a smaller premium for spreadsheets that offer local area network compatibility. These results support the hypothesis that the computer spreadsheet market exhibits network externalities. The data also show that with the exception of the "network" features, the qualities most valued by consumers are basic rather than sophisticated. Finally, the quality-adjusted (real) price of computer spreadsheets has fallen by approximately 15 percent per annum over the last five years.

Ganoulis, Ioannis

PD December 1991. **TI** Stock Market Prices and Investment When Financial Markets are not Strongly Efficient. **AA** University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 128; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 29. **PR** not available. **JE** G14, D23, E22. **KW** Inefficient Financial Market. Asset Pricing. Adjustment Costs.

AB The real and financial corporate policies are examined in an intertemporal model of a firm, controlled by a subgroup of shareholders who are better informed than the financial markets. We find that an adjusted Tobin's q ratio is related the rate of investment, despite the non-strong efficiency of the stock market. It is further shown that convex adjustment costs may be entirely due to imperfections in the financial system. The investment path converging to the stationary equilibrium can be described in this case as a flexible accelerator rule, where the rate of adjustment depends on financial factors.

Garber, Alan M.

TI Forecasting Nursing Home Utilization of Elderly Americans. **AU** Dick, Andrew; MaCurdy, Thomas; Garber, Alan M.

Garratt, Rod

PD April 1992. **TI** On Decentralizing Lottery Allocations in a Market with Consumption Indivisibilities. **AA** University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 10-92; Working Papers Coordinator, Department of Economics, University of California at Santa Barbara, CA 93106. **PG** 29. **PR** no charge. **JE** D41, D51, C62. **KW** Stochastic Allocations. Consumption Possibilities Set.

AB The stochastic competitive (lottery) equilibrium concept of Prescott and Townsend [IER, 1984, Vol. 25, No. 1] is applied to a market where consumption indivisibilities provide a role for welfare-improving stochastic allocations. It is shown that gains from allowing stochastic allocations may not always be achieved through decentralized trade involving lotteries. A key consideration is the placement of bounds on the consumption possibilities set. A method for calculating the probability of existence of a lottery equilibrium which involves randomly and independently selecting the parameter on consumer preferences is presented. The probability of existence of a lottery equilibrium is strictly positive for finite consumer economies. It is proven that the set of economies for which a lottery equilibrium exists is strictly contained in the set of economies for which a sunspot equilibrium exists.

Gary-Bobo, Robert J.

TI An Exact Formula for the Lion's Share: A Model of Pre-Play Negotiation. **AU** Bensaid, Bernard; Gary-Bobo, Robert J.

Gasser, Theo

PD May 1992. **TI** Searching for Structure in Curve Samples. **AU** Gasser, Theo; Kneip, Alois. **AA** Gasser: Central Institute for Mental Health, Mannheim. Kneip: University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: A-368; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 13. **PR** no charge. **JE** C14. **KW** Curves. Feature Extraction. Kernel Estimation.

AB Increasingly often, data arise in form of samples of curves. Examples are physiological parameters measured over time for one or more samples of subjects, or measurements obtained longitudinally for various experimental units. In such a case it is important to know at an early stage of data analysis which features are occurring consistently in the sample(s) of curves. Such a definition is usually not easy due to substantial interindividual variation both in x- and the y-axis, and due to the influence of noise. A method is proposed for defining features in a semi-automatic, nonparametric way in a sample of curves. The consistent occurrence of some feature in a subinterval is extracted via the mode in a kernel estimated density of the estimated features. Features may be extrema, inflection points etc. ("structural points"). They are obtained via kernel estimators designed for estimating regression functions and their derivatives.

Gately, Dermot

PD February 1992. **TI** Oil Demand in the U.S. and Japan: Why the Demand Reductions Caused by the Price Increases of the 1970's Won't Be Reversed by the Price Declines of the 1980's. **AA** New York University. **SR** New York University Economic Research Reports: 92-09; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 26. **PR** no charge. **JE** Q41, C22. **KW** Hysteresis. Oil Demand. Price Reversibility.

AB This paper analyzes the imperfect price-reversibility ("hysteresis") of oil demand in the U.S. and Japan. We test econometrically oil demand data, disaggregated into transportation oil and nontransportation oil uses. The oil demand reductions following the oil price increases of the 1970's will not be completely reversed by the price cuts of the 1980's. The response to price cuts in the 1980's is perhaps only one-fifth that for price increases in the 1970's. This has dramatic implications for projections of oil demand, especially under low-price assumptions. We also consider the demand effects of a price recovery in the 1990's, specifically whether the effects would be as large as for the price increases of the 1970's or only as large as the smaller demand reversals of the 1980's. On this the results are inconclusive.

Gaudet, Gerard

PD February 1992. **TI** The Limits of Monopolization Through Acquisition: Further Results. **AU** Gaudet, Gerard; Salant, Stephen. **AA** Gaudet: Universite de Quebec a Montreal. Salant: University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory, (CREST), Working Paper: 92-03; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 4. **PR** not available. **JE** D40, D42, D43, G34. **KW** Mergers. Monopolization.

AB Nearly a decade ago, Salant, Switzer, and Reynolds (1983) pointed out an unnoticed peculiarity in the way mergers and cartelizations had been analyzed: in some exogenous mergers the post-merger profits of the merged entity are smaller than the sum of the component profits prior to the merger. Salant, Switzer, and Reynolds took this as strong evidence of the need to endogenize the merger decision. Kamien and Zang (1990) have provided one of the first models where mergers arise endogenously. We have generalized Kamien and Zang's model and have used it to show that some socially desirable mergers will not occur endogenously. Indeed what occurs in equilibrium may be socially inferior to every other potential market structure. Consolidation failures of this sort are, or ought to be, an issue of policy concern.

Gavin, William T.

TI Zero Inflation: Transition Costs and Shoe-Leather Benefits. **AU** Carlstrom, Charles T.; Gavin, William T.

TI A Different Kind of Money Illusion: The Case of Long and Variable Lags. **AU** Bryan, Michael F.; Gavin, William T.

Gay, Philip

TI Carbon Taxes, Consumer Demand and Carbon Dioxide Emission: A Simulation Analysis for the U. K. **AU** Symons, Elizabeth; Proops, John; Gay, Philip.

Gibson, Heather D.

PD April 1992. **TI** Financial Crises and the International Debt Problem. **AU** Gibson, Heather D.; Oppenheimer, Peter M. **AA** Gibson: University of Kent. Oppenheimer: University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 135; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 28. **PR** not available. **JE** G21, G15. **KW** Financial Crisis. Speculative Bubble. Rational Bubble.

AB This paper examines the adequacy of existing theories of financial crisis and in particular their success in explaining the LDC debt story of the 1970's and 1980's. It makes two main contributions. First, it considers how far the rational speculative bubble literature can help to illuminate the causes of the debt crisis, and conversely, whether the debt crisis sheds any light on the concept of rational bubbles. Secondly, it seeks a more unified approach to financial crisis than has existed hitherto. The paper argues that existing theories underrate the importance of market structure as a factor contributing to financial crises.

Gokhale, Jagadeesh

TI Generational Accounts: A Meaningful Alternative to Deficit Accounting. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J.

TI Generational Accounting: A New Approach for Understanding the Effects of Fiscal Policy on Saving. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J.

TI Estimating a Firm's Age-Productivity Profile Using the Present Value of Worker's Earnings. **AU** Kotlikoff, Laurence J.; Gokhale, Jagadeesh.

TI Social Security and Medicare Policy from the Perspective of Generational Accounting. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J.

Goldin, Claudia

PD June 1992. **TI** The Meaning of College in the Lives of American Women: The Past One-Hundred Years. **AA** Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4099; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 32. **PR** $3.00. **JE** I21, N31, N32. **KW** Education--Women. Gender Equality.

AB Three cohorts of college women are considered here. The first, graduating from 1900 to 1920, was faced with a choice of "family or career," while the second, graduating from 1945 to the early 1960's, opted for family and employment serially -- that is, "family then job." The third, graduating since 1980 in a climate of greater gender equality, is attempting both "family and career," with mixed results and considerable frustration. This paper assesses the reasons for the changing set of tradeoffs each generation of college women faced and why the college education of women expanded in the post-World War II era. The first cohort attended college when the numbers of men and women in college were about equal, while the second attended college when the proportion of all undergraduates who were male was at an all-time high.

Gollier, Christian

PD February 1992. **TI** Second-Best Insurance Contract Design in an Incomplete Market. **AU** Gollier, Christian; Schlesinger, Harris. **AA** Gollier: HEC School of Management, Paris. Schlesinger: University of Alabama. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9212; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 17. **PR** not available. **JE** D81, D82. **KW** Multiple Risk. Deductibles. Insurance.

AB This paper considers the optimal form of insurance contracts for multiple risks. A well-known result in the literature is that, under fairly general conditions, an insurance policy with a deductible for aggregate losses is optimal. We provide a new proof of this result based only on stochastic dominance, (whereas existing proofs require dynamic optimization techniques). Considering a real-world incompleteness, whereby separate loss exposures are indemnified via separate contracts, we show that separate deductibles are second-best optima in this setting. We compare the indemnity provided in this second-best setting with first-best solutions. The effect of second-best contracts on the individual's total insurance demand is also examined.

Goulder, Lawrence H.

PD May 1992. **TI** Do the Costs of a Carbon Tax Vanish When Interactions with Other Taxes are Accounted for? **AA** National Bureau of Economic Research and Stanford University. **SR** National Bureau of Economic Research Working Paper: 4061; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** $5.00. **JE** H23, Q38. **KW** Carbon Tax. Nonrenewable Resources.

AB Previous analyses of U.S. carbon taxes have tended to ignore interactions between this tax and other, pre-existing U.S. taxes. This paper assesses the effects of the carbon tax using a model that addresses these interactions. This model is unique in integrating a detailed treatment of taxes and attention to nonrenewable resource supply dynamics within a disaggregated general equilibrium framework. We find that the GNP and welfare costs of the carbon tax are significantly lower than what would be predicted if tax interactions were disregarded. When the revenues are used to finance reductions in marginal taxes at the personal or corporate level, the welfare costs are 25-32 percent lower than when the revenues finance lump-sum reductions in taxes.

Govindan, Srihari

PD January 1992. **TI** Stability and the Chain Store Paradox. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9204; Universite Catholique de Louvain Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 15. **PR** not available. **JE** C72. **KW** Chain Store Paradox. Subgame Perfection.

AB For the Kreps and Wilson version of Selten's Chain Store Game, every equilibrium of every stable set induces the same outcome. This unique outcome is the one induced by the Kreps and Wilson solution.

Green, Susan

PD May 1992. **TI** Schedule D Non-Compliance: Would an Amnesty Help? **AA** University of Bristol. **SR** University of Bristol Discussion Paper: 92/334; Department of Economics, University of Bristol, 8 Woodlands Road, BRISTOL, BS8 ITN, IRELAND. **PG** 27. **PR** no charge. **JE** H26, H25, K34. **KW** Tax Evasion. Amnesty. Unincorporated Businesses.

AB This paper discusses the economic and political issues that relate to current and potential uses of tax amnesties in the U.K. The paper is in two parts. The first describes the Inland Revenue's current approach to tax evasion and discusses the potential for using a temporary but formal tax amnesty as an appropriate short-term measure to reduce schedule D non-compliance. In the second section of the paper we examine the theoretical arguments for and against the adoption of a formal tax amnesty, and we explore whether the short-term use of an amnesty could be linked to the current U.K. Revenue's proposals to reform the taxation of unincorporated businesses.

Greene, Joshua E.

PD July 1992. **TI** The Sub-Saharan African Debt Problem: An Update. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: 92/52; International Monetary Fund, Washington, DC 20431. **PG** 13. **PR** not available. **JE** F40, P52. **KW** Debt. Debt Cancellation.

AB This paper provides updated information on the external debt problem of sub-Saharan Africa. Between 1980 and 1990 on the region's external debt more than tripled, to US$171 billion, while debt service payments and rescheduling rose by more than 150 percent to US$20 billion. In addition, the region continues to qualify as severely debt-distressed. During the last few years the region has benefited from several new debt initiatives, including a substantial increase in debt cancellation by bilateral creditors and the general application of Toronto terms for debt rescheduling. There are also proposals for further debt assistance, including more liberal rescheduling terms, broader debt forgiveness, and consolidating debt relief and aid generation activities.

TI The Export of Sub-Saharan Africa, 1970-90: A Survey. **AU** Baban, Roy C.; Greene, Joshua E.

Greenhalgh, Christine

PD April 1992. **TI** The Role of Career Aspirations and Financial Constraints in Individual Access to Vocational Training. **AU** Greenhalgh, Christine; Mavrotas, George. **AA** University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 136; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 14. **PR** not available. **JE** J24, C21. **KW** Job Training. Career Goals.

AB The probability of experiencing vocational training is influenced by various characteristics of the worker and his place of employment. In this empirical study we are able to investigate the determinants of both employer-arranged training and individually organized training. Both recent training history and future expected training are related to a wide range of personal and job characteristics. The information set includes indicators of attitudes to vocational training and personal career progress, as well as current income. The findings are that both types of measures contribute to an explanation of the differences between individuals in their likelihood of taking training. Thus while financial constraints are implicated in the failure to undertake training, reflecting an element of market failure, so too are an individual's career aspirations which reflects an efficient selection rule.

Greenwood, Margaret

TI Long Term Contracts and the EC Fourth Directive. **AU** Forker, John; Greenwood, Margaret.

Gregory, Allan W.

TI Theoretical Relations Between Risk Premiums and Conditional Variances. **AU** Backus, David K.; Gregory, Allan W.

TI Accounting for Forward Rates in Markets for Foreign Currency. **AU** Backus, David K.; Gregory, Allan W.; Telmer, Chris I.

Grishukhin, Viatcheslav P.

TI Hypermetric Graphs. **AU** Deza, Michel; Grishukhin, Viatcheslav P.

Gronberg, Timothy J.

TI Wagner's Hypothesis: A Local Perspective. **AU** Eberts, Randall W.; Gronberg, Timothy J.

Groshen, Erica L.

PD December 1991. **TI** Rising Inequality in a Salary Survey: Another Piece of the Puzzle. **AA** Federal Reserve Bank of Cleveland. **SR** Federal Reserve Bank of Cleveland Working Paper: 9121; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 21. **PR** not available. **JE** J30, J31. **KW** Wage Inequality. Compensation. Labor Markets.

AB Studies of wage inequality based solely on the Bureau of Labor Statistics Current Population Survey have concluded that the recent rising trend has made family income less equally distributed. To investigate the sources of rising wage variance, this paper examines data from a private salary survey conducted for a panel of firms and occupations in Cleveland, Cincinnati, and Pittsburgh over a 33-year period. These data allow examination, for the first time, of the role of occupational distinctions and employer compensation practices in the recent rise in wage inequality. The results confirm the existence of rising inequality and reject one important hypothesis. Because wage disparity among nonproduction workers rises even when companies and occupations are held constant over time, the increase is not solely attributable to the direct effects of industrial restructuring (i.e., the net creation of unusually unequal jobs).

Grossman, Gene M.

TI Asset Bubbles and Endogenous Growth. **AU** Yanagawa, Noriyuki; Grossman, Gene M.

Grout, Paul

PD May 1992. **TI** The Cost of Capital in Regulated Industries. **AA** University of Bristol. **SR** University of Bristol Discussion Paper: 92/335; Department of Economics, University of Bristol, 8 Woodlands Road, BRISTOL, BS8 ITN, IRELAND. **PG** 40. **PR** no charge. **JE** D92, G30, G31, K20. **KW** Financing. Regulation.

AB The cost of capital plays a central role in the regulation of industry but, until recently, particularly in comparison to cost and tariff issues, has not received sufficient attention in the U.K. This paper attempts to identify and clarify some of the main issues but, since the role of the cost of capital in regulation and the impact on policy is quite complex, deliberately avoids some of the more detailed "finance" problems. It provides a discussion of the concept of the cost of capital, its use in U.K. regulatory policy and considers some of the most practical confusions that have important policy implications.

Gruber, Jonathan

TI Taxation and the Structure of Labor Markets: The Case of Corporatism. **AU** Summers, Lawrence; Gruber, Jonathan; Vergara, Rodrigo.

Gruber, Martin J.

TI Return Generating Process and the Determinants of Term Premiums. **AU** Elton, Edwin J.; Gruber, Martin J.; Mei, Jianping.

Gulde, Anne Marie

PD May 1992. **TI** Aggregation of Economic Indicators Across Countries: Exchange Rate versus PPP Based GDP Weights. **AU** Gulde, Anne Marie; Schulze-Ghattas, Marianne. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/36; International Monetary Fund, Washington, DC 20431. **PG** 28. **PR** not available. **JE** C43, E31, F31. **KW** GDP Shares. Weighting. Numeraire Currency.

AB Relative GDP shares are frequently used as weights in aggregations. In order to ensure that these weights reflect countries' shares in real output, GDP data in national currencies should be converted into a common numeraire currency at purchasing power parity (PPP) rates. A review of the empirical evidence on the relationship between exchange rates are generally poor proxies for PPP rates. The paper examines the PPP-based GDP data generated by the International Comparison Program and compares aggregations with PPP- and exchange rate-based GDP weights.

Gyarfas, Gabor

PD October 1991. **TI** Ein Verfahren zur Konstruktion Synthetischer Mikrodaten aus Aggregierten Strukturinformationen. **AU** Gyarfas, Gabor; Quinke, Hermann. **AA** Gyarfas: University of Bonn. Quinke: Gesellschaft fur Mathematik und Datenverarbeitung. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: A-346; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 17. **PR** no charge. **JE** C81, C15. **KW** Synthetic Microdata. Data Recovery. Monte Carlo Experiments.

AB Simulation analyses of the tax-transfer system require disaggregated data. If microdata are not available-e.g. because of privacy issues-often a large number of published tables (aggregate structural information) can be utilized. In addition to these "hard" data there are frequently more or less "soft" prior notions based on other (older or foreign) data sources or simply on ad hoc reasoning. Our paper presents a method for the construction of synthetic microdata from aggregate structural information and a prior distribution. Such a database is not only consistent with the available information, but it also has desirable statistical properties in the case of large samples. We prove that the empirical distributions corresponding to the synthetic samples converge to the distribution that is consistent with the aggregate information and maximizes the entropy relative to the prior distribution. Two small Monte Carlo experiments illustrate this proposition.

Gyourko, Joseph

PD June 1992. **TI** Leasing as a Lottery: Implications for Rational Building Surges and Increasing Vacancies. **AU** Gyourko, Joseph; Voith, Richard. **AA** Gyourko: University of Pennsylvania. Voith: Federal Reserve Bank of Philadelphia. **SR** Federal Reserve Bank of Philadelphia Research Working Paper: 92-10; Working Papers, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, PA 19106. **PG** 18. **PR** no charge except overseas airmail, $2.00; checks/money orders in U.S. funds payable to Federal Reserve Bank of Philadelphia. **JE** E32, D21. **KW** Construction Surges. Vacancy Patterns.

AB An expanded inventory demand framework is developed in which builders rationally respond to transitory, not just permanent, changes in the local leasing environment. The key addition is that the lease-up process is modeled as a lottery. Changes in turnover or absorption affect the probability of winning the leasing lottery and, hence, influence the decision to build. Complex construction and vacancy behavior result without complex dynamics involving multiperiod builder expectations. Rational surges in development can occur in the absence of uncertainty or speculation about underlying market fundamentals. This framework, which refocuses attention on the local determinants of the developer's decision to build, hopefully will prove fruitful in future empirical efforts to explain development and vacancy behavior during the past decade.

Haas, Richard D.

TI A Note on Burden Sharing Among Creditors. **AU** Dooley, Michael; Haas, Richard D.; Symansky, Steven.

Hahn, Gena

PD August 1991. **TI** On the Ultimate Independence Ratio of a Graph. **AU** Hahn, Gena; Hell, Pavol; Poljak, Svatopluk. **AA** Hahn: University of Montreal. Hell: Simon Fraser University, Burnaby, Canada. Poljak: University of Bonn and Charles University, Prague. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-91 717-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 11. **PR** no charge. **JE** C44. **KW** Graph Theory. Homomorphisms. Bipartite Graphs.

AB We study the ultimate independence ratio I(G) of a graph G, defined as the limit, as k goes to infinity, of the sequence of independence ratios of the powers G to the K. We prove that I(H) is less than or equal to I(G) if there is a homomorphism of G to H. This allows us to prove that I(G) is bounded below by the inverse of the chromatic number of G, and bounded above by the inverse of the fractional chromatic number of G. From this result we derive a number of consequences: We construct graphs with I(G) strictly between the inverse of the chromatic number of G and i(G) (answering a question from an earlier paper). We estimate I(G) for some classes of graphs, and, in some cases, we compute the exact value of I(G). In particular, we show that I(G) = 1/2 for all bipartite graphs G.

Hajivassiliou, Vassilis A.

PD May 1992. **TI** A Note on the Dual Approach to the Existence and Characterization of Optimal Consumption Decisions under Uncertainty and Liquidity Constraints. **AU** Hajivassiliou, Vassilis A.; Ioannides, Yannis M. **AA** Hajivassiliou: Yale University. Ioannides: Virginia Polytech Institute and State University. **SR** Yale Cowles Foundation Discussion Paper: 1018; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PG** 20. **PR** no charge. **JE** D91, D81. **KW** Consumer Choice. Duality Theory.

AB This paper considers a dual approach to the problem of maximizing lifetime utility subject to liquidity constraints in a discrete time setting. These constraints prohibit the decision maker from borrowing against future endowment income. The dual approach allows us to exploit directly the supermartingale property of the marginal utility of expenditure and to establish existence and uniqueness of the optimal solution. The optimal solution is interpreted as deriving from a version of the problem that is subject to a single lifetime budget constraint, where expenditures and incomes are discounted to the beginning of the horizon by means of individualized Arrow-Debreu prices.

Haldeman, Robert G.

TI Valuation, Loss Reserves and Pricing of Commercial Loans. **AU** Altman, Edward I.; Haldeman, Robert G.

Hall, Bronwyn H.

PD February 1992. **TI** Exploring the Relationship Between R&D and Productivity at the Firm Level in French Manufacturing. **AU** Hall, Bronwyn H.; Mairesse, Jacques. **AA** Hall: University of California, Berkeley and National Bureau of Economic Research. Mairesse: ENSAE-CREST and National Bureau of Economic Research. **SR** University of California at Berkeley Working Paper in Economics: 92-190; IBER 156 Barrows Hall, University of California at Berkeley, Berkeley CA 94720. **PG** 44. **PR** $3.50 plus applicable sales tax. **JE** O30, L60, C23. **KW** R&D. Productivity. Manufacturing.

AB This paper uses a newly available dataset on the R&D performance of individual French manufacturing firms for the 1980s to replicate and update a series of studies on French R&D and productivity growth at the firm level during the 1970s. The focus of the paper is on the use of a single data set to evaluate the robustness of the methods commonly used to measure the private returns to R&D. We investigate the consequences of varying specifications and estimations, and in particular that of using different measures of R&D (knowledge) capital and of double counting corrections.

PD June 1992. **TI** Investment and Research and Development at the Firm Level: Does the Source of Financing Matter? **AA** University of California, Berkeley and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4096; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 21. **PR** $3.00. **JE** D21, L60, G32. **KW** R&D. Investment Elasticity.

AB The elasticity of investment and R&D investment with respect to cash flow is unambiguously positive in a large panel of U.S. manufacturing firms from 1973 to 1987, even with proper controls for permanent differences across firms and for simultaneity. I argue that the evidence favors liquidity constraints rather than just demand effects as the cause of this finding. Other results are that debt is not favored as a form of finance for R&D-intensive firms. Finally, the contemporaneous relationship between changes in debt levels and investment which I have previously documented (Hall 1990b and Hall 1991) is one of simultaneity, and apparently transitory, unlike the relationship between cash flow and investment.

Haltiwanger, John

TI Autos and the National Industrial Recovery Act: Evidence on Industry Complementarities. **AU** Cooper, Russell; Haltiwanger, John.

Hamann, A. Javier

PD May 1992. **TI** The Optimal Rate of Money Creation in an Overlapping Generations Model: Numerical Simulations for the U.S. Economy. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/37; International Monetary Fund, Washington, DC 20431. **PG** 32. **PR** not available. **JE** E42, E52. **KW** Monetary Policy. Pareto Efficiency. Friedman Rule.

AB This paper develops a large scale overlapping generations model and calibrates it for the U.S. economy. Simulations with the model show that the steady state welfare maximizing inflation rate may be positive, although the numerical results are not robust. It is also shown, however, that increases in the inflation rate are never Pareto efficient because during the transition to the new steady state at least some generations are made worse-off. Using an optimality criterion that takes into account the welfare of all generations, it is found that implementing Friedman's rule is a Pareto superior policy, and that the efficiency gains derived from implementing such rule could be substantial.

Hanemann, W. Michael

TI Assessing Climate Change Risks: Valuation of Effects. **AU** Fisher, Anthony C.; Hanemann, W. Michael.

Hanley, Nick

PD March 1992. **TI** The Effects of Information in Contingent Markets for Environmental Goods: A Survey and Some New Evidence. **AU** Hanley, Nick; Munro, Alistair. **AA** Hanley: Queen's University and University of Stirling. Munro: University of East Anglia. **SR** Queen's Institute for Economic Research Discussion Paper: 848; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 33. **PR** $3.00 Canada; $3.50 U.S. and elsewhere. **JE** Q20, Q21, H41. **KW** Contingent Valuation. Environmental Valuation. Preservation Values.

AB This paper considers the ways in which information can impact contingent valuation estimates of environmental values. The Hoehn/Randall distinction between value formulation and value statement is employed. We distinguish several ways information should be expected to effect true Willingness to Pay, and survey past contingent valuation work in the area. A model of information impacts is used to set up a series of testable hypotheses. These are then tested using data from a contingent valuation survey of the benefits of heathland preservation.

PD March 1992. **TI** The Valuation of Forest Characteristics. **AU** Hanley, Nick; Ruffell, Robin. **AA** Hanley: University of Stirling and Queen's University. Ruffell: University of Stirling. **SR** Queen's Institute for Economic Research Discussion Paper: 849; Department of Economics, Queen's University, Kingston, Ontario, CANADA K7L 3N6. **PG** 45. **PR** $3.00 Canada; $3.50 U.S. and elsewhere. **JE** Q20, Q21, Q23, H41. **KW** Consumer Surplus. Contingent Valuation. Forestry Economics.

AB Most work on valuing the recreational benefits of public forests has concentrated on arriving at consumers surplus per visit figures, using either the travel cost method, or contingent valuation. We use both methods to try and explain the variation in consumers surplus across different forest types, by placing values on the physical characteristics of individual forests. These characteristics are also used to explain total visits to a given forest. Both maximum likelihood and ordinary least squares estimates are presented.

Hansen, Bruce E.

PD May 1992. **TI** Autoregressive Conditional Density Estimation. **AA** University of Rochester. **SR** University of Rochester Center for Economic Research Working Paper: 322; Department of Economics, University of Rochester, Rochester, NY 14627. **PG** 27. **PR** no charge. **JE** C32, C13. **KW** ARCH. Conditional Dependence.

AB Engle's ARCH model is extended to permit parametric specifications for conditional dependence beyond the mean and variance. The suggestion is to model the conditional density with a small number of "parameters", and then model these parameters as functions of the conditioning information, in the same manner as the conditional variance is modeled in standard ARCH models. Models of this form will be important for predictive density estimation, and option pricing. This method is applied to two data sets. The first application is to the monthly excess holding yield on U.S. Treasury securities. The second is to the U.S. dollar/Swiss Franc exchange rate. Shape parameters are found to be significantly sensitive to the conditioning information.

Hansen, Lars Peter

TI Asset Pricing Explorations for Macroeconomics. **AU** Cochrane, John H.; Hansen, Lars Peter.

Hardle, Wolfgang

PD November 1991. **TI** Better Bootstrap Confidence Intervals for Regression Curve Estimation. **AU** Hardle, Wolfgang; Huet, S.; Jolivet, E. **AA** Hardle: Universite Catholique de Louvain. Huet and Jolivet: INRA. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9156; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Neuve, BELGIUM. **PG** 14. **PR** not available. **JE** C81, C51. **KW** Bootstrap Method. Bias Correction. Coverage Accuracy.

AB Bootstrap methods in curve estimation have been introduced for smoothing parameter selection and for construction of confidence intervals. Most of the papers on confidence intervals use explicit bias estimation of the technique of "undersmoothing" to deal with bias. Coverage accuracy has only been considered for "undersmoothed" curve estimates with constant variance function. In this paper we show that explicit bias estimation even with heteroskedastic variance structure leads to an improvement of coverage accuracy. Bootstrapping with this bias correction using the so-called wild bootstrap leads to an improved coverage accuracy.

PD January 1992. **TI** Applied Nonparametric Methods. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9203; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 22. **PR** not available. **JE** C14. **KW** Nonparametric Regression. Kernel Estimators. Splines.

AB In this note we review different approaches to nonparametric regression. Kernel estimators are motivated from local averaging, solving ill-posed problems and weighting of binned data. Kernel estimators are compared to k-NN estimators and splines. The choice of smoothing parameter is discussed and finally the method is applied for nonparametric prediction of time series.

Hare, Paul

TI Banking in Transition: Development and Current Problems in Hungary. **AU** Estrin, Saul; Hare, Paul; Suranyi, Marta.

Hariri, A. M. A.

PD 1992. **TI** Single Machine Scheduling to Minimize Total Weighted Late Work. **AU** Hariri, A. M. A.; Potts, C. N.; Van Wassenhove, Luk. **AA** Hariri: King Abdul-Aziz University, Saudi Arabia. Potts: University of Southampton. Van Wassenhove: INSEAD. **SR** INSEAD Working Papers: 92/29/TM; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 20. **PR** not available. **JE** C61, D24. **KW** Optimal Schedule. Pseudopolynomial Algorithm.

AB In the problem of scheduling a single machine to minimize total weighted late work, there are n jobs to be processed for which each has an integer processing time, a weight and a due date. The objective is to minimize the total weighted late work, where the late work for a job is the amount of processing of this job which is performed after its due date. An O(nlog n) algorithm is derived for the preemptive total weighted late work problem. For non-preemptive scheduling, efficient algorithms are derived for the special cases in which all processing times are equal and in which all due dates are equal. A pseudopolynomial algorithm is presented for the general non-preemptive total weighted late work problem. Also, a branch and bound algorithm in which lower bounds are obtained using the dynamic programming state-space relaxation method is proposed for this general problem. Computational results with the branch and bound algorithm for problems with up to 700 jobs are given.

Hart, Oliver

TI The Economics of Bankruptcy Reform. **AU** Aghion, Philippe; Hart, Oliver; Moore, John.

TI The Economics of Bankruptcy Reform. **AU** Aghion, Philippe; Moore, John; Hart, Oliver.

Hatch, Nile

TI Optimal Response to Periodic Shortage: Engineering/ Economic Analysis for a Large Urban Water District. **AU** Fisher, Anthony C.; Fullerton, David; Hatch, Nile; Reinelt, Peter.

Haubrich, Joseph G.

PD November 1991. **TI** The Sources and Nature of Long-Term Memory in the Business Cycle. **AU** Haubrich, Joseph G.; Lo, Andrew W. **AA** Haubrich: Federal Reserve Bank of Cleveland. Lo: National Bureau of Economic Research and Massachusetts Institute of Technology. **SR** Federal Reserve Bank of Cleveland Working Paper: 9116; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 39. **PR** not available. **JE** E30, E32. **KW** Economic Shocks. Dependence. Persistence.

AB This paper examines the stochastic properties of aggregate macroeconomic time series from the standpoint of fractionally integrated models, focusing on the persistence of economic shocks. We develop a simple macroeconomic model that exhibits long-range dependence, a consequence of aggregation in the presence of real business cycles. We then derive the relation between properties of fractionally integrated macroeconomic time series and those of microeconomic data and discuss how fiscal policy may alter the stochastic behavior of the former. To implement these results empirically, we employ a test for fractionally integrated time series based on the Hurst-Mandelbrot rescaled range. This test, which is robust to short-term dependence, is applied to quarterly and annual real GNP to determine the sources and nature of long-term dependence in the business cycle.

PD December 1991. **TI** Risk Aversion, Performance Pay, and the Principal-Agent Problem. **AA** Federal Reserve Bank of Cleveland. **SR** Federal Reserve Bank of Cleveland Working Paper: 9118; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 19. **PR** not available. **JE** G35, L10, J33. **KW** Compensation. Firm Performance. Performance Pay.

AB This paper calculates numerical solutions to the principal-agent problem and compares the results to the stylized facts of CEO compensation. The numerical predictions come from parameterizing the models of Grossman and Hart and of Holmstrom and Milgrom. While the correct incentives for a CEO can greatly enhance a firm's performance, providing such incentives need not be expensive. For many parameter values, CEO compensation need only increase by about \$10.00 for every \$1,000 of additional shareholder value; for some values, the amount is 0.003 cents. The paper thus answers two challenges posed by Jensen: that principal-agent theory does not yield quantitative predictions, and that CEO compensation is insufficiently sensitive to firm performance.

Hay, Donald A.

PD April 1992. **TI** Cost Behaviour of Chinese State-Owned Manufacturing Enterprises During the Reform Period, 1979-87. **AU** Hay, Donald A.; Liu, Guy S. **AA** University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 134; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 16. **PR** not available. **JE** D24, D21, P31, C33. **KW** Cost Minimization. Labor Incentives. China.

AB The paper explores the cost behavior of a sample of Chinese state-owned manufacturing firms in the reform period of the mid 1980's. Attention is focused on two particular features which affected cost behavior: the freedom given to the firms to pay profit-related bonuses to the workers, and the constraint on the total wage bill through the wage bill quota. Standard cost functions and frontier cost functions are fitted with specifications that incorporate these features, and both features are found to be important in explaining cost behavior.

The frontier cost functions indicate that frontier firms conform more closely to cost minimizing behavior than those within the frontier.

Hayashi, Fumio

PD July 1992. **TI** Fiat Money, Barter, and Optimal Monetary Policy with Capital. **AU** Hayashi, Fumio; Matsui, Akihiko. **AA** University of Pennsylvania. **SR** University of Pennsylvania Center for Analytic Research in Economics and Social Science (CARESS) Working Paper: 92-20; 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** E42, E52, D51. **KW** Bilateral Trade. Inflation Tax.

AB We present an infinite horizon model with capital in which fiat money and barter are two competing means of payment. Fiat money has value because in our trading arrangement barter is limited by the extent of double coincidence of wants. The pattern of exchange is influenced by monetary policy through the inflation tax. Money nevertheless is super-neutral. We find that the Chicago rule is sufficient for Pareto efficiency, while nominal interest targeting is necessary. For a specific utility function we calculate equilibrium prices and the range of inflation rates over which a stationary monetary equilibrium exists.

Hell, Pavol

TI On the Ultimate Independence Ratio of a Graph. **AU** Hahn, Gena; Hell, Pavol; Poljak, Svatopluk.

Helpman, Elhanan

PD May 1992. **TI** Innovation, Imitation, and Intellectual Property Rights. **AA** Tel Aviv University, CIAR, and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4081; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 40. **PR** $3.00. **JE** O34, O31, D51, O32. **KW** Intellectual Property. Welfare Analysis. Patents.

AB The debate between the North and the South about the enforcement of intellectual property rights in the South is examined within a dynamic general equilibrium framework in which the North innovates new products and the South imitates them. A welfare evaluation of a policy of tighter intellectual property rights is provided by decomposing a region's welfare change into four components: terms of trade, production composition, available product choice and intertemporal allocation of consumption spending. The paper provides a theoretical evaluation of each one of these components and their relative size. The analysis proceeds in stages. It begins with an exogenous rate of innovation in order to focus on the first two components. The last two components are added by endogenizing the rate of innovation. Finally, the paper considers the role of foreign direct investment.

PD July 1992. **TI** Innovation, Imitation, and Intellectual Property Rights. **AA** Tel Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 12/92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, ISRAEL. **PG** 54. **PR** no charge. **JE** O34, O31, O32, F12. **KW** Patents. Welfare Analysis.

AB See other entry.

PD August 1992. **TI** Israel's Exchange Rate Band. **AU** Helpman, Elhanan; Leiderman, Leonardo. **AA** Tel-Aviv University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 17-92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 71. **PR** no charge. **JE** F31, F33. **KW** Exchange Rate. Foreign Exchange Intervention.

AB This paper presents an empirical analysis of Israel's exchange-rate band from 1989 to 1991. After discussing the implications of popular models, the paper provides evidence that market participants did not consider the exchange rate bands to be particularly credible. Moreover, this regime introduced a strong cyclical pattern in short-term interest rates. The results for Israel are compared against evidence from five exchange rate target zones in the EMS and with the experience of Chile. Based on these findings and comparisons, the paper draws policy implications on exchange rate regimes in Israel.

Henderson, Rebecca

TI Ivory Tower Versus Corporate Lab: An Empirical Study of Basic Research and Appropriability. **AU** Trajtenberg, Manuel; Henderson, Rebecca; Jaffe, Adam B.

TI Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations. **AU** Jaffe, Adam B.; Trajtenberg, Manuel; Henderson, Rebecca.

Hendry, David F.

TI On the Limitations of Comparing Mean Square Forecast Errors. **AU** Clements, Michael P.; Hendry, David F.

TI Forecasting in Cointegrated Systems. **AU** Clements, Michael P.; Hendry, David F.

Hetzel, Asmus

PD May 1991. **TI** Kantendisjunkte Verdrahtungsprobleme im Chip-Design. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-91 723-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 106. **PR** no charge. **JE** C44, C88. **KW** Graph Theory. Channel Routing. Computing Research.

AB not available. The paper is written in German.

Higgott, Richard

TI Two Level Games and the Political Economy of Adjustment: Comparing Australian and Canadian Approaches Towards the Cairns Group and Agricultural Trade in the Uruguay Round. **AU** Cooper, Andrew F.; Higgott, Richard.

Ho, Teng Suan

PD August 1992. **TI** Multivariate Binomial Approximation for Variables with Arbitrary and Covariance Characteristics. **AU** Ho, Teng Suan; Stapleton, Richard C.; Subrahmanyam, Marti G. **AA** Ho and Stapleton: Lancaster University. Subrahmanyam: New York University and INSEAD. **SR** INSEAD Working Papers: 92/33/FIN; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 28. **PR** not available. **JE** G13, C63. **KW** Option Prices. Binomial Distribution. Asset Pricing.

AB Geske and Johnson (1984) suggest that an American put can be valued, to a good approximation, using a series of multiple exercisable options that are exercised once, twice, ..., m times. The valuation of one of these multiple exercisable options requires a multivariate distribution over the asset price at each of the exercise dates. Geske and Johnson used a multivariate lognormal distribution. In this paper, we show that a binomial distribution with a changing probability parameter can be constructed to approximate the joint distribution of the asset price at the various dates. This allows the number of exercise dates to be increased beyond the three and four in Geske and Johnson. It also leads to a rapid computational method for American style option prices.

Hodrick, Robert J.

TI Financial Market Efficiency Tests. **AU** Bollerslev, Tim; Hodrick, Robert J.

Holmes, Thomas J.

PD July 1992. **TI** On the Turnover of Business Firms and Business Managers. **AU** Holmes, Thomas J.; Schmitz, James A. Jr. **AA** Bureau of the Census. **SR** Bureau of the Census Center for Economic Studies Discussion Paper: 92-6; Center for Economic Studies, Bureau of the Census, Washington, DC 20233. **PG** 36. **PR** not available. **JE** D20, M10. **KW** Small Business. Managerial Tenure.

AB The success of a business depends in part on whether or not the manager and the business make a good "fit" or "match." Success also depends upon characteristics of the business that are distinct from the manager, for example, the convenience of the business location to customers. Variations across firms in "match quality" and in "business quality" account, in part, for why some businesses survive and others are discontinued. This paper is a first attempt at assessing the relative importance of variation in match quality and variation in business quality in accounting for the turnover dynamics of the U.S. small business sector. An evolutionary model is developed in which a selection process tends to eliminate both "unfit" business as well as "unfit" pairings between businesses and managers. Our estimates suggest that variations in match quality play a more significant role than variations in business, or general, quality in accounting for turnover behavior of U.S. of small businesses.

Houba, Harold

TI Odd Man Out: Bargaining Among Three Players. **AU** Bennett, Elaine; Houba, Harold.

Hsieh, Psieh-Shun

PD March 1992. **TI** The Japanese Financial Market: Evidence on Firm Financing Choice and Investment After Deregulation. **AU** Hsieh, Psieh-Shun; Wells, Robin. **AA** Hsieh: University of Michigan. Wells: University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9222; Department of Economics, University of Southampton, Southampton S09 SNH, ENGLAND. **PG** 10. **PR** no charge. **JE** G31, G32. **KW** Investment Behavior. Deregulation. Financing.

AB In this paper we compare several characteristics of and the investment behavior of Japanese firms which have been decreasing their dependence upon bank loans and Japanese firms which have been increasing their dependence upon bank loan ties since deregulation in order to try to discover why firms switch. We find evidence that firm growth rates and profitability are a predictor of financing choice rather than the usual indicators of informational asymmetry such as size or membership in a bank group.

Huet, S.

TI Better Bootstrap Confidence Intervals for Regression Curve Estimation. **AU** Hardle, Wolfgang; Huet, S.; Jolivet, E.

Humpage, Owen F.

TI Post-Louvre Intervention: Did Target Zones Stabilize the Dollar? **AU** Baillie, Richard T.; Humpage, Owen F.

Humphrey, David B.

TI Inefficiency and Productivity Growth in Banking: A Comparison of Stochastic Econometric and Thick Frontier Methods. **AU** Bauer, Paul W.; Berger, Allen N.; Humphrey, David B.

TI Megamergers in Banking and the Use of Cost Efficiency as an Antitrust Defense. **AU** Berger, Allen N.; Humphrey, David B.

Hunt, Jennifer

TI Wage Bargaining Structure, Employment and Economic Integration. **AU** Danthine, Jean-Pierre; Hunt, Jennifer.

Husain, Aasim M.

PD March 1992. **TI** Sovereign Debt Relief Schemes and Welfare. **AA** University of Pennsylvania. **SR** International Monetary Fund Working Paper: WP/92/25; International Monetary Fund, Washington, DC 20431. **PG** 12. **PR** not available. **JE** F34. **KW** Debt Reduction. Debt Overhang.

AB This paper shows that concerted debt reduction may be welfare-improving even when the investment disincentive effect of a debt overhang is not large enough to place the debtor country on the wrong side of the debt Laffer curve. Whether the appropriate relief scheme involves debt reduction or new money, however, depends on whether investment disincentives or liquidity constraints dominate. It is shown that, except under very special circumstances, mixed policy packages involving both debt and liquidity relief may not yield the desired results.

Ichimura, Hidehiko

PD December 1991. **TI** Semiparametric Least Squares (SLS) and Weighted SLS Estimation of Single-Index Models. **AA** University of Minnesota. **SR** University of Minnesota Center for Economic Research Discussion Paper: 264; Department of Economics, 1035 Management and Economics, University of Minnesota, Minneapolis, MN 55455. **PG** 33. **PR** no charge. **JE** C14. **KW** Semiparametric Estimator. Tobit Model. Efficiency Bound.

AB For the class of single-index models, I construct a semiparametric estimator of coefficients up to a multiplicative constant that exhibits (1/square root of n)-consistency and asymptotic normality. This class of models includes censored and truncated Tobit models, binary choice models, and duration models with unobserved individual heterogeneity and random censoring. I also investigate a weighting scheme that achieves the semiparametric efficiency bound.

Imbeau, Louis M.

PD May 1992. **TI** In Search of a Compromise in Canada: Constitutional Negotiation and Game Theory. **AA** Universite

Laval. **SR** Papers in Political Economy Political Economy Research Group, University of Western Ontario: 23; Department of Economics, Social Science Centre, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 26. **PR** no charge. **JE** C72, H77, O51. **KW** Quebec. Nationalism.

AB I suggest formalizing the Quebec-Canada Constitutional negotiation through game theory concepts. According to the classic model of Von Newmann and Morgenstern (1953), the basic configuration could be the following one. Two actors ("Quebec" and "Canada") each have two strategies, to adopt a cooperative attitude or not to adopt such an attitude, the combination of which results in four possible outcomes: (1) a compromise; (2) a solution favoring "Quebec" (where Quebec gets most of what it wants while preserving the federal link); (3) a solution favoring "Canada" (the status quo); (4) no agreement.

Ioannides, Yannis M.

TI A Note on the Dual Approach to the Existence and Characterization of Optimal Consumption Decisions under Uncertainty and Liquidity Constraints. **AU** Hajivassiliou, Vassilis A.; Ioannides, Yannis M.

Isard, Peter

PD May 1992. **TI** A Framework for the Analysis of Financial Reforms and the Cost of Official Safety Nets. **AU** Isard, Peter; Mathieson, Donald J.; Rojas-Suarez, Liliana. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/31; International Monetary Fund, Washington, DC 20431. **PG** 40. **PR** not available. **JE** E44, G21, G28, O16. **KW** Financial Liberalization. Deposit Insurance. General Equilibrium Model.

AB This paper builds a multiperiod, general equilibrium framework for analyzing the macroeconomic effects of financial reforms in developing countries and the costs of maintaining official safety nets under the financial system during such reforms. While a financial liberalization yields efficiency gains, adverse macroeconomic effects can arise if the creditworthiness of the nonfinancial sector is weak. In this situation, financial liberalization may also increase the authorities' expected deposit insurance funding obligations even with strong prudential supervision. Moreover, given the distortions in a repressed financial system, an increase in the required bank capital-asset ratio may increase the funding obligations associated with deposit insurance, particularly when the debt-servicing capacity of nonfinancial firms is low.

TI Exchange Rates, Country Preferences, and Gold. **AU** Dooley, Michael; Isard, Peter; Taylor, Mark P.

Jackman, Richard

PD January 1992. **TI** Regional Migration versus Regional Commuting: The Identification of Housing and Employment Flows. **AU** Jackman, Richard.; Savouri, Savvas. **AA** London School of Economics. **SR** Centre for Economic Performance Discussion Paper: 57; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 12. **PR** no charge. **JE** J61, R20. **KW** Migration. Commuting. Housing Stream.

AB The paper examines whether relative house price and vacancy elasticities differ in contiguous region migration flows as against non-contiguous flows. We find that house price elasticities are increasing in the length of common regional boundaries. We argue that this effect may be due to residential movers between adjacent regions i.e. individuals who change house but not job and then commute back to their original work-places. We also find that the response of migration to an improvement in relative employment opportunities across neighboring regions is less than the response to comparable differences between non-contiguous regions.

Jaffe, Adam B.

TI Ivory Tower Versus Corporate Lab: An Empirical Study of Basic Research and Appropriability. **AU** Trajtenberg, Manuel; Henderson, Rebecca; Jaffe, Adam B.

PD August 1992. **TI** Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations. **AU** Jaffe, Adam B.; Trajtenberg, Manuel; Henderson, Rebecca. **AA** Jaffe: Harvard University. Trajtenberg: Tel-Aviv University. Henderson: Massachussetts Institute of Technology. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 14-92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, Tel Aviv, ISRAEL. **PG** 28. **PR** no charge. **JE** O30, R11, O34. **KW** Spillovers. Patents. Geography.

AB We compare the geographic location of patent citations to those of the cited patents, as evidence of the extent to which knowledge spillovers are geographically localized. We find that citations to U.S. patents are more likely to come from the same state and SMSA as the cited patents that one would expect based only the pre-existing concentration of related research activity. These effects are particularly significant at the local (SMSA) level, and are particularly apparent in early citations.

Jamar, Marie-Astrid

TI A Study of Cost Efficiency and Returns to Scale for 235 Municipalities in Belgium. **AU** Vanden Eeckaut, Philippe; Tulkens, Henry; Jamar, Marie-Astrid.

Jelassi, Tawfik

PD 1992. **TI** Information, Systemes Complexes et Technologies de l'Information. **AU** Jelassi, Tawfik; Sanglier, Michele. **AA** Jelassi: INSEAD. Sanglier: Instituts Internationaux de Physique et de Chimie. **SR** INSEAD Working Papers: 92/20/TM; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 9. **PR** not available. **JE** O33. **KW** Information Technology. Communication Technology.

AB Les technologies de l'information et de la communication (TIC) exercent aujourd'hui un role strategique dans l'evolution de tous les secteurs de l'activite economique et des rapports regissant les entites sociales et politiques. Ce papier se propose d'apporter des elements de reponse a la question suivante: Quels sont les facteurs majeurs qui justifient une approche dynamique, multi-disciplinaire et comportementale pour l'analyse de systemes socio-technologico-economiques? En particulier, comment peut-on envisager, dans ce contexte, la transition du niveau micro-economique au niveau macro-economique ainsi que la relation homme-information-technologies? Dans ce qui suit, nous presenterons d'abord l'evolution des systemes complexes vue sous un angle dynamique, non-lineaire, et pluridisciplinaire. Ensuite, nous examinerons la relation information-individu et nous etudierons le role des TIC dans un contexte caracterise par la mondialisation des affaires.

Jolivet, E.

TI Better Bootstrap Confidence Intervals for Regression Curve Estimation. **AU** Hardle, Wolfgang; Huet, S.; Jolivet, E.

Jones, Andrew

TI NP-REG: An Interactive Package for Kernel Density Estimation and Non-Parametric Regression. **AU** Duncan, Alan; Jones, Andrew.

Jordan, Tibor

TI Tree-Representation of Directed Circuits. **AU** Frank, Andras; Jordan, Tibor.

Kahan, Marcel

PD February 1992. **TI** Do Bondholders Lose from Junk Bond Covenant Changes? **AU** Kahan, Marcel; Tuckman, Bruce. **AA** New York University. **SR** New York University Salomon Brothers Working Paper: S-92-33; 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** 36. **PR** $5.00. **JE** G32. **KW** Public Debt. Bondholder Returns.

AB This paper documents that firms can and commonly do change the covenants of their public debt indentures through consent solicitations. A game theoretic model of these solicitations shows that they can be coercive, Despite this theoretical finding, abnormal bondholder returns around the announcements of consent solicitations are significantly positive. Further analysis of the data reveals that bondholders can, in fact, coordinate their actions to modify or defeat disadvantageous proposals. As a result, stockholders cannot extract bondholder wealth through these solicitations nor can they enjoy covenant modifications unless any resulting gains are shared with bondholders.

Kalat, Karen

TI Surviving Winter: A Fitness-Based Explanation of Hoarding and Hibernation. **AU** Salant, Stephen; Kalat, Karen; Wheatcroft, Ana.

Kandori, Michihiro

PD February 1992. **TI** Evolution of Equilibria in the Long Run: A General Theory and Applications. **AU** Kandori, Michihiro; Rob, Rafael. **AA** Kandori: Princeton University. Rob: University of Pennsylvania. **SR** University of Pennsylvania CARESS Working Paper: 92-06; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 64. **PR** no charge. **JE** C72, C70. **KW** Learning. Nash Equilibrium. Coordination Games.

AB We study an adaptive process of learning in the context of societal games played by randomly matched pairs of players. Our construction extends the analysis of Kandori, Mailath, and Rob (1991) to general n x n games. The basic assumptions we employ are: (1) Players adjust their behavior from time to time, picking a best-response against the present strategy configuration played by others. (2) Players mutate or experiment with strategies which need not be best-responses. We first provide a general algorithm to determine the long run equilibrium, and then we apply the algorithm to pure coordination games and to games with strategic complementarities.

Kaplan, Steven N.

PD May 1992. **TI** Top Executive Rewards and Firm Performance: A Comparison of Japan and the U.S. **AA** University of Chicago and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4065; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 37. **PR** $5.00. **JE** J33, G35. **KW** Management Turnover. Executive Compensation.

AB This paper compares CEO and top management turnover and its relation to firm performance in the largest companies (by sales) in Japan and the U.S. Japanese top managers are older and have shorter tenures as top managers than their U.S. counterparts. Overall, however, turnover-performance relations are economically and statistically similar: turnover is negatively related to stock, sales, and earnings performance in both countries. Turnover in Japan is particularly sensitive to low earnings. Evidence on executive compensation confirms that Japanese executives own less stock and receive lower cash compensation than U.S. executives. Cash compensation-performance relations, nevertheless, are also similar in magnitude to those found in previous work for U.S. executives.

Kaplow, Louis

TI Optimal Sanctions when the Probability of Apprehension Varies Among Individuals. **AU** Bebchuk, Lucian Arye; Kaplow, Louis.

TI Optimal Sanctions When Individuals are Imperfectly Informed About the Probability of Apprehension. **AU** Bebchuk, Lucian Arye; Kaplow, Louis.

Karni, Edi

PD June 1992. **TI** Social Attributes and Strategic Equilibrium: A Restaurant Pricing Game. **AU** Karni, Edi; Levin, Dan. **AA** Karni: The John Hopkins University. Levin: University of Houston. **SR** Johns Hopkins Department of Political Economy Working Paper: 282; Department of Political Economy, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 21. **PR** no charge. **JE** D40, D43, L10. **KW** Bertrand Equilibrium. Consumption Externalities. Social Interaction.

AB Using a game theoretic approach we examine possible equilibrium explanations of the often observed phenomenon that two neighboring restaurants offering similar menus nevertheless experience vastly different demands. The essential aspect of this analysis is the presence of a consumption externality that makes the popularity itself a factor in the determination of the relative attractiveness of the restaurants.

PD June 1992. **TI** The Impossibility of Experimental Elicitation of Subjective Probabilities. **AU** Karni, Edi; Safra, Zvi. **AA** Karni: Johns Hopkins University. Safra: Tel Aviv University. **SR** Johns Hopkins Department of Political Economy Working Paper: 283; Department of Political Economy, Johns Hopkins University, Baltimore, Maryland 21218. **PG** 10. **PR** no charge. **JE** D80, D87. **KW** Subjective Probabilities. Elicitation.

AB In this paper we show that if decision makers may have stakes in certain events then the experimental elicitation of their subjective probabilities of these events is impossible.

Karolyi, G. Andrew

TI Global Financial Markets and the Risk Premium on U.S. Equity. **AU** Chan, K. C.; Stulz, Rene M.; Karolyi, G. Andrew.

Karp, Larry S.

TI Nonconvexity, Efficiency and Equilibrium in Exhaustible Resource Depletion. **AU** Fisher, Anthony C.; Karp, Larry S.

PD July 1992. **TI** Helping by Hurting: Industrial Policy as an Alternative to Trade Policy. **AU** Karp, Larry S.; Perloff, Jeffrey M. **AA** Karp: University of California, Berkeley and University of Southampton. Perloff: University of California, Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics Working Paper: 631; Department of Agricultural and Resource Economics, 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 26. **PR** $9.00. **JE** F12, F13. **KW** Commercial Policy. Oligopoly.

AB Industrial policies that are essentially nonlinear taxes or subsidies on adjustment costs of domestic firms affect those firms' market power in oligopolistic international markets. These adjustment policies often can achieve a strategic purpose at lower cost to the government than linear trade or investment subsidies and are less likely to result in retaliation by other governments. Many governments, however, use adjustment policies for non-strategic purposes without recognizing that they are lowering their firms' market power by subsidizing adjustment costs rather than taxing them.

Karzanov, Alexander V.

PD October 1991. **TI** Maximization over the Intersection of Two Compatible Greedy-Polyhedra. **AA** University of Moscow. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-91 732-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 24. **PR** no charge. **JE** C44. **KW** Graph Theory. Greedy Polyhedron.

AB A greedy-polyhedron, arising as a generalization of the notion of polymatroid, is a convex set Q in the |T|-dimensional Euclidean space R to the T for which a natural greedy-algorithm yields an optimum solution for any (not necessarily nonnegative) real-valued objective vector c. Such a polyhedron can be equivalently defined as the solution set of a system of inequalities. It is known that the problem of maximizing c'x over the intersection of two greedy-polyhedra Q and Q' described by integer-valued functions f and f' has a half-integral optimal solution x. We consider a special case of the problem when c equals 1 and there are certain additional compatibility relations. We develop a combinatorial method to solve the problem in question in which the number of iterations is bounded by a polynomial in |T|, and establish the existence of an optimal solution having a special structure. Using an approach in [FKS], we then demonstrate application of compatible greedy-polyhedra to the maximum undirected multi(commodity)flow problem for the case when the commodity graph is the complement to the line graph of a bipartite graph.

Keating, Michael

PD May 1992. **TI** The State, Territorial Minorities and International Regimes. **AA** University of Western Ontario. **SR** Papers in Political Economy Political Economy Research Group, University of Western Ontario: 24; Department of Economics, Social Science Centre, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 35. **PR** no charge. **JE** J15, R50, H77. **KW** Territorial Autonomy.

AB The complex and differentiated international order emerging in Europe and, to some extent, North America, and specifically, international and supranational regimes may provide external support systems for new forms of territorial autonomy. Yet only certain territorial minorities are in a position to exploit these. This depends on the institutional structure of the territory; economic capacity; patterns of social relations in civil society; capacities for territorial political mobilization; and access to the international regime. The paper examines the conditions under which this might be so, involving the state, the international order, the nature of the autonomist demands and the institutional, economic and social capacity of the territory concerned. The analysis draws on the situation of western Europe and North America and the state and international economic/political regimes being created there and at this state claims no wider applicability.

Keen, Michael

TI Public Goods, Self-Selection and Optimal Income Taxation. **AU** Boadway, Robin; Keen, Michael.

Kenen, Peter B.

TI Using an EC-Wide Monetary Aggregate in Stage Two of EMU. **AU** Bayoumi, Tamim A.; Kenen, Peter B.

Kilgour, D. Marc

PD February 1992. **TI** Putting the Other Side "On Notice" Can Induce Compliance in Arms Control. **AU** Kilgour, D. Marc; Brams, Steven J. **AA** Kilgour: Wilfred Laurier University. Brams: New York University. **SR** New York University Economic Research Reports: 92-07; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 28. **PR** no charge. **JE** C72, C73. **KW** Sequential Game. Simultaneous Game. Pre-announced Policy.

AB Arms-control inspection is modeled by two games, one played simultaneously and one sequentially, between an inspector (O) and an inspectee (E). In each game, E may choose to comply with or violate an arms-control agreement while O may choose to inspect, or not, for a possible violation by E. Besides various costs and benefits, the parameters of the games include the conditional probability that a violation will be detected if there is an inspection, reflecting the uncertainty of inspection. In the simultaneous game, O is not always able to deter E from violating an agreement. In the sequential game, by contrast, O, by announcing in advance an inspection strategy and credibly committing itself to carrying it out, can, with certainty, deter E from violating, which in general leads to an equilibrium in the sequential form Pareto-superior to that in the simultaneous form.

Kim, W. C.

TI Asymptotically Best Bandwith Selectors in Kernel Density Estimation. **AU** Park, Byeong U.; Kim, W. C.; Marron, J. S.

Kim, Youngse

PD March 1992. **TI** Adjustment Dynamics and Equilibrium Selection in Coordination Games. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 667; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 28. **PR** $2.50; checks payable to U.C. Regents. **JE** C72, D90. **KW** Risk Dominance. Adjustment Costs.

AB We consider symmetric multiperson coordination games in a perfect foresight deterministic dynamic framework with a costly adjustment. Strong doubt is cast on the equivalence between risk dominance and learning outcomes formerly alleged in two person games. Equilibrium selection is fully characterized as a function of friction, which in turn depends upon players' discount rate and the duration of action commitment. Some limiting results obtain and their links to static equilibrium concepts based on perturbation are clarified. Surprisingly enough, the limit as the friction gets smaller coincides with the selection from global perturbation and strict iterated admissibility. In any pure coordination game, a much stronger result obtains supporting the Pareto efficiency as long as friction is sufficiently small, regardless of the number of players and of the initial states. We also provide numerical results that have substantial implications for the well known experiments on coordination failures.

Kleit, Andrew N.

PD April 1992. **TI** Efficiencies Without Economists: The Early Years of Resale Price Maintenance. **AA** Federal Trade Commission. **SR** Federal Trade Commission Bureau of Economics Working Paper: 193; Bureau of Economics, Federal Trade Commission, 6th and Pennsylvania Ave. NW, Washington, D.C. 20580. **PG** 28. **PR** no charge. **JE** L42, K21, L22, N42. **KW** Vertical Restraints. Antitrust.

AB Resale price maintenance (RPM) contentious topic, both in economics and in antitrust. During the 1980's economists derived new efficiency motivations for RPM while the Supreme Court reaffirmed the per se ban on its use and Congress threatened to extend that ban. While economists have proposed a number of different efficiency explanations for RPM, such theorizing has been performed largely without the help of businesses that actually use RPM. This paper seeks to find out why businesses may believe they benefit from RPM by examining which efficiency rationales were advanced by firms during a critical time for RPM in the U.S., 1915 to 1917. This study finds that the efficiency explanations for RPM generated by modern economists are not new. While today's theories may appear unlikely to their critics, they were certainly real enough to businessmen over 70 years ago.

Kletzer, Kenneth M.

TI Government Solvency, Ponzi Finance and the Redundancy and Usefulness of Public Debt. **AU** Buiter, Willem H.; Kletzer, Kenneth M.

Kneip, Alois

PD February 1992. **TI** Model Estimation in Nonlinear Regression under Shape Invariance. **AU** Kneip, Alois; Engel, Joachim. **AA** Kneip: University of Bonn. Engel: University of Heidelberg. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: A-367; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 13. **PR** no charge. **JE** C14, C51. **KW** Model Selection. Nonparametric Smoothing.

AB Given data from a sample of noisy curves we consider a nonlinear parametric regression model with known model function. An interactive algorithm for estimating individual parameters as well as the model function is introduced under the assumption of a certain shape invariance: the individual regression curves are obtained from a common shape function by linear transformations of the axes. Our algorithm is based on least-squares methods for parameter estimation and on nonparametric kernel methods for curve estimation. Asymptotic distributions are derived for the individual parameter estimators as well as for the estimator of the shape function. An application to human growth data illustrates the method.

TI Searching for Structure in Curve Samples. **AU** Gasser, Theo; Kneip, Alois.

Knetter, Michael M.

PD June 1992. **TI** International Comparisons of Pricing-to-Market Behavior. **AA** Dartmouth College and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4098; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 19. **PR** $3.00. **JE** F12, F31. **KW** Price Discrimination. International Trade.

AB This paper measures the degree of price discrimination across export destinations that is associated with exchange rate changes using U.S., U.K., German and Japanese industry-level data. Given the industries sampled more price discrimination across destinations is observed in the U.K., German and Japanese data. For industries that match across source countries, however, behavior is very similar across source countries. Furthermore, destination-specific price adjustment on exports to the U.S. from Germany and Japan is similar to price adjustment observed on shipments to other destinations. Most variation in the data appears to be related to industry.

Koopman, Siem Jan

PD May 1992. **TI** Exact Score for Time Series Models in State Space Form. **AU** Koopman, Siem Jan; Shephard, Neil G. **AA** Koopman: London School of Economics. Shephard: Nuffield College, Oxford. **SR** London School of Economics Suntory-Toyota International Centre for Economics and Related Disciplines Working Paper: EM/92/241; Suntory-Toyota International Centre for Economics and Related Disciplines, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 11. **PR** no charge. **JE** C32. **KW** Score Vector. Kalman Filter.

AB The score vector for a time series model which fits into the Gaussian state space form can be approximated by numerically differentiating the log-likelihood. If the parameter vector is of length p, this involves the running of p+1 Kalman filters. This paper shows the score vector can be computed in a single pass of the Kalman filter and a smoother. For many classes of models this dramatically increases the speed and reliability of algorithms for the numerical maximization of likelihood.

Kotlikoff, Laurence J.

TI Generational Accounts: A Meaningful Alternative to

Deficit Accounting. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J.

TI Generational Accounting: A New Approach for Understanding the Effects of Fiscal Policy on Saving. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J.

PD December 1991. **TI** Estimating a Firm's Age-Productivity Profile Using the Present Value of Worker's Earnings. **AU** Kotlikoff, Laurence J.; Gokhale, Jagadeesh. **AA** Kotlikoff: Boston University and National Bureau of Economic Research. Gokhale: Federal Reserve Bank of Cleveland. **SR** Federal Reserve Bank of Cleveland Working Paper: 9119; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 26. **PR** not available. **JE** J31, J33. **KW** Hiring. Compensation. Wages. Labor Market.

AB In hiring new workers, risk-neutral employers equate the present expected value of each worker's compensation to the present expected value of his/her productivity. Data detailing how present expected compensation varies with the age of hire embed, therefore, information about how productivity varies with age. This paper infers age-productivity profiles using data on the present expected value of earnings of new hires of a Fortune 1000 firm. For each of the five occupation/sex groups considered, productivity falls with age, with productivity exceeding earnings for young workers and vice versa for older workers.

TI Social Security and Medicare Policy from the Perspective of Generational Accounting. **AU** Auerbach, Alan J.; Gokhale, Jagadeesh; Kotlikoff, Laurence J.

PD May 1992. **TI** Economic Exchange and Support Within U.S. Families. **AA** Boston University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4080; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 19. **PR** $3.00. **JE** J11, J14, J12, J13. **KW** Demographics. Extended Family.

AB This paper examines U.S. family exchange and support, its levels and trends. The paper points out the importance of demographics and geographic mobility in affecting the amount and form of family exchange. It then considers family economic exchange in the form of shared living, financial transfers, and the provision of time. Finally, it describes recent tests of family altruism and risk sharing. The paper paints a very pessimistic picture. While many Americans are members of extended families that are intact and in touch, a growing number of Americans have few extended family members on whom to rely. Family support in the form of shared living, financial assistance, and significant provision of time is increasingly becoming the exception, rather than the rule.

Kovenock, Dan

TI GATT, Dispute Settlement and Cooperation. **AU** Thursby, Marie; Kovenock, Dan.

Krelle, Wilhelm

PD February 1992. **TI** A Theory on Long-Term Changes of Economic Growth. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: B-213; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 14. **PR** no charge. **JE** E32, O47. **KW** Business Cycles. Kondratieff Cycle.

AB Growth rate of GDP, technical progress and structural change are higher in Kondratieff upswings than in downswings. This defines a Kondratieff cycle. Why is that so? The theory offered in this paper suggests that there is a sort of "normal" rate of change in a society. If the rate of change induced by economic growth and structural change is too large resistance against this change develops. If structural change is too slow a revolutionary spirit develops which opens up new possibilities of economic activity. In the simplest case this process may be described by a linear second order difference equation for a variable called "degree of activity" which reflects this general attitude in the society. The paper shows that this approach applied to the developed market economies after World War II yields long term sinosoidal cycles roughly between 30 and 40 years.

Krueger, Alan B.

TI Estimating the Payoff to Schooling Using the Vietnam-Era Draft Lottery. **AU** Angrist, Joshua D.; Krueger, Alan B.

TI Estimates of the Economic Return to Schooling from a New Sample of Twins. **AU** Ashenfelter, Orley; Krueger, Alan B.

TI Race and School Quality Since Brown vs. Board of Education. **AU** Boozer, Michael A.; Wolkon, Shari; Krueger, Alan B.

TI Union Membership in the United States: The Decline Continues. **AU** Farber, Henry S.; Krueger, Alan B.

Kydland, Finn E.

PD October 1991. **TI** On the Econometrics of World Business Cycles. **AA** Carnegie-Mellon University. **SR** Federal Reserve Bank of Cleveland Working Paper: 9115; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 10. **PR** not available. **JE** E30, E32, O40. **KW** Business Cycles. Growth.

AB In this paper I describe briefly an econometric (that is, quantitative-theoretic) approach to business cycles along with two examples of applications to questions or issues in international business cycles The focus is on its use in obtaining quantitative answers to well-defined questions. Moreover, since much of the progress in economic science is motivated by remaining deviations or anomalies relative to established theory, I emphasize that disciplined use of this econometric approach indeed enables the researcher to document such deviations clearly.

TI The Gold Standard as a Rule. **AU** Bordo, Michael D.; Kydland, Finn E.

Lagunoff, Roger, D.

PD March 1992. **TI** Committing to a Mechanism: Resilient Allocation Rules for Bilateral Trade. **AA** University of Pennsylvania. **SR** University of Pennsylvania CARESS Working Paper: 92-07; 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** D82, D80. **KW** Private Information. Allocation Rules. Central Planner.

AB In decision problems where agents hold private information, it may be that an uninformed central planner cannot or should not commit to a mechanism governing trade. The reason is that the planner may be unable to identify Pareto improvements that the players themselves could identify. This paper examines allocation rules that are "resilient" in the sense that no improvements could be both identified and achieved by the agents themselves.

Lambelet, Jean-Christian

PD February 1992. **TI** Previsions Economiques: Science, Art ou Imposture?. **AU** Lambelet, Jean-Christian; Nilles, Delia. **AA** Universite de Lausanne. **SR** Universite de Lausanne, Cahiers de Recherches Economiques: 9201; Departement d'Econometrie et d'Economie Politique, Universite de Lausanne, BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. **PG** 22. **PR** no charge. **JE** C51, C53. **KW** Macroeconomic Models. Model Construction.
AB Cet article se propose d'expliquer, le plus simplement possible, comment on construit un modele macroeconometrique de type structurel et comment il est utilise en pratique.

Lambson, Val Eugene

PD June 1992. **TI** Empirical Evidence for Collusion in the U.S. Auto Market? **AU** Lambson, Val Eugene; Richardson, J. David. **AA** Lambson: Brigham Young University. Richardson: Syracuse University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4111; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 18. **PR** $3.00. **JE** L62, L41, C71. **KW** Automobile Industry. Anticompetitive Practices. Market Structure.
AB A supergame theoretic price-setting model of collusion is calibrated to data from the North American passenger car market before, during, and after the voluntary restraint arrangements (VRAs) with Japan. Conclusions about whether the model is consistent with the data from the various regimes depend on assumptions about market structure, demand elasticities, and discount factors. If one believes that the price elasticity of auto demand is about one, for example, then the calibrations suggest that in the pre-VRA and VRA regimes, only General Motors and Ford could conceivably have colluded, and even this limited potential broke down in the post-VRA regime.

Lane, Timothy D.

PD June 1992. **TI** Market Discipline. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/42; International Monetary Fund, Washington, DC 20431. **PG** 26. **PR** not available. **JE** G14, H32. **KW** Borrowing. Market Information.
AB Under what circumstances can market forces prevent unsustainable borrowing? Effective market discipline requires that capital markets be open, that information on the borrower's existing liabilities be readily available, that no bailout be anticipated, and that the borrower respond to market signals. This paper explores the implications of these conditions, and reviews some relevant empirical evidence.

Lang, Kevin

PD May 1992. **TI** Labor Market Segmentation, Wage Dispersion and Unemployment. **AU** Lang, Kevin; Dickens, William T. **AA** Lang: Boston University and National Bureau of Economic Research. Dickens: University of California, Berkeley and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4073; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 28. **PR** $3.00. **JE** J42, J64, J31. **KW** Segmented Labor Markets.
AB This paper briefly reviews the empirical evidence on labor market segmentation and presents some new results on the similarity of the pattern of segmentation across 66 different countries. The paper goes on to consider how unemployment might be understood in a labor market segmentation framework. Existing models of unemployment in a dual labor market suggest that unemployment should be concentrated among those who are ultimately employed in high wage jobs. In fact, unemployment seems to be concentrated among workers who are more likely to be found in low wage jobs. This happens even though at least some workers find low wage jobs easy to obtain. We develop a segmented labor market model capable of explaining these facts and then explore its implications for the aggregate unemployment rate. We find that it fits well with the facts.

TI Labor Market Segmentation Theory: Reconsidering the Evidence. **AU** Dickens, William T.; Lang, Kevin.

Lang, Larry H. P.

TI Troubled Savings and Loan Institutions: Voluntary Restructuring Under Insolvency. **AU** DeGennaro, Ramon P.; Lang, Larry H. P.; Thomson, James B.

PD January 1992. **TI** Asset Sales, Leverage, and the Agency Costs of Managerial Discretion. **AU** Lang, Larry H. P.; Poulsen, Annette; Stulz, Rene M. **AA** Lang: New York University. Poulsen: University of Georgia. Stulz: Ohio State University. **SR** New York University Salomon Brothers Working Paper: S-92-31; 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** 30. **PR** $5.00. **JE** G10, G32. **KW** Asset Sales. Agency Costs. Managerial Discretion.
AB This paper investigates a sample of large asset sales. We find that the average stock-price reaction to asset sales is significantly larger when the proceeds are used to repay debt than otherwise. The stock-price reaction to asset sales when the proceeds are kept within the firm is insignificantly different from zero. The typical firm that sells assets in the sample performs poorly in the year before the sale, so that it may find it difficult to raise funds on capital markets without accepting restrictions on the use of the funds. Asset sales may therefore enable the selling firm to keep investing in poor operations without the monitoring from capital markets that is the byproduct of securities sales. Our evidence is therefore consistent with the hypothesis that assets sales increase the agency costs of managerial discretion when the proceeds are kept within the firm.

PD January 1992. **TI** Contagion and Competitive Intra-Industry Effects of Bankruptcy Announcements. **AU** Lang, Larry H. P.; Stulz, Rene M. **AA** Lang: New York University. Stulz: Ohio State University. **SR** New York University Salomon Brothers Working Paper: S-92-32; 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** 25. **PR** $5.00. **JE** G33, L16. **KW** Bankruptcy. Equity Value.
AB This paper investigates the effect of bankruptcy announcements on the equity value of competitors of the bankrupt firm. On average, bankruptcy announcements decrease the value of a value-weighted portfolio of competitors by 1%. This negative industry effect of bankruptcy announcements is significantly larger for highly levered industries and industries where the unconditional stock returns of the non-bankrupt and bankrupt firms are highly correlated; however, the industry effect is significantly positive for highly concentrated industries with low leverage, suggesting that in such industries competitors benefit from the difficulties of the bankrupt firm.

Laurent, M.

TI Some New Classes of Facets for the Equicut Polytope. **AU** De Souza, C. C.; Laurent, M.

PD February 1992. **TI** The Metric Polytope. **AU** Laurent, M.; Poljak, Svatopluk. **AA** Laurent: University of Bonn and University of Paris. Poljak: University of Bonn and Charles University of Prague. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-92 742-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 11. **PR** no charge. **JE** C44. **KW** Graph Theory. Metric Polytope. Graphical Vertices.
AB We study fractional vertices of the metric polytope MP sub n, in particular, those with denominator 3 (vertices with denominator 2 do not exist). A graph G is called one-third-integral if, for every objective function c supported by G, the linear program max ((c sup T)x:x in MP sub n) has a solution whose coordinates all belong to {0, 1/3, 2/3, 1}. Several operations preserving one-third-integral graphs are presented. A large class of one-third-integral vertices of the metric polytope, called graphic vertices, are constructed from shortest path metrics. Adjacency properties on the metric polytope are also studied.

TI l sub 1-Rigid Graphs. **AU** Deza, Michel; Laurent, M.

Layard, Richard

PD December 1991. **TI** Unemployment in the OECD Countries. **AU** Layard, Richard; Nickell, Stephen J. **AA** Layard: London School of Economics. Nickell: University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 130; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 39. **PR** not available. **JE** J64, J65, C21. **KW** Unemployment Patterns. Unemployment Benefits.
AB This paper presents a theoretical framework followed by an empirical analysis of unemployment patterns in the OECD countries in post-war period. Our broad conclusions indicate, first, that both levels of unemployment and the size of the unemployment response to shock depend in the structure of the unemployment benefit system and the mechanism of wage determination. Second, the persistence of unemployment depends again on the benefit and wage determination systems, and also on the degree of employment flexibility. Third, the impact of nominal shocks is negatively influenced by the degree of nominal flexibility in wage bargaining and the average variance of nominal shocks over the sample period.

PD April 1992. **TI** A Code of Conduct for Inter-State Trade. **AU** Layard, Richard; Sapir, Andre. **AA** Layard: London School of Economics. Sapir: European Commission. **SR** London School of Economics Centre for Economic Performance Occasional Paper: 3; Centre for Economic Performance, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 7. **PR** no charge. **JE** F42. **KW** Trade Agreement. Former Soviet States.
AB This paper was prepared for a conference of economic representatives of the states of the former Soviet Union. The paper argued the case for a code of conduct for inter-state trade and proposed such a code. The paper also includes the revisions proposed by those attending, all of whom did so in a personal capacity.

Layenov, Victor

PD July 1992. **TI** Bureaucrats, Subordinates, and the Failure of Soviet Marxism. **AU** Layenov, Victor; Majewski, John; Sokoloff, Kenneth. **AA** Layenov: none. Majewski and Sokoloff: University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 670; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 20. **PR** $2.50; checks payable to U.C. Regents. **JE** P30, P27. **KW** Bureaucracy. Soviet State.
AB Is Marxism irrelevant to modernity? I believe that the potential of the materialist approach in history and sociology is far from exhausted. Particularly, it refers to class-based analysis of social relations, including the conclusions of one of Marx's most profound postulates not yet applied to modernity that the State constitutes the private property of the bureaucracy. A class-based theory of bureaucracy elucidates the main characteristics of Soviet society. As I will try to show, the theory, once logically developed and applied to the reality of the Soviet Union, explains many mysterious and seemingly paradoxical events that take place in the Soviet Union. I do not offer this theory in typical scholarly fashion, but as an exploratory essay that seeks to see what went wrong with the "Great Experiment.".

Lee, Changwoo

TI Effects of Alternative Goodwill Treatments on Merger Premia: Further Empirical Evidence. **AU** Choi, Frederick D. S.; Lee, Changwoo.

Lee, Howard

TI Bank Risk and the Declining Franchise Value of the Banking Systems in the United States and Japan. **AU** Weisbrod, Steven R.; Lee, Howard; Rojas-Suarez, Liliana.

Lee, Jon

TI More Facets from Fences for Linear Ordering and Acyclic Subgraph Polytopes. **AU** Leung, Janny; Lee, Jon.

PD February 1992. **TI** Geometric Comparison of Combinatorial Polytopes. **AU** Lee, Jon; Morris, Walter D., Jr. **AA** Lee: Yale University and Universite Catholique de Louvain. Morris: George Mason University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9216; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 20. **PR** not available. **JE** C60. **KW** Graph Theory. Volume

Calculation.
AB We survey some analytic methods of volume calculation and introduce a distance function for pairs of polytopes based on their volumes. We study the distance function in the context of three familiar settings of combinatorial optimization: (i) Chvatal-Gomory rounding, (ii) fixed charge problems, and (iii) vertex packing on threshold graphs.

Lee, Lung-fei

PD November 1991. **TI** Semiparametric Minimum-Distance Estimation. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory, (CREST), Working Paper: 92-08; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 19. **PR** not available. **JE** C10, C14. **KW** Semiparametric Estimation.
AB Semiparametric minimum-distance estimation methods are introduced for the estimation of parametric or semiparametric econometric models. The semiparametric minimum-distance estimation methods share some familiar properties of the classical minimum-distance estimation method. However, they can be applied to the estimation of models with disaggregated data. Asymptotic properties of the estimators are analyzed. Some goodness-of-fit test statistics are introduced. For the estimation of some econometric models, weighted minimum-distance estimators can be asymptotically efficient. The minimum-distance estimators are asymptotically invariant with respect to some transformations.

PD April 1992. **TI** Consistent Estimation of Linear and Nonlinear Errors-in-Variables Models with Validation Information. **AU** Lee, Lung-fei; Sepanski, Jungsywan H. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory, (CREST), Working Paper: 92-07; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 17. **PR** not available. **JE** C10, C13, C42. **KW** Errors-in-Variables. Validation Study. Survey Data.
AB Consistent methods for the estimation of linear and nonlinear regression models with general measurement errors in variables in the presence of validation data information are introduced. The estimation procedures do not rely on any specific specification of auxiliary structural measurement error equations and are robust against any specification of measurement error equations. The estimation procedures can be applied even to situations where validation data alone does not permit possible estimation of the model. When validation data is rich enough for consistent estimation of the model, survey data are still valuable in improving efficiency of the validation data estimates. The estimation procedures can be applied to models and data where direct bias corrections might not be feasible.

PD May 1992. **TI** Asymptotic Distribution of the Maximum Likelihood Estimator for a Stochastic Frontier Function Model with a Singular Information Matrix. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory, (CREST), Working Paper: 92-01; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 11. **PR** not available. **JE** C10, C12. **KW** Maximum Likelihood. Stochastic Frontier Function.
AB This article has investigated the asymptotic distribution of the maximum likelihood estimator in a stochastic frontier function when the firms are all technically efficient. For such a situation, the true parameter vector is on the boundary of the parameter space, and the scores are linearly dependent. The maximum likelihood estimator is shown to be a mixture of certain truncated distributions. The maximum likelihood estimates for different parameters may have different rates of convergence. The model can be reparameterized into one with a regular likelihood function. The likelihood ratio test statistic has the usual mixture of chi-square distributions as in the regular case.

Leiderman, Leonardo

TI Israel's Exchange Rate Band. **AU** Helpman, Elhanan; Leiderman, Leonardo.

Leininger, Wolfgang

PD May 1992. **TI** Dynamic Rent-Seeking Games. **AU** Leininger, Wolfgang; Yang, Chun-Lei. **AA** Leininger: Universitat Dortmund and Boston University; Yang: Universitat Dortmund. **SR** Boston University Industry Studies Program Discussion Paper: 32; Department of Economics, Boston University, Boston, MA 02215. **PG** 20. **PR** no charge. **JE** C73, C72. **KW** Rent Dissipation. Dynamic Games.
AB The present paper analyses rent-seeking games in which competitors for a rent can act and react finitely or infinitely often. It argues for an infinite-move model as the most appropriate specification of a model of rent-seeking. Dynamic equilibrium analysis of this game suggests that wasteful expenditures in rent-seeking competitions are lower than previously studied static (simultaneous-move) games predict.

TI On the Scope of Indirect Regulation of Monopolies in the Presence of Large Entry Cost. **AU** Drottboom, Michael; Leininger, Wolfgang.

Leung, Janny

PD January 1992. **TI** More Facets from Fences for Linear Ordering and Acyclic Subgraph Polytopes. **AU** Leung, Janny; Lee, Jon. **AA** Leung: University of Arizona. Lee: Yale University and Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9209; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 21. **PR** not available. **JE** C60. **KW** Graph Theory. Linear Ordering Polytope.
AB We present new facets for the linear ordering polytope. These new facets generalize facets induced by subgraphs called fences and augmented fences. We provide the smallest known example of a facet-representing inequality for the linear ordering polytope that is not a rank inequality. Gilboa (1990) introduced the diagonal inequalities for the linear ordering polytope, and Fishburn (1991) posed the question of identifying precisely which diagonal inequalities represent facets. We completely resolve Fishburn's question. Some of our results can be transported to the acyclic subgraph polytope. These new facets for the acyclic subgraph polytope are the first ones that are not represented by rank inequalities.

Levin, Dan

TI Social Attributes and Strategic Equilibrium: A Restaurant Pricing Game. **AU** Karni, Edi; Levin, Dan.

Levine, David K.

PD July 1992. **TI** Debt Constraints and Equilibrium in Infinite Horizon Economies with Incomplete Markets. **AU** Levine, David K.; Zame, William R. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 666; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 23. **PR** $2.50; checks payable to U.C. Regents. **JE** D52, D90. **KW** Asset Markets. Pseudo-Equilibrium.

AB The primary purpose of this paper is to suggest a notion of equilibrium and pseudo-equilibrium for infinite horizon economies with incomplete asset markets, and to establish the existence of such a pseudo-equilibrium when assets are short-lived and denominated in general commodity bundles. When assets are denominated solely in a single numeraire commodity, or in units of account, we establish the existence of a true equilibrium.

Levy, Anat

PD July 1992. **TI** Individual and Collective Wage Bargaining. **AU** Levy, Anat; Shapley, Lloyd S. **AA** Levy: Tel Aviv University. Shapley: University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 671; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 22. **PR** $2.50; checks payable to U.C. Regents. **JE** J50, C71. **KW** Wage Determination. Bargaining Power. Oceanic Game.

AB Wage negotiation is modeled as an "oceanic" game. The employer and the union or unions (if any) are represented as atoms while the unorganized workers form a non-atomic continuum. The workers are heterogeneous in their outside opportunities but, for simplicity, are assumed to appear homogeneously in the employer's production function. The surplus that each set of participants is capable of generating is a measure of that set's potential, and a cooperative game in characteristic-function form is thereby defined. Its Shapley-value solution - the marginal surplus attributable to each player averaged over all possible alignments - distributes the total surplus among the players so as to yield a plausible long-run wage settlement. Several different levels of unionization are examined and contrasted. It is noteworthy that this solution is not tied to any particular set of bargaining rules or procedures but rests on the coalitional powers inherent in the economic model itself.

Lewis, Karen K.

TI Trends in Expected Returns in Currency and Bond Markets. **AU** Evans, Martin D. D.; Lewis, Karen K.

Li, Anlong

TI On Flexibility, Capital Structure, and Investment Decisions for the Insured Bank. **AU** Ritchken, Peter; Thomson, James B.; DeGennaro, Ramon P.; Li, Anlong.

PD August 1991. **TI** Optimal Bank Portfolio Choice under Fixed-Rate Deposit Insurance. **AA** Case Western Reserve University. **SR** Federal Reserve Bank of Cleveland Working Paper: 9111; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 15. **PR** not available. **JE** G21, G11, G22. **KW** Deposit Insurance. Portfolio Decisions.

AB This paper analyzes the optimal investment decisions of insured banks under fixed-rate deposit insurance. In the presence of charter value, trade-offs exist between preserving the charter and exploiting deposit insurance. Allowing banks to dynamically revise their asset portfolios has a significant impact on both the investment decisions and the fair cost of deposit insurance. The optimal bank portfolio problem can be solved analytically for constant charter value. The corresponding deposit insurance is shown to be a put option that matures sooner than the audit date. An efficient numerical procedure is also developed to handle more general situations.

PD January 1992. **TI** Binomial Approximation in Financial Models: Computational Simplicity and Convergence. **AA** Case Western University and Federal Reserve Bank of Cleveland. **SR** Federal Reserve Bank of Cleveland Working Paper: 9201; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 28. **PR** not available. **JE** G12, G13. **KW** Contingent Claims. Asset Pricing.

AB This paper explores the potential of transformation and other schemes in constructing a sequence of simple binomial processes that weakly converge to the desired diffusion limit. Convergence results are established for valuing both European and American contingent claims when the underlying asset prices are approximated by simple binomial processes. We also demonstrate how to construct reflecting and absorbing binomial processes to approximate diffusions with boundaries. Numerical examples show that the proposed simple approximations not only converge, but also give more accurate results than existing methods, such as that of Nelson and Ramaswamy (1990), especially for longer maturities.

Lichtenberg, Frank R.

PD June 1992. **TI** Ownership Structure and Corporate Performance in Japan. **AU** Lichtenberg, Frank R.; Pushner, George M. **AA** Lichtenberg: Columbia University and National Bureau of Economic Research. Pushner: Columbia University. **SR** National Bureau of Economic Research Working Paper: 4092; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 26. **PR** $3.00. **JE** G32, D21. **KW** Japanese Corporations. Equity Ownership. Corporate Performance.

AB We test several hypotheses regarding the relationship between ownership structure and corporate performance. Our findings support the proposition that equity ownership by financial institutions in Japan may effectively substitute for the missing external takeover market by resulting in monitoring and intervention which minimizes the danger of lapses in productivity. In contrast, we also find evidence that high levels of intercorporate shareholding insulate firms from their own problems, at the expense of firms performance. Further, we find a notable positive influence of insider ownership, but see no evidence that the influence of financial institutions has diminished in the globalization and prosperity of the 1980's.

Lin, Shoukang

PD March 1992. **TI** Can the Release of a Monetary Overhang Trigger Hyperinflation? **AU** Lin, Shoukang; Osband, Kent. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/24; International Monetary Fund, Washington, DC 20431. **PG** 21. **PR** not available. **JE** E31, E63, P22. **KW** Monetary Overhang. Government Policy.

AB It is widely feared that, once prices are decontrolled in the formerly centrally-planned economies, households' release of previously accumulated money will trigger a hyperinflation. This paper finds, instead, that whether a country's fiscal, monetary, and labor market policies are destabilizing typically does not depend on the money stock. However, the release of a monetary overhang can precipitate a large initial real wage shock. To the extent such a shock is not feasible politically, there is a motive for monetary reform, which must be weighed against the cost of reduced public confidence in money.

Lindner, Deborah J.

PD July 1992. **TI** The Political Economy of the Won: U.S.-Korean Bilateral Negotiations on Exchange Rates. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 434; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 20. **PR** no charge. **JE** F31, F13, F14. **KW** Exchange Rate Manipulation. Korea. Protectionism.

AB This paper traces the development of U.S.-Korean negotiations on exchange rates in the second half of the 1980's. Korea's current account surpluses emerged at a time when the United States was experiencing record current account deficits, in part due to the rapid appreciation of the dollar in the first half of the 1980's. Under the Omnibus Trade and Competitiveness Act, Korea and Taiwan were cited in 1988 as "manipulating" their currencies for "unfair" trade gain. With the implementation of the market average-rate system in March 1990, Korea was removed from Treasury's list of exchange rate manipulators. However, the Treasury has complained that even though Korea does not directly manipulate the won within the meaning of the Exchange Rates Act, pervasive capital controls limit potential exchange rate movements and may be used to "manipulate" the value of the won indirectly.

PD August 1992. **TI** Foreign Exchange Policy, Monetary Policy, and Capital Market Liberalization in Korea. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 435; Division of Research and Statistics, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 18. **PR** no charge. **JE** F31, E58, E65. **KW** Exchange Rates. Foreign Exchange Intervention. Monetary Policy. Korea.

AB In this paper, I investigate the interactions between foreign-exchange policy, monetary policy, and developments in Korean capital markets. A large increase in Korea's external position, combined with a relatively inflexible exchange rate, led to very large potential increases in money growth between 1986 and 1989. The sterilization of the foreign exchange intervention required an unprecedented monetary tightening on other fronts--a tightening that could have created serious distortions in the financial markets had direct credit controls been utilized. Consequently, the use of open market operations, rediscount policy, and reserve requirement was expanded and adapted to be more responsive to other market rates.

Liu, Guy S.

TI Cost Behaviour of Chinese State-Owned Manufacturing Enterprises During the Reform Period, 1979-87. **AU** Hay, Donald A.; Liu, Guy S.

Lo, Andrew W.

TI The Sources and Nature of Long-Term Memory in the Business Cycle. **AU** Haubrich, Joseph G.; Lo, Andrew W.

Lupi, Claudio

PD April 1992. **TI** Measures of Persistence, Trends, and Cycles in I(1) Time Series: A Rather Skeptical Viewpoint. **AA** Instituto Nazionale di Statistica, Rome and University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 137; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 19. **PR** not available. **JE** C22, C32. **KW** Stochastic Trends. Trend Decomposition. Difference Stationary Process.

AB Various measures of persistence and different Permanent-Transitory decompositions with integrated economic time series are considered and their properties are discussed in detail. The measures and the decompositions considered here are divided into univariate methods in the presence of a univariate Data Generating Process (DGP); univariate methods in the presence of a multivariate DGP; multivariate methods. The main result is that none of these techniques lead to a fully reliable estimate of the true persistence and of the true permanent component of the series unless the actual DGP is known.

Lynch, Lisa M.

TI Training at Work: A Comparison of U.S. and British Youths. **AU** Blanchflower, David G.; Lynch, Lisa M.

MacDonald, Ronald

PD May 1992. **TI** The Monetary Approach to the Exchange Rate: Rational Expectations, Long-Run Equilibrium and Forecasting. **AU** MacDonald, Ronald; Taylor, Mark P. **AA** MacDonald: University of Dundee. Taylor: International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/34; International Monetary Fund, Washington, DC 20431. **PG** 18. **PR** not available. **JE** F31, C52. **KW** Exchange Rate Forecasts. Monetary Model.

AB We re-examine the monetary approach to the exchange rate from a number of perspectives, using monthly data on the deutschemark-dollar exchange rate. Using the Campbell-Shiller technique for testing present value models, we reject the restrictions imposed upon the data by the forward-looking rational expectations monetary model. We demonstrate, however, that the monetary model is validated as a long-run equilibrium condition. Moreover, imposing the long-run monetary model restrictions in a dynamic error correction framework leads to exchange rate forecasts which are superior to those generated by a random walk forecasting model.

Machin, Stephen

PD March 1992. **TI** The Economic Effects of Multiple Unionism: Evidence from the 1984 Workplace Industrial Relations Survey. **AU** Machin, Stephen; Stewart, Mark; Van Reenen, John. **AA** Machin: University College, London and London School of Economics. Stewart: University of Warwick. Van Reenen: University College, London. **SR** Centre for Economic Performance Discussion Paper: 66; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 17. **PR** no charge. **JE** J50, J51. **KW** Unions. Bargaining. Wages.

AB This paper uses establishment-level data from the 1984

Workplace Industrial Relations Survey to investigate the relationship between the presence of multiple recognized unions and wages, financial performance and the incidence of industrial action. Where multiple unions are present, it is found to be important to distinguish between whether they bargain separately or jointly, and the most important effects are isolated where separate bargains occur. The results suggests that plants with multi-unionism and separate bargaining arrangements pay higher wages, have lower financial performance and are more prone to strike action lasting at least one day.

MaCurdy, Thomas

TI Forecasting Nursing Home Utilization of Elderly Americans. **AU** Dick, Andrew; MaCurdy, Thomas; Garber, Alan M.

Mailath, George J.

PD April 1992. **TI** JET Symposium on Evolutionary Game Theory: Introduction. **AA** University of Pennsylvania. **SR** University of Pennsylvania CARESS Working Paper: 92-08; 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** B40, C72, C73, D83. **KW** Evolutionary Game Theory.

AB Interest in evolutionary game theory has recently increased dramatically. I present a brief overview of the subject and the symposium. An evolutionary model consists of a large population of myopic and unsophisticated players playing some game repeatedly through time. Strategies that are "good" replies to the distribution of actions chosen by the current population will be played by a larger fraction of the population in the next period. Thus, players learn from the experience of the population. Results on dynamics, convergence, and equilibrium concepts and their interpretation are discussed.

Mairesse, Jacques

TI Exploring the Relationship Between R&D and Productivity at the Firm Level in French Manufacturing. **AU** Hall, Bronwyn H.; Mairesse, Jacques.

Majewski, John

TI Bureaucrats, Subordinates, and the Failure of Soviet Marxism. **AU** Layenov, Victor; Majewski, John; Sokoloff, Kenneth.

Makowski, Louis

PD July 1992. **TI** General Equilibrium and Market Socialism: Clarifying the Logic of Competitive Markets. **AU** Makowski, Louis; Ostroy, Joseph M. **AA** Makowski: University of California, Davis. Ostroy: University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 672; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 19. **PR** $2.50; checks payable to U.C. Regents. **JE** D50, P22, P23, B24. **KW** Price System. Socialist Economies.

AB We describe two versions of general equilibrium, each highlighting different features of the price system, the standard (Walrasian) version with its emphasis on the decentralization/information role of prices and another emphasizing what we call the appropriation/incentive role of competitive prices. Through their different implications for market socialism, we illustrate the differences between these two approaches to general equilibrium.

Mammen, Enno

PD March 1992. **TI** Behavior of Kernel Density Estimates and Bandwidth Selectors for Contaminated Data Sets. **AU** Mammen, Enno; Park, Byeong U. **AA** Mammen: Universitat Heidelberg. Park: Universite Catholique de Louvain and Seoul National University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9214; Universite Catholique de Louvain Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 13. **PR** not available. **JE** C14. **KW** Kernel Density Estimation. Contamination Neighborhoods.

AB In this paper robustness properties are studied for kernel density estimators. A plug-in and least squares cross-validation bandwidth selector are considered. In an asymptotic analysis and in a simulation study it is shown that the robustness of kernel density depends strongly on the chosen bandwidth selector.

Mankiw, N. Gregory

TI Asymmetric Price Adjustment and Economic Fluctuations. **AU** Ball, Laurence; Mankiw, N. Gregory.

Manning, Alan

PD February 1992. **TI** Wage Bargaining and the Phillips Curve: The Identification and Specification of Aggregate Wage Equations. **AA** London School of Economics. **SR** Centre for Economic Performance Discussion Paper: 62; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 36. **PR** no charge. **JE** J50. **KW** Wage Bargaining. Phillips Curve.

AB Most economists believe that wage-setting is very important for understanding macroeconomic behavior. But, the form of wage equations commonly estimated suffer from problems of identification. The aim of this paper is to consider whether these problems are inevitable and, if they are not, to suggest ways in which we can estimate structural models of wage-setting. It is argued that if one confines attention to models of wage bargaining that are commonly used, identification of the parameters of of wage-setting should not be a problem, and that the most appropriate form of an aggregate wage equation should be a Phillips Curve.

PD March 1992. **TI** Productivity Growth, Wage Setting and the Equilibrium Rate of Unemployment. **AA** London School of Economics. **SR** Centre for Economic Performance Discussion Paper: 63; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 30. **PR** no charge. **JE** J30. **KW** Productivity Growth. Unemployment. Wages.

AB The paper argues that one cannot tell a convincing story of the rise in OECD unemployment without mentioning the slowdown in productivity and real wage growth that occurred in the 1970's. It is argued that whereas most authors have regarded any effects of the slowdown on unemployment as temporary while "real wage resistance" is overcome, there is no theoretical reason to believe that this is the case. This point was illustrated using a dynamic union bargaining model. This model also suggested that a Phillips Curve was appropriate as an empirical wage equation. For most OECD countries such a wage equation works well, and the slowdown in real wage growth does appear to have been important in explaining the rise in unemployment.

PD March 1992. **TI** How Robust is the Microeconomic Theory of the Trade Union? **AA** London School of Economics. **SR** Centre for Economic Performance Discussion Paper: 65; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 34. **PR** no charge. **JE** J50, J51. **KW** Unions.
AB This paper argues that the predictions of standard trade union models and the tests for distinguishing between these models are not robust to quite small and reasonable changes in the conventional assumptions. It shows how assuming that the ex post substitutability between labor and capital is less than the ex ante substitutability can reverse much of the conventional wisdom about the effects of trade unions.

Marchand, Maurice

TI Education and the Poverty Trap. **AU** Barham, Vicky; Boadway, Robin; Marchand, Maurice; Pestieau, Pierre.

TI Towards a Theory of the Direct-Indirect Tax Mix. **AU** Boadway, Robin; Marchand, Maurice; Pestieau, Pierre.

Markusen, James R.

TI Accounting for Growth with New Inputs. **AU** Feenstra, Robert C.; Markusen, James R.

Marron, J. S.

TI Asymptotically Best Bandwith Selectors in Kernel Density Estimation. **AU** Park, Byeong U.; Kim, W. C.; Marron, J. S.

Marsden, David

PD May 1992. **TI** Motivation and Performance Related Pay in the Public Sector: A Case Study of the Inland Revenue. **AU** Marsden, David; Richardson, Ray. **AA** London School of Economics. **SR** Centre for Economic Performance Discussion Paper: 75; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 40. **PR** no charge. **JE** J45, J33. **KW** Performance Pay. Inland Revenue.
AB Performance related pay has been extended to practically the whole of the Civil Service over the last few years, and the Chancellor of the Exchequer recently announced the Government's intention to enlarge its role even further. Almost no serious work on it seems to have been published on whether the existing systems have succeeded. Our first finding is that the majority of Revenue staff support the principle of performance related pay but that a significant minority feels hostile to it. Our second finding is that any positive motivational effects of Performance Pay have been, at most, very modest among Revenue staff.

Martimort, David

TI Strategic Trade Policy with Incompletely Informed Policymakers. **AU** Brainard, S. Lael; Martimort, David.

Mathieson, Donald J.

TI A Framework for the Analysis of Financial Reforms and the Cost of Official Safety Nets. **AU** Isard, Peter; Mathieson, Donald J.; Rojas-Suarez, Liliana.

PD June 1992. **TI** Liberalization of Capital Account: Experiences and Issues. **AU** Mathieson, Donald J.; Rojas-Suarez, Liliana. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/46; International Monetary Fund, Washington, DC 20431. **PG** 49. **PR** not available. **JE** F21, F32, F31, F41. **KW** Capital Controls. International Investment.
AB This paper reviews the experience with capital controls in industrial and developing countries, considers the policy issues raised when the effectiveness of capital controls diminishes, examines the medium-term benefits and costs of an open capital account, and analyzes the policy measures that could help sustain capital account convertibility. As the effectiveness of capital controls eroded more rapidly in the 1980's than in earlier periods, new constraints were placed on the formulation of stabilization and structural reform programs. However, experience suggests that certain macroeconomic, financial, and risk management policies would allow countries to attain the benefits of capital account convertibility and reduce the financial risks created by an open capital accounts.

Matsui, Akihiko

TI Induction and Bounded Rationality in Repeated Games. **AU** Cho, In-Koo; Matsui, Akihiko.

TI Learning and the Ramsey Policy. **AU** Cho, In-Koo; Matsui, Akihiko.

TI Fiat Money, Barter, and Optimal Monetary Policy with Capital. **AU** Hayashi, Fumio; Matsui, Akihiko.

Mavros, Panagiotis G.

TI Do Doctoral Students' Financial Support Patterns Affect Their Times-to-Degree and Completion Probabilities. **AU** Ehrenberg, Ronald G.; Mavros, Panagiotis G.

Mavrotas, George

TI The Role of Career Aspirations and Financial Constraints in Individual Access to Vocational Training. **AU** Greenhalgh, Christine; Mavrotas, George.

McAllister, Patrick H.

PD June 1992. **TI** Diversification and Risk in Banking: Evidence From Ex Post Returns. **AU** McAllister, Patrick H.; McManus, Douglas A. **AA** Federal Reserve Board. **SR** Board of Governors of the Federal Reserve System Finance and Economics Discussion Series: 201; C/O Stephen A. Sharpe, Mail Stop 89, Federal Reserve Board, Washington, DC 20551. **PG** 24. **PR** no charge. **JE** G21, G11, G28, C14. **KW** Bank Loan Portfolio. Scale Economies.
AB This paper examines rates of return on bank loan portfolios less than $10 billion in size. It develops nonparametric estimates of the mean and variance of the rate of return and derives a measure of insolvency risk. We find that variance declines with the size of the portfolio, a form of financial returns to scale that has been overlooked in recent studies of scale economies in banking. Our results imply that the current system of risk-based capital requirements, which does not take diversification into account, places a disproportionate burden on most larger banks.

McAndrews, James J.

PD April 1992. **TI** Results of a Survey of ATM Network Pricing. **AA** Federal Reserve Bank of Philadelphia. **SR** Federal Reserve Bank of Philadelphia Research Working Paper: 92-7; Working Papers, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, PA 19106. **PG** 11. **PR** no charge except overseas airmail, $2.00; checks/money orders in U.S. funds payable to Federal Reserve Bank of Philadelphia. **JE** D40, G21, O33. **KW** Automated Teller. ATM Fees.

AB This paper presents the results of a survey of large automated teller machine networks undertaken in 1989 and 1990. The networks were asked to provide information on fees, membership, and governance. The survey reveals a significant variation in both membership fees and switch fees, with both fees often varying according to size of the participating member. Using other published data some simple economic relationships are estimated. They suggest that in 1990 there was a substantial complementarity between ATMs and ATM-cards in producing ATM transactions, that there were economies of scale in networks, and that the ATM elasticity of demand was relatively large.

McCallum, Bennett T.

PD June 1992. **TI** Specification of Policy Rules and Performance Measures in Multicountry Simulation Studies. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/41; International Monetary Fund, Washington, DC 20431. **PG** 18. **PR** not available. **JE** C53, C15, F41. **KW** Stochastic Simulations. International Monetary Policy.

AB Much recent analysis of international monetary and fiscal policy issues, such as the choice of an exchange-rate regime or the design of a policy coordination scheme, has been conducted by stochastic simulations with multicountry econometric models. In these studies, it has become standard practice to consider alternative policy rules of a particular form that calls for departures of a policy instrument, from some "baseline" reference path, that are proportional to deviations of a specified target variable from its own baseline path. The present paper argues, however, that this standard rule form is seriously defective for evaluating such issues because the implied rules (1) often fail to be operational and (2) have associated performance measures that can be misleading in important cases. An example is presented that concerns the international "assignment problem" of optimally pairing instruments with policy objectives.

PD July 1992. **TI** A Reconsideration of the Uncovered Interest Parity Relationship. **AA** Carnegie Mellon University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4113; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 29. **PR** $5.00. **JE** F31, G13. **KW** Foreign Exchange. Forward Markets.

AB The paper first presents reasons for viewing the uncovered interest-parity (UIP) relationship as more important, in terms of economic analysis, than the unbiasedness of forward rates as predictors of future spot exchange rates. The two hypotheses are closely related, so that test rejections of the latter tend to cast doubt on the former, but are not identical--so unbiasedness rejections are not conclusive for UIP. Next, some representative evidence is presented that pertains to alternative versions of the unbiasedness test.

McManus, Douglas A.

TI Diversification and Risk in Banking: Evidence From Ex Post Returns. **AU** McAllister, Patrick H.; McManus, Douglas A.

Mehra, Rajnish

TI The Equity Premium and the Allocation of Income Risk. **AU** Danthine, Jean-Pierre; Donaldson, John B.; Mehra, Rajnish.

TI The Equity Premium and the Allocation of Income Risk. **AU** Danthine, Jean-Pierre; Donaldson, John B.; Mehra, Rajnish.

Mei, Jianping

TI Return Generating Process and the Determinants of Term Premiums. **AU** Elton, Edwin J.; Gruber, Martin J.; Mei, Jianping.

Mertens, Jean-Francois

PD February 1992. **TI** Two Examples on Strategic Equilibrium. **AA** State University of New York at Stony Brook. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9208; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 9. **PR** not available. **JE** C72. **KW** Quasi-Perfect Equilibrium. Perfect Information. Subgame Perfect Equilibrium.

AB The first example is a two person game with a unique dominant strategy for each player where the dominant strategy equilibrium is not extensive form perfect. It is argued that the concept of quasi-perfect equilibria may be superior to that of perfect equilibria. The second example is a two person game with perfect information and unique subgame perfect equilibrium, and a unique stable set, but where the latter allows different outcomes.

Mester, Loretta J.

TI Debt Covenants and Renegotiation. **AU** Berlin, Mitchell; Mester, Loretta J.

PD May 1992. **TI** Perpetual Signaling with Imperfectly Correlated Costs. **AA** Federal Reserve Bank of Philadelphia. **SR** Federal Reserve Bank of Philadelphia Research Working Paper: 92-8; Working Papers, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, PA 19106. **PG** 18. **PR** no charge except overseas airmail, $2.00; checks/money orders in U.S. funds payable to Federal Reserve Bank of Philadelphia. **JE** D82, C72. **KW** Private Information. Signaling.

AB In many imperfect information models in industrial organization, a firm is induced to take an action which does not maximize its first-period profit because other firms view this action as a signal about the firm's private information. In these models, because the opponent firms can correctly invert the firm's strategy, all information is revealed after play in the first period, and in subsequent periods, all firms play their single-period profit maximizing strategies. Thus, behavior like limit pricing is observed only in the first period. The empirical importance of such signaling behavior, however, depends on its being perpetuated through time rather than being a single-period phenomenon. In this paper, such perpetual signaling is obtained by allowing the variable about which firms have private information to vary through time. In a separating equilibrium, while a firm's action will perfectly reveal its private information in a period, it will not perfectly reveal the firm's private information in subsequent periods. Thus, the incentive to signal perpetuates through time.

Michel, Philippe

PD January 1992. **TI** Bubbles Slowing Down Economic Growth. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9201; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 17. **PR** not available. **JE** E22, O90. **KW** Growth. Capital Accumulation.

AB To analyze the effects of bubbles on economic growth, we study a three-period life overlapping generations economy with accumulation of physical and human capital, using an extension of Azariadis and Drazen (1990). We characterize the balanced growth paths and the local dynamics both in the model without bubbles and with bubbles. Tirole's (1985) study of bubbles is extended to the overlapping generations model with endogenous growth, and we show that bubbles are likely to have a negative effect on the growth rate of the economy.

Mihaljek, Dubravko

PD April 1992. **TI** Tariffs, Optimal Taxes, and Collection Costs. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/28; International Monetary Fund, Washington, DC 20431. **PG** 26. **PR** not available. **JE** F13, H21, E62. **KW** Optimal Taxation. Tariffs.

AB This paper studies an optimal tax problem for a small open economy where collecting taxes is costly. It is shown that, in the presence of collection costs modeled as an increasing function of the tax rate: (a) the standard rules of optimal commodity taxation (the Ramsey, the inverse elasticity, the Corlett-Hague rules) may no longer be valid; (b) tariffs may replace domestic taxes as a second-best revenue-raising device; and (c) the optimal tariff/tax structure may be uniform rather than differentiated.

Milesi-Ferretti, Gian Maria

PD March 1992. **TI** A Simple Model of Disinflation and the Optimality of Doing Nothing. **AA** London School of Economics. **SR** Centre for Economic Performance Discussion Paper: 69; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 31. **PR** no charge. **JE** E31, E52. **KW** Disinflation. Inertia. Elections.

AB Inertial factors are one of the main reasons for the persistence of inflation and the high output losses of disinflation. However, the removal of these factors can be costly in terms of popularity for the government. In this paper I construct a simple model exhibiting inflation inertia, and study the optimal stabilization policy of a government that likes being in power, and whose disinflationary "abilities" are uncertain, under the assumption that removing inertial factors is costly. It is shown that the government can choose to "do nothing" on the inflation front or disinflate too little with respect to the social optimum because reducing inertial factors entails costs today but brings benefits in the future, when the current government may not be in power.

Miller, Marcus

PD March 1992. **TI** Contacts, Credibility and Common Knowledge: Their Influence on Inflation Convergence. **AU** Miller, Marcus; Sutherland, Alan. **AA** Miller: University of Warwick. Sutherland: University of York. **SR** International Monetary Fund Working Paper: WP/92/26; International Monetary Fund, Washington, DC 20431. **PG** 11. **PR** not available. **JE** E31, F31. **KW** Inflation. Exchange Rates.

AB In this paper three possible reasons are examined for a sluggish inflation response to a hard currency peg. Models of overlapping wage contracts are analyzed and shown to generate little inertia. This contrasts with the effects of government credibility and the speed of private sector learning, which are shown to have a major impact on the speed of inflation adjustment. But even if individual agents believe the government will not devalue, it is shown that inflation inertia can still arise if these expectations are not common knowledge.

Milner, Simon

PD May 1992. **TI** Dispute Deterrence: Evidence on Final-Offer Arbitration. **AA** London School of Economics. **SR** London School of Economics Centre for Economic Performance Discussion Paper: 76;Centre for Economic Performance, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 24. **PR** no charge. **JE** J52. **KW** Arbitration. Disputes.

AB Final-offer arbitration is specifically designed to deter disputes more effectively than conventional arbitration. Over the last decade a number of U.K. workplaces have signed new collective agreements incorporating this form of arbitration. Evidence from 72 of these plants, covering nearly 300 bargaining rounds, is used to test the theory. The data suggest that, except in multi-stage dispute procedures FOA is not more effective than conventional arbitration at preventing disputes in collective bargaining.

Mishkin, Frederic

TI Central Bank Behavior and the Strategy of Monetary Policy: Observations from Six Industrialized Countries. **AU** Bernanke, Ben; Mishkin, Frederic.

Mohar, Bojan

PD March 1992. **TI** Eigenvalues in Combinatorial Optimization. **AU** Mohar, Bojan; Poljak, Svatopluk. **AA** Mohar: University of Ljubljana. Poljak: Charles University of Prague. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-92 752-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 37. **PR** no charge. **JE** C44. **KW** Graph Theory. Partition Problems.

AB In the last decade many important applications of eigenvalues and eigenvectors of graphs in combinatorial optimization were discovered. The number and importance of these results is so fascinating that it makes sense to present this survey.

Moore, John

TI The Economics of Bankruptcy Reform. **AU** Aghion, Philippe; Hart, Oliver; Moore, John.

TI The Economics of Bankruptcy Reform. **AU** Aghion,

https://doi.org/10.1017/S0951007900002813 Published online by Cambridge University Press

Philippe; Moore, John; Hart, Oliver.

Morgan, Donald P.

PD December 1991. **TI** Imperfect Information and Financial Constraints: New Evidence Using Bank Loan Commitments. **AA** Federal Reserve Bank of Kansas City. **SR** Federal Reserve Bank of Kansas City Research Working Paper: 91-07; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Ave., Kansas City, MO 64198. **PG** 11. **PR** no charge. **JE** G21, D82. **KW** Investment. Bank Loans. Signaling.

AB We find investment by firms is less financially constrained when they have a loan commitment from a bank than when they do not. We take this as evidence that bank loan commitments are important in signaling a firms' creditworthiness to outside investors. And because absence of this signal affects investment by firms, our results are evidence that imperfect information can impose financial constraints on business investment.

Morris, Stephen

PD April 1992. **TI** When Does Information Lead to Trade? Trading with Heterogeneous Prior Beliefs and Asymmetric Information. **AA** University of Pennsylvania. **SR** University of Pennsylvania CARESS Working Paper: 92-09; 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** D82, D81. **KW** Asymmetric Information. Heterogeneous Beliefs.

AB Consider an exchange economy with uncertainty where, initially, there is no information and the allocation is efficient. Suppose agents then observe signals correlated with the initial payoff relevant uncertainty. The paper provides a framework for looking at the interaction between heterogeneous prior beliefs and asymmetric information, relating "type space" and partition representations of uncertainty, and dealing with private and public information in a unified way. The paper gives necessary and sufficient conditions for "no trade" results such as Milgrom and Stokey (1982). The results are heterogeneous prior analogues of "no trade" results in Geanakoplos (1989) concerning agents with non-standard information processing.

PD June 1992. **TI** Dynamic Consistency and the Value of Information. **AA** University of Pennsylvania. **SR** University of Pennsylvania CARESS Working Paper: 92-17; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 22. **PR** no charge. **JE** D83, D84, D91. **KW** Bayes Rule. Information.

AB A necessary and sufficient condition for information to be valuable is that beliefs are noisy Bayes updated. This work builds on Geanakoplos (1989) who showed that the valuable information condition is key to no speculation results, and gave conditions, when agents' information is represented (non-partition) possibility correspondences and agents update by Bayes rule, for information to be valuable. I show here that possibility correspondences are valuable, for some beliefs (not necessarily Bayes updated), if and only if they satisfy two properties, non-delusion and knowing that you know, while choices satisfy dynamic consistency, for some beliefs, if and only if possibility correspondences are partitions.

Morris, Walter D., Jr

TI Geometric Comparison of Combinatorial Polytopes. **AU** Lee, Jon; Morris, Walter D., Jr.

Motta, Massimo

PD January 1992. **TI** National R&D Cooperation: A Special Type of Strategic Policy. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9202; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 20. **PR** not available. **JE** O43, F13, L41, O31. **KW** Research Agreements. Innovation.

AB D'Aspremont and Jacquemin's (1988) model is extended to study alternative configurations of research agreements. Analogies with the cartel literature are found: under certain conditions on spillover values, outsiders benefit more than participants in R&D agreements. If cooperative spillovers are high enough,though, national R&D cooperation has the same beneficial effect as subsidies in strategic trade policies. Unlike the latter, however, it is not necessarily harmful to foreigners, and retaliation may leave both countries better off than non-cooperation. Finally, international R&D cooperation would be Pareto-superior to both retaliation and non-cooperation for high enough spillovers.

Mulder, Christian

PD June 1992. **TI** The Macroeconomic Effects of Counterpart Funds and the Underlying Foreign Aid. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/47; International Monetary Fund, Washington, DC 20431. **PG** 15. **PR** not available. **JE** O11, E52, E61, F35. **KW** Monetary Policy.

AB Counterpart funds generated through foreign currency or commodity aid have again become an issue of interest, in view of the substantial buildup of these funds. Contrary to the usual approach a model is developed in this paper, which takes account of the budgetary impact, supply-side and money demand effects of counterpart funds and the underlying foreign aid. This model is used to show that counterpart funds need not have any economic impact if their creation, use, and effects are adequately monitored and understood, both by donors and by the authorities in the recipient country. The policy rules that ensure an inflation- and foreign reserves-neutral result from expected and unexpected foreign aid are derived and contrasted with a policy rule regarding unexpected foreign aid that is sometimes observed in IMF programs. A feasible alternative is developed. Various real world complications are shown not to alter the conclusions.

Munro, Alistair

TI The Effects of Information in Contingent Markets for Environmental Goods: A Survey and Some New Evidence. **AU** Hanley, Nick; Munro, Alistair.

Murota, Kazuo

PD July 1991. **TI** Computing the Degree of Determinants via Combinatorial Relaxation. **AA** University of Tokyo. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-91 709-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 39. **PR** no charge. **JE** C63, C44. **KW** Polynomial Matrix. Computer Algebra.

AB Let A(x) be a square matrix with each element being a polynomial in x. This paper proposes "combinatorial relaxation" type algorithms for computing the degree of the determinant, based on its combinatorial upper bound, which is defined in terms of the maximum weight of a perfect matching in an associated graph. The graph is bipartite for a general square matrix A and nonbipartite for skew-symmetric A. The algorithm transforms A to another matrix A' (with the same degree of the determinant) with successive elementary operations. The algorithm is efficient, making full use of the fast algorithms for weighted matchings; it is combinatorial in almost all cases and invokes algebraic elimination routines only when accidental numerical cancellations occur.

Musiela, Marek

TI On the Existence and Characterization of Arbitrage-free Measures in Contingent Claim Valuation. **AU** Christopeit, Norbert; Musiela, Marek.

Muzondo, Timothy R.

PD July 1992. **TI** Alternative Forms of Mineral Taxation, Market Failure and the Environment. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: 92/49; International Monetary Fund, Washington, DC 20431. **PG** 29. **PR** not available. **JE** H23. **KW** Mineral Taxes. Externalities.

AB This paper examines the environmental effects of mineral taxes in a framework that recognizes the importance of rates and cumulative externalities and proposes an appropriate corrective tax. It concludes that mineral resources taxation should combine neutral taxes with a dynamic Pigouvian type tax proposed in the paper. Such a tax resembles a specific tax plus an element that depends on the amount of remaining reserves. This resemblance means that, in practice, specific taxes may act as proxies for environmental taxes. The paper also points at complementarities and trade-offs between economic and environmental concerns that could arise in reforming mineral taxes.

Nagarajan, S.

TI On the Strategic Role of High Leverage in Entry Deterrence. **AU** Fulghieri, P.; Nagarajan, S.

Nesetril, Jaroslav

PD December 1991. **TI** On Ramsey Graphs without Bipartite Subgraphs. **AU** Nesetril, Jaroslav; Rodl, Vojtech. **AA** Nesetril: University of Bonn and Charles University of Prague. Rodl: Emory University. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-91 698-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 8. **PR** no charge. **JE** C44. **KW** Graph Theory. Partite Graphs.

AB We prove that for every graph H without triangles and K(m,n) (m,n less than or equal to 2) there exists a Ramsey graph with the same properties. This answers a problem due to Erdos and Faudree. Moreover we characterize all (edge-) Ramsey classes Forb(K(m,n)).

Neumark, David

PD June 1992. **TI** Hostile Takeovers and Expropriation of Extramarginal Wages: A Test. **AU** Neumark, David; Sharpe, Steven A. **AA** Neumark: University of Pennsylvania and National Bureau of Economic Research. Sharpe: Federal Reserve Board. **SR** National Bureau of Economic Research Working Paper: 4101; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 33. **PR** $3.00. **JE** G34, J41. **KW** Employee Characteristics. Firm Takeovers.

AB We construct a prediction model for testing the hypothesis that firms with employees earning extramarginal wages were more likely to experience hostile tender offers from 1979-1989. Firms on the Compustat (active) file in 1979 comprise the domain from which targets were identified. The 1980 Census of Population is used to estimate wage equations by two-digit (SIC) industry and extract both industry wage premia as well as age-earnings profiles and age distributions of employees by industry. Firm-level estimates of employee characteristics are then constructed using the Compustat breakdown of firm sales by industry segment. Finally, event probabilities are estimated using logit and multinomial logit models. Variables related to proxies for the magnitude of extramarginal wages payments, are found to raise the likelihood of being a hostile takeover target, relative to other corporate control events.

Newey, Whitney K.

PD April 1992. **TI** Efficiency of Weighted Average Derivative Estimators. **AU** Newey, Whitney K.; Stoker, Thomas M. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 92-8; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 28. **PR** not available. **JE** C14. **KW** Semiparametric Estimation. Nonparametric Estimation.

AB Weighted average derivatives are useful parameters for semiparametric index models, including limited dependent variables, and in nonparametric demand estimation. Efficiency of weighted average derivative estimators is a concern, because the weight may affect efficiency and the presence of a nonparametric function estimator might lead to low efficiency. This purpose of this paper is to give efficiency results for average derivative estimators, including formulating estimators that have high efficiency.

Nickell, Stephen J.

TI Unemployment in the OECD Countries. **AU** Layard, Richard; Nickell, Stephen J.

PD December 1991. **TI** Wages, Unions, Insiders and Product Market Power. **AU** Nickell, Stephen J.; Vainiomaki, Jari; Wadhwani, Sushil B. **AA** Nickell: University of Oxford. Vainiomaki: London School of Economics. Wadhwani: Goldman Sachs, London. **SR** Oxford Applied Economics Discussion Paper Series: 131; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 26. **PR** not available. **JE** D43, J31, C23. **KW** Wage Determination. Productivity.

AB See other entry.

PD May 1992. **TI** Wages, Unions, Insiders and Product Market Power. **AU** Nickell, Stephen J.; Vainiomaki, Jari; Wadhwani, Sushil B. **AA** Nickell: Oxford University. Vainiomaki: London School of Economics. Wadhwani: Goldman Sachs, London. **SR** Centre for Economic Performance Discussion Paper: 77; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND.

PG 21. **PR** no charge. **JE** J31, J50. **KW** Wages. Unions. Rents.
AB This paper analyses time series data on some 800 British manufacturing companies to address various questions concerning the role of insiders and market power in wage determination. The following are the most important results. First, firm specific factors such as productivity gains do influence wage increases. Second, there is no robust evidence of insider power at work in wage setting. Third, conditions in the external labor market are a very important influence on company wages, although less so for firms with a high degree of market power. Finally, product market power itself has a positive impact on wages, which is enhanced in large firms but is not influenced by union status.

Nilles, Delia

TI Previsions Economiques: Science, Art ou Imposture?. **AU** Lambelet, Jean-Christian; Nilles, Delia.

Nordhaus, William D.

PD June 1992. **TI** Rolling the "Dice": An Optimal Transition Path for Controlling Greenhouse Gases. **AA** Yale University. **SR** Yale Cowles Foundation Discussion Paper: 1019; Yale University, Cowles Foundation, Box 2125, Yale Station, New Haven CT 06520. **PG** 21. **PR** no charge. **JE** Q28, Q25. **KW** Global Warming. Environmental Regulation. Cost-Benefit.
AB The possibility of greenhouse warming has received growing attention in recent years. Many scientific bodies are calling for severe curbs on the emissions of greenhouse gases. To date, the calls to arms and treaty negotiations have progressed more or less independently of economic studies of the costs and benefits of measures to slow greenhouse warming. The plan of the present study is to develop a dynamic, global model of both the impacts of and policies to slow global warming. It is an integrated model that incorporates both the dynamics of emissions and impacts and the economic costs of policies to curb emissions.

Noussair, Charles

PD June 1992. **TI** An Experimental Investigation of the Patterns of International Trade. **AU** Noussair, Charles; Plott, Charles; Riezman, Raymond. **AA** Noussair and Plott: California Institute of Technology. Riezman: University of Iowa. **SR** Caltech Social Science Working Paper: 799; Division of Humanities and Social Sciences, 228-77, California Institute of Technology, Pasadena, CA 91125. **PG** 33. **PR** no charge. **JE** C90, F10. **KW** International Trade. Experiments.
AB This study is the first attempt to create and study a laboratory economy with the prominent features of an international economic system. The patterns of trade and output predicted by the law of comparative advantage are observed evolving in the experimental markets. Market prices and quantities are observed moving in the direction of the competitive equilibrium but considerable amounts of economic activity occur as disequilibria. Movements in response to the imposition of a tariff are as predicted by the comparative statics of the competitive equilibrium model. Factor price equalization is observed. The overall conclusion is that experiments of this level of complexity can be successfully implemented with modern technology and that these complicated and interdependent systems, when observed operating experimentally, have many of the properties that competitive theory suggests should exists.

O'Brien, Daniel P.

PD April 1992. **TI** Non-Linear Contracts, Foreclosure, and Exclusive Dealing. **AU** O'Brien, Daniel P.; Shaffer, Greg. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory, (CREST), Working Paper: 92-06; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 16. **PR** not available. **JE** D40, L14, L42. **KW** Upstream Rivalry. Supply Contracts. Exclusive Dealing.
AB This paper examines the nature of upstream rivalry in non-linear supply contracts with and without exclusive dealing. We find that foreclosure can occur without exclusive dealing, if economies of scale are sufficiently large, as well as with exclusive dealing. Surprisingly, however, it is the retailer and not the upstream firms who benefit. This formalizes the view that exclusive dealing will not be initiated by suppliers because retailer compensation is too steep. It also implies that anticompetitive foreclosure is more likely to occur when downstream firms have bargaining power.

O'Brien, R. J.

TI Unit Root Tests and Mean Shifts. **AU** Edmonds, Graham J.; O'Brien, R. J.; Podivinsky, Jan M.

O'Rourke, Kevin

PD June 1992. **TI** Were Heckscher and Ohlin Right? Putting the Factor-Price-Equalization Theorem Back into History. **AU** O'Rourke, Kevin; Williamson, Jeffrey G. **AA** O'Rourke: Columbia University. Williamson: Harvard University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper Series on Historical Factors in Long Run Growth: 37; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge MA 02138. **PG** 19. **PR** $3.00. **JE** N31, N33, J31, F15. **KW** Wage Convergence. Commodities Markets. Factor Markets.
AB Due primarily to transport improvements, commodity prices in Britain and America tended to equalize 1870-1913. This commodity price equalization was not simply manifested by the great New World grain invasion of Europe. Rather, it can be documented for intermediate primary products and manufactures as well. Heckscher and Ohlin, writing in 1919 and 1924, thought that these events should have contributed to factor price equalization. This paper applies the venerable Heckscher-Ohlin trade model to the late 19th century Anglo-American experience and finds that they were right: at least half of the real wage convergence observed can be assigned to commodity price equalization. Furthermore, these events also had profound influences on relative land and capital scarcities. It appears that this late 19th century episode was the dramatic start of world commodity and factor market integration that is still ongoing today.

Obstfeld, Maurice

PD June 1992. **TI** Risk-Sharing, Global Diversification, and Growth. **AA** University of California, Berkeley and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4093; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 36. **PR** $3.00. **JE** D92,

F21, F23. **KW** International Investment. Risky Capital.
AB This paper develops a dynamic continuous-time model in which international risk sharing can yield substantial welfare gains through its positive effect on expected consumption growth. The mechanism linking global diversification to growth is an attendant world portfolio shift from safe, but low-yield, capital into riskier, high-yield capital. The presence of these two types of capital is meant to capture the idea that growth depends on the availability of an ever-increasing array of specialized, hence inherently risky, production inputs. A partial calibration exercise based on Penn World Table consumption data implies steady-state welfare gains from global financial integration that for some regions amount to several times initial wealth.

PD June 1992. **TI** International Adjustment With Habit-Forming Consumption: A Diagrammatic Exposition. **AA** University of California, Berkeley and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4094; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 28. **PR** $3.00. **JE** F41, E21. **KW** Open Economy. External Adjustment.
AB This paper presents a simple diagrammatic analysis of an open economy's external adjustment process under habit-forming individual preferences. The exposition focuses on the consumption side and aims to make transparent the linkage among wealth, past consumption experience, and current consumption. An extension of the standard representative-agent model to a growing economy of overlapping generations completes the paper. Under habit formation an agent's consumption exhibits a form of hysteresis, in that his current consumption depends on his past consumption experience as well as initial assets. In the overlapping-generations model aggregate hysteresis disappears in the long run.

Odedokun, Matthew

PD July 1992. **TI** Multi-Country Evidence on the Effects of Macroeconomic, Financial and Trade Policies on Efficiency of Resources Utilization in the Developing Countries. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: 92/53; International Monetary Fund, Washington, DC 20431. **PG** 27. **PR** not available. **JE** E10, E60, O11. **KW** Economic Efficiency. Economic Policy.
AB This study examines the effects of selected policies on economic efficiency in 81 developing countries by pooling cross-country data over various subperiods between 1961-90. An incremental output-capital ratio is the measure of economic efficiency, while the policy variables include: export orientation, size of the public sector, directed credit program through development bank lendings, financial depth, and real interest rate are found to promote economic efficiency, while other policy variables are found to hinder it.

Olson, Craig A.

TI Bargaining Power, Strike Duration, and Wage Outcomes: An Analysis of Strikes in the 1880s. **AU** Card, David; Olson, Craig A.

PD July 1992. **TI** The Impact of Permanent Job Loss on Health Insurance Benefits. **AA** University of Wisconsin-Madison. **SR** Princeton Industrial Relations Section Working Paper: 305; Industrial Relations Section, Department of Economics, Princeton University, Princeton, NJ 08544-2098. **PG** 23. **PR** $1.50. **JE** J32, I11, J65. **KW** Displaced Workers. Plant Closings. Health Coverage.
AB This paper investigates the impact of plant closings and permanent layoffs on the group health insurance coverage for a random sample of workers displaced from 1979-1988. Using data from the 1984, 1986 and 1988 CPS Displaced Worker Surveys and the March 1989 CPS, I find displaced workers that were re-employed at the time of the surveys were significantly less likely to have health insurance on their new job. Less educated workers and minorities were more likely to lose coverage than white and college educated workers. I find no evidence that workers who lost health insurance benefits received higher wages on their new jobs to compensate for the loss.

Oppenheimer, Peter M.

TI Financial Crises and the International Debt Problem. **AU** Gibson, Heather D.; Oppenheimer, Peter M.

Osband, Kent

TI Can the Release of a Monetary Overhang Trigger Hyperinflation? **AU** Lin, Shoukang; Osband, Kent.

PD July 1992. **TI** Independent Currency Authorities: An Analytic Primer. **AU** Osband, Kent; Villanueva, Delano. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: 92/50; International Monetary Fund, Washington, DC 20431. **PG** 20. **PR** not available. **JE** E52, E59. **KW** Currency Boards. Monetary Authority.
AB This paper provides an analytic overview of independent currency authorities (ICAs), sometimes called currency boards. ICA's issue and redeem domestic currency against an exchange standard on demand and back such operations through a 100 percent marginal foreign reserve cover. They also impose significant constraints on the banking system and the budget of the country that operates them. When supporting institutions have been put in place, ICA's appear to have promoted price stability, foreign trade, saving and investment.

Osterberg, William P.

TI The Risk Premium in Forward Foreign Exchange Markets and G-3 Central Bank Intervention: Evidence of Daily Effects, 1985-1990. **AU** Baillie, Richard T.; Osterberg, William P.

Ostroy, Joseph M.

TI General Equilibrium and Market Socialism: Clarifying the Logic of Competitive Markets. **AU** Makowski, Louis; Ostroy, Joseph M.

Oswald, Andrew

PD February 1992. **TI** Pay-Setting, Self-Employment and the Unions: Themes of the 1980's. **AA** London School of Economics and Oxford University. **SR** Centre for Economic Performance Discussion Paper: 64; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 16. **PR** no charge. **JE** J50. **KW** Unions. Pay. Entrepreneur.
AB The paper attempts to evaluate three of the central themes in recent economic policy towards the labor market. It is critical of the idea that pay should be linked to company

performance; it does not find evidence that the 1980's witnessed a renaissance of self-employment; it concludes that there is only a little evidence that union power was reduced over the decade.

TI Trade Union Utility Functions: A Survey of Union Leaders' Views. **AU** Clark, Andrew; Oswald, Andrew.

Otsuki, Toshiyuki

TI Exchange Rate Volatility and Equity Returns. **AU** Brown, Stephen J.; Otsuki, Toshiyuki.

Padoa-Schioppa, Tommaso

PD December 1991. **TI** Agenda for Stage Two: Preparing the Monetary Platform. **AU** Padoa-Schioppa, Tommaso; Saccomanni, Fabrizio. **AA** Banca d'Italia. **SR** Centre for Economic Policy Research Occasional Paper: 7; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, England. **PG** 16. **PR** 1 pound ($2) individuals; 1.50 pounds ($3) companies, libraries, institutions. **JE** F33, G21, F36. **KW** European Monetary Unification. Common Currency.

AB The building of a united Europe does not consist only of actions; it is also an intellectual exercise. It is not just a question of applying an existing model of political, economic or monetary order. For economists, the creation first of the single market and then of economic and monetary union implies a rethinking of the very foundations of economic management, the relations between the market economy and market institutions, the allocation to different levels of government of responsibility for economic policy, the aims and distribution of central bank functions. The present paper is intended as a contribution to this intellectual process.

Palm, Franz C.

TI Asymmetric Adjustment Costs in Non-Linear Labour Demand Models for the Netherlands and U. K. Manufacturing Sectors. **AU** Pfann, Gerard A.; Palm, Franz C.

Park, Byeong U.

PD November 1991. **TI** Asymptotically Best Bandwith Selectors in Kernel Density Estimation. **AU** Park, Byeong U.; Kim, W. C.; Marron, J. S. **AA** Park: Universite Catholique de Louvain and Seoul National University. Kim: Seoul National University. Marron: Universite Catholique de Louvain and University of North Carolina. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9154; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 6. **PR** not available. **JE** C14. **KW** Bandwith Selection. Kernel Density Estimation.

AB This paper gives asymptotically best data based choices of the bandwidth of the kernel density estimator. These bandwidth selectors attain the fastest possible rate of convergence to the desired theoretical optimum and the best possible constant coefficient in the spirit of the usual Fisher Information, with the use of only nonnegative kernel estimators at all stages of the selection process.

PD January 1992. **TI** Practical Performance of Several Data Driven Bandwidth Selectors. **AU** Park, Byeong U.; Turlach, Berwin A. **AA** Park: Seoul National University. Turlach: Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9205; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 10. **PR** not available. **JE** C14. **KW** Kernel Density. Bandwidth Selectors. Cross Validation.

AB Most recently proposed bandwidth selectors in kernel density estimation have been developed with intent to reduce the large sampling variability of Least Squares Cross-Validation. Their asymptotic superiority has been shown in many papers. Some of those selectors above have even the fastest relative rate of convergence to their theoretical optimum. The aim of this paper is to see what is happening for small sample sizes. Several recently proposed methods of bandwidth selection are considered. These methods are compared to Least Squares Cross-Validation through simulations. It is seen that, while most of the bandwidth gain some in terms of variance reduction, some of them lose a lot in terms of increased bias resulting in inferior overall performance when compared to Least Squares Cross-Validation.

PD February 1992. **TI** Efficient Semiparametric Estimation in Stochastic Frontier Model. **AU** Park, Byeong U.; Simar, Leopold. **AA** Park: Seoul National University and Universite Catholique de Louvain. Simar: Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9213; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 20. **PR** not available. **JE** C14. **KW** Frontier Function. Panel Data.

AB This paper considers the semiparametric stochastic frontier model with panel data which arises in the problem of measuring technical inefficiency in production processes. We assume a parametric form for the frontier function, which is linear in production inputs. The density of the individual firm-specific effects is considered unknown. We construct an efficient estimator of the slope parameters in the frontier function. We also give an estimator of the level of the frontier function and its asymptotic properties are investigated. Furthermore, we provide a predictor of the individual's effects which can be directly translated to firm-specific technical inefficiencies. Finally, we illustrate our methods through a real data example.

TI Behavior of Kernel Density Estimates and Bandwidth Selectors for Contaminated Data Sets. **AU** Mammen, Enno; Park, Byeong U.

Pashardes, Panos

PD January 1992. **TI** Bias in Estimating the Almost Ideal Demand System with the Stone Index Approximation. **AA** City University and Institute for Fiscal Studies. **SR** Institute for Fiscal Studies (IFS) Working Paper: W92/9; Institute for Fiscal Studies, 7 Ridgmount Street, London WCE 7AE, ENGLAND. **PG** 16. **PR** 3 pounds. **JE** D12, C13, C33. **KW** Demand System. Stone Index. Micro Data.

AB This paper shows that estimation of the Almost Ideal Demand System based on the Stone index approximation can result in parameter bias, in particular when the budget shares are estimated from individual household data. A consequence of this bias is the understatement of the own price elasticities and of the distributional effect of price changes. The price parameter bias can be largely corrected through re-parameterization. The empirical analysis compares exact with approximate estimates of the Almost Ideal demand system and provides illustrations with micro and macro data.

Paulsen, Thomas W.

PD February 1992. **TI** Price Dispersion and Search Costs with Differentiated Goods. **AU** Paulsen, Thomas W.; Von Ungern-Sternberg, Thomas. **AA** Universite de Lausanne. **SR** Universite de Lausanne, Cahiers de Recherches Economiques: 9202; Departement d'Econometrie et d'Economie Politique, Univerite de Lausanne, BFSH - Dorigny, CH-1015 Lausanne, SWITZERLAND. **PG** 23. **PR** no charge. **JE** D43, D82, D83. **KW** Sequential Search. Monopolistic Competition. Incomplete Information.

AB This paper introduces search costs into the standard circular road model of monopolistic competition with linear transport costs. Under the assumption of incomplete consumer information it is shown that for certain levels of search costs no single price equilibrium exists. However, for some of these values there exist pure strategy equilibria, where firms charge different prices.

Perloff, Jeffrey M.

TI Who Works for Piece Rates and Why. **AU** Rubin, D. Kate; Perloff, Jeffrey M.

TI Helping by Hurting: Industrial Policy as an Alternative to Trade Policy. **AU** Karp, Larry S.; Perloff, Jeffrey M.

Pestieau, Pierre

TI Education and the Poverty Trap. **AU** Barham, Vicky; Boadway, Robin; Marchand, Maurice; Pestieau, Pierre.

TI Towards a Theory of the Direct-Indirect Tax Mix. **AU** Boadway, Robin; Marchand, Maurice; Pestieau, Pierre.

Pfann, Gerard A.

PD March 1992. **TI** Asymmetric Adjustment Costs in Non-Linear Labour Demand Models for the Netherlands and U. K. Manufacturing Sectors. **AU** Pfann, Gerard A.; Palm, Franz C. **AA** Pfann: Universite Catholique de Louvain. Palm: University of Limburg. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9217; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 25. **PR** not available. **JE** J23, J20, C13. **KW** Labor Demand. Adjustment Costs.

AB The costs of hiring a worker generally differ in size from the firing costs. This article investigate optimal demand schedules for production and nonproduction workers of firms that operate under uncertainty and face asymmetric costs of adjusting their workforce. In the empirical part generalized methods of moments (GMM) estimates of the structural parameters of the Euler conditions for production and nonproduction workers are presented, together with specification and structural stability tests, using time series data of the Netherlands and U.K. Manufacturing sectors. We find that asymmetric adjustment costs play an important role in the explanation of unbalanced labor demand between upward and downward movements of the business cycle.

Pindyck, Robert S.

PD May 1992. **TI** The Present Value Model of Rational Commodity Pricing. **AA** Massachusetts Institute of Technology and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4083; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 22. **PR** \$3.00. **JE** G13, C22. **KW** Commodities Market. Spot Prices. Futures Prices.

AB The present value model relates an asset's price to the sum of its discounted expected future payoffs. I explore the limits of the model by testing its ability to explain the pricing of storable commodities. For commodities the payoff stream is the convenience yield that accrues from holding inventories, and it can be measured directly from spot and futures prices. Hence the model imposes restrictions on the joint dynamics of spot and futures prices, which I test for four commodities. I find close conformance to the model for heating oil, but not for copper or lumber, and especially not for gold. The pattern is the same for the serial dependence of excess returns. These results suggest that for three of the four commodities, prices at least temporarily deviate from fundamentals.

Pinson, Christian

PD 1992. **TI** Semiotics of Marketing. **AA** INSEAD. **SR** INSEAD Working Papers: 92/22/MKT; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 9. **PR** not available. **JE** M30. **KW** Advertising.

AB This paper aims to survey, in a concise fashion, the diverse theories and uses of semiotics by marketing scholars.

Pissarides, Christopher A.

PD May 1992. **TI** Search Unemployment with On-the-Job Search. **AA** London School of Economics. **SR** Centre for Economic Performance Discussion Paper: 74; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 27. **PR** no charge. **JE** J63, J64. **KW** Job Search. Unemployment. Vacancies.

AB This paper introduces on-the-job search into the model of search equilibrium that builds on the concept of the matching function and non-cooperative wage behavior. On-the-job search takes place only at short job tenures because of the accumulation of job-specific human capital. The model of search equilibrium retains its familiar structure but yields new results. The most interesting is an increase in the cyclical volatility of job vacancies and a dampening in that of unemployment, because of induced changes in the composition of jobs and the number of employed job seekers.

Pitchford, John

PD July 1992. **TI** Current Account Deficits, External Liabilities and Economic Policy. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: 92/54; International Monetary Fund, Washington, DC 20431. **PG** 40. **PR** not available. **JE** F40. **KW** Economic Policy. Current Account.

AB This paper assesses the policy significance of foreign liabilities and the current account deficits that give rise to them. Current account imbalances are shown to have some capacity to indicate difficulties elsewhere in the economy, but are imperfect indicators and subject to potential misinterpretation. The paper concludes that successful pursuit of internal balance could be an important factor in stabilizing current account balances, but, beyond that, there seems no good reason for using macroeconomic policy to target the current account as such. However, there may be grounds for microeconomic action to remedy specifically identified problems.

Plott, Charles

TI An Experimental Investigation of the Patterns of International Trade. **AU** Noussair, Charles; Plott, Charles; Riezman, Raymond.

Podivinsky, Jan M.

TI Unit Root Tests and Mean Shifts. **AU** Edmonds, Graham J.; O'Brien, R. J.; Podivinsky, Jan M.

Polemarchakis, Heraklis M

PD January 1992. **TI** The Generic Existence of Competitive Equilibria with Restricted Participation. **AU** Polemarchakis, Heraklis M; Siconolfi, Paolo. **AA** Polemarchakis: Universite Catholique de Louvain. Siconolfi: Columbia University. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9211; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 19. **PR** not available. **JE** D50, D52. **KW** Asset Markets. Incomplete Markets.

AB The generic existence of competitive equilibria when the asset market is incomplete extends to economies with restricted participation.

Poljak, Svatopluk

TI On the Ultimate Independence Ratio of a Graph. **AU** Hahn, Gena; Hell, Pavol; Poljak, Svatopluk.

TI The Metric Polytope. **AU** Laurent, M.; Poljak, Svatopluk.

TI Eigenvalues in Combinatorial Optimization. **AU** Mohar, Bojan; Poljak, Svatopluk.

Polyak, Boris T.

PD December 1991. **TI** On Stochastic Approximation with Arbitrarily Dependent Noise. **AU** Polyak, Boris T.; Tsybakov, Alexander B. **AA** Polyak: Institut of Control Sciences, Moscow Tsybakov: Universite Catholique de Louvain and Academy of Sciences,Moscow. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9160; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 8. **PR** not available. **JE** C10. **KW** Regression Function. Estimation.

AB The problem of estimating the location of the minimum of a regression function is studied. In Polyak, Tsybakov (1990) the randomized recursive algorithms were proposed that are optimal in asymptotically minimax sense among all possible estimators, with any admissible designs. Here is is shown that these algorithms retain the optimality property for stochastic (or deterministic) noise with arbitrary dependence structure.

Pope, Peter F.

PD March 1992. **TI** Transaction Cost Thresholds, Arbitrage Activity and Index Futures Pricing. **AU** Pope, Peter F.; Yadav, Pradeep K. **AA** Pope: New York University and University of Strathclyde. Yadav: University of Strathclyde. **SR** New York University Salomon Brothers Working Paper: S-92-38; 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** $5.00. **JE** G12, G13. **KW** Futures Pricing. Mispricing.

AB This paper explores the effect of transaction costs on the time series process followed by stock index futures mispricing. Market demand can be expected to be non-linearly related to mispricing-specifically in the form of a step function. This implies that the time series of mispricing should follow a self exciting threshold autoregressive (TAR) process, in which the process parameters are path-dependent. Empirical tests of the hypothesis of TAR type non-linearity in the time series of stock index futures mispricing are conducted, based on a dataset which avoids the potential measurement error-induced biases inherent in much index arbitrage related work. The results lead to a conclusive rejection of the hypotheses of a linear AR model in favor of threshold non-linearity in the mispricing time series.

Porter, Richard C.

PD December 1991. **TI** Redressing Inequality in the Post-Apartheid South African Economy. **AA** University of Michigan. **SR** Papers in Political Economy Political Economy Research Group, University of Western Ontario: 19; Department of Economics, Social Science Centre, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 62. **PR** no charge. **JE** J15, J18, D63, O55. **KW** South Africa. Racism.

AB Originally an obscure word in an obscure language, apartheid has come everywhere to mean a complex web of government intrusion into the market system intended to direct the fruits of economic progress to one race. Now that the official economic underpinning of apartheid is being finally dismantled, it is important that we stop thinking about South Africa only as a racist, or even as a racial, state. It becomes a majority-governed state which has inherited a frightening degree of inequality -- indeed, redressing that inequality will be its highest policy priority for generations to come. Accordingly, I will look at South Africa in two ways, first as "just another" middle-income economy in the world, and second as a country fraught with apartheid's legacy of inequality and inefficiency.

Porteus, Evan L.

TI An Approach to Single Parameter Process Design. **AU** de Groote, Xavier; Porteus, Evan L.

Potts, C. N.

TI Single Machine Scheduling to Minimize Total Weighted Late Work. **AU** Hariri, A. M. A.; Potts, C. N.; Van Wassenhove, Luk.

Poulsen, Annette

TI Asset Sales, Leverage, and the Agency Costs of Managerial Discretion. **AU** Lang, Larry H. P.; Poulsen, Annette; Stulz, Rene M.

Preston, Ian

PD June 1992. **TI** Welfare Measurement in Labour Supply Models with Nonlinear Budget Constraints. **AU** Preston, Ian; Walker, Ian. **AA** Preston: University College London and Institute for Fiscal Studies. Walker: Keele University and Institute for Fiscal Studies. **SR** Institute for Fiscal Studies (IFS) Working Paper: W92/12; Institute for Fiscal Studies, 7 Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 34. **PR** 3 pounds. **JE** I32, I38, J22, C25. **KW** Labor Supply. Discrete Choice Model. Welfare Measure.

AB This paper is concerned with the measurement of individual welfare in labor supply models which allow for the impact of income taxation and income support schemes on labor supply decisions. The paper is motivated by the desire to develop measures which can be interpreted easily, which can be compared with net income, and which can be meaningfully aggregated. In econometric analyses of labor supply the interpretation of the error term and the appropriate treatment of nonlinear budget constraints are of considerable importance for the estimation methodology. Thus we consider the role that the error term might play in welfare measurement and how welfare measurement is affected by nonlinear budget constraints. To illustrate the issues we use estimates of a discrete choice model of labor supply for UK lone mothers to compute alternative welfare measures which might be considered as having intuitive appeal to policy-makers.

Proops, John

TI Carbon Taxes, Consumer Demand and Carbon Dioxide Emission: A Simulation Analysis for the U. K. **AU** Symons, Elizabeth; Proops, John; Gay, Philip.

Propper, Carol

PD May 1992. **TI** Need, Equity and the NHS: The Distribution of Health Care Expenditure 1974-1987. **AU** Propper, Carol; Upward, Richard. **AA** University of Bristol. **SR** University of Bristol Discussion Paper: 92/332; Department of Economics, University of Bristol, 8 Woodlands Road, BRISTOL, BS8 ITN, IRELAND. **PG** 22. **PR** no charge. **JE** H42, H51, I11. **KW** Health Care. National Health Service.

AB Previous analyses of equity in the delivery of U.K. health care have found conflicting results. It is not known whether these differences are the result of different methodological approaches, change over time or sampling variability. This paper adopts several methodologies used in earlier research. Using consistent definitions of need, ability to pay and expenditure, this study examines the distribution of NHS expenditure over the period 1974 to 1987. The findings indicate that this distribution is not heavily biased in favor of higher income groups, nor has it changed markedly over the 15 year period.

Pushner, George M.

TI Ownership Structure and Corporate Performance in Japan. **AU** Lichtenberg, Frank R.; Pushner, George M.

Quinke, Hermann

TI Ein Verfahren zur Konstruktion Synthetischer Mikrodaten aus Aggregierten Strukturinformationen. **AU** Gyarfas, Gabor; Quinke, Hermann.

Rabin, Matthew

PD July 1992. **TI** Incorporating Behavioral Assumptions into Game Theory. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 92-198; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 23. **PR** $3.50 plus applicable sales tax. **JE** C72. **KW** Coordination. Nash Equilibrium.

AB By now, most game theorists are familiar with an apparent shortcoming of noncooperative game theory: Using even the most strained arguments about what rationality implies, the analysis of many games does not yield sharp predictions. I believe that game theorists must make their peace with these limits, and incorporate "behavioral assumptions"-assumptions that restrict players' beliefs due to a shared perception of how people behave. In this paper I discuss an approach to formulating solution concepts that combines the assumption of rationality with such behavioral assumptions. To do so, I suppose players share the belief that they will behave consistently with some limited set of strategies. I then analyze their behavior as if these focal strategies constituted the actual game. For such behavioral restrictions to be rational, I check that no player would wish to deviate given the real, unrestricted game. I call any set of predictions that can be constructed in this way a Consistent Behavioral Theory.

PD July 1992. **TI** Incorporating Fairness into Game Theory and Economics. **AA** University of California, Berkeley. **SR** University of California at Berkeley Working Paper in Economics: 92-199; IBER, 156 Barrows Hall, University of California at Berkeley, Berkeley, CA 94720. **PG** 44. **PR** $3.50 plus applicable sales tax. **JE** C70, D63, A13. **KW** Altruism. Noncooperative Games.

AB Psychological evidence shows that, rather than pursuing solely their own material interests in group situations, people have additional "social" goals: They wish to help those who are helping them, and hurt those who are hurting them. In this paper, I model such behavior in noncooperative game theory, and define the solution concept "Fairness Equilibrium" as those outcomes that constitute equilibrium behavior when such motives are added to material games. I apply the model to some well known games, and to models of monopoly pricing and labor economics. I argue that the welfare implications of fairness can be large, both because concern for fairness affects behavior, and because it changes a person's utility for a given outcome.

Rady, Sven

PD April 1992. **TI** The Direct Approach to Debt Option Pricing. **AU** Rady, Sven; Sandmann, Klaus. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: B-212; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 23. **PR** no charge. **JE** G13. **KW** Options Pricing. Interest Rate Contracts.

AB New financial securities like interest rate options, debt options, liquid yield options, swaptions and so forth are more and more introduced to financial markets. These new derivative securities provide an insurance against athe uncertainty of interest rate movements, which is an important factor for financial decision making. The principal components of most of these commonly used interest rate contracts are European or American type options on zero coupon or coupon bonds. This is one reason for numerous investigations into the theory of bond options. The direct approach to debt option pricing goes back to the principle of option pricing over stocks. Up to now there are a lot of extensions and reformulations which as a whole are called the direct approach. The purpose of this paper is to give a survey to this approach since a thorough understanding of two-bond models may help to link this approach to models of the term structure of interest rates.

Ramey, Valerie A.

TI Output Fluctuations at the Plant Level. **AU** Bresnahan, Timothy F.; Ramey, Valerie A.

Ramsey, James

PD April 1992. **TI** Seasonal Economic Data as Approximate Harmonic Oscillators. **AA** New York University. **SR** New York University Economic Research Reports: 92-16; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 30. **PR** no charge. **JE** C22, E23, E32. **KW** Nonlinear Oscillator. Durables Production. Nondurables Production.

AB This paper draws the tentative conclusion that a single class of nonlinear, damped, forced, oscillator with delay can be used to describe the growth rates for both the indices of consumer durable and nondurable goods production. These data are monthly data from 1919 to 1988. The same class of model fits the entire period, although with parameter drift. The model is prescribed to track the seasonal components of the time series. However, the degree of fit as measured by R-squared has a low value of about 79% during the war years and if often in excess of 96%. Variations in the series at business cycle frequencies are re-expressed by this model in terms of drift in the values of the parameters. Examination of the Laplace transform of the linear approximation indicates that there has been a qualitative change in the dynamic properties of both series and that the two series also differ qualitatively; these conclusions are drawn based on an examination of the differences in the parameter values within the same class of model.

Rausser, Gordon C.

TI Alternative Subsidy Reduction Paths: The Role of Fiscal and Monetary Policy Linkages. **AU** Ardeni, Pier-Giorgio; Rausser, Gordon C.

Ravid, S. Abraham

PD January 1992. **TI** On Toeholds and Bidding Contests. **AU** Ravid, S. Abraham; Spiegel, Matthew. **AA** Ravid: Haifa University, Israel, and Columbia University. Spiegel: Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-92-12; Columbia University, Graduate School of Business, First Boston Series, New York, NY 10027. USA. **PG** 17. **PR** $5.00 academics and non-profit institution; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G32, G38. **KW** Tender Offers. Acquisitions.

AB Prior to the announcement of a tender offer, the bidding firm is legally allowed to acquire shares in the open market, subject to some limitations. These pre-announcement purchases are known as toeholds. This paper presents a simple model that describes the bidder's optimal toehold acquisition strategy, within an environment that closely parallels the present legal institutions. We show that when a second bidder is unlikely to appear the optimal strategy involves a zero toehold. Conversely, when another rival is likely to emerge, the initial bidder has an incentive to obtain a positive toehold. The paper also shows that a rule similar to "fair price" provisions, is optimal in the sense that a second bidder arrives and wins if and only if he places a higher value on the target than the initial bidder.

PD January 1992. **TI** Renegotiation Proof Equilibria and Irrelevance Propositions. **AU** Ravid, S. Abraham; Spiegel, Matthew. **AA** Ravid: Haifa University, Israel. Spiegel: Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-92-13; Columbia University, Graduate School of Business, First Boston Series, New York, NY 10027. USA. **PG** 17. **PR** $5.00 academics and non-profit institution; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G14, G10, C78. **KW** Recontracting. Irrelevance Proposition.

AB A great deal of research has recently focused upon the ideal that strategic interactions between firms may lead to violations of the Modigliani-Miller irrelevance propositions. This paper argues that a critical assumption of the above literature is that parties cannot recontract even if it is in their interest to do so. We show that the ability to recontract extends the irrelevance propositions to environments that include asymmetric information, strategic interactions between firms, multiple time periods, arbitrary security spaces, and arbitrary contract spaces between managers and their firm.

PD February 1992. **TI** Optimal Contracting and the Design of Securities. **AU** Ravid, S. Abraham; Spiegel, Matthew. **AA** Haifa University, Israel and Rutgers University. Spiegel: Columbia University. **SR** Columbia First Boston Series in Money, Economics and Finance Working Paper: FB-92-14; Columbia University, Graduate School of Business, First Boston Series, New York, NY 10027. USA. **PG** 13. **PR** $5.00 academics and non-profit institution; $6.00 corporations (add $1.00 outside U.S., Canada and Puerto Rico). **JE** G14, G32. **KW** Debt Financing. Equity Financing. Partnerships. Asymmetric Information.

AB This paper presents a model in which asymmetric information leads to the exclusive use of riskless debt and equity for small business financing. What drives the paper's results is the assumption that investors can produce negative net present value projects, if they so desire. As a result outside suppliers of funds must design contracts so that in equilibrium, entrepreneurs do not wish to undertake these undesirable investments. In addition to showing that firms only use debt and equity for their financing, the model produces two other results. First, it shows that when a firm does not have any collateralizable assets then only partnership agreements are formed in equilibrium.

Ravn, Morten Overgaard

PD June 1992. **TI** The Effects of Labour Turnover Costs in a Two Sided Search Model. **AU** Ravn, Morten Overgaard; Vetter, Henrik. **AA** Ravn: University of Aarhus and University of Southampton. Vetter: University of Aarhus. **SR** Aarhus Institute of Economics Memo: 1992-4; Institute of Economics, University of Aarhus, Building 350, Universitetsparken, DK-8000 Aarhus C, DENMARK. **PG** 24. **PR** no charge. **JE** J64, J41. **KW** Wage Bargaining. Reservation Utility.

AB In this paper we apply a two sided search model to analyze the optimal behavior of firms and workers in the face of exogenous labor turnover costs. We first illustrate that increased hiring costs will lead firms to become more demanding by increasing their reservation utility level. This will lead workers to lower their reservation utility levels, an effect neglected in most other studies. Firing costs are different from hiring costs because they are avoidable. First we show that under some special circumstances, they will not affect the economy at all. This is however due to a number of assumption that we later relax.

Reed, Bruce A.

PD September 1991. **TI** Paths, Stars and the Number Three. **AA** University of Waterloo. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-91 724-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 34. **PR** no charge. **JE** C44. **KW** Graph Theory. Cubic Graph.

AB A dominating set for graph G is a set D of vertices of G such that every vertex of G not in D is adjacent to a vertex of D. We prove that any graph G of minimum degree at least three contains a dominating set D of size at most (3/8)IV(G)I. A star S is a graph consisting of a center x and a set of edges from x to S-x. Clearly, a dominating set D for a graph G corresponds to a set of IDI stars which cover V(G). Thus, we show that the vertices of any graph G of minimum degree 3 can be covered by at most (3/8)IV(G)I vertex disjoint stars.

PD April 1992. **TI** Finding Approximate Separators and Computing Tree Width Quickly. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-91 728-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, GERMANY. **PG** 15. **PR** no charge. **JE** C44. **KW** Graph Theory. Tree Decomposition. Linear-Time Algorithm.

AB We show that for any fixed k, there is a linear-time algorithm which given a graph G either: (i) finds a cutset X of G with IXI less than or equal to k such that no component of G-X contains more than (3/4)IG-XI vertices, or (ii) determines that for every set X of vertices of G with IXI less than or equal to k, there is a component of G-X which contains more than (2/3)IG-XI vertices. This approximate separator algorithm can be used to develop an O(nlog n) algorithm for determining if G has a tree decomposition of width at most k (for fixed k) and finding such a tree decomposition if it exists. We also show that for any k which is O(log n) there is a polynomial time algorithm with the specification given above.

Rees, Hedley

PD May 1992. **TI** The Economic Effects of Collective Bargaining: Wage Premium, Hours Discount and Welfare Differential. **AU** Rees, Hedley; Shah, Anup. **AA** Rees: University of Bristol. Shah: University of Newcastle. **SR** University of Bristol Discussion Paper: 92/326; Department of Economics, University of Bristol, 8 Woodlands Road, BRISTOL, BS8 ITN, IRELAND. **PG** 30. **PR** no charge. **JE** C25, J50. **KW** Unions. Wages. Profit.

AB Estimates of the union/non-union wage differential from cross-section data appear to be in the 7-10% range. Using the 1983 General Household Survey and extracting data for manual and non-manual workers we find that the wage differential is approximately 5% and hours worked just over 4% when comparing employers who are covered by trade union agreements against those who are not. In order to explain the differential we propose the following four hypotheses of differences in productivity, compensating differentials, comparative advantage and rationing. Of these the last appears to be consistent with the data and results in a wage premium in favor of covered sector workers, but the hours differential is found to be due to worker characteristics.

PD May 1992. **TI** Work and Employment in Public and Private Sectors. **AU** Rees, Hedley; Shah, Anup. **AA** Rees: University of Bristol. Shah: University of Newcastle. **SR** University of Bristol Discussion Paper: 92/327; Department of Economics, University of Bristol, 8 Woodlands Road, BRISTOL, BS8 ITN, IRELAND. **PG** 27. **PR** no charge. **JE** C25, J45. **KW** Public Sector. Wages. Probit.

AB Using data from the General Household Survey for 1983 the paper sets out to investigate why public sector employees earn more per hour but work less hours per week than their private sector counterparts. By estimating wage and hours equations for workers in the public and private sectors and allowing for self-selectivity it is found that the evidence supports a comparative advantage explanation but not a compensating differential one. It is also found that there is a public sector hours discount of approximately 7%.

Regev, Haim

TI The Production and Cost Structure of Israeli Industry: Evidence from Individual Firm Data. **AU** Bregman, Arie; Regev, Haim; Fuss, Melvyn.

Reinelt, Peter

TI Optimal Response to Periodic Shortage: Engineering/Economic Analysis for a Large Urban Water District. **AU** Fisher, Anthony C.; Fullerton, David; Hatch, Nile; Reinelt, Peter.

Richardson, J. David

TI Empirical Evidence for Collusion in the U.S. Auto Market? **AU** Lambson, Val Eugene; Richardson, J. David.

Richardson, Ray

TI Motivation and Performance Related Pay in the Public Sector: A Case Study of the Inland Revenue. **AU** Marsden, David; Richardson, Ray.

Riezman, Raymond

TI An Experimental Investigation of the Patterns of International Trade. **AU** Noussair, Charles; Plott, Charles; Riezman, Raymond.

Riordan, Michael H.

PD June 1992. **TI** Preemptive Adoptions of an Emerging Technology. **AU** Riordan, Michael H.; Salant, David J. **AA** Riordan: Boston University. Salant: GTE Laboratories, Inc. **SR** Boston University Industry Studies Program Discussion Paper: 30; Department of Economics, Boston University, Boston, MA 02215. **PG** 23. **PR** no charge. **JE** D43, L13, C73. **KW** Technology Adoption. Preemption.

AB Many oligopolies exhibit/face continuing technological change and lumpy costs of adopting new technologies. If firms choose adoption dates in a game of timing, and downstream market structure is a Bertrand duopoly, the equilibrium adoption pattern displays rent-dissipating "increasing dominance" (Vickers, 1986): all adoptions are by the same firm and the discounted value of profits is zero. These results need not hold for other market structures, such as Cournot duopoly.

Ritchken, Peter

PD July 1991. **TI** On Flexibility, Capital Structure, and Investment Decisions for the Insured Bank. **AU** Ritchken, Peter; Thomson, James B.; DeGennaro, Ramon P.; Li, Anlong.

AA Ritchken and Li: Case Western Reserve University. Thomson: Federal Reserve Bank of Cleveland. DeGennaro: University of Tennessee. **SR** Federal Reserve Bank of Cleveland Working Paper: 9110; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 12. **PR** not available. **JE** G11, G21, G22, G28. **KW** Deposit Insurance. Portfolio Decisions.

AB Most models of deposit insurance assume that the volatility of a bank's assets is exogenously provided. Although this framework allows the impact of volatility on bankruptcy costs and deposit insurance subsidies to be explored, it is static and does not incorporate the fact that equityholders can respond to market events by adjusting previous investment and leverage decisions. This paper presents a dynamic model of a bank that allows for such behavior. The flexibility of being able to respond dynamically to market information has value to equityholders. The impact and value of this flexibility option are explored under a regime in which flat-rate deposit insurance is provided.

Rizzo, Mario J.

PD April 1992. **TI** The Morality of Profits, and the Struggle for Existence. **AA** New York University. **SR** New York University Economic Research Reports: 92-17; New York University, Faculty of Arts and Science, Department of Economics, Washington Square, New York, N.Y. 10003. **PG** 27. **PR** no charge. **JE** A13, P16. **KW** Ethics. Evolutionary Morality. Adaptation.

AB This paper is about the morality of the pursuit of profits as a means of enhancing adaption to change. It follows the Austrian view of the function of profits elaborated by Israel Kirzner. Profits are made by correctly adapting to future changes. This adaptation has a moral value because it creates wealth, and thereby increases the probability of species-survival. The latter is the standard of morality in an evolutionary theory. The pursuit of profits also serves a long-run function in imposing costs on those who adhere to rules of conduct that have lost their ability to help agents adapt to change. This paper argues that profits have two moral functions. First, they create incentives to apply those existing rules that enhance adaptation to change. Second, they create incentives to change the moral rules themselves, insofar as they are deficient in their ability to promote adaptation.

TI Fundamental Issues in the Justification of Profits. **AU** Cowan, Robin A.; Rizzo, Mario J.

Rob, Rafael

TI Evolution of Equilibria in the Long Run: A General Theory and Applications. **AU** Kandori, Michihiro; Rob, Rafael.

Roberts, Mark J.

TI Costs, Demand, and Imperfect Competition as Determinants of Plant-Level Output Prices. **AU** Dunne, Timothy; Roberts, Mark J.

Rodl, Vojtech

TI On Ramsey Graphs without Bipartite Subgraphs. **AU** Nesetril, Jaroslav; Rodl, Vojtech.

Rodrik, Dani

PD May 1992. **TI** Foreign Trade in Eastern Europe's Transition: Early Results. **AA** National Bureau of Economic Research, Stanford University and Harvard University. **SR** National Bureau of Economic Research Working Paper: 4064; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 37. **PR** $5.00. **JE** F10, F14. **KW** Trade Liberalization. Eastern Europe.

AB By the end of 1991, Czechoslovakia, Hungary, and Poland have achieved a substantial degree of openness to foreign trade. In all three countries, trade is now de-monopolized and licensing and quotas play a very small role. Exchange controls have virtually disappeared for current-account transactions. Judging by partner statistics, export performance has been impressive in all three countries, and import bonds are under way in at least Hungary and Poland as well. However, there is no evidence that exporters have had any success in finding Western markets for the exports they have lost in Eastern markets. Finally, trade liberalization so far appears to have had little effect on price discipline, in large part because of the substantial devaluations that have accompanied it.

PD June 1992. **TI** Making Sense of the Soviet Trade Shock in Eastern Europe: A Framework and Some Estimates. **AA** National Bureau of Economic Research and Columbia University. **SR** National Bureau of Economic Research Working Paper: 4112; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 31. **PR** $3.00. **JE** E23, F14, F41. **KW** Market Loss. Terms of Trade.

AB Eastern European countries have experienced sharp declines in real GDP since 1990. One of the reasons for this decline is the Soviet trade shock, deriving from the collapse of the CMEA and of traditional export markets in the Soviet Union. This paper is an attempt to quantify the magnitude of this external shock. A conceptual framework is developed to show that the shock has three distinct elements: (a) a terms of trade deteriorations; (b) a market-loss effect; and (c) a removal-of-import-subsidy effect. Taking all three together, and also adding in Keynesian multiplier effects, the conclusion is that the Soviet trade shock accounts for all of the decline in Hungarian GDP, about 60 percent of decline in Czechoslovakia, and between a quarter and a third of the decline in Poland.

Rojas-Suarez, Liliana

TI A Framework for the Analysis of Financial Reforms and the Cost of Official Safety Nets. **AU** Isard, Peter; Mathieson, Donald J.; Rojas-Suarez, Liliana.

PD May 1992. **TI** Currency Substitution and Inflation in Peru. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/33; International Monetary Fund, Washington, DC 20431. **PG** 25. **PR** not available. **JE** E41, F31, C13, O54. **KW** Exchange Rates. Black Market. Money Demand.

AB This paper shows that there is a long-run relationship between the expected rate of depreciation in the black-market-exchange rate and the ratio of domestic to foreign money in Peru; that is, the hypothesis of currency substitution can explain the behavior of real holdings of money in Peru. The paper also shows that, while the importance of currency substitution as a transmission mechanism through which domestic policies affected the dynamics of inflation was relatively small during a period of high but relatively stable inflation (January 1978-85), it became an important factor in the inflation process during the recent hyperinflation episode.

TI Bank Risk and the Declining Franchise Value of the Banking Systems in the United States and Japan. **AU** Weisbrod, Steven R.; Lee, Howard; Rojas-Suarez, Liliana.

TI Liberalization of Capital Account: Experiences and Issues. **AU** Mathieson, Donald J.; Rojas-Suarez, Liliana.

Rolin, Jean-Marie

PD January 1992. **TI** Some Useful Properties of the Dirichlet Process. **AA** PROB and Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9207; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 17. **PR** not available. **JE** C14, C11. **KW** Dirichlet Process. Gamma Measure. Nonparametric Bayesian Statistic.

AB The aim of this paper is to first recall the close connection between the Dirichlet process and the Gamma process in very general spaces and to show how it can be used to derive interesting properties of the Dirichlet process. Secondly, it is shown that the characterization of the Dirichlet process through independence relations between associated sigma fields entails a nice description of the posterior distribution of the posterior distribution of the Dirichlet process at points where there is either none or at least one observation.

Rosati, Dariusz K.

PD February 1992. **TI** The Politics of Economic Reform in Central and Eastern Europe. **AA** Warsaw School of Economics and United Nations Economic Commission for Europe. **SR** Centre for Economic Policy Research Occasional Paper: 6; Centre for Economic Policy Research, 6 Duke of York Street, London SW1Y 6LA, England. **PG** 21. **PR** 1 pound ($2) individuals; 1.50 pounds ($3) companies, libraries, institutions. **JE** O11, P47, D63. **KW** Transition Economies. Market Reform. Economic Welfare.

AB The process of transforming the centrally planned economies into market-based democracies, which was initiated in Central and Eastern Europe in 1989 with overwhelming enthusiasm and hopes, lost much of its momentum and vigor only two years later. Economic reform programmes implemented in post-socialist countries do not deliver on much of their promises. Prolonged economic downturn, growing unemployment, persistent inflation and declining consumption give rise to general frustration and disappointment. Emancipating themselves from the grand utopia of Marxist ideas, the societies of East European countries are likely to fall into another big illusion: that the market reform will benefit everybody and hurt nobody. The clash between the expectations and economic reality, between illusions and market rules, leads necessarily to political instability, which may put the reform process in the region into jeopardy.

Rosenthal, Robert W.

PD June 1992. **TI** Bargaining Rules of Thumb. **AA** Boston University. **SR** Boston University Industry Studies Program Discussion Paper: 33; Department of Economics, Boston University, Boston, MA 02215. **PG** 10. **PR** no charge. **JE** C72, C78. **KW** Bargaining. Bounded Rationality. Noncooperative Games.

AB A steady-state, random-matching game model is used to describe bargaining in a large population, where bargainers choose rules of thumb to apply across the board in a class of bargaining situations they face. The unique population equilibrium rule distributions are computed for certain cases of the model. These are then used in an exercise to analyze relationship between a society's wealth and the relative frequency of haggled transactions in the society.

PD June 1992. **TI** Rules of Thumb in Games. **AA** Boston University. **SR** Boston University Industry Studies Program Discussion Paper: 34; Department of Economics, Boston University, Boston, MA 02215. **PG** 17. **PR** no charge. **JE** C72. **KW** Bounded Rationality. Noncooperative Games.

AB A steady-state, random-matching game model is proposed in which rules of thumb, which assign strategies to individual games, are the units of choice for individuals. Costs, which reflect complexity or difficulty of use, are associated with the rules independently of the games in which they are employed. A population equilibrium is a distribution of rules across the population of players such that no individual has an incentive to change rules, given the current distribution. Examples illustrate the concept, and existence is demonstrated.

TI Price and Quality Cycles for Experience Goods. **AU** Gale, Douglas; Rosenthal, Robert W.

Rostowski, Jacek

TI Secondary Currencies and High Inflation: Implications for Monetary Theory and Policy. **AU** Auerbach, Paul.; Davison Geoffrey.; Rostowksi, Jacek.

PD January 1992. **TI** Secondary Currencies in the Russian Hyperinflation and Stabilization of 1921-24. **AU** Rostowski, Jacek; Shapiro, Judith. **AA** University of London. **SR** Centre for Economic Performance Discussion Paper: 59; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 26. **PR** no charge. **JE** E50. **KW** Hyperinflation. Russia.

AB The introduction of a secondary currency, the chervonets, played an important and beneficial role during hyperinflation in Soviet Russia in the early 1920's. This sophisticated strategy was crowned by the execution of a successful stabilization in March 1924, despite the persistence of a substantial budget deficit. The stabilization was much less costly than appears to have been the case in other post Great War hyperinflations. Further, the use of a secondary currency in this case allowed real money and output to increase in the course of 1923, while these were greatly disrupted in the late phase of hyperinflation in cases like Germany and Poland in this period. The theoretical approach to secondary currencies developed here (and in Auerbach, Davison and Rostowski 1992) further suggests that this may have important implications for policy today.

PD June 1992. **TI** A Proposal on How to Introduce a Currency Board Based Monetary System in the Republic of Latvia. **AA** School of Slavonic and East European Studies. **SR** London School of Economics Centre for Economic Performance Discussion Paper: 83; Centre for Economic Performance, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 22. **PR** no charge.

JE F30, E52, O16. **KW** Monetary Policy. Backed Currency. Foreign Exchange.

AB Latvia is considering adopting a convertible currency which would be highly backed and which would be administered by a currency board. The problem is that with a tiny proportion of national income generated by trade with convertible currency countries this would require a huge initial undervaluation of the new domestic currency (the Lat), which would be highly stagflationary. The introduction of a bi-paper standard, with the Lat as a fully backed second currency circulating in parallel with the rapidly inflating Latvian ruble, avoids these costs. The advantages of such a system for evolutionary banking sector reform are also described.

Roubini, Nouriel

PD May 1992. **TI** A Growth Model of Inflation, Tax Evasion, and Financial Repression **AU** Roubini, Nouriel; Sala-i-Martin, Xavier. **AA** Roubini: Stanford University and National Bureau of Economic Research. Sala-i-Martin: Yale University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4062; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** $5.00. **JE** G18, E31, O40, H26. **KW** Financial Repression. Seignorage Taxation.

AB In this paper we study the effects of policies of financial repression on long term growth and try to explain why optimizing governments might want to repress the financial sector. We also explain why inflation may be negatively related to growth, even though it does not affect growth directly. We argue that the main reason why governments repress the financial sector is that this is the source of "easy" resources for the public budget. The source of revenue stemming from this intervention is modeled through the inflation tax. Our model has the implication that financial development reduces money demand. We show that in countries where tax evasion is large the government will optimally choose to repress the financial sector in order to increase seigniorage taxation.

Rubin, D. Kate

PD May 1992. **TI** Who Works for Piece Rates and Why. **AU** Rubin, D. Kate; Perloff, Jeffrey M. **AA** University of California, Berkeley. **SR** University of California at Berkeley Department of Agricultural and Resource Economics Working Paper: 627; Department of Agricultural and Resource Economics, 207 Giannini Hall, University of California, Berkeley, CA 94720. **PG** 18. **PR** $7.00. **JE** J31, J41, Q12. **KW** Agricultural Labor. Agricultural Wages. Contracts.

AB Whether a hired agricultural worker has a piece rate or a time rate job is not random. The probability the worker is paid by the piece is a function of the worker's demographic characteristics (especially age) and the wage differential between piece-rate and time-rate jobs. Using a simultaneous equations model, we show that wages and age-earnings profiles substantially differ between workers in piece-rate and time-rate jobs and that the probability of working in piece rate varies significantly with age. Piece-rate contracts provide workers with incentives to work harder and faster in a given period than under time-rate contracts. Under a piece-rate contract, individuals who are willing to work very hard or who are highly skilled are rewarded for their higher productivity. The portion of the earnings differential due to differences in the characteristics of the contract, of the worker, or both are captured in our model.

Ruffell, Robin

TI The Valuation of Forest Characteristics. **AU** Hanley, Nick; Ruffell, Robin.

Ruiz, Esther

PD May 1992. **TI** Quasi-Maximum Likelihood Estimation of Stochastic Variance Models. **AA** London School of Economics. **SR** London School of Economics Suntory Toyota International Centre for Economics and Related Disciplines Working Paper: EM/92/244; Suntory-Toyota International Centre for Economics and Related Disciplines, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 17. **PR** no charge. **JE** C51, C22, F31. **KW** Stochastic Volatility Model. Exchange Rates.

AB Changes in variance or volatility over time can be modeled using stochastic volatility (SV) models. This approach is based on treating the variance as an unobservable variable, the logarithm of which is modeled as a linear stochastic process, usually an autoregression. Although it is not easy to obtain the exact likelihood for SV models, they tie in closely with finance theory and have certain statistical attractions. This article analyzes the asymptotic and finite sample properties of a Quasi Maximum Likelihood (QML) estimator based on the Kalman filter applied to the appropriate transformation of the observations. The model is finally fitted to daily observations on the Yen/Dollar exchange rate.

Ruwaard, Jacqueline

PD 1992. **TI** On Coordination of Product and Waste Flows in Distribution Networks: Model Formulation and Solution Procedures. **AU** Ruwaard, Jacqueline; Salomon, Marc; Van Wassenhove, Luk. **AA** Ruwaard and Salomon: Erasmus University. Van Wassenhove: INSEAD. **SR** INSEAD Working Papers: 92/23/TM; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 15. **PR** not available. **JE** C61, D23. **KW** Plant Location. Waste Disposal. Integer Programming.

AB We study the problem of coordinating product and waste flows in a two-level distribution network. In this problem, a single product is produced at multiple plants in order to fulfill customer demands. Furthermore, in the production process waste is generated, that must be transported to, and disposed at waste disposal units. The problem objective is to determine suitable locations for plants and waste disposal units from a predetermined set of feasible locations, such that total costs are minimal. Here, total costs consist of fixed costs associated with opening plants and waste disposal units, and variable costs associated with transport of product and waste. We discuss alternative mathematical model formulations for this problem, and derive lower and upper bounding procedures.

Saccomanni, Fabrizio

TI Agenda for Stage Two: Preparing the Monetary Platform. **AU** Padoa-Schioppa, Tommaso; Saccomanni, Fabrizio.

Sachs, Horst

PD October 1991. **TI** Remark on the Dimer Problem. **AU** Sachs, Horst; Zernitz, Holger. **AA** University of Ilmenau. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: C-91 731-OR; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300

Bonn 1, GERMANY. **PG** 9. **PR** no charge. **JE** C44. **KW** Graph Theory. Dimer Covering.

AB Let S(n) be the 2n x 2n square lattice and c(S(n)) the number of dimer coverings of S(n). In 1961, M.E. Fisher, P.W. Kasteleyn and H.N.V. Temperley/M.E. Fisher established the-now classical-result that log c(S(n)) is asymptotically equivalent to C(S)lS(n)l where C(S) greater that 0 is a constant. In this paper, another sequence {T(n)} of subsets of the infinite square lattice is considered which, in a way, is similar to {S(n)}, and by elementary means it is shown that the asymptotic behavior of c(T(n)) is quite different from that of c(S(n)).

Safra, Zvi

TI The Impossibility of Experimental Elicitation of Subjective Probabilities. **AU** Karni, Edi; Safra, Zvi.

Sala-i-Martin, Xavier

TI A Growth Model of Inflation, Tax Evasion, and Financial Repression **AU** Roubini, Nouriel; Sala-i-Martin, Xavier.

Salant, David J.

TI Preemptive Adoptions of an Emerging Technology. **AU** Riordan, Michael H.; Salant, David J.

Salant, Stephen

PD February 1992. **TI** Surviving Winter: A Fitness-Based Explanation of Hoarding and Hibernation. **AU** Salant, Stephen; Kalat, Karen; Wheatcroft, Ana. **AA** University of Michigan. **SR** University of Michigan Center for Research on Economic and Social Theory, (CREST), Working Paper: 92-02; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 18. **PR** not available. **JE** A12. **KW** Hibernation. Hoarding.

AB Until last year, a literature on animal hoarding comprising more than 1500 articles lay scattered across various journals of behavioral ecology. Stephen Vander Wall masterfully surveys this wide-ranging literature in his encyclopedic Food Hoarding in Animals [1991]. The literature which Vander Wall summarizes has one striking deficiency. As David Sherry observed in his glowing evaluation in Science, "What his [Vander Wall's] review makes clear, however, is that quantitative models of the fitness consequences of food hoarding are badly needed." The purpose of our essay is to provide such a model. Like any work, ours owes many an intellectual debt-not only to Vander Wall and those he surveys but also to two economists, Harold Hotelling [1931] for his theory of storage and Gary Becker [1965] for his theory of time allocation. Our paper is organized as follows. In section 2, we formulate the optimization problem and present a set of conditions which must hold if a path of behaviors is optimal. In section 3, we describe the qualitative characteristics of "noninept" paths of behaviors. At the end of section 3, we illustrate the predictions of the model with a spreadsheet simulation.

TI The Limits of Monopolization Through Acquisition: Further Results. **AU** Gaudet, Gerard; Salant, Stephen.

TI Cartel Quotas Under Majority Rule. **AU** Cave, Jonathan; Salant, Stephen.

TI Intertemporal Self-Selection with Multiple Buyers Under Complete and Incomplete Information. **AU** Bagnoli, Mark; Salant, Stephen; Swierzbinski, Joseph E.

Salomon, Marc

TI On Coordination of Product and Waste Flows in Distribution Networks: Model Formulation and Solution Procedures. **AU** Ruwaard, Jacqueline; Salomon, Marc; Van Wassenhove, Luk.

Samolyk, Katherine A.

PD February 1992. **TI** Bank Performance and Regional Economic Growth: Evidence of a Regional Credit Channel. **AA** Federal Reserve Bank of Cleveland. **SR** Federal Reserve Bank of Cleveland Working Paper: 9204; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 16. **PR** not available. **JE** G20, G21, O40, R00. **KW** Banking. Economic Growth.

AB This paper examines the relationship between bank performance and economic growth at the state level. We develop a regional credit view to explain how, due to information costs, regional banking conditions can influence local economic activity by affecting a region's ability to fund local investments. The model suggests that local banking-sector problems may constrain economic activity in financially distressed regions, whereas no such link need be evident in financially sound regions. We test the empirical relevance of this credit view for the 1983-1990 period using state-level data and find evidence of a regional financial channel to output. Specifically, local banking-sector conditions explain more of real personal income growth in states whose share of nonperforming loans is above the national share.

Sandmann, Klaus

TI The Direct Approach to Debt Option Pricing. **AU** Rady, Sven; Sandmann, Klaus.

Sanglier, Michele

TI Information, Systemes Complexes et Technologies de l'Information. **AU** Jelassi, Tawfik; Sanglier, Michele.

Santos-Silva, J. M. C.

PD May 1992. **TI** A Note on the Score Test for Neglected Heterogeneity in the Truncated Normal Regression Model. **AA** University of Bristol and Universidade Tecnica de Lisboa. **SR** University of Bristol Discussion Paper: 92/329; Department of Economics, University of Bristol, 8 Woodlands Road, BRISTOL, BS8 ITN, IRELAND. **PG** 10. **PR** no charge. **JE** C12. **KW** Score Test. Conditional Maximum Likelihood. Information Matrix Tests.

AB In this paper, the Score test for neglected heterogeneity in the truncated normal regression model is derived. Because this model is estimated using conditional maximum likelihood, the resulting test is not a member of the class of Information Matrix tests. However, as in other models, this test can be interpreted as a combination of Score tests for non-normality and heteroskedasticity.

Sapir, Andre

TI A Code of Conduct for Inter-State Trade. **AU** Layard, Richard; Sapir, Andre.

Savouri, Savvas

TI Regional Migration versus Regional Commuting: The

Identification of Housing and Employment Flows. **AU** Jackman, Richard.; Savouri, Savvas.

Schaffer, Mark E.

PD March 1992. **TI** The Economy of Poland. **AA** London School of Economics. **SR** Centre for Economic Performance Discussion Paper: 67; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 58. **PR** no charge. **JE** O52, P50. **KW** Poland. Economic Growth. Market Socialism.

AB This paper presents a survey of the economy of Poland, covering both the pre-reform period and the developments in 1990-91. The first part of the paper outlines the basic features of the Polish economy, analyses its economic growth and performance in the communist period, and examines the market socialist system that existed in Poland from 1982 to 1989. The second part of the paper analyses the Polish economy in transition: the Balcerowicz Plan, the transition economic system, economic performance in 1990-91, and the challenge of structural adjustment and privatization. The Polish enterprise sector receives particular attention throughout the paper because of its central role in the transition from socialism.

Scharfstein, David S.

TI Risk Management: Coordinating Corporate Investment and Financing Policies. **AU** Froot, Kenneth A.; Stein, Jeremy C.; Scharfstein, David S.

Schlesinger, Harris

TI Second-Best Insurance Contract Design in an Incomplete Market. **AU** Gollier, Christian; Schlesinger, Harris.

Schmidt, Klaus M.

PD March 1992. **TI** Reputation and Equilibrium Characterization in Repeated Games with Conflicting Interests. **AA** Massachusetts Institute of Technology. **SR** Massachusetts Institute of Technology Department of Economics Working Paper: 92-7; Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139. **PG** 27. **PR** not available. **JE** C72, D82. **KW** Game Theory. Folk Theorem.

AB A two-person game is of conflicting interests if the strategy to which player one would most like to commit herself holds player two down to his minmax payoff. Suppose there is a positive prior probability that player one is a "commitment type" who will always play this strategy. Then player one will get at least her commitment payoff in any Nash equilibrium of the repeated game if her discount factor approaches one. This result is robust against further perturbations of the informational structure and in striking contrast to the message of the Folk theorem for games with incomplete information.

Schmitz, James A. Jr

TI On the Turnover of Business Firms and Business Managers. **AU** Holmes, Thomas J.; Schmitz, James A. Jr.

Schoeni, Robert

TI Income Prospects and Age at Marriage. **AU** Bergstrom, Ted; Schoeni, Robert.

Schulze-Ghattas, Marianne

TI Aggregation of Economic Indicators Across Countries: Exchange Rate versus PPP Based GDP Weights. **AU** Gulde, Anne Marie; Schulze-Ghattas, Marianne.

Schwartz, Robert

TI Price Discovery Noise. **AU** Bronfman, Corinne; Schwartz, Robert.

Schweizer, Urs

PD April 1992. **TI** Institutional Choice: A Contract-Theoretic Approach. **AA** University of Bonn. **SR** Universitat Bonn Sonderforschungsbereich 303 - Discussion Papers: A-366; Sonderforschungsbereich 303 an der Universitat Bonn, Adenauerallee 24-42, D-5300 Bonn 1, DEUTSCHLAND. **PG** 20. **PR** no charge. **JE** D42, D82. **KW** Incomplete Contracts. Transactions Costs. Coase Theorem.

AB This paper distinguishes various settings according to what kind of contracts they allow for. The same model of sequential binary choice is used to illuminate different aspects of the contract-theoretic approach to transaction costs economics. Selective intervention as the notion which leads to Williamson's Puzzle is explored in a framework of incomplete contracts. It is shown that agents committed by contracts that are second-best or worse cannot safely be relied upon to administer selective intervention. In a final section, the model is used critically to revisit the theory of ownership structure which is due to Grossman and Hart (1986).

Scotchmer, Suzanne

TI The Core and the Hedonic Core: Equivalence and Comparative Statics. **AU** Engl, Greg; Scotchmer, Suzanne.

Sepanski, Jungsywan H.

TI Consistent Estimation of Linear and Nonlinear Errors-in-Variables Models with Validation Information. **AU** Lee, Lung-fei; Sepanski, Jungsywan H.

Shaffer, Greg

TI Non-Linear Contracts, Foreclosure, and Exclusive Dealing. **AU** O'Brien, Daniel P.; Shaffer, Greg.

Shah, Anup

TI The Economic Effects of Collective Bargaining: Wage Premium, Hours Discount and Welfare Differential. **AU** Rees, Hedley; Shah, Anup.

TI Work and Employment in Public and Private Sectors. **AU** Rees, Hedley; Shah, Anup.

Shapiro, Judith

TI Secondary Currencies in the Russian Hyperinflation and Stabilization of 1921-24. **AU** Rostowski, Jacek; Shapiro, Judith.

Shapley, Lloyd S.

PD June 1992. **TI** Kernels of Replicated Market Games. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 654; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 14. **PR** $2.50; checks payable to U.C.

Regents. **JE** C71. **KW** Replicated Markets. Multi-Bilateral Equilibrium.
AB Our subject is replicated TU economies and the kernels of the cooperative games that they generate. The kernel is a multi-bilateral bargaining Equilibrium; it contains the nucleolus and is contained in most bargaining sets. Two players are considered to be in equilibrium if at the given outcome they split their combined payoff equally between what they could claim on the basis of marginal worth to coalitions containing one but not the other. To qualify for the kernel, an outcome must have all pairs of players in equilibrium simultaneously. It is somewhat remarkable that the kernel is never empty.

TI Individual and Collective Wage Bargaining. **AU** Levy, Anat; Shapley, Lloyd S.

Sharpe, Steven A.
TI Hostile Takeovers and Expropriation of Extramarginal Wages: A Test. **AU** Neumark, David; Sharpe, Steven A.

Sheiner, Louise
PD July 1992. **TI** The Housing Wealth of the Aged. **AU** Sheiner, Louise; Weil, David N. **AA** Sheiner: Joint Committee on Taxation. Weil: Brown University and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4115; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 30. **PR** $5.00. **JE** J14, R20. **KW** Homeownership. Elderly.
AB This paper examines the degree to which the elderly reduce homeownership as they age, and the factors which influence this process. We find that average levels of homeownership decline significantly with age, even when cohort effects are taken into consideration, and that the amount of housing held by people near death is quite low compared to what is seen in cross sections. We estimate that 42% of households will leave behind a house when the last member dies. We also find that the degree to which households reduce homeownership between age 65 and death does not differ greatly between the upper and lower income halves of our sample; that does not differ greatly between the upper and lower income halves of our sample; that people who do not have children reduce their homeownership more slowly than those who do; that increases in house prices in a state make it more likely that the elderly in that state reduce their home equity; and that the value of houses sold by elderly people tends not to remain in their portfolios after the house is sold.

Shekhar, Shashi
TI Generalization With Neural Networks: An Application in the Financial Domain. **AU** Dutta, Soumitra; Shekhar, Shashi.

TI Decision Support in Non-Conservative Domains: Generalization with Neural Networks. **AU** Dutta, Soumitra; Shekhar, Shashi; Wong, W. Y.

Shephard, Neil G.
TI Exact Score for Time Series Models in State Space Form. **AU** Koopman, Siem Jan; Shephard, Neil G.

TI Deletion Diagnostics and Transformations for Time Series. **AU** Atkinson, A. C.; Shephard, Neil G.

Shome, Parthasarathi
PD June 1992. **TI** Trends and Future Directions in Tax Policy Reform: A Latin American Perspective. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/43; International Monetary Fund, Washington, DC 20431. **PG** 32. **PR** not available. **JE** H20, K34, N46, P52. **KW** Taxation. Latin America.
AB Tax reform in Latin America during the 1980's emphasized broadbased, low-rate consumption taxes over steeply progressive income and property taxes, primarily to simplify the tax structure and facilitate tax administration. While tax reform need not necessarily raise tax-to-GDP ratios, countries that undertook tax reform experienced a higher revenue gain in terms of GDP relative to those that did not. Tax reform issues during the 1990's will include a minimum income tax, alternative corporate taxes (cash flow tax, assets tax), capturing difficult tax bases (financial intermediation, property), environment taxes, extending withholding as a taxing mechanism, and tax harmonization.

Sibert, Anne
PD December 1991. **TI** Public Finance and Coordination Problems in a Common Currency Area. **AA** University of Kansas. **SR** Federal Reserve Bank of Kansas City Research Working Paper: 91-06; Research Division, Federal Reserve Bank of Kansas City, 925 Grand Ave., Kansas City, MO 64198. **PG** 26. **PR** no charge. **JE** F33, F42. **KW** European Community. Monetary System--Europe.
AB The Delors report suggests the eventual adoption of a common currency within the European Community. Recent discussions of monetary union have centered on budgetary matters and the intent of this paper is to address one aspect of this: the provision and allocation of seigniorage in a common currency area. It is shown that if fiscal policy is made independently, a common currency area leads to excess inflation, even when monetary policy is run by a single central bank. Bank constitution framers desiring to improve matters should mandate a level of inflation below that associated with an optimal policy mix.

Siconolfi, Paolo
TI The Generic Existence of Competitive Equilibria with Restricted Participation. **AU** Polemarchakis, Heraklis M; Siconolfi, Paolo.

Sicular, Terry
PD May 1991. **TI** Plan, Market and Inflation: Potential Problems with China's Two-Track System. **AA** Harvard University. **SR** Papers in Political Economy Political Economy Research Group, University of Western Ontario: 20; Department of Economics, Social Science Centre, University of Western Ontario, London, Ontario, CANADA N6A 5C2. **PG** 31. **PR** no charge. **JE** P21, P22, E31. **KW** Socialist Economies. Central Planning. Price Level.
AB Economic reform or transition in socialist economies is often accompanied by inflation. This paper proposes that inflation can arise in such economies due to inherent contradictions between plan and market. Specifically, inflation can occur as the result of government efforts to maintain planned allocation when market opportunities cause plan evasion. A theoretical analysis shows that under these circumstances the rate of inflation will depend on (1) the

relative sizes of planned and market allocation, and (2) the velocity of money. Evidence for China suggests that such interactions have contributed to recent price level instability.

Simar, Leopold

TI Efficient Semiparametric Estimation in Stochastic Frontier Model. **AU** Park, Byeong U.; Simar, Leopold.

Sinclair-Desgagne, Bernard

TI Environmental Regulation and Innovation. **AU** Cadot, Olivier; Sinclair-Desgagne, Bernard.

Sokoloff, Kenneth

TI Bureaucrats, Subordinates, and the Failure of Soviet Marxism. **AU** Layenov, Victor; Majewski, John; Sokoloff, Kenneth.

Spiegel, Mark

TI The Role of Human Capital and Political Instability in Economic Development. **AU** Benhabib, Jess; Spiegel, Mark.

Spiegel, Matthew

TI On Toeholds and Bidding Contests. **AU** Ravid, S. Abraham; Spiegel, Matthew.

TI Renegotiation Proof Equilibria and Irrelevance Propositions. **AU** Ravid, S. Abraham; Spiegel, Matthew.

TI Optimal Contracting and the Design of Securities. **AU** Ravid, S. Abraham; Spiegel, Matthew.

Stanczak, Kazimierz

PD June 1992. **TI** Devaluations and Revaluations Without Capital Mobility and PPP. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 663; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 27. **PR** $2.50; checks payable to U.C. Regents. **JE** F30, F31, F40, F41. **KW** Arbitrage Costs. Exchange Rates.

AB I study the effects of unanticipated permanent devaluations and revaluations in a small-open production economy under the assumptions of capital immobility and impediments to trade. The paper is motivated by a recent discussion about the business cycle-type effects of the exchange-rate-based stabilizations (ERBS). In the model, the quadratic labor costs involved in carrying out foreign transactions imply that, in general equilibrium, PPP is not instantaneously reestablished following changes in the nominal exchange rate. In contrast to the existing literature, I demonstrate that in the presence of convex arbitrage costs, a devaluation (revaluation) leads to a combination of the trade surplus (deficit) and fall (increase) in the relative price of traded goods in terms of the nontraded goods, and - finally - that a revaluation is not a reversed devaluation.

PD June 1992. **TI** The Implications of Convex Arbitrage Costs for International Macroeconomics. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 664; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 26. **PR** $2.50; checks payable to U.C. Regents. **JE** F30, F32, F34, F40, F41. **KW** Arbitrage Costs. Exchange Rates. Business Cycles.

AB I study the implications of convex arbitrage costs in a two-country dynamic general equilibrium model. The presence of the selling/buying costs implies that the real exchange rate (the relative price of the foreign-market goods in terms of the home-market goods) in a trade surplus (deficit) country is above (below) unity. I demonstrate why and how the long run real exchange rate depends on the initial net foreign asset position. I analyze the relationships between the real exchange rate, net exports, output, employment, and consumption. In particular, I derive an upward (downward) sloping aggregate supply (demand) curve in a trade surplus (deficit) country.

PD July 1992. **TI** A Note on the Benefits of Inflation in the Economies with Price Controls and the Cash-in-Advance Black Markets. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 665; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 11. **PR** $2.50; checks payable to U.C. Regents. **JE** E31, P22, P23, D52. **KW** Rationing. Queuing.

AB I extend the classical rationing-by-waiting arguments in Barzel (1974) into a dynamic general equilibrium model with money. In the model, the binding price controls give rise to queuing and the (competitive) black market. Purchases on the black market are subject to the cash-in-advance (CIA) constraint. In a sharp contrast to a commonly-held view, I show that an unanticipated permanent increase in growth rate of the money supply reduces rather than increases the waiting lines. This obtains due to an effect typical in the CIA economies, i.e., an inflation-induced substitution towards the inflation-tax-free leisure (see Wilson (1979)). If output, and hence consumption are unaffected by the fall of the labor supply then inflation unambiguously increases welfare. I also argue that inflation may still be welfare-improving even if lower labor supply does cause a fall in output and consumption.

Stapleton, Richard C.

TI Idiosyncratic Risk, Sharing Rules and the Theory of Risk Bearing. **AU** Franke, Gunter; Stapleton, Richard C.; Subrahmanyam, Marti G.

PD April 1992. **TI** The Analysis and Valuation of Interest Rate Options. **AU** Stapleton, Richard C.; Subrahmanyam, Marti G. **AA** Stapleton: Lancaster University. Subrahmanyam: New York University and INSEAD. **SR** INSEAD Working Papers: 92/35/FIN; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 17. **PR** not available. **JE** G13. **KW** Swap Options. European-style Options.

AB This paper provides a simple, alternative model for the valuation of European-style interest rate options. The assumption that derives the hedging argument in the model is that the forward prices of bonds follow an arbitrary two-state process. Later, this assumption is made more specific by postulating that the discount on a zero-coupon bond follows a multiplicative binomial process. In contrast to the Black-Scholes assumption applied to zero-coupon bonds, the limiting distribution of this process has the attractive feature that the zero-bond price has a natural barrier at unity (thus precluding negative interest rates), and the bond price is negatively skewed. The model is used to price interest rate options in general, and interest rate caps and floors, in particular. The model is then generalized and applied to European-style options on bonds. A relationship is established between options on swaps and options on coupon bonds.

TI Multivariate Binomial Approximation for Variables with Arbitrary and Covariance Characteristics. **AU** Ho, Teng Suan; Stapleton, Richard C.; Subrahmanyam, Marti G.

Stein, Jeremy C.

TI Risk Management: Coordinating Corporate Investment and Financing Policies. **AU** Froot, Kenneth A.; Stein, Jeremy C.; Scharfstein, David S.

Stekler, Lois E.

PD May 1992. **TI** The Adequacy of the Data on U.S. International Financial Transactions: A Federal Reserve Perspective. **AU** Stekler, Lois E.; Truman, Edwin M. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 430; Division of International Finance, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. **PG** 24. **PR** no charge. **JE** F30, C81, C82. **KW** Data Adequacy. U. S. Capital Flows. International Finance.

AB There are well-documented inadequacies in the data on U.S. international capital flows, cross-border holdings of assets, and investment income. In order to set priorities for data improvements, it is necessary to evaluate our needs for information, survey possible additions and alternatives to the current data collection system, and weigh the costs and benefits of proposed improvements. This paper focuses on only one facet of these issues, the needs of the Federal Reserve for more accurate and complete data on U.S. international financial transactions. The Federal Reserve uses such data in three basic areas: first, in formulating monetary policy, second, in meeting its supervisory responsibilities, and third, in analyzing the implications of economic and financial developments for the U.S. economy and financial system. The paper concludes with a set of recommendations for improving the quality, coverage, and usefulness of the data on U.S. international financial transactions.

Stewart, Mark

TI The Economic Effects of Multiple Unionism: Evidence from the 1984 Workplace Industrial Relations Survey. **AU** Machin, Stephen; Stewart, Mark; Van Reenen, John.

Stoker, Thomas M.

TI Efficiency of Weighted Average Derivative Estimators. **AU** Newey, Whitney K.; Stoker, Thomas M.

Stone, Mark R.

TI Endogenous Creditor Seniority and External Debt Values. **AU** Dooley, Michael; Stone, Mark R.

Stulz, Rene M.

TI Asset Sales, Leverage, and the Agency Costs of Managerial Discretion. **AU** Lang, Larry H. P.; Poulsen, Annette; Stulz, Rene M.

TI Contagion and Competitive Intra-Industry Effects of Bankruptcy Announcements. **AU** Lang, Larry H. P.; Stulz, Rene M.

TI Global Financial Markets and the Risk Premium on U.S. Equity. **AU** Chan, K. C.; Stulz, Rene M.; Karolyi, G. Andrew.

Sturzenegger, Federico

PD May 1992. **TI** "Deadlock" Societies, The Allocation of Time and Growth Performance. **AU** Sturzenegger, Federico; Tommasi, Mariano. **AA** Sturzenegger: University of California, Los Angeles and National Bureau of Economic Research. Tommasi: University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 660; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 18. **PR** $2.50; checks payable to U.C. Regents. **JE** H20, J22, D72, D73. **KW** Government Subsidy. Political Process.

AB This paper deals with the relation between the nature of the political process and the growth performance of the economy. We claim that the poor growth performance of many countries is a consequence of the misallocation of its human resources. Growth is the consequence of deliberate efforts by entrepreneurs who try to increase their profits through innovation. We endogenize the choice of time devoted to this activity vis-a-vis other ways of increasing income, i.e., by obtaining government subsidies. We provide an explicit technology for the allocation of government subsidies. The characteristics of this political redistribution mechanism will affect time allocations and therefore, growth performance. For example, as groups have a more unequal access to the political system, fewer resources will be devoted to political fighting since the outcome of the process is more certain. On the other hand, societies in which the balance of power is more evenly distributed will find themselves in a "deadlock", where a considerable amount of resources are spent on trying to affect government decisions.

PD June 1992. **TI** Inflation and Social Welfare in a Model with Endogenous Financial Adaptation. **AA** University of California, Los Angeles and National Bureau of Economic Research. **SR** National Bureau of Economic Research Working Paper: 4103; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $3.00. **JE** E44, E31, E61. **KW** Financial Adaptation. Heterogeneous Agents.

AB This paper develops a model with endogenous financial adaptation. With a representative agent, inflation and welfare increase upon introduction of financial adaptation. Once we allow for agents' heterogeneity, we can show that inflation still increases and that the "poor" are hurt, while the "rich" benefit from the process of financial adaptation. Finally, we consider the optimal level of seigniorage collection. With a representative agent, financial adaptation increases both the optimal level of government spending and the inflation rate. With heterogeneous agents, if the government cares for the low income group, the optimal amount of government spending falls even though the rate of inflation increases. The model accounts for many stylized facts of high inflation economies and explains the incentives behind many policy actions.

Subrahmanyam, Avanidhar

TI Decimal Stock Trading and "Off-Floor" Market Making. **AU** Chordia, Tarun; Subrahmanyam, Avanidhar.

Subrahmanyam, Marti G.

TI Idiosyncratic Risk, Sharing Rules and the Theory of Risk Bearing. **AU** Franke, Gunter; Stapleton, Richard C.; Subrahmanyam, Marti G.

TI The Analysis and Valuation of Interest Rate Options. **AU** Stapleton, Richard C.; Subrahmanyam, Marti G.

TI Multivariate Binomial Approximation for Variables with Arbitrary and Covariance Characteristics. **AU** Ho, Teng Suan; Stapleton, Richard C.; Subrahmanyam, Marti G.

Summers, Lawrence

PD May 1992. **TI** Taxation and the Structure of Labor Markets: The Case of Corporatism. **AU** Summers, Lawrence; Gruber, Jonathan; Vergara, Rodrigo. **AA** Summers: The World Bank and National Bureau of Economic Research. Gruber: Harvard University. Vergara: Banco Central de Chile. **SR** National Bureau of Economic Research Working Paper: 4063; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 25. **PR** $5.00. **JE** H20, J40, J38. **KW** Labor Markets. Corporatist Economies. Labor Taxes.

AB We propose an explanation for the wide variation in rates of taxation across developed economies, based on differences in labor market institutions. In "corporatist" economies, which feature centralized labor markets, taxes on labor input will be less distortionary than when labor supply is determined individually. Since the level of labor supply is set by a small group of decision-makers, these individuals will recognize the linkage between the taxes that workers pay and the benefits that they receive. Labor tax burdens are indeed higher in more corporatist nations, and non-labor taxes are lower, which is consistent with this theory. There is also some evidence that the distortionary effects of labor taxes are lower in more corporatist economies.

Suranyi, Marta

TI Banking in Transition: Development and Current Problems in Hungary. **AU** Estrin, Saul; Hare, Paul; Suranyi, Marta.

Sutherland, Alan

TI Contacts, Credibility and Common Knowledge: Their Influence on Inflation Convergence. **AU** Miller, Marcus; Sutherland, Alan.

Swierzbinski, Joseph E.

TI Intertemporal Self-Selection with Multiple Buyers Under Complete and Incomplete Information. **AU** Bagnoli, Mark; Salant, Stephen; Swierzbinski, Joseph E.

Symansky, Steven

TI A Note on Burden Sharing Among Creditors. **AU** Dooley, Michael; Haas, Richard D.; Symansky, Steven.

Symons, Elizabeth

PD March 1992. **TI** Carbon Taxes, Consumer Demand and Carbon Dioxide Emission: A Simulation Analysis for the U. K. **AU** Symons, Elizabeth; Proops, John; Gay, Philip. **AA** Symons: University of Keele, University of Manchester, and Institute for Fiscal Studies. Proops and Gay: University of Keele,. **SR** Institute for Fiscal Studies (IFS) Working Paper: W92/6; Institute for Fiscal Studies, 7 Ridgmount Street, London WC1E 7AE, ENGLAND. **PG** 19. **PR** 3 pounds. **JE** H31, I30, D12, D30, Q48. **KW** Emissions Tax. Input-Output Framework.

AB This paper examines a policy instrument that has been proposed as a means of reducing "greenhouse gases", the introduction of a carbon tax on fossil fuels. It investigates the implication of a carbon tax for consumer prices using an input-output framework. Thus the effect of a tax on use of fossil fuels is allowed to affect consumer prices. These are then used in a micro-simulation program that features estimates of a system of demand equations obtained using 116,000 observations from the Family Expenditure Survey. This predicts the behavioral reaction of each household to the tax changes and the consequent effect on CO2 emission, government revenue, and any distributional effects.

Tagaras, George

PD 1992. **TI** A Dynamic Programming Approach to the Economic Design of X-Charts. **AA** INSEAD. **SR** INSEAD Working Papers: 92/26/TM; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 24. **PR** not available. **JE** C61, C63, C44. **KW** Dynamic Process Control. Program Efficiency.

AB Recent technological advances have rendered dynamic process control a viable alternative. A dynamic programming approach is proposed for the modeling and cost minimization of statistical process control activities. The decision parameters of the control chart are allowed to change dynamically as new information about the process becomes available. This general approach has been known as a theoretical possibility for many years, but its practical performance is explicitly investigated in this paper. It is shown with numerical examples that the dynamic programming solution can be much more economical than the conventional static solution with fixed control chart parameters. The substantial potential cost savings and the feasibility of a dynamic control procedure suggest that dynamic process control should replace standard statistical or economic design of control charts as the preferred method in automated production processes.

Tanzi, Vito

PD April 1992. **TI** Financial Markets and Public Finance in the Transformation Process. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/29; International Monetary Fund, Washington, DC 20431. **PG** 26. **PR** not available. **JE** B24, B25, E44, E62, G21. **KW** Fiscal Institutions. Economic Transition.

AB The paper surveys the role of financial markets and fiscal institutions in the transformation process going on in Eastern and Central Europe. It highlights (a) the need to create some sort of "social ecological balance" necessary for the working of a modern market economy; (b) the need to develop appropriate financial institutions that can mobilize savings and allocate them efficiently; and (c) the major reforms necessary in the fiscal area. It also calls attention to the extent to which monetary and fiscal policies overlap in these countries and the implications of that overlapping.

Tatom, John A.

PD March 1992. **TI** The P-Star Model and Austrian Prices. **AA** Federal Reserve Bank of St. Louis. **SR** Federal Reserve Bank of St. Louis Working Paper: 92-001A; Research and

Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 21. **PR** no charge. **JE** E31, F41, E52, F42. **KW** Prices--Austria. Inflation. Monetary Policy.

AB In the P-star model the price level is determined by the money stock per unit of potential output and long-run equilibrium level of the velocity of money. This article applies this model to Austria. Problems in identifying permanent shocks to potential output and/or velocity lead to the rejection of such models of the price level, but their first-difference version is not so suspect. While evidence is found of a long-run relationship between Austrian inflation and money growth, even the first-difference version of the P-star model is rejected for Austria. Since Austria is a small economy, closely tied to Germany, the article also investigates whether Austrian prices are tied to a German P-star measure. This hypothesis is also rejected, but there is a statistically-significant long-run relationship between Austrian and German inflation. Moreover, Austrian money growth remains significant even in this relationship.

Taylor, Mark P.

TI The Monetary Approach to the Exchange Rate: Rational Expectations, Long-Run Equilibrium and Forecasting. **AU** MacDonald, Ronald; Taylor, Mark P.

TI Exchange Rates, Country Preferences, and Gold. **AU** Dooley, Michael; Isard, Peter; Taylor, Mark P.

Telmer, Chris I.

TI Accounting for Forward Rates in Markets for Foreign Currency. **AU** Backus, David K.; Gregory, Allan W.; Telmer, Chris I.

Thomson, James B.

TI On Flexibility, Capital Structure, and Investment Decisions for the Insured Bank. **AU** Ritchken, Peter; Thomson, James B.; DeGennaro, Ramon P.; Li, Anlong.

TI Troubled Savings and Loan Institutions: Voluntary Restructuring Under Insolvency. **AU** DeGennaro, Ramon P.; Lang, Larry H. P.; Thomson, James B.

Thornton, Daniel L.

PD November 1991. **TI** The Market's Reaction to Discount Changes: What's Behind the Announcement Effect? **AA** Federal Reserve Bank of St. Louis. **SR** Federal Reserve Bank of St. Louis Working Paper: 92-003A; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 23. **PR** no charge. **JE** E40, E43, E44, E60. **KW** Discount Rate. Monetary Policy. Market Efficiency.

AB Market interest rates respond to discount rate changes. What is the reason for this response. This paper investigates several competing hypotheses of why markets respond to discount rate changes. Evidence that the response is invariant to changes in the Federal Reserve's operating procedure suggests that it is purely an "announcement effect." Contrary to common belief the evidence suggests that the effect does not depend critically on whether the discount rate change is unanticipated, because all discount rate changes appear to be largely unanticipated. It appears that changing expectations about monetary policy is not the only reason--and perhaps not the most important reason--for the market's reaction to changes in the discount rate.

PD March 1992. **TI** Why Do T-Bill Rates React to Discount Rate Changes? **AA** Federal Reserve Bank of St. Louis. **SR** Federal Reserve Bank of St. Louis Working Paper: 92-004A; Research and Public Information Division, Federal Reserve Bank of St. Louis, P.O. Box 442, St. Louis, MO 63166. **PG** 21. **PR** no charge. **JE** E40, E43, E44, E60. **KW** Discount Rate. Market Efficiency. Federal Funds Rate.

AB This paper investigates the hypothesis suggested by Cook and Hahn (1988) that the T-bill rates respond to the announcement of discount rate changes because the market takes discount rate changes to be a signal that the Fed has changed its target for the federal funds rate. Re-Interpreting Cook and Hahn's empirical evidence and using theirs and an alternative methodology, we show that the evidence cannot differentiate their hypothesis from a number of others that have been suggested in the literature. We further find that there is no difference in the relative magnitude or timing of the response during periods when the Fed was directly targeting the funds rate or using a "fuzzy" funds rate target. This result suggests that the market does not simply interpret discount rate changes as a signal that the Fed has changed its target for the funds rate.

Thursby, Marie

PD May 1992. **TI** GATT, Dispute Settlement and Cooperation. **AU** Thursby, Marie; Kovenock, Dan. **AA** Thursby: Purdue University and National Bureau of Economic Research. Kovenock: Purdue University. **SR** National Bureau of Economic Research Working Paper: 4071; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 24. **PR** $3.00. **JE** F13, K33. **KW** International Trade. Trade Pact. Negotiation.

AB This paper analyzes GATT and its dispute settlement procedure (DSP) in the context of a supergame model of international trade featuring both explicit and implicit agreements. An explicit agreement, such as GATT, may be violated at some positive cost in addition to retaliatory actions that might be induced by the violation. We interpret this cost as arising from "international obligation," a phenomenon frequently mentioned in the legal literature on GATT. We focus on how international obligation affects two aspects of GATT-DSP: unilateral retaliation and the effect of inordinate delays in the operation of DSP.

Tommasi, Mariano

PD May 1992. **TI** Inflation and Relative Prices: Evidence From Argentina. **AA** University of California, Los Angeles. **SR** University of California at Los Angeles Department of Economics Working Paper: 661; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 21. **PR** $2.50; checks payable to U.C. Regents. **JE** E31, L81, D40, D83. **KW** Inflation. Relative Price Variability. Information.

AB The paper analyzes the effects of inflation at the microeconomic level, using weekly grocery prices from Argentina 1990, at the level of individual store. The paper is mainly directed to explore the informational consequences of high inflation, from the perspective of repeat buyers. The findings support the fact that higher inflations are associated with diminished informativeness of current prices about future ones. The evidence is also helpful in evaluating theories that address the relationship between inflation and relative price dispersion and variability. The evidence suggests that price-setting technologies --and other transaction technologies such as the use of mark-downs-- are not invariant to the inflation regime.

TI "Deadlock" Societies, The Allocation of Time and Growth Performance. **AU** Sturzenegger, Federico; Tommasi, Mariano.

Trajtenberg, Manuel

PD August 1992. **TI** Ivory Tower Versus Corporate Lab: An Empirical Study of Basic Research and Appropriability. **AU** Trajtenberg, Manuel; Henderson, Rebecca; Jaffe, Adam B. **AA** Trajtenberg: Tel Aviv University. Henderson: Massachusetts Institute of Technology. Jaffe: Harvard University. **SR** Tel Aviv Foerder Institute for Economic Research Working Paper: 15/92; Department of Economics, Tel Aviv University, Ramat Aviv 69978, ISRAEL. **PG** 32. **PR** no charge. **JE** O31, O34. **KW** University Research. Patents. Innovation.

AB This paper is an attempt to quantify and clarify important aspects of the process of technical change (i.e. basicness and appropriability), and explore the linkages between them. We rely for that purpose on detailed patent data, thus awarding the proposed measures a very wide coverage. Relying on the prior that universities perform more basic research than corporations, we find that forward-looking measures of "importance" and "generality" seem to capture aspects of the basicness of innovations; similarly, measures of the degree of reliance on scientific sources, and of the closeness to the origins of innovational paths, appear to reflect aspects of the basicness of research. As measures of actual appropriability we use the fraction of citations coming from patents awarded to the same inventor, and in fact these measures are much higher for corporations than for universities. We also find evidence of the existence of "technological trajectories.".

TI General Purpose Technologies: "Engines of Growth?" **AU** Bresnahan, Timothy F.; Trajtenberg, Manuel.

TI Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations. **AU** Jaffe, Adam B.; Trajtenberg, Manuel; Henderson, Rebecca.

Trejo, Stephen J.

PD May 1992. **TI** Does the Statutory Overtime Premium Discourage Long Workweeks? **AA** University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 12-92; Working Papers Coordinator, Department of Economics, University of California at Santa Barbara, CA 93106. **PG** 24. **PR** no charge. **JE** J38, J22, C22. **KW** Overtime Regulation. Fair Labor Standards. Overtime Hours.

AB This paper analyzes the impact of overtime pay regulation on weekly work schedules. Using a pooled data set consisting of 20 annual observations on each of 10 major industry groups, I estimate the effects of time series variation in the proportion of nonsupervisory workers within an industry who are subject to the overtime pay provisions of the Fair Labor Standards Act (FLSA). The results indicate that the statutory overtime premium of time and a half reduces overtime hours per worker by 13-18 percent, with almost all of this reduction due to the induced decline in the prevalence of overtime work schedules, since there appears to be little effect on the length of overtime workweeks. The estimates also imply that, starting from the FLSA overtime pay coverage rate of 84 percent that existed in 1989, extending overtime pay regulation to remaining uncovered workers would have very little additional impact.

PD May 1992. **TI** A Transformation for Estimating the Trinomial Logit Model with Grouped Data. **AA** University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 13-92; Working Papers Coordinator, Department of Economics, University of California at Santa Barbara, CA 93106. **PG** 8. **PR** no charge. **JE** C35. **KW** Multinomial Logit. Data Transformation. GLS.

AB For logit models where the outcome variables are the proportions of individuals falling into each of three categories, this paper develops a data transformation through which GLS estimates can be obtained by running OLS on the transformed data.

PD June 1992. **TI** Overtime Pay, Overtime Hours, and Labor Unions. **AA** University of California, Santa Barbara. **SR** University of California at Santa Barbara Department of Economics Working Paper: 11-92; Working Papers Coordinator, Department of Economics, University of California at Santa Barbara, CA 93106. **PG** 24. **PR** no charge. **JE** J51, J31. **KW** Overtime Compensation.

AB This paper analyzes the impact of labor unions on overtime compensation and overtime hours. Estimates from May 1985 CPS data indicate that unionization increases the prevalence of premium pay for overtime and reduces the incidence and extent of overtime hours. Along with the finding of previous research that unionized workers are more susceptible to temporary layoffs, these results are consistent with a model in which unions use overtime pay to stabilize working hours and expand membership.

Truman, Edwin M.

TI The Adequacy of the Data on U.S. International Financial Transactions: A Federal Reserve Perspective. **AU** Stekler, Lois E.; Truman, Edwin M.

Tsybakov, Alexander B.

TI On Stochastic Approximation with Arbitrarily Dependent Noise. **AU** Polyak, Boris T.; Tsybakov, Alexander B.

Tuckman, Bruce

TI Do Bondholders Lose from Junk Bond Covenant Changes? **AU** Kahan, Marcel; Tuckman, Bruce.

Tulkens, Henry

PD December 1991. **TI** Non-Frontier Measures of Efficiency, Progress and Regress. **AU** Tulkens, Henry; Vanden Eeckaut, Philippe. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9155; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 24. **PR** not available. **JE** C14, C67. **KW** Production. Frontier Model.

AB In the classical literature on efficiency measurement, the notion of efficiency is intimately linked with the one of production frontier: specifically, a productive activity is called

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efficient if the vector of input-output quantities that describes it belongs to the (efficient) frontier of some appropriately defined productions set; and the activity is called inefficient if this vector belongs to the interior of the set. Running against this tradition, we deal in this paper with efficiency, progress and regress without using the frontier concept. We substitute for it another notion for describing the relation between inputs and outputs in production, called "benchmark production correspondence", with respect to which we suggest that progress and regress be measured without having to distinguish between progress and efficiency gains, or between regress and efficiency losses.

TI A Study of Cost Efficiency and Returns to Scale for 235 Municipalities in Belgium. **AU** Vanden Eeckaut, Philippe; Tulkens, Henry; Jamar, Marie-Astrid.

Turlach, Berwin A.

TI Practical Performance of Several Data Driven Bandwidth Selectors. **AU** Park, Byeong U.; Turlach, Berwin A.

Turner, Christopher M.

TI Yields and Tax Rates on Corporate, Municipal and Industrial Revenue Bonds: Testing Market Integration and the Miller Hypothesis with Micro-Data. **AU** Crabbe, Leland; Turner, Christopher M.

Turnovsky, Stephen J.

PD June 1992. **TI** The International Transmission of Tax Policies in a Dynamic World Economy. **AU** Turnovsky, Stephen J.; Bianconi, Marcelo. **AA** Turnovsky: University of Washington and National Bureau of Economic Research. Bianconi: Tufts University. **SR** National Bureau of Economic Research Working Paper: 4086; National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138. **PG** 31. **PR** $3.00. **JE** H23. **KW** Taxation. Tax Shocks.
AB This paper analyzes the international transmission of tax shocks in a two-country infinite-horizon representative agent framework. In analyzing such shocks, the viability of the underlying tax regimes, arising from the arbitrage conditions characterizing equilibrium in a perfect world capital market, is emphasized. Conditions for both short-run and long-run viability are derived, and the two polar regimes of source-based and residence-based taxation discussed. In general, we find the former more likely to satisfy the viability conditions than the latter. With equity financing, the long-run viability of residence-based taxation is likely to require the harmonization of tax and/or dividend policy. The main features of the dynamic adjustment paths following a tax increase are characterized.

Upward, Richard

TI Need, Equity and the NHS: The Distribution of Health Care Expenditure 1974-1987. **AU** Propper, Carol; Upward, Richard.

Vainiomaki, Jari

TI Wages, Unions, Insiders and Product Market Power. **AU** Nickell, Stephen J.; Vainiomaki, Jari; Wadhwani, Sushil B.

TI Wages, Unions, Insiders and Product Market Power. **AU** Nickell, Stephen J.; Vainiomaki, Jari; Wadhwani, Sushil B.

Van Reenen, John

TI The Economic Effects of Multiple Unionism: Evidence from the 1984 Workplace Industrial Relations Survey. **AU** Machin, Stephen; Stewart, Mark; Van Reenen, John.

Van Wassenhove, Luk

TI On Coordination of Product and Waste Flows in Distribution Networks: Model Formulation and Solution Procedures. **AU** Ruwaard, Jacqueline; Salomon, Marc; Van Wassenhove, Luk.

TI Single Machine Scheduling to Minimize Total Weighted Late Work. **AU** Hariri, A. M. A.; Potts, C. N.; Van Wassenhove, Luk.

TI A Guided Tour Through Applications of OR-Techniques to Environmental Problems. **AU** Debets, F. J. C.; Van Wassenhove, Luk.

TI The Natural Drift (What Happened to Operational Research?). **AU** Corbett, Charles; Van Wassenhove, Luk.

Vanden Eeckaut, Philippe

TI Non-Frontier Measures of Efficiency, Progress and Regress. **AU** Tulkens, Henry; Vanden Eeckaut, Philippe.

PD December 1991. **TI** A Study of Cost Efficiency and Returns to Scale for 235 Municipalities in Belgium. **AU** Vanden Eeckaut, Philippe; Tulkens, Henry; Jamar, Marie-Astrid. **AA** Universite Catholique de Louvain. **SR** Universite Catholique de Louvain CORE Discussion Paper: 9158; Universite Catholique de Louvain, Voie du Roman Pays, 34, B-1348 Louvain-la-Nueve, BELGIUM. **PG** 25. **PR** not available. **JE** H72, C14. **KW** Aggregate Costs. Municipality Services.
AB The purpose of this paper is to analyze the relation between aggregate cost and the size of the services provided by municipalities. The relation is first viewed in terms of a usual total cost function, and then as a total cost "frontier", using in this case various techniques of efficiency analysis. Along the way some indications will be obtained on the nature of returns to scale in communal activities. We deal with two nonparametric methods of efficiency measurement, namely FDH and DEA: we present their respective results when applied to our data set and evaluate their respective merits. In the final section, we turn to the question of identifying factors that might explain the observed inefficiencies; in particular, we explore the political factor.

Vegh, Carlos A.

TI Currency Substitution in Developing Countries: An Introduction. **AU** Calvo, Guillermo A.; Vegh, Carlos A.

Verdin, Paul J.

PD October 1991. **TI** From Barriers to Entry to Barriers to Survival. **AU** Verdin, Paul J.; Williamson, Peter J. **AA** Verdin: INSEAD. Williamson: London Business School. **SR** INSEAD Working Papers: 92/21/SM; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 23. **PR** not available. **JE** L11, L60, C81. **KW** Entry Barriers. Firm Survival.
AB Mounting evidence of a weak relationship between traditional measures of entry barriers and inter-industry variation in the actual rate of entry is the paper's starting point. Distinguishing new, independent firms from plant addition by

existing multiplant operators or diversifiers only partially addresses this inadequacy. We therefore develop the concept of barriers to survival (BTS) as a structural phenomenon operating alongside, but substantially independent of, traditional entry barriers. It is postulated that BTS depend on the importance of industry-specific, experience-based assets. Empirical testing on a sample of 160,000 entrants across 120 US industries supports the relevance of the BTS concept.

TI Age, Experience and Corporate Synergy: When are They Sources of Business Unit Advantage? **AU** Williamson, Peter J.; Verdin, Paul J.

Vergara, Rodrigo

TI Taxation and the Structure of Labor Markets: The Case of Corporatism. **AU** Summers, Lawrence; Gruber, Jonathan; Vergara, Rodrigo.

Vetter, Henrik

TI The Effects of Labour Turnover Costs in a Two Sided Search Model. **AU** Ravn, Morten Overgaard; Vetter, Henrik.

Vickers, John

TI Price Discrimination, Competition and Regulation. **AU** Armstrong, Mark; Vickers, John.

Villanueva, Delano

TI Independent Currency Authorities: An Analytic Primer. **AU** Osband, Kent; Villanueva, Delano.

Voith, Richard

TI Leasing as a Lottery: Implications for Rational Building Surges and Increasing Vacancies. **AU** Gyourko, Joseph; Voith, Richard.

Von Ungern-Sternberg, Thomas

TI Price Dispersion and Search Costs with Differentiated Goods. **AU** Paulsen, Thomas W.; Von Ungern-Sternberg, Thomas.

Wadhwani, Sushil B.

TI Wages, Unions, Insiders and Product Market Power. **AU** Nickell, Stephen J.; Vainiomaki, Jari; Wadhwani, Sushil B.

TI Wages, Unions, Insiders and Product Market Power. **AU** Nickell, Stephen J.; Vainiomaki, Jari; Wadhwani, Sushil B.

Wadsworth, Jonathan

PD April 1992. **TI** Unemployment Benefits and Labour Market Transitions in Britain. **AA** London School of Economics. **SR** Centre for Economic Performance Discussion Paper: 73; The Centre for Economic Performance, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 19. **PR** no charge. **JE** J64, J65. **KW** Unemployment Benefits. Labor Force Transition.

AB Recent evidence suggests that unemployment benefit recipients search more extensively than non-recipients. It is conceivable that benefit claimants, looking for work in a more formal search environment, enjoy an informational advantage relative to non-claimants. This paper examines how such an effect could influence the probability of leaving unemployment, utilizing data drawn from a matched sub-sample of the 1983 and 1984 Labor Force Surveys. Studies which neglect the claimant/non-claimant dichotomy may bias the true impact of the benefit system on transitions, since they also neglect this informational asymmetry.

Walker, Ian

TI Welfare Measurement in Labour Supply Models with Nonlinear Budget Constraints. **AU** Preston, Ian; Walker, Ian.

Warner, Andrew M.

PD July 1992. **TI** Import Demand and Supply with Relatively Few Theoretical or Empirical Puzzles. **AA** Board of Governors of the Federal Reserve System. **SR** Board of Governors of the Federal Reserve System International Finance Discussion Paper: 433; Division of International Finance, Board of Governors of the Federal Reserve System, Washington DC 20551. **PG** 27. **PR** no charge. **JE** C30, C51, F17, F40, F47. **KW** Imports. Trade.

AB This paper documents that a textbook, supply and demand, simultaneous equations model of import prices and quantities can explain many aspects of import price and quantity behavior over the past 25 years, appears to forecast better than standard trade equations, and the instruments we use appear to be valid instruments. On the negative side, although the demand equation and the two reduced form equations satisfy nominal homogeneity restrictions, the supply equation does not. One possible explanation for this is that foreign suppliers do not believe that exchange rate shocks have the same permanence as price no wage shocks. Overall, however, the findings reported in this paper show that a classical simultaneous equations model can explain the behavior of non-oil import prices and quantities fairly successfully.

Weber, Guglielmo

TI On the Aggregation of Euler Equations for Consumption in Simple OLG Models. **AU** Attanasio, Orazio P.; Weber, Guglielmo.

TI Durable and Nondurable Consumption: Evidence from Italian Household Data. **AU** Brugiavini, Agar; Weber, Guglielmo.

Wegge, Leon L.

PD June 1992. **TI** Testing (p,q) in the Armax (p,q)-Model. **AA** University of California, Davis. **SR** University of California at Davis Economics Department Working Paper: 402; Department of Economics, University of California at Davis, CA 95616-8578. **PG** 30. **PR** $3.00 U.S. and Canada. $4.00 International. **JE** C12, C22. **KW** Moving Average Process. Durbin-Watson Test.

AB If the parameters of the moving average process were known, the multivariate Armax (p,q)-Model would simply be a linear model and well known generalized least squares estimation and testing techniques would be available. If the parameters of the moving average process are not known, it is well known that an iterative sequence of generalized least squares estimators corresponds to the method of scoring and Wald-type prior tests concerning the orders (p,q) of the model are readily available. These tests are multivariate generalizations of the univariate Durbin-Watson test and a simulation study with 200 replications bears out that the asymptotic chi square distribution is a good approximation for testing the null hypothesis: q=2, in a bivariate Armax (1,1)-Model with 100 observations. In a final section we represent the postwar U.S. macrodata on population, money stock, prices and GNP as a quadrivariate Armax(1,4)-Model.

PD June 1992. **TI** Identifiability of the Arma(p,q)-Model. **AA** University of California. **SR** University of California at Davis Economics Department Working Paper: 403; Department of Economics, University of California at Davis, CA 95616-8578. **PG** 39. **PR** $3.00 U.S. and Canada. $4.00 International. **JE** C32. **KW** Time Series Model. Identification. ARMA model.
AB In a G-variate Arma(p,q)-Model, the reduced form parameter is identifiable under a great variety of economically meaningful prior restrictions. If the rank of the autocovariance matrix of lag order q is k, pG-k properly distributed prior constraints are needed for identifiability of the reduced form parameter. The gap between identifiability and estimability is bridged.

Weikard, Hans-Peter
PD May 1992. **TI** Fairness as Mutual Advantage? A Comment on Buchanan and Gauthier. **AA** University of Bristol. **SR** University of Bristol Discussion Paper: 92/331; Department of Economics, University of Bristol, 8 Woodlands Road, BRISTOL, BS8 ITN, IRELAND. **PG** 12. **PR** no charge. **JE** D72. **KW** Social Contract. Fairness.
AB In the liberal tradition of political-economic thought the notion of fairness is closely connected to the notion of rational agreement. Rational individuals will choose a social contract that is in their own interest. In addition no possible gains from cooperation should be wasted; i.e., the contract will be individually rational and Pareto optimal. Buchanan and Gauthier have argued that the social contract will also be fair. The negotiation of the contract is described as a bargaining problem. The paper explores what the contract will look like and whether the claim that it is fair can be justified.

Weil, David N.
TI The Housing Wealth of the Aged. **AU** Sheiner, Louise; Weil, David N.

Weisbrod, Steven R.
PD June 1992. **TI** Bank Risk and the Declining Franchise Value of the Banking Systems in the United States and Japan. **AU** Weisbrod, Steven R.; Lee, Howard; Rojas-Suarez, Liliana. **AA** International Monetary Fund. **SR** International Monetary Fund Working Paper: WP/92/45; International Monetary Fund, Washington, DC 20431. **PG** 26. **PR** not available. **JE** G21, G28. **KW** Wholesale Banking. Banking Reform.
AB This paper associates both the increase in risk taken by wholesale banks in the United States and the decline in earnings at wholesale banks in Japan with a reduction in the franchise value of wholesale banking. In contrast with the conventional view that relates the franchise value of banking to informational advantages over other lenders, this paper argues that banks' franchise value originates in their provision of liquidity and payments services to their customers. Therefore, the decline in corporate demand for bank liquidity is identified as a major factor explaining the fall of the franchise value. The paper also analyzes recent proposals for banking reform and assesses their relevance for dealing with the problems of wholesale banks.

Wells, Robin
TI The Japanese Financial Market: Evidence on Firm Financing Choice and Investment After Deregulation. **AU** Hsieh, Psieh-Shun; Wells, Robin.

PD April 1992. **TI** Strategic Dynamic Debt. **AA** University of Southampton. **SR** University of Southampton Discussion Paper in Economics and Econometrics: 9221; Department of Economics, University of Southampton, Southampton S09 SNH, ENGLAND. **PG** 25. **PR** no charge. **JE** G32, G33, G34. **KW** Capital Structure. Bankruptcy. Reorganization.
AB This paper develops a general model of how debt can alter the bargaining outcome between firm and union as an "outside option method" of negotiating labor contracts. The model is equally valid for any supplier in a relationship of bilateral monopoly with the firm, and whose claims upon the firm are junior to those of the bondholders and in which the value of the claim depends upon the continued operation of the firm. The model shows that the strategic use of debt is bounded by the relative strength of labor in its relationship with the firm and by the costs associated with reorganization. In addition, I consider renegotiation of the labor contract once default is imminent and determine the set of renegotiation proof equilibria. Such renegotiation will extend the strategic use of debt.

Werner, Richard A.
PD December 1991. **TI** The Great Yen Illusion: Japanese Foreign Investment and the Role of Land Related Credit Creation. **AA** University of Oxford. **SR** Oxford Applied Economics Discussion Paper Series: 129; Institute of Economics and Statistics, St Cross Building, Manor Road, Oxford OX1 3UL. **PG** 23. **PR** not available. **JE** F21, G11. **KW** Capital Flow. Asset Markets--Japan. Real Estate Prices.
AB The aim of this paper is to model and empirically examine the determinants of Japanese long-term capital flows. In doing so emphasis is placed on domestic real asset markets and their impact on capital exports. In particular the possible link between extraordinary rises in land prices and Japanese capital exports is studied. It is argued in a portfolio model of individual net asset diversification that investors who wish to diversify away from their exogenously increased land holdings towards other asset forms have an incentive to do so by borrowing with land as collateral. The paper then develops and estimates a simple macroeconomic model of Japanese net capital flows incorporating the role of diversifying net land positions by borrowing with land as collateral. Further, a pure flow model of the Japanese capital account is empirically tested. The paper concludes by pointing out the policy implications of the findings for the world and for Japan.

Wheatcroft, Ana
TI Surviving Winter: A Fitness-Based Explanation of Hoarding and Hibernation. **AU** Salant, Stephen; Kalat, Karen; Wheatcroft, Ana.

White, Michelle J.
PD March 1992. **TI** Corporate Bankruptcy as a Filtering Device. **AA** University of Michigan. **SR** University of

Michigan Center for Research on Economic and Social Theory, (CREST), Working Paper: 92-09; Department of Economics, University of Michigan, Ann Arbor, Michigan 48109. **PG** 17. **PR** not available. **JE** G33. **KW** Bankruptcy. Inefficient Firms. Reorganization.

AB This paper explores the implications of both Chapter 7 alone and the Chapter 7/Chapter 11 combination for type I and type II error in bankruptcy. Chapter 7 is shown to cause both types of error: type I error occurs since declining earnings firms delay shutting down too long and type II error occurs since some fluctuating earnings firms that should be saved shut down. The effect of adding Chapter 11 bankruptcy as an alternative to Chapter 7 depends on whether filtering failure or perfect filtering occurs. If perfect filtering occurs, the amount of type I error remains unaffected since managers of declining earnings firms can still delay filing for bankruptcy, but type II error drops since managers of fluctuating earnings firms are more likely to file for bankruptcy reorganization and be saved.N But if filtering failure occurs, then type II error will fall but type I error will rise. This is because along with economically efficient firms, some inefficient firms are also saved in Chapter 11. Filtering failure occurs in bankruptcy because creditors are assumed not to know whether failing firms have declining or fluctuating earnings. Thus when policymakers attempt to reduce type II error by adopting a policy such as Chapter 11 which attempts to save economically efficient but failing firms, they are likely to waste resources by delaying the demise of economically inefficient firms.

Whitelaw, Robert F.

TI Liquidity as a Choice Variable: A Lesson from the Japanese Government Bond Market. **AU** Boudoukh, Jacob (Kobi); Whitelaw, Robert F.

Williams, Donald R.

PD December 1991. **TI** A Dynamic Analysis of Recent Changes in the Rate of Part-Time Employment. **AA** Kent State University. **SR** Federal Reserve Bank of Cleveland Working Paper: 9120; Research Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101. **PG** 26. **PR** not available. **JE** J60, J63, J64, J16. **KW** Gender Differentials. Transition Rates. Female Employment. Labor Markets.

AB The part-time employment rate has declined since the early 1980's especially among females. This paper examines the decline over the 1980-1990 period, with a focus on the gender differential, using gross change data from the Bureau of Labor Statistics. Monthly transition rates between full-time employment, part-time employment, unemployment, and nonparticipation are estimated according to sex. Trend and cyclical analysis of the transition rates is conducted to identify the sources of part-time employment-rate trends and to explore gender differentials in them. The results suggest that the decline in the rate of part-time employment among females is not so much because unemployed females are more likely to move into full-time employment, but rather because females have become more likely to move from part-time to full-time employment and, most important, because they have become less likely to leave full-time employment once they get there.

Williamson, J.

PD March 1992. **TI** The Eastern Transition to a Market Economy: A Global Perspective. **AA** Institute for International Economics. **SR** London School of Economics Centre for Economic Performance Occasional Paper: 2; Centre for Economic Performance, London School of Economics, Houghton Street, London WC2A 2AE, ENGLAND. **PG** 47. **PR** no charge. **JE** D27, P17, D52. **KW** Transition Economy. Economic Reform.

AB I review the reasons for the failure of the socialist experiment and outline the main components of the reform package that we economists have concluded are needed to allow the transition to a market economy. I point out the basic similarity in the content of the reforms that have been increasingly implemented around the world for a little over a decade now, and those that are being introduced at breakneck speed in Eastern Europe, which are perforce more extensive because of the prior absence of the infrastructure of a market economy but are directed at the same objectives of stabilization, liberalization and opening up. I describe the logic underlying the mainstream position on the main controversy that has arisen during the debate on the transition, namely the merits of a "big bang." I examine the facts about what has happened so far in the transition. I proceed to examine alternative explanations for the massive declines in output that have occurred.

Williamson, Jeffrey G.

TI Were Heckscher and Ohlin Right? Putting the Factor-Price-Equalization Theorem Back into History. **AU** O'Rourke, Kevin; Williamson, Jeffrey G.

Williamson, Peter J.

TI From Barriers to Entry to Barriers to Survival. **AU** Verdin, Paul J.; Williamson, Peter J.

PD 1992. **TI** Age, Experience and Corporate Synergy: When are They Sources of Business Unit Advantage? **AU** Williamson, Peter J.; Verdin, Paul J. **AA** Williamson: London Business School. Verdin: INSEAD. **SR** INSEAD Working Papers: 92/27/SM; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 25. **PR** not available. **JE** L11, L22, L60. **KW** Competitive Advantage.

AB When do older businesses have a competitive advantage over new startups? When do the corporate subsidiaries have advantages over independent firms? This paper tackles these questions by comparing the performance of businesses classified by age and affiliation in the game of competitive survival. The research is based on an analysis of 377,000 U.S. business units between 1978 and 1984. Our results suggest that age confers substantial advantages in competitive environments where intangible assets, accumulated through experience, are critical to success. These include industries with high labor intensity, high skill levels and heavy reliance on push marketing. For other industries, e.g. where competitive advantage can be built through superior service or media hype, age advantage is generally much more limited. Affiliation with a corporate group, meanwhile, allows young businesses to overcome some of their handicap by "borrowing" experience through their parent. Once a business is well established, however, affiliation is immaterial.

Wimmer, Larry T.

TI Early Indicators of Later Work Levels, Disease, and Death. **AU** Fogel, Robert W.; Wimmer, Larry T.

Wolkon, Shari

TI Race and School Quality Since Brown vs. Board of Education. **AU** Boozer, Michael A.; Wolkon, Shari; Krueger, Alan B.

Wolpin, Kenneth, I.

TI Duration to First Job and the Return to Schooling: Estimates from a Search-Matching Model. **AU** Eckstein, Zvi; Wolpin, Kenneth, I.

Wong, W. Y.

TI Decision Support in Non-Conservative Domains: Generalization with Neural Networks. **AU** Dutta, Soumitra; Shekhar, Shashi; Wong, W. Y.

Xavier de Groote

TI A Sensitivity Analysis of Stochastic Inventory Systems. **AU** Zheng, Yu-Sheng; Xavier de Groote.

Yadav, Pradeep K.

TI Transaction Cost Thresholds, Arbitrage Activity and Index Futures Pricing. **AU** Pope, Peter F.; Yadav, Pradeep K.

Yanagawa, Noriyuki

PD February 1992. **TI** Asset Bubbles and Endogenous Growth. **AU** Yanagawa, Noriyuki; Grossman, Gene M. **AA** Yanagawa: University of Tokyo and Princeton University. Grossman: Princeton University. **SR** Princeton Woodrow Wilson School Discussion Paper in Economics: 160; Woodrow Wilson School, Robertson Hall, Princeton University, Princeton, NJ 08544. **PG** 15. **PR** no charge. **JE** O41, G12, E21. **KW** Asset Valuation. Rational Bubbles.

AB We study the interaction between productive and nonproductive savings in an economy that grows in the long run due to endogenous improvements in labor productivity. As in the neoclassical growth setting with overlapping generations studied by Tirole (1985), asset bubbles can exist in an economy with endogenous growth provided they are not too large and that the growth rate in the equilibrium without bubbles exceeds the interest rate. Since the growth rate in the bubbleless equilibrium is endogenous, the existence condition reflects parameters of tastes and technology. We find that bubbles, when they exist, retard the growth of the economy, perhaps even in the long run, and reduce the welfare of all generations born after the bubble appears.

Yang, Chun-Lei

TI Dynamic Rent-Seeking Games. **AU** Leininger, Wolfgang; Yang, Chun-Lei.

Younes, Yves

PD March 1992. **TI** Towards a Theory of Incentive Compatibility for Economies with Incomplete Market Structures. **AA** University of Pennsylvania and CEPREMAP. **SR** University of Pennsylvania CARESS Working Paper: 92-10; University of Pennsylvania, Center for Analytic Research in Economics and the Social Sciences, McNeil Building, 3718 Locust Walk, Philadelphia, PA 19104-6297. **PG** 40. **PR** no charge. **JE** D40, D52. **KW** Incentive Compatibility. Incomplete Markets.

AB How to take into account the division into markets implied by an incomplete market structure in the formulation of incentive compatibility constraints? This question will be partly addressed from the point of view of the State which tries to remedy market coordination failures due to the incompleteness of a market structure (and/or wants to redistribute "income") and knows at most the distribution of characteristics.

Zame, William R.

TI Debt Constraints and Equilibrium in Infinite Horizon Economies with Incomplete Markets. **AU** Levine, David K.; Zame, William R.

PD August 1992. **TI** Efficiency and the Role of Default When Security Markets are Incomplete. **AA** University of California, Los Angeles and Johns Hopkins University. **SR** University of California at Los Angeles Department of Economics Working Paper: 673; Department of Economics, University of California at Los Angeles, 2263 Bunche, Los Angeles, CA 90024. **PG** 44. **PR** $2.50; checks payable to U.C. Regents. **JE** G14, G33. **KW** Bankruptcy.

AB Default, and the anticipation of default, appear to play an important role in the economy. The possibility of default may deter lenders, the fear of penalties may deter borrowers, and the cost of enforcement represents a deadweight loss to society. In view of such consequences, it seems natural to view default in a negative light, and the ascribe the default which is observed to the impossibility of perfectly foreseeing all possible contingencies. The purpose of this paper is to argue - precisely to the contrary - that default may also play an important positive role. In a world of uncertainty and incomplete financial markets, default may promote efficiency. We find this to be so because the possibility of default improves the efficiency of markets, and does so in a way that simply opening new markets does not.

Zernitz, Holger

TI Remark on the Dimer Problem. **AU** Sachs, Horst; Zernitz, Holger.

Zheng, Yu-Sheng

PD October 1991. **TI** A Sensitivity Analysis of Stochastic Inventory Systems. **AU** Zheng, Yu-Sheng; Xavier de Groote. **AA** Zheng: University of Pennsylvania. Xavier: INSEAD. **SR** INSEAD Working Papers: 92/16/TM; INSEAD, Boulevard de Constance, Fontainebleau, 77305 Cedex, FRANCE. **PG** 15. **PR** not available. **JE** E22, D81. **KW** Demand Uncertainty. Inventory Costs.

AB This paper derives sensitivity properties of the single item inventory model with stochastic demand and positive setup costs. The analysis emphasizes the effect of changes in the variability of the leadtime demand. For the order-quantity/reorder-point systems, we prove that when the variability of the leadtime demand increases: (i) the optimal order quantity increases, but, somewhat contrary to the conventional wisdom, the optimal reorder point does not necessarily increase; (ii) the minimum cost of the inventory system increases, and it increases at a slower rate than and converges to the cost of the optimal base-stock policy; and (iii) the cost performance becomes more robust to the choice of order quantity. In addition, we also show that both the optimal reorder point and the optimal order-up-to level decrease (increase) as the inventory holding (shortage penalty) cost increases.