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Centre for Economic Policy Research

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International Trade (IT)

The Centre's International Trade (IT) programme focuses on topics such as Economic Geography, FDI and the World's Trading System. Led by Programme Directors Richard Baldwin and Tony Venables, the programme includes 52 Research Fellows and 24 Research Affiliates. Since January 1999, the programme has published 84 Discussion Papers as well as a *Policy Paper* and the *MEI 10* Report 'Integration and the Regions of Europe: How the Right Policies Can Prevent Polarization'. Of the *Discussion Papers* published between April 1998 and May 1999, 40% have already been republished in other books and journals.

In addition to these publications, the programme has organized a number of meetings over the last two years. The European Research Workshop in International Trade (ERWIT) continues to serve as the IT programme's annual symposium. The 1999 meeting took place in Bergen and was hosted by the Norwegian School of Economics and Business Administration, while the 2000 meeting took place in Copenhagen, organized jointly with the Economic Policy Research Unit at Copenhagen University. 1999-2000 also saw seven workshops and three conferences, as well as a number of lunchtime meetings and press briefings.

Economic Geography

Since the early 1990s the IT Programme has pursued a programme of research on the new economic geography. In 1998 CEPR was awarded two contracts from the Directorate General for Economic and Financial Affairs of the European Commission to carry out studies on the impact of market integration in Europe. The first study, entitled 'EMU and the Integration of European Product Markets', focused on price dispersion and the likely effects of increased price transparency due to EMU. It found evidence of reduced price dispersion between EU core countries but increased dispersion between the core and the periphery. The second study, entitled 'Factors Affecting the Location of Activities within the EU', provided an analysis of the changing location of EU industries and patterns of specialization of EU countries. The report established that EU countries are becoming more specialized. Significant innovations were also made in developing and applying an econometric framework which nests both comparative advantage and economic geography determinants of specialization and shows that both matter. Both projects were completed in early 2000.

June 1999 saw a workshop in Paris on 'Economic Geography and Public Policies', which raised issues such as capital taxation, unemployment, transportation and land use models, regional disparities, regional public investment and firm start-ups. April 2000 saw the publication of the tenth report in the *Monitoring European Integration* series. Entitled 'Integration and the Regions of Europe: How the Right Policies Can Prevent Polarization', the report questions whether European integration, which will increase the incentives for regional specialization, will lead to a polarized Europe. It argues that there are essentially three possible outcomes: dispersion, concentration or regional stagnation. Which of these occurs depends on the forces unleashed by economic integration and the ease with which people and firms respond to them. Evidence presented in the report suggests that government policy has an important role to play in preventing polarization. The authors argue that the most effective policies are ones that build up a region's skills rather than merely allowing it to bid for business more cheaply.

The largest new development in the programme's research portfolio is a 'Research Training Network' (RTN) network award entitled 'The Economic Geography of Europe: Measurement, Testing and Policy Simulations'. This project will allow eight participating institutions to recruit researchers, hold workshops and conferences, and publish Discussion Papers. Many members of the IT Programme are involved in the new network, which aims to carry out research to develop the microfoundations of agglomeration theory in order to provide more precise guidance for testing, measurement and computer simulation of the location effects of European integration. The project also aims to test econometrically the theory's predictions using European data and to use these results to analyse policies designed to influence the location of activity. The project held its first workshop in Villars, Switzerland, in January 2001.

Foreign Direct Investment

Foreign Direct Investment (FDI) has become an increasingly important factor in the global economy, but much less research has been undertaken on the causes, consequences and policy implications of FDI than on international trade. The Centre has tackled this problem via two specific projects. The

first of these is a 'Training and Mobility of Researchers' (TMR) network funded by the European Commission and entitled 'Foreign Direct Investment and the Multinational Corporation'. Established in April 1998 for a period of five years, the network's research agenda focusses on the determinants of multinational activity at the level of the firm and the relationship between foreign trade and multinational activity.

Exploring the implications of FDI for both the home and the host economy, this research follows three main methodological approaches: theoretical modelling, empirical work based on econometric analysis, and empirical work based on case studies. The network held its first workshop in London in November 1998, with subsequent workshops taking place in Vouliagmeni in September 1999 and in Turin in May 2000. Publications to date include 29 CEPR *Discussion Papers*, production of a background paper on data sources and the development of a website (www.cepr.org/research/Networks/FDIMC/default.htm). It is intended that the final output of this project should be a multi-authored book, written by network members, which will aim to be the definitive advanced text in the area. It will review both theory and empirical work, drawing on the output of the project and literature in general.

The second of our current FDI projects is a 'Socio-Economic Research' (SER) project involving six European institutions, which began work in spring 2000. Entitled 'Labour Market Effects of European FDI', the research focuses on five European countries: Ireland, Italy, Spain, Sweden and the UK. The network will attempt to develop an analytical framework, accounting for all the various links between FDI and the labour market, and analyse empirically the sectoral and geographical distribution of European FDI and derive implicit labour demands. Subsequently, the impact of inward and outward FDIs on host and home economies will be analysed using cross-country firm-level panel-data. A considerable effort will be made in constructing comparable harmonized firm-level panel-data for the sample countries. The network's first workshop took place in Madrid in October 2000.

Globalization and the World Trading System

It is now generally recognized that the liberalization of trade flows that has occurred in the last two decades, although perhaps necessary, has not proved sufficient in increasing growth for developing countries. In response to this the Centre is about to launch a project on globalization and development, which will illustrate the conditions under which countries succeed in participating effectively in the world economy and are able to gain from attracting new economic activities. This research will seek to establish the effects of trade liberalization and the wider forces of globalization on the pattern of international trade flows, on foreign direct investment flows and on the location of production. It will also examine issues arising at the country level, such as how important geography, regional clustering and the propensity for disease are in affecting economic performance. The project will be launched at a conference funded by DfID at the end of March 2001.

Our second major undertaking in this area is a project funded by the World Bank and led by Research Fellow Bernard Hoekman. Entitled 'WTO 2000', it aimed to address issues likely to arise in the new WTO round; following the collapse of the talks in Seattle in December 1999, its main focus has been on issues of WTO governance. Initial results were presented at the June 1999 'International Seminar on International Trade' (ISIT) conference in Cambridge, Massachusetts. A selection of the papers from this conference were reprinted in the Canadian Journal of Economics. In July 2000 we organized a conference in Brussels on 'The World Trading System Post Seattle: Institutional Design, Governance and Ownership', a report of which is on page 44.

In addition to these meetings, the 'WTO 2000' project is responsible for a number of publications. In March 2000 CEPR published the fourth in our series of *Policy Papers*, entitled 'Putting Humpty Together Again: Including Developing Countries in a Consensus for the WTO' and written by Zhen Kun Wang and Alan Winters. The paper argues that the failure of the 1999 Ministerial meeting reflected the different parties' widely disparate positions, the lukewarm attitude of governments towards further trade liberalization, and a failure of the WTO as an institution. In response to this the authors develop an eight-point plan that attempts to bind the developing countries into the world's trading system.

In the summer of 2001 we will publish two more reports under the auspices of the 'WTO 2000' project. The first will be our sixth *Policy Paper*, entitled 'The World Trading System Post Seattle: Institutional Design, Governance and Ownership' and written by Bernard Hoekman, André Sapir and Alan Winters. The second will be a report produced in conjunction with the World Bank called 'World Trade Liberalization for the New Millennium: An Empirical Study'. This will examine the changing landscape of world production and trade, focusing on the major trends in global markets as they affect the distribution of gains from further trade reform. The report will estimate the costs of trade distortions that remain after the Uruguay Round is implemented, and the potential economic effects of reducing those distortions. Using the Global Trade Analysis Project (GTAP) model, the patterns of change since the 1960s are used as a basis for projecting the world economy through to 2005. The authors conclude that even after the full implementation of the Uruguay Round commitments, huge welfare gains remain to be realized.

Applied Industrial Organization

The Second CEPR Conference on 'Applied Industrial Organization', held in conjunction with Universidade Nova de Lisboa, was held in Lisbon on 6/8 July 2000. Sponsored by Fundação Calouste Gulbenkian and Fundação Luso-Americana para o Desenvolvimento, the Conference was organized by Pedro Pita Barros (Universidade Nova de Lisboa and CEPR), Lars-Hendrik Röller (Wissenschaftszentrum Berlin für Sozialforschung and CEPR) and Frank Verboven (Universiteit Antwerpen and CEPR). The programme featured the following papers:

'Who Decides to Regulate? Lobbying Activity in the US Cellular Industry', Tomaso Duso (Wissenschaftszentrum Berlin für Sozialforschung)

'Estimating Production Functions Using Intermediate Inputs to Control for Unobservables', James Levinsohn (University of Michigan) and Amil Petrin (University of Chicago)

'Cooperative Research and Firm Performance', Reka Horvath (University College London)

'Quantifying Equilibrium Network Externalities in the ACH Banking Industry', Daniel Ackerberg (Boston University), Gautam Gowrisankaran (University of Minnesota) and Joanna Stavins (Federal Reserve Bank of Boston)

'The DVD Vs DIVX Standard War: Network Effects, and Empirical Evidence of Vaporware?', David Dranove (Northwestern University) and Neil Gandal (Tel Aviv University and CEPR)

'Choosing the Wrong Calling Plan? Ignorance, Learning, and Risk Aversion', Eugenio J Miravete (University of Pennsylvania and CEPR)

'Pricing over the Product Cycle: The Transition from the 486 to the Pentium Processor', Elefterios Zacharias (Hebrew University of Jerusalem)

'Modelling the Dynamics of Industry Populations', Paul A Geroski (London Business School and CEPR) and Mariana Mazzucato (Open University)

'The Adoption of Offset Presses in the Daily Newspaper Industry in the United States', David Genesove (Hebrew University of Jerusalem)

'Who Benefits from Social Health Insurance in Developing Countries?', Paul Gertler (University of California, Berkeley) and Orville Solon (University of the Philippines)

'How Vigorous is HMO Competition? Evidence from California's Small Group Market', Thomas Buchmueller (University of California, Irvine) and Robert Town (University of California, Irvine)

'Estimating Switching Costs and Oligopolistic Behaviour', Moshe Kim (University of Haifa)

'Multiproduct Firms, Market Conduct, and Dynamic Marginal Costs Over the Product Life Cycle: Evidence From the DRAM Industry', Ralph Siebert (Wissenschaftszentrum Berlin Für Sozialforschung)

'Collude, Compete, or Both? Deregulation in the Norwegian Airline Industry', Kjell G Salvenes (Norwegian School of Economics and Business Administration), Frode Steen (Norwegian School of Economics and Business Administration) and Lars Sorgard (Norwegian School of Economics and Business Administration)

'Barriers to Innovation and Subsidies' Effectiveness', Xulia González (Universidade de Vigo, Spain), Jordi Jaumandreu (Fundación Empresa Pública, Madrid) Chelo Pazó (Universidade de Vigo, Spain)

'Entry Effects on Cartel Stability and the Joint Executive Committee', Helder Vasconcelos (European University Institute, Firenze)

The above papers can be downloaded from **www.cepr.org/meets/wkcn/6/672/papers/**

Institutional Determinants of Growth,

Or why the American 'miracle' is not taking place in France

Between 1990 and 1998, the American economy grew at an average annual rate of over 3%, increasing to over 4% since 1998, and peaking with a record yearly growth rate of 5.2% in the first semester of 2000. The recent downturns in the US, notably the collapse of the Nasdaq index and the closures of a substantial number of 'dotcoms', will certainly result in substantially slower growth. Yet the expectations are for a 'soft landing', with predicted growth rates remaining above those in Europe over the next decade. Even if the US has experienced a speculative bubble in high-tech stocks, a comparison with the East Asian crisis of 1997 shows important differences: there has been little speculation in the housing market; while private sector firms have a debt level which is much lower and, crucially, is denominated in the domestic currency. This means that the American economy is in a better position to overcome the current turbulence in the stock market and avoid a major recession.

The French economy has followed a growth pattern similar to that in the US. GDP growth has increased from an annual average of 1.4% in the period 1990-98, to 2.9% in 1999 and 2.5% in the first semester of 2000. What is surprising in these figures is not so much the similarity in trends but rather the large difference in levels: over the last decade the US will have grown twice as fast as France. Why did this happen?

Part of the answer can be found in the different evolution of employment in the two countries. The rate of output growth is, by definition, the sum of labour productivity and the rate of growth of employment, and French employment levels have been dwindling for the past decade. Over the period 1990-95, private-sector employment grew at an annual rate of 1.3% in the US, while it fell by 0.7% in France. Although the negative trend reversed in the next five years, an annual growth rate of 0.8% seems poor when confronted with the 2.4% experienced in the US. Yet the second half of the 1990s has also witnessed a mediocre performance of French productivity growth. Although output per worker grew faster in France than in the US over the period 1990-95 (1.6% against 1.2% per annum), the next three years saw an acceleration to 2.1% in the US and no change in France.

This acceleration of US productivity growth has coincided with the start of the Information Technology (IT) boom. France lags well behind the US in this respect, as indicated by the low levels of R&D expenditure (particularly in the private sector) and of IT investment. Private-sector R&D expenditures represent only 1.37% of GDP in France, compared with 2.08% in the US. The differences are even more marked when looking at IT investment as a share of gross fixed capital formation – OECD research suggests figures of 6% and 13.4% in France and the US, respectively. Moreover, in the period 1990-96, expenditures in high-technology equipment grew twice as fast in the US as in France. All this seems to indicate that both the creation and the diffusion of new technologies is taking place at a much slower rate in France.

Modern growth theory argues that the main engine for growth in mature, industrial countries is not the accumulation of physical capital but innovation, particularly intentional innovation carried out by firms. This has shifted attention away from households' saving decisions and into the institutional environment that can provide (or not) the incentives to innovate. The institutional framework becomes particularly important after the arrival of a new 'general purpose technology' (GPT). A GPT is a technological invention (or breakthrough) that affects the entire economic system, but which needs to be adapted to particular industries through further research and development. The new information technologies are such a general purpose technology. Two sets of institutions seem to play a major role in allowing countries to fully exploit IT: those that affect the incentives to innovate, and those that create the possibility of innovating and implementing new technologies.

A key aspect affecting firms' incentives to innovate is the extent to which intellectual property rights are protected. Agents will only be willing to invest in innovation if they know that once they have created a new product or process they can reap the rewards. For this to occur, patent legislation has to provide sufficient protection to innovators. At the beginning of the 1980s, the US approved a number of laws designed to reinforce intellectual property rights both domestically and abroad (most notably the Bayh-Dole Act) and created a federal Appeal Court dealing with patent-related law suits. As a result, the number of resident patent applications by US firms grew by 91% between 1981 and 1997 compared with only 22% in France over the same period. Furthermore, the rate of growth in the number of American patents purchased by French firms lags behind the average for the EU (9.6% compared with 10.2 over 1990-96).

A second factor affecting the incentives to innovate is the degree of product market competition. Contrary to the Schumpeterian argument that monopoly is necessary in order to allow a firm to recoup the fixed costs incurred when investing in R&D, recent empirical and theoretical work emphasizes that competition is more likely to foster the creation and implementation of new technologies. The basic argument is that under strong competitive pressure, firms are forced to adopt the latest technologies in order to survive, and to create ever newer technologies if they want to stay ahead of their competitors. France also lags behind the US in this respect. The public sector is three times larger, and, more importantly, the barriers to trade and foreign investment are much higher. A recent study by the OECD ranks countries according to the degree of barriers to entry. The UK exhibits the lowest barriers, with an indicator of 0.43, while the US has an index of 0.87, and France of 1.03. In other words, the threat of entry by possible foreign competitors is substantially weaker in France than in the US, thus reducing the incentives of French firms to adopt new technologies.

France seems to have another major handicap due to the difficulty in creating new enterprises: a recent NBER working paper suggests that the average number of working days needed to complete the administrative procedures in order to establish a new firm is 66 in France, and only seven in the US. Entry by competitors is consequently slower, and hence poses less of a threat to established firms. Administrative barriers to entry are also problematic because new firms are likely to adopt the latest technologies (as there is no opportunity cost of adoption) and are therefore a source of technological change. For example, research shows that in the US more than 50% of trials on new pharmaceutical drugs are done by newly created biotech firms, while in Europe 90% of the new trials are done by established firms. This shows the importance of entry in the recent technological revolution in the US, and the high cost that such barriers may have in terms of forgone technological possibilities.

Together with the administrative barriers to the entry of new firms, access to capital markets is a crucial factor affecting the incentives and the possibilities to innovate. R&D activities and the implementation of new technologies are, by nature, risky. Innovating firms often find it difficult to obtain loans and must therefore raise capital in the stock market. The US lies well ahead of France in this respect, despite the substantial improvements that the latter has experienced in the last three years. In 1999, market capitalization (as a share of GDP) was over 55% larger in the US than in France. Meanwhile, venture capital represented only 0.065% of GDP in France, compared with 0.16% in the US.

Finally, the creation and the implementation of new technologies requires a sufficiently qualified labour force. The fraction of the labour force that holds university degrees is 20.6% and 34.9% in France and the US, respectively. Moreover, the number of scientists and engineers per thousand employees is one-and-a-half times larger in the US. Such differences can be partly explained by the education system, in particular the greater emphasis placed by American universities on entrepreneurship and business-oriented education, but it seems that migration has also been an important factor. Between 1992 and 1997 the number of qualified workers entering the country grew by 45% in the US, and by only 16% in France. This is partly because of the lack of *de facto* mobility of workers within the Schengen area as well as the constraints imposed by French legislation on non-EU immigrants. For example, the average duration of working visas extended to skilled workers is only nine months in France compared with three years in the US.

In order to benefit fully from the IT revolution and experience an acceleration in growth rates, France will require substantial institutional changes. This does not mean that US institutions should be reproduced. A crucial issue is whether such changes would necessarily be accompanied by an increase in income inequality. The challenge for policy-makers is to develop innovation, immigration, and growth-oriented policies that can be compatible with an improvement (or at least no deterioration) in the distribution of income. Recent research has shown that a substantial fraction of the increase in wage inequality induced by the technological revolution is within educational groups, and that this fraction affects the temporary component of income inequality. In contrast, inequality between educational groups affects the permanent component of income inequality. Hence, a policy that would increase the innovation rate while reducing skill differentials (or educational differences) among individuals would meet the challenge of increasing productivity growth without increasing the permanent component of income inequality.

The above article was written by Philippe Aghion (Harvard University, University College London and CEPR), Eve Caroli (Laboratoire d'Economie Appliquée (INRA) and CEPREMAP) and Cecilia García-Peñalosa (GREQAM and CNRS).

European Unemployment Clusters and Regional Polarization

Large differences in unemployment rates within countries are a striking characteristic of the EU. For example, in Italy, the 1996 unemployment rate in Campania was 4.4 times that of Valle d'Aosta; in the UK, Merseyside has an unemployment rate 3.2 times that of Surrey and Sussex; in Belgium, the unemployment rate of Hainut is 2.2 times that of Vlaams Brabant; in Spain, Andalucía has a rate 1.8 times that of La Rioja; and in France, Languedoc-Roussillon has a rate twice that of Alsace.

In the decade prior to the mid-1980s, differences in unemployment rates across European regions were relatively stable. So how have regions changed since then and what now determines a region's unemployment rate? A *Discussion Paper* by Henry Overman and Diego Puga describes the evolution of the regional distribution of unemployment rates in Europe. The authors find that there has been a polarization in regional unemployment rates. Specifically, regions that in 1986 had a low unemployment rate relative to the EU average still tended to have low relative unemployment rates in 1996. Similarly, regions that in 1986 had a relatively high unemployment rate still tended to have high relative unemployment rates in 1996. However, regions with intermediate initial unemployment rates tended to move towards the two extremes of the distribution. The maps on the opposite page illustrate the changes that have taken place.

Regional Polarization

The authors study relative unemployment rates (i.e. the ratio of the regional unemployment rate to the Europe-wide average) so as to remove co-movements that occur due to the Europe-wide business cycle and trends in the average unemployment rate. The definition of a region corresponds to level two of Eurostat's Nomenclature of Territorial Units for Statistics (NUTS2). There are 150 regions, the average of which is 13,800 km^2 and in 1996 had a population of 2.1 million. In order to track the changes in the distribution over time, Overman and Puga construct a transition probability matrix between the 1986 and 1996 distributions of relative unemployment rates, shown below. The first column of the table, labelled N, shows the number of regions that fall in to each of the five categories.

The bottom row of the matrix illustrates strong persistence for regions with an unemployment rate below 0.6 times the European average: by 1996 81% remained below 0.6 times the European average, while the remaining 19% had increased their relative rates to between 0.6 and 0.75 times the European average. The next row up shows that of the 23 regions starting with a relative unemployment rate between 0.6 and 0.75, 26% remained in that range while 52% fell to below 0.6. The top row tells a similar story, with strong persistence among the regions with the highest unemployment rates. However, it is the regions that in 1986 had rates between 0.75 and 1.3 that experienced the greatest mobility in the distribution, with a tendency to deviate towards the extremes of high or low unemployment.

1986 Relative Unemployment Rates		N	1996 Relative Unemployment Rates				
			(0-0.6)	(0.6-0.75)	(0.75-1)	(1-1.3)	(1.3-∞)
	(0-0.6)	32	0.00	0.00	0.16	0.22	0.62
	(0.6-0.75)	32	0.06	0.22	0.34	0.19	0.19
	(0.75-1)	42	0.24	0.29	0.26	0.21	0.00
	(1-1.3)	23	0.52	0.26	0.09	0.09	0.04
	(1.3-∞)	21	0.81	0.19	0.00	0.00	0.00

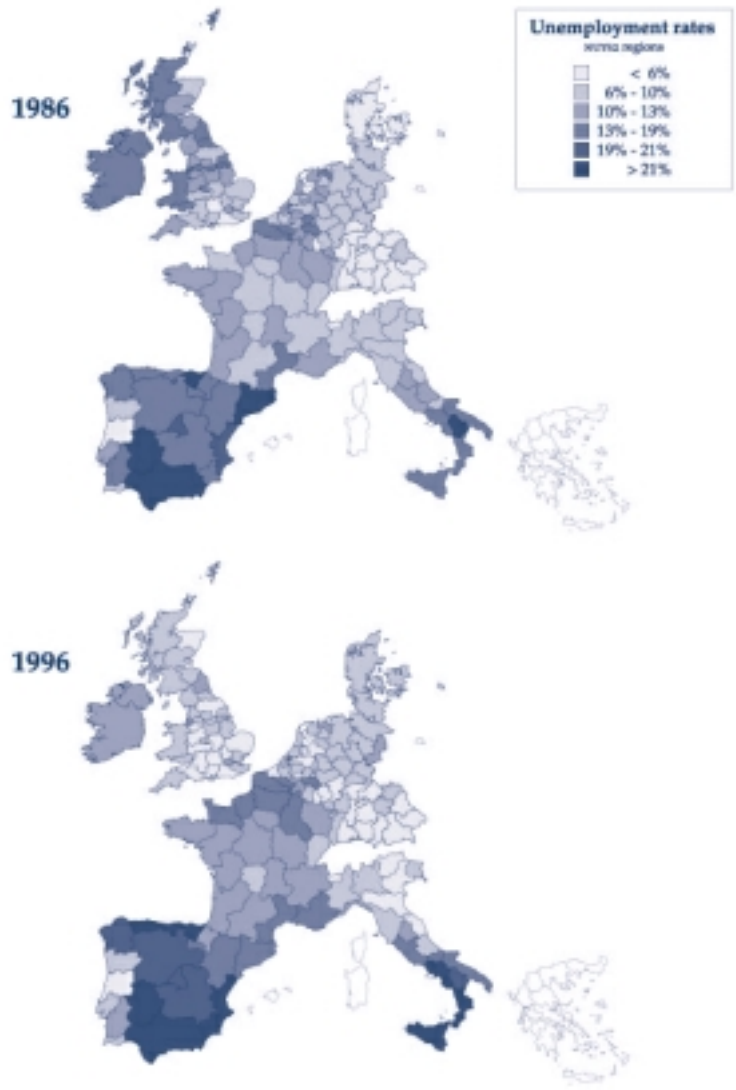
Transition probability matrix

The transition probability matrix illustrates the evolution of the distribution over time, but it requires the choice of a specific discretization which could possibly distort the true picture of the transition. The authors resolve this problem by plotting the transition kernel from the 1986 distribution to the 1996 distribution. The contour plot derived from this graph confirms the polarization process suggested by the transition probability matrix.

Of course, the polarization of regional unemployment can stem from both changes in regional employment opportunities and changes in the structure of the labour force. Overman and Puga show that the process has in fact been driven by changes in the pattern of employment opportunities. Indeed, as would be expected, the labour force tended to move so as to offset any polarization, with those regions with below average unemployment seeing the greatest increases in their labour forces while regions with above average unemployment witnessed smaller rises or

actual falls. Previous research has shown that between 1960-and 1980, regional labour force adjustments were able to offset changes in regional employment, leaving differences in unemployment rates reasonably stable. Yet the paper shows that, since 1986, labour force adjustments have been unable to keep pace with employment changes and have been insufficient to prevent polarization.

What factors caused the polarization? Regions differ in the sectoral composition of their employment; in the age, sex and skill structure of their populations; and in their geographical location within the EU. Regions that initially specialized in agriculture or manufacturing may have seen their unemployment rates rise as the EU production structure moved away from those sectors. Similarly, regions with a high proportion of low-skilled workers may have seen their unemployment rates rise as production shifted from low-skilled to high-skilled employment. Over the last decade, the Member States of the EU have pushed ahead with ever-closer economic integration. Recent theoretical developments suggest that such a process can be associated with the emergence of spatial concentrations of employment and that with falling barriers to trade these may extend across national borders. If regional labour forces do not fully adjust to such employment changes, then geographical location may be important in explaining the increased polarization of unemployment rates.



Regional unemployment rates in Europe

Unemployment Clusters

Overman and Puga use two complementary techniques, one parametric, one non-parametric, to examine these alternative explanations. The underlying idea behind the non-parametric approach is to track how closely the evolution of each region's unemployment rate has followed that of some group of regions which would be expected to behave similarly. The regions are grouped by the following criteria: regions in the same country; regions that are geographical neighbours; regions with similar sectoral compositions; and regions with similar proportions of low-skilled.

The results for the same country group suggest that regions do not tend to move strongly with their country over time. Yet even though national borders seem to have become less important in determining regional outcomes, geographical location may still matter at levels below the nation state. The authors test this idea by analysing the evolution of each region's unemployment rate in relation to that of its immediate geographical neighbours (i.e. bordering regions). Here, each region's outcome is much closer to the outcomes of neighbouring regions than to the outcomes of other regions in the same country. In fact even foreign neighbours (i.e. bordering regions that are in a different country) are more closely related than non-bordering regions in the same

country. The similarity of outcomes across neighbours could be driven by neighbouring regions having similar characteristics that are important determinants of unemployment rates. The final two criteria test this idea by examining such determinants.

The period 1986-96 saw the continuation of an ongoing shift in European employment from agriculture and industry into services. If labour force adjustment is slow, then regions with high initial specialization in declining sectors may have seen their unemployment rates rise and not recover. Could this be driving the polarization of unemployment in Europe? And can the importance of neighbours be justified by the fact that regions with heavy industrial or agricultural employment often occupy the same areas? The authors' results suggest the answer to both questions is no: regions with very similar industrial specifications have experienced very different outcomes. This is probably due to the fact that the largest drop in agricultural and manufacturing employment had already taken place before the period in consideration - between 1971 and 1986 the share of manufacturing in European employment fell from 41% to 33%; between 1986 and 1996 it fell from 33% to 30%. A final explanation for the neighbour effect could be that neighbouring groups of regions possess similar skill compositions. However, the authors' results suggest skill composition is only a minor predictor of unemployment.

The ordinary least squares results from the parametric analysis broadly echo the non-parametric conclusions. Using the same types of explanatory variables as the non-parametric approach, the authors show that unemployment rates are only weakly explained by industrial structure and skill level variables. However, neighbouring regions' unemployment rates have a very strong and significant effect. Interestingly, the regressions show that foreign neighbours are as important as domestic neighbours: the authors are unable to reject the hypothesis that the coefficient on both domestic and foreign neighbours are identical. This result can be seen in the map on the previous page, where the high and low unemployment clusters that have emerged over the last decade show little respect for national borders. The use of instrumental variables in the regression does not alter any of these results.

What is driving this emerging pattern of cross-border unemployment clusters? Overman and Puga surmise that the patterns may be the result of firm location and relocation decisions, reflected in an agglomeration of activity over geographical areas somewhat larger than NUTS2, but somewhat smaller than nation states. In contrast to the divergence of unemployment rates across European regions, differences in regional incomes per capita are narrowing. Yet while inequalities in income per capita exhibit a core-periphery gradient, unemployment clusters are more localized and are emerging in both Europe's core and its periphery. Recent location theories suggest that the self-reinforcing nature of agglomerations will make these clusters hard to break once they become established. Given that the unemployment clusters observed are not very large and are scattered across Europe, the authors conclude that it may be more efficient to implement policies that accept some clustering and larger mobility within a neighbourhood.

Discussion Paper No. 2255: 'Unemployment Clusters Across European Regions and Countries' by Henry G Overman (London School of Economics and CEPR) and Diego Puga (University of Toronto and CEPR).

See www.cepr.org/pubs/dps/dp2255.asp for abstract and online ordering.

Regulation and Competition

A CEPR/ESRC Industrial Organization Workshop on 'Regulation and Competition' was held in London on 23 November 2000. Organized by Pierre Régibeau (University of Essex and CEPR), the programme contained the following papers:

'Investment, Reprocurement and Franchise Contract Length in the British Railway Industry', Luisa Affuso (University of Cambridge) and David M G Newbery (University of Cambridge and CEPR)

'Redundant Regulation? Competition and Consumer Choice in Residential Energy Markets', Monica Giulietti (University of Warwick), Catherine Waddams (University of East Anglia) and Michael Waterson (University of Warwick)

'Can Competition Replace Regulation for Small Utility Customers?', Richard J Green (University of Hull and CEPR)

'Price Regulation, Investment and the Commitment Problem', Paul L Levine (University of Surrey, London Business School and CEPR) and Neil Rickman (University of Surrey, London Business School and CEPR)

The above papers can be downloaded from **www.cepr.org/meets/wkcn/6/687/papers/**

The Different Faces of Globaphobia in Europe and America

The emergence of a world in which goods, services and capital flow with almost complete freedom has brought unprecedented wealth to both Europe and America. Yet at the same time, labour has fared relatively poorly on both sides of the Atlantic with declining wages and rising job insecurity in America and growing unemployment in Europe. While economists continue to argue about whether trade or technological change is the main culprit behind the waning fortunes of labour, ordinary citizens tend to see the two as simply different facets of the same process: globalization. To them, it makes no difference whether economists label flows of goods and services as 'trade' and flows of ideas passing through the Internet or multinational corporations as 'technological change'; both constitute globalization. A recent *Discussion Paper* by André Sapir illustrates why there are important differences between the attitudes of Europeans and Americans to the different facets of globalization.

The paper examines why 'globaphobia' seems to be more prevalent in the US than in Europe, arguing that globalization has generated more wealth, income inequality and adjustment problems in America than in Europe. In the US, the median voter has experienced both lower wages and rising job insecurity because of globalization. By contrast, in Europe, the welfare state has largely insulated the median voter from the pains of globalization. The paper also examines international labour mobility, which is conspicuously absent in the current wave of globalization, and argues that for immigration the phobias are reversed. Sapir claims that the relative generosity of Europe's welfare state makes it less open to migration than the US.

Free Trade

The main opposition to globalization in the US, and to a lesser extent in Europe, comes from the labour force, which claims that international economic integration is largely responsible for the recent deterioration of its economic and social condition. Since the mid-1970s, the US has experienced rising wage disparity between skilled and unskilled workers and falling real wages for large parts of the labour force: between 1973 and 1997 the median real weekly earnings of male full-time workers fell from $700 to $600 in constant 1997 dollars. Europe, by contrast, has experienced rising unemployment with little or no downward pressure on wages: between 1973 and 1997 the unemployment rate in Europe (EU-15) jumped from less than 3% to nearly 11%.

Sapir splits the costs from globalization accruing to the labour force into two kinds: permanent income loss (stemming from inter-industry trade) and temporary adjustment costs (stemming from intra-industry trade). The scale of these costs varies depending on three factors: the nature of trade; the type of labour market institutions; and the kind of redistribution and adjustment mechanisms. Consider first the effect of the nature of trade. Under perfect competition in all product and factor markets, and with different factor endowments across countries (i.e. when only inter-industry trade takes place), the Stolper Samuelson theorem shows that trade liberalization is likely to be detrimental to (unskilled) workers in industrial countries, where (unskilled) labour is relatively scarce. Since countries enjoy overall gains from trade, there is always the possibility, however, of the winners compensating the losers. By contrast, if countries have similar factor endowments and trade is intra-industry, then both scarce and abundant factors are likely to gain from trade. Consequentially, labour is far more likely to oppose inter-industry trade than intra-industry trade.

Sapir then analyses the evolution of trade in Europe and the US over the last 40 years. From 1960 to 1998 trade openess (exports plus imports divided by GDP) for the EU-15 rose from 30% to 50%. This increase was almost entirely accounted for by trade with other EU countries; other EU trade remained fairly constant over the period. As EU countries all have similar factor endowments, the increase in intra-EU trade is likely to be dominated by intra-industry trade. Indeed, Sapir calculates that in 1998 73% of intra-EU trade was intra-industry. Over the same period, trade openess in the US rose from 7% to 20%, and roughly two-thirds of trade is intra-industry. Although the data seem to suggest that the US has experienced a greater exposure to inter-industry trade than Europe, Sapir concludes that it is unlikely that this difference accounts for a sizeable share of the two cultures' different reactions to globalization.

The second factor the paper identifies as determining the scale of the costs of globalization is the type of labour market institutions. Europe has a high level of labour market rigidity in comparison with the US. With rigid wages, a shift in demand such as globalization that favours skilled workers, new sectors or new regions tends to produce unemployment among unskilled workers and in older regions and sectors. In addition, the Stolper-Samuelson effect tends to break down for inter-industry trade when wages are rigid. In the US, declining wages and rising job insecurity have produced an

anxious median voter. By contrast, in Europe, the median voter has been largely spared from growing unemployment, the burden falling mainly on the young.

The final determinant of the size of opposition to globalization is the type of adjustment mechanism that each country employs. The previous two factors suggested that globalization may have affected labour somewhat more in America than in Europe, yet Sapir argues that the main reason for the disparity in attitudes comes from differences in adjustment mechanisms. In the US, the Trade Adjustment Assistance (TAA) programme is the federal entitlement programme for workers affected by trade liberalization. In 1993, the NAFTA-Transitional Adjustment Assistance (NAFTA-TAA) programme was introduced specifically to help workers adversely affected by NAFTA. The US Department of Labor, which administers the programme, proclaims on its website: 'If imports from Canada or Mexico cost you your job ... Apply for NAFTA-TAA'. Both programmes focus on career counselling, training, job search and relocation. Income support under these schemes is available for one year after unemployment benefit runs out and while the worker participates in an approved full-time training programme.

The stated purpose of both programmes is to assist individuals to return to 'suitable employment'. 'Suitable employment' is defined as that which pays no less than 80% of the person's earnings from their previous employment. The paper argues that the main reason for organized labour's opposition to globalization is that, despite such programmes, TAA and NAFTA-TAA only tackle temporary adjustment costs, whereas globalization is seen by labour as a cause of permanent income losses. In other words, TAA and NAFTA-TAA solve an efficiency problem, whereas labour perceives an issue of equity. When the TAA programme was created in 1963, the US traded very little internationally and imported virtually no manufactured goods from low-income countries. In those days import surges were mainly short-term, cyclical phenomena, requiring only temporary solutions. During the 1990s, however, trade openess and imports from low-income countries increased substantially, thereby adding permanent income losses to temporary adjustment costs. Yet, TAA remains the only response.

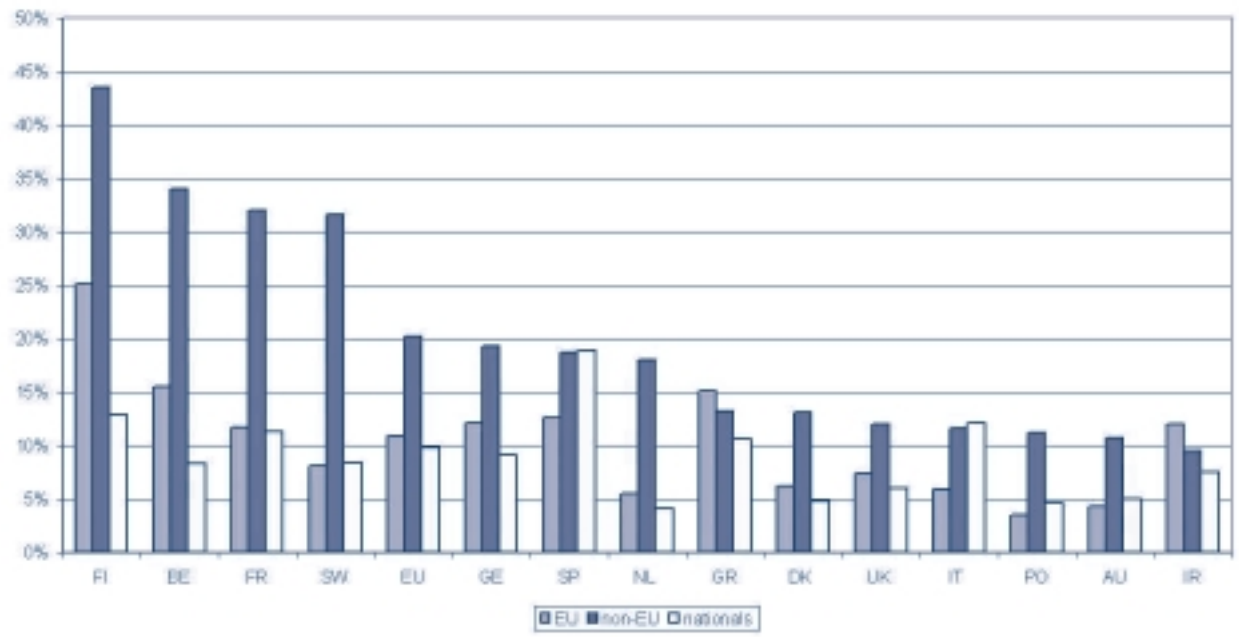
There is no programme resembling TAA in Europe. Sapir suggests two reasons for this. First, the welfare state in Europe is not only much larger but it is also both more equity-oriented and less efficiency-oriented than in the US. Unquestionably, Europe's social policy has been much more effective in limiting income inequality and poverty, and can subsequently be seen as an answer (of sorts) to permanent income loss. Second, the integrationist ideology of the EU seems hardly compatible with having its executive body, the European Commission, proclaim on its website: 'If the Single Market cost you your job ... Apply for ...'. However, The 1957 Treaty of Rome, the founding document of the EU, did establish a European Social Fund (ESF) designed to improve the employment opportunities for EU workers. Where the ESF differs from TAA is that its purpose is to help labour adapt to economic shocks whatever their origin.

Free Movement of Labour

Although the welfare state may encourage a liberal attitude to the free movement of goods and capital, it has the opposite effect on the movement of labour. In the second part of his paper, Sapir focuses on international labour mobility. This is a topic where phobia runs high on both sides of the Atlantic, with probably a clear advantage going to Europe. The fear of the American median voter is rooted in the same cause as his globaphobia: declining wages and rising job insecurity. By contrast, Europeans seem ready to accept increasing international integration of product and capital markets as long as labour is kept out of the picture.

Estimates by the UN's Population Division indicate that, at current birth and death rates, the EU would need 1.6 million immigrants a year to keep its working-age population stable in the next 50 years. Holding the ratio of workers to pensioners constant would require an additional inflow of 12 million a year. Yet the current objections to EU enlargement centre on the idea that it will entail mass migration into Western Europe. The paper identifies two factors likely to determine attitudes towards migrants: whether the migrants are substitutes or compliments to the existing labour force, and whether they are net contributors to or beneficiaries from the welfare state. In Europe, the vast majority of immigrants are unskilled and are therefore compliments to skilled labour and substitutes to unskilled labour. However, their position in relation to the welfare state is not as clear-cut. Hence Sapir examines the differences in the incidence of unemployment between national and foreign workers.

The graph on the next page presents data on unemployment rates for EU countries in 1998, broken down between nationals, EU foreigners and non-EU foreigners. It reveals two important features. First, for the EU as a whole, the unemployment rate for non-EU foreigners was twice the unemployment rate for nationals or EU foreigners. By contrast, in the US, the unemployment rate for foreigners was only 25% higher than the unemployment rate for nationals. The other key finding is the variance across countries. In Finland, Belgium, France and Sweden, the unemployment rate for non-EU foreigners was far higher than the EU average (30-40% compared with 20%); whereas the unemployment rate for nationals in these countries was similar to the EU average. By contrast, in Italy and Spain, and to a lesser extent in Ireland and Greece, unemployment rates are roughly the same for nationals and EU foreigners.



Unemployment rates for (EU and non-EU) foreigners and nationals, 1998

By calculating the ratio of the unemployment rate for non-EU foreigners to the total unemployment rate, Sapir is able to split the countries into three discernible groups. Those with high ratios (3 or above): the Netherlands, Belgium, Denmark and Sweden. Those with average ratios (between 1.5 and 2.5): France, Finland, Germany, Portugal, Austria, the UK and Greece. And those with low ratios (below 1.5): Ireland, Italy and Spain. These country groupings suggest that countries with the most generous welfare state are also those where foreigners have a higher probability than nationals of being unemployed. Sapir identifies two reasons for a possible relationship between the welfare state and the relative unemployment rates of non-EU foreigners. First, countries with generous welfare states may be those that attract most secondary migrants (i.e. family members of immigrant workers). Primary migrants (usually settled guest workers) may be expected to have unemployment rates similar to those of nationals. Second, countries with generous social transfers are also likely to have large public sectors, where employment is typically restricted to nationals or EU foreigners.

Sapir's regression analysis confirms that the unemployment rate among non-EU foreigners (relative to the total unemployment rate) increases with the generosity of the welfare state, and with the importance of secondary or second-generation migrants. This finding is not evidence that migrants tend to go to countries with generous welfare systems, since the regression does not reveal causality. It does, however, suggest that cross-country differences in the unemployment rate among migrants tend to be positively correlated with cross-country differences in welfare generosity. Sapir claims the correct response to this potentially explosive situation is straightforward: Europe needs to make more efforts to integrate its immigrant population and unleash its productive potential.

There is a broad consensus in Europe that the welfare state must be reformed in order to improve the efficiency of resource allocation as well as for budgetary reasons. An ageing population is expected to increase the gap between social expenditures and revenues. EMU is also likely to increase the demand for social transfers and to reduce the collection of taxes needed to finance them. Given the current high level of taxation in Europe, raising taxes does not seem a politically viable option. The paper proposes two other options. One is to adjust social expenditures downwards. The other is to employ more migrant workers, either by attempting to lower the unemployment rate among the current immigrant population, or by importing new permanent or temporary foreign workers. Either option would require difficult choices on the part of EU governments.

Discussion Paper No. 2595: 'Who Is Afraid of Globalization? The Challenge of Domestic Adjustment in Europe and America' by André Sapir (ECARES, Université Libre de Bruxelles, and CEPR).

See www.cepr.org/pubs/dps/dp2595.asp for abstract and online ordering.

European Financial Markets After EMU: A First Assessment

European Monetary Union has the potential to create the world's largest domestic financial market. But, while a single currency is a necessary condition for the emergence of pan-European capital markets, it is not a sufficient one. A *Discussion Paper* by Jean-Pierre Danthine, Francesco Giavazzi and Ernest-Ludwig von Thadden reviews the initial evidence on EMU's impact on European capital markets. Their assessment is favourable, concluding that, on almost all counts, EMU has either already drastically changed the financial landscape of Europe or has the potential to do so in the future.

European capital markets underwent remarkable transformations in the late 1990s. A corporate euro bond market emerged, with issuing activity in 1999 which exceeded that of the dollar market. Primary issues in European equity have reached record highs, with whole new markets becoming prominent internationally, such as the *Neue Markt* in Frankfurt or Italy's *Nuovo Mercato*. Europe-wide indices have been established and portfolios have begun to be allocated along pan-European sectoral lines rather than on a country basis. *Eurex*, the German-Swiss exchange founded in 1998, has not only caught up with other large exchanges but by the end of 1999 had overtaken the *Chicago Board of Trade* to become the world's largest derivatives exchange. Banks all over Europe have merged or formed alliances on an unprecedented scale, drastically changing the national banking environments. Cross-border mergers in all industries have increased strongly, giving rise to record volumes in Europe's M&A industry.

The authors argue that part of these developments could have been expected as the consequences of the direct effects of the euro. These direct effects include the shrinking of the foreign exchange market; standardization and transparency in pricing; the elimination of currency risk; the elimination of currency-related investment regulations; and the homogenization of the public bond market and bank refinancing procedures. But these direct effects typically induce additional indirect effects. These are more difficult to assess, and the authors concentrate on them. Danthine *et al* consider four groups of indirect effects: the cost of cross-country transactions within the EMU area; the liquidity of European financial markets; the diversification opportunities available to European investors; and the institutional changes that are stimulated by EMU. At the centre of the discussion is the observation that arithmetically the euro zone has created a huge financial market with the potential to rival that of the US: in 1995, the combined value of equities, bonds and bank assets outstanding in the 11 EMU countries was $21,084 billion, compared to $22,865 billion in the US. The question is to what extent this arithmetic translates into economic reality.

Transaction Costs

While the euro leads directly to a decrease in explicit and implicit transaction costs, such as the cost of currency conversion and currency risk, this does not automatically signal that the cost of cross-border investment in Europe falls to the level of within country investment. Several important obstacles to intra-European capital flows remain, and these lie at the heart of the uncertainty about the impact of the single European capital market. Within Europe, cross-border payments and securities settlements are riskier, lengthier, more expensive and less standardized than equivalent domestic transactions. What is more, the euro zone has 18 large-value systems (compared to two in the US), 23 securities settlement systems (three in the US) and 13 retail payments systems (again, three in the US). Differences in taxation, legislation and standards create further obstacles.

A recent study by the ECB shows that fees charged to customers for domestic credit transfers rarely exceed 0.1-0.15, while for cross-border transactions these fees vary between 3.5-26 for small amounts and 31-400 for large amounts. The study also shows that, on average, cross-border payments need 4.8 working days to reach their destination and that 15% of the transactions needed more than a week to reach their destinations. By contrast, domestic payments arrive usually in one to three days.

An important indirect effect of the euro has been to expose these problems and put pressure on politicians and market participants to adopt measures that will foster a greater degree of harmonization and efficiency in financial market transactions. And EMU has certainly brought some progress to payment systems: the establishment of TARGET and EURO1 (the settlement systems for large transactions for the European System of Central Banks and the European Banking Association, respectively) and the implementation of the European Commission's Directive on cross-border credit transfers are the most visible steps taken in this direction.

Market Depth: Liquidity Risk

The problem of transaction costs notwithstanding, by eliminating currency risk EMU has put traders in foreign

euro-denominated assets on an equal risk base with domestic traders. Together with the increase in transparency resulting from the single currency, this has greatly reduced the barriers to trading such assets. In this sense, EMU has increased the demand side of the market for every asset traded in the euro zone. This effect will be reinforced if the supply of such assets increases or assets that were previously considered different become closer substitutes for investor portfolios.

To the extent that the expanded markets give rise to increased trading, the euro has reduced liquidity risk. An important theoretical feature of markets with transaction costs and liquidity is the possibility of multiple equilibria. In such markets, depth is endogenous and the possibility of 'virtuous circles' of high trading activity and low liquidity risk exist alongside those of 'vicious circles' of low trading and high liquidity risk. When assessing the euro's impact on liquidity, it is therefore important not only to add up the different pre-euro domestic markets, but also to evaluate the relationships between market prices, trading volume, the number and type of participants and transaction costs in the market after EMU.

A preliminary and still incomplete analysis of public and private bond and equity markets reveals that markets have deepened considerably, although there is still scope for further integration of the public bond market. Private bond and primary equity markets have expanded at a speed and to a point where it is possible to speak of a dramatic 'equilibrium switch', although the change in secondary equity markets has been less dramatic.

Market Breadth: Diversification

A second benefit of increased market size is the opportunity for greater diversification. In theory, the reduction in the costs and risks of cross-border transactions allows investors to improve the spread of risk of their holdings and to rebalance portfolios towards assets that were previously too costly in terms of the risk-return trade-off of standard portfolio theory. The only problem with this theoretical argument is that it is inconsistent with the evidence. As documented repeatedly in the 1980s and early 1990s, the share of international equity in total equity holdings by domestic investors has been much too small to be consistent with the standard portfolio model (the home-bias puzzle). Hence reasons other than currency risk must have kept investors away from foreign equity; if this is correct, the unification of currencies will not necessarily change investors' behaviour. Instead, the authors argue that the home bias in equities may be better explained by information problems that domestic investors face when valuing foreign securities.

According to this view, both the weakly developed equity culture of European investors and the lack of transparency and trading opportunities in European firms explain the sparseness of equity flows in and out of Europe prior to 1990. And the change in both these features during the 1990s explains the observed increases in equity flows. Thus EMU fosters market integration not by eliminating foreign exchange risk, but by improving information flows and by reorienting traditional international asset allocation methods from a country basis to a pan-European industry basis. If international transaction costs are high, only a few firms will find it profitable to change their portfolio strategies; but if these costs fall, a major shift in intra-European portfolio allocation is possible. Whether and to what extent the record turnover on European equity markets in 1999 can be attributed to this effect is, however, still unclear.

Institutional Change

In assessing how EMU has affected financial market institutions, the authors note some surprising success stories, such as the rise of Eurex and the increased competition between stock exchanges. But the banks, the main players in the European capital markets, have been affected by the euro in different ways. In particular, while the changes in capital market activity tend to hurt the traditional deposit and lending business of commercial banks (by producing a 'shift from banks to markets') they benefit the more market-based asset management and investment activities.

European commercial banks became more profitable and cost efficient during the 1990s. Some of this progress can be attributed to the competitive pressures of the Single Market, yet the existence of different currencies had been an important factor in maintaining a segmented market. The introduction of the euro seems to have provided an important, perhaps decisive, push towards the emergence of a more competitive and ultimately more integrated European banking market. The authors conclude that banks, especially in Europe, continue to be important in an environment of deepening and broadening capital markets. But they have had to adjust significantly in the past few years, and the evidence suggests that this adjustment has not always been successful. Several indicators, such as the evolution of M&A activity, suggest that EMU has had a major effect on bank restructuring in Europe.

Discussion Paper No. 2413: 'European Financial Markets After EMU: A First Assessment' by Jean-Pierre Danthine (Université de Lausanne and CEPR), Francesco Giavazzi (IGIER, Università Bocconi, Milano, and CEPR) and Ernest-Ludwig von Thadden (Université de Lausanne and CEPR).

See www.cepr.org/pubs/dps/dp2413.asp for abstract and online ordering.

Household Wealth Can Predict Stock Market Fluctuations

Understanding the empirical linkages between macroeconomic variables and financial markets has long been a goal of financial economics. One reason for the interest in these links is that stock returns appear to vary with the business cycle. This evidence suggests that stock returns should be forecastable by business cycle variables at cyclical frequencies. Yet the most successful variables at predicting stock market fluctuations are not macroeconomic variables but financial variables: dividend-price ratios, earnings-price ratios and dividend-earnings ratios are all able to predict stock returns over long-term horizons. Over shorter horizons, spanning the length of a typical business cycle, stock returns have typically been found to be only weakly forecastable. Traditional macroeconomic variables have proven especially feeble predictors of stock returns over any time span.

A CEPR *Discussion Paper* by Martin Lettau and Sydney Ludvigson adopts a new approach to investigating the links between macroeconomics and financial markets. The paper studies the role of transitory movements in aggregate household wealth for predicting stock market fluctuations, arguing that these movements can predict stock returns over horizons as short as one quarter. Aggregate household wealth is defined as the sum of both human (i.e. human capital) and non-human (i.e. asset holdings) wealth. The authors begin by noting that aggregate consumption, asset holdings and labour income share a common long-term trend but may deviate substantially from one another in the short run. Their results show that these 'trend deviations' are a strong univariate predictor of both raw stock returns and excess stock returns over a Treasury-bill rate, and can account for a substantial fraction of the variation in future returns.

This 'trend deviation' variable, a proxy for the log consumption-wealth ratio, provides information about future stock returns that is not captured by lagged values of other variables which are popular among forecasters. Trend deviations display their greatest predictive powers for returns over business cycle frequencies – i.e. those ranging from one to five quarters. In addition, Lettau and Ludvigson find that this variable would have improved out-of-sample forecasts of excess stock returns in post-war data relative to a variety of alternative forecasting models. These results occur despite the fact that the individual growth rates of consumption, labour income, and asset wealth, like other macroeconomic variables, bear little relationship to future stock returns.

So why does household wealth, de-trended in this way, help predict asset returns? In the empirical macroeconomic literature, consumption behaviour has traditionally been studied using models that assume expected asset returns are constant over time, as in the permanent income framework of Hall (1978) and Flavin (1981). These models rule out any link between real consumption and movements in asset returns that can be forecasted. Lettau and Ludvigson develop a broader theoretical framework that generalizes the simple permanent income model, by allowing for time-varying expected returns. Their framework is able to encompass a number of different models of investor behaviour where consumption is a function of aggregate wealth – defined as the sum of human capital and asset wealth. For a wide range of preferences, the log of the ratio of consumption to aggregate wealth predicts asset returns because it is a function of expected future returns from total wealth. This result has been noted previously by Campbell and Mankiw and is the starting point of the theoretical framework.

There are two important practical obstacles that must be overcome before the log consumption aggregate-wealth ratio can be empirically linked with future asset returns. The most immediate is that aggregate wealth, specifically the human capital part of it, is unobservable. The authors argue that the important predictive components of the consumption aggregate-wealth ratio for future market returns may be expressed in terms of observable variables, namely in terms of consumption, asset holdings and current labour income. And they assume that aggregate labour income may be described by the product of a stationary 'return' multiplied by the aggregate stock of human capital, implying that the non-stationary component of human capital may be captured by labour income itself. Consequently, the unobservable log consumption aggregate-wealth ratio may be expressed as the difference between log consumption and a weighted average of log labour income and log asset wealth. The weights on log labour income and log asset wealth are the average ratios of human and non-human wealth in aggregate wealth, respectively. In practice, this results in coefficients of about one-third for asset wealth and two-thirds for human capital.

Hence the authors' model implies that the log of consumption, labour income and asset holdings are co-integrated. If expected consumption growth is not too volatile, stationary deviations from this shared trend produce movements in the consumption aggregate-wealth ratio which can predict future asset returns. This follows from the fact that the consumption aggregate-wealth ratio summarizes agents' expectations of future returns to aggregate wealth. Accordingly, deviations from the shared trend will forecast returns to asset holdings, as long as the expected return to human capital is not too volatile.

The economic intuition for this result can be described as follows. Investors who want to maintain a flat consumption path over time will attempt to 'smooth out' transitory movements in their asset wealth arising from time-variation in expected returns. When excess returns are expected to be higher in the future, forward-looking investors will react by increasing consumption out of current asset wealth and labour income, allowing consumption to rise above its common trend with those variables. When excess returns are expected to be lower in the future, these investors will react by decreasing consumption out of current asset wealth and labour income, and consumption will fall below its shared trend with these variables. In this way, investors may insulate future consumption from fluctuations in expected returns, and stationary deviations from the shared trend are likely to be a predictor of excess stock returns.

Lettau and Ludvigson test their model's predictions using quarterly US per capita data for consumption, household net worth and net labour income over the period 1952-98. They regress consumption on household net worth and net labour income, and use the residuals from this regression as their 'trend deviation' variable. Their financial data include stock returns, dividends per share and quarterly earnings per share from the Standard and Poor's (S&P) Composite index. Plotting the trend deviations and the excess returns on the S&P Composite index shows a multitude of episodes in which positive trend deviations precede large positive excess returns and negative ones precede large negative returns. This pattern is evident during the 1950s and early 1960s, when the deviations shot up prior to a sequence of 'up ticks' in excess returns, during the 1970s, when sharp declines in the deviations led the bear markets of those years, and during the 1980s, when the trend deviation turned negative prior to the 1987 stock market crash.

Combining the trend deviation variable with variables on the log dividend-price ratio and the log dividend-earnings ratio reveals a substantial forecastibility of stock returns at both short-run and long-run horizons. The authors run a number of forecasting regressions, all of which are significantly improved by the inclusion of a one-quarter lag of the trend deviation variable. For example, a regression of the excess returns on the S&P Composite index on its own one quarter lag has little explanatory power, but adding de-trended wealth allows the regression to predict an extra 9% of the variation in the next quarter's excess return.

An important policy implication of these results is that large swings in financial assets need not be associated with large subsequent movements in consumption. Currently, this issue is one of pressing importance as fears rise that substantial declines in US equity markets will cause consumer spending to decrease sharply. Lettau and Ludvigson's model suggests that the real economy may be less vulnerable to transitory movements in asset values than many analysts presume: with consumption well below its traditional ratio to asset wealth and labour income, the model implies that households in the US have already factored the expectation of lower returns into today's consumption and will therefore not need to make large adjustments tomorrow.

Discussion Paper No. 2223: 'Consumption, Aggregate Wealth and Expected Stock Returns' by Martin Lettau (CentER, Tilburg University, and CEPR) and Sydney Ludvigson (Federal Reserve Bank of New York).

See www.cepr.org/pubs/dps/dp2223.asp for abstract and online ordering.

Financial Markets Symposium

The eleventh CEPR/Studienzentrum Gerzensee 'European Summer Symposium in Financial Markets' (ESSFM) was held in Gerzensee on 17/28 July 2000. Sponsored by the New York Stock Exchange and organized by Philippe Bacchetta (Studienzentrum Gerzensee, Université de Lausanne and CEPR), Bruno Biais (Université des Sciences Sociales de Toulouse and CEPR) and James Dow (London Business School and CEPR), the programme included topics such as 'Competition and Performance of Exchanges', 'Insolvency Procedures', 'Emerging Financial Markets, Past and Present' and 'Experimental Financial Markets and Psychology'. A total of 22 papers were presented.

The Conference papers can be downloaded from **www.cepr.org/meets/wkcn/5/557/papers/**

Asset Prices and Central Bank Policy

Movements in asset prices (such as equity or housing prices or the exchange rate), can have significant effects on real economic activity. Yet the consensus view of monetary policy is that central banks should set interest rates in response to forecast inflation, and (possibly) the output gap, but that they should not react directly to movements in asset prices. The argument is usually that asset prices are too volatile to be of much use in determining policy; that misalignments in asset prices are almost impossible to identify, let alone correct; and that systematically reacting to asset prices may prove to be destabilizing.

The second of CEPR's *Geneva Reports on the World Economy*, produced in conjunction with the International Centre for Monetary and Banking Studies (ICMB), reviews the arguments on these issues and presents new analysis and evidence. The Report takes issue with the consensus view, concluding that central banks can improve macroeconomic performance (defined in terms of minimizing the variability of output and inflation) by reacting systematically to asset prices, in addition to their reaction to the inflation forecast and output gap. Of course, it can be argued that some asset prices (e.g. the exchange rate) already appear in central banks' policy functions as they often have a direct effect on the banks' inflation forecast. However, the Report's recommendations go beyond this, concluding that a central bank should react to asset prices themselves, not just the effects of asset prices.

Theory

The Reports notes that asset price bubbles create distortions in investment and consumption, leading to extreme rises and then falls in both output and inflation. Modestly raising and lowering interest rates as asset prices rise and fall above and below what are estimated to be warranted levels helps to smooth these fluctuations, thus reducing the possibility of an asset price bubble forming in the first place. The intuition behind this result is based on two simple arguments.

The first is an application of the classic Poole analysis, which states that a central bank should 'lean against the wind' of significant asset price movements if these disturbances originate in the asset markets themselves, say, for example, because of 'irrational exuberance'. Such a policy should attenuate the disturbance's influence on the real sector of the economy. In contrast, if the disturbance originates in the real sector, asset prices should be allowed to adjust accordingly. The second argument is explicitly intertemporal. It is based on the notion that when significant asset price misalignments occur, they help create instability in inflation and/or employment that may be exacerbated when the misalignment is eventually eliminated. A pre-emptive policy approach will tend to limit the build-up of such misalignments and the size of the eventual correction, thereby lowering the medium-term variability of inflation and output. The Report argues that such a policy is desirable in general, even if it means a temporary departure from the short-term inflation target.

The Report then examines whether these intuitive arguments are robust, by conducting extensive simulations using two models incorporating sophisticated treatments of asset markets and realistic assumptions about the dynamic effects of policies and disturbances. The first of these is a generalized version of a standard dynamic new-Keynesian model used by Bernanke and Gertler[1] in their recent influential study of how central banks should react to equity price bubbles. Bernanke and Gertler conclude that policy should not respond to movements in asset prices except insofar as asset prices signal changes in expected inflation. By contrast, the Report finds that in the vast majority of cases it is strongly advisable for interest rates to respond to equity prices.

The disparity between the Report's conclusions and Bernanke and Gertler's study appears to stem from the wider range of policy responses that the Report considers. Specifically, the Report allows for the inclusion of an output gap in the policy rule (making the rule more like a standard Taylor rule); the introduction of an objective function for the central bank so that optimal policy rules can be calculated; the inclusion of interest rate smoothing in the policy rule; variations in the extent to which agents are backward looking; and a reduction in the degree of leverage that stems from the knowledge that the authorities will react to a bubble. The authors of the Report conclude that macroeconomic stability is well served if monetary policy reacts in part to asset price misalignments; the reaction is not necessarily large – but it should nevertheless be there.

The second model the Report considers explicitly examines the question of exchange rate misalignments. In closed economy models, economists have argued that optimal policies are versions of inflation targets and Taylor rules. In an extension of such models, a paper by Ball[2] finds that inflation targeting is sub-optimal in an open economy, in that the optimal policy targets 'long-run' inflation – i.e.

inflation that is adjusted for the temporary effects of exchange rate fluctuations. These are important results, but some have questioned them on the grounds that the equation for the exchange rate in Ball's model is unconventional: it does not incorporate the uncovered interest parity condition (a cornerstone of most theoretical models of the exchange rate), and exchange rate expectations do not play a role in affecting the current exchange rate. The Report re-examines this issue with a model that includes both these aspects of exchange rate determination and has previously been used by the Bank of England to analyse optimal inflation forecast horizons.

Specifically, a conventional small open-economy model is shocked each quarter by unobserved random disturbances in aggregate demand, aggregate supply and capital flows. The results of the simulations suggest that the optimal policy is to respond to exchange rate fluctuations when these fluctuations arise from portfolio shocks. This response is above and beyond the direct effect that the exchange rate movements have on the inflation forecast. If, instead, exchange rate fluctuations stem from aggregate demand shocks, then the optimal policy ignores the exchange rate altogether. Hence whether a central bank should respond to a shock crucially depends on the type of shock.

A commonly held view among economists is that the UK's experience of shadowing the DM during the late 1980s was a mistake as it allowed inflationary imbalances to build up. How might this experience be viewed in the light of the models discussed above? First, at least a part of what happened then was a significant shock to aggregate demand associated with financial liberalization. Hence the experience can be viewed as consistent with the model, which suggests that the only effective policy is to 'lean into' portfolio shocks. Second, the open-economy model only considers one asset price (i.e. the exchange rate). Yet the first model illustrated that there may well be a case for including other asset prices (i.e. stock prices, the housing market) in the bank's reaction function. It is worth recalling that in the late 1980s the UK's housing market appeared overvalued, with a price-earnings ratio higher than at any other time during 1970-2000. A monetary policy rule that took all asset markets into account would surely have reacted to the overvalued housing market in the 1980s.

Measurement

Many policy-makers are hostile to the notion of taking action to prevent asset price misalignments because of the difficulties associated with distinguishing between movements in asset prices that are warranted by underlying fundamentals and those that are not. But implementing 'conventional' monetary policy also requires estimates of asset price misalignments since inflation forecasts often depend, in part, on asset prices. In this sense, estimates of asset price misalignments already influence the policy function.

The Report analysed the valuation of the US equity market in 2000, concluding that even under optimistic assumptions about the increase in underlying productivity growth, the equity risk premium is currently towards the lower end of its historical range. Since econometric evidence suggests that this premium is likely to revert towards its mean in the medium term, it is probable that this will occur at least in some cases through an adjustment in equity prices. The Report therefore concludes that measurement difficulties, as real as they are, should not stand in the way of attempting to incorporate estimates of asset price misalignments into the monetary policy-setting process.

In addition, it is probably no more difficult to measure the degree of stock price misalignment than it is to measure the size of the output gap or the equilibrium value of the real interest rate, concepts that many central banks already use in preparing their inflation forecast. Specifically, output gap estimates depend on estimates of underlying productivity growth and the equilibrium equity risk premium. These inputs are also necessary to estimate equity price misalignments.

Practice

The Report's proposal to take asset price developments into account, over and above the effect they have on the inflation forecast, is consistent with the remit given to the Bank of England and other inflation-targeting central banks. One possible way to implement this suggestion would be to adopt an augmented Taylor rule in which asset prices are given a role together with the inflation forecast and some measure of the output gap - this is the type of rule that was shown to be superior to a 'pure' Taylor rule in the context of the Bernanke and Gertler model. As an alternative to actually specifying a policy rule to determine interest rates, a government might instead specify to its central bank that inflation and, perhaps, output deviations should be minimized on average in the future.

In terms of implementation, it is true that the central bank needs to undertake the rather difficult task of estimating the degree of misalignment. But in order to forecast inflation accurately, the central bank needs to do this anyway. The one factor that would make the job of the central bank a little more difficult is that it would have to make a decision about how much weight to attach to the asset price misalignment. Clearly, the answer would be model-specific, but this is also true of inflation forecasts.

Many policy-makers have expressed concern over the potential for moral hazard arising from the perceived asymmetry in their policies. Indeed, these concerns seem to be justified: an informal survey of major fund managers and chief economists, documented in the Report, reveals an almost unanimous belief that the Fed reacts more to a fall in equity prices than it does to a rise. It is entirely possible that this perception has arisen because market price changes are themselves asymmetric. If policy-makers react equally to sudden rises and falls in market prices, but if the markets only exhibit sudden falls, then their behaviour may seem asymmetric. The result of this is that investors may feel insured against big losses and are thus prepared to place one-sided bets, which itself can push equity prices even higher. One advantage of the Report's proposal is that central banks would have a policy rule that is explicitly symmetric, this may help reduce misperceptions among market participants. In addition, the Report examines whether central banks could use alternative policy instruments to influence asset price developments, namely margin requirements and policy signals. It concludes that neither of these alternatives are substitutes for traditional monetary policy in affecting asset prices.

Measuring and Forecasting Inflation

Much of the discussion on the inclusion of asset prices in the measurement of inflation centres on the idea that asset price movements give information about future inflation - i.e. asset prices will increase in anticipation of future price increases. The authors view this issue as entirely empirical: anything that can be used to improve inflation forecasts should be. In the context of this rationale, the weights assigned to asset prices should relate to their relative contribution to the inflation forecast. This necessitates constructing an index of overall inflation that reflects as much as possible the common trend in all prices (i.e. core inflation) and as little as possible the idiosyncratic behaviour of individual prices. The index should be a weighted average of all price changes in the economy, where the weights chosen are inversely proportional to the volatility of the price change of the factor in question.

In order to determine whether asset prices belong in an index based on this approach, the authors use a set of quarterly data for 12 OECD countries, which allows them to calculate the weights of housing and equities in a measure of core inflation for each country. The results are what would have been expected. Since stock prices are so much more volatile than consumer prices, their implied weight is very low, never exceeding 2.5%. But housing prices are less volatile and therefore carry more information about core inflation. Overall, the Report recommends that current inflation measures could benefit from an increased weight on housing, but that the current practice of ignoring equity price changes is justified.

In addition to concluding that (some) asset prices should be included in inflation measures, the Report also concludes that asset prices contain information about future inflation that can be incorporated into inflation forecasts. There exist a large number of empirical studies that show significant relationships between changes in asset prices and future inflation. These relationships are not identical across countries and may even change over time, but by performing out-of-sample forecast comparisons, the authors show that asset prices do provide useful information about future inflation in a number of countries and time periods.

This conclusion is confirmed by simulations carried out on models employed by central banks to prepare forecasts used as inputs in the policy decision process. For example, changes in equity prices have significant effects on both inflation and output in a model used by the Federal Reserve. Similarly, inflation and output are strongly influenced by the exchange rate and the price of housing in the Bank of England's macroeconometric model. Equity prices tend to have a greater impact in the US because of the larger capitalization of the US equity market and the larger share of household wealth represented by stocks, whereas exchange-rate changes are more important in countries where exports and imports make up a greater proportion of GNP. The recognition that asset prices can have strong effects on future inflation implies that central banks have an incentive to forecast asset prices themselves. While the authors recognize that this is not easy, they note that central banks possess a significant informational advantage over their fellow forecasters, in that they have a much better idea of their own reaction function and where interest rates are heading.

Geneva Report on the World Economy No. 2 'Asset Prices and Central Bank Policy' by Stephen G Cecchetti (Ohio State University), Hans Genberg (Graduate Institute of International Studies, Geneva), John Lipsky (Chase Manhattan Bank) and Sushil Wadhwani (Bank of England).

See www.cepr.org/pubs/books/p135.asp for summary and online ordering.

An audio interview with the authors of the Report is available at: www.cepr.org/press/audio/

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[1]*Bernanke, B and M. Gertler (1999) 'Monetary Policy and Asset Price Volatility', in New Challenges for Monetary Policy, Proceedings of the Symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Whole, Wyoming.*

[2]*Ball, L (1999) 'Policy Rules for Open Economies', in J Taylor, Monetary Policy Rules, University of Chicago Press, Chicago.*

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The IMF, Moral Hazard and Private Sector 'Bail-ins'

Since the Mexico crisis in 1994, a consensus has grown that IMF rescue packages are a major source of moral hazard. The moral hazard arises because financial assistance to countries hit by financial crises results in private-sector investors exercising less caution, in the belief that the Fund will always ensure they are repaid. This resulting excessive risk-taking not only weakens market discipline but also increases the likelihood of future crises. The failure of the Fund to resolve this problem provides ammunition for those who insist that the IMF is part of the problem rather than part of the solution. In addition, because the Fund is almost always paid back, these loans are effectively transfers from the taxpayers in the crisis countries to international investors; a situation that seems unacceptable on both equity and efficiency grounds.

The answer to these problems would seem to lie in ensuring private-sector participation in any future crisis: investors must bear at least some of the costs of crises if they are not to disregard the risks of lending altogether. Hence ensuring that investors are 'bailed-in', rather than 'bailed-out', is central to any strategy that seeks to limit moral hazard. Furthermore, the increase in the size of capital flows in emerging markets means that the Fund often does not have the resources to stabilize a country in financial crisis without the participation of the private sector. While there is agreement in principle that more private-sector participation is needed, how this is to be achieved in practice still remains contentious.

In a special issue of the ICMB/CEPR series of *Geneva Reports on the World Economy*, Barry Eichengreen considers two approaches to the private-sector bail-in problem: payment standstills and collective action clauses (CACs). He argues that the problem of private-sector participation is too deeply embedded in the structure of the markets to be solved by simply proposing changes in IMF lending practices. Any lasting solution will require changing the broader set of institutional arrangements governing international financial transactions.

Meltzer Commission and Ad Hoc Approaches

Eichengreen evaluates both existing and proposed approaches to combating moral hazard from this perspective. Perhaps the most controversial reforms are those suggested by the Meltzer Commission, which proposed that the Fund should lend more freely to countries encountering liquidity crises, but that it should avoid lending to countries experiencing crises that stemmed from flawed fundamentals. This distinction is difficult to draw: the Meltzer Commission suggested it could be achieved by having the Fund lend for short periods, at penalty rates and only to countries with strong banking systems, strong fiscal policies and a willingness to treat obligations to the Fund as senior to other liabilities. If banking systems and budgets are sound, the Commission's argument runs, there can be a presumption that the problem is one of liquidity rather than fundamentals and the Fund will subsequently receive requests for assistance only from illiquid countries, while those with inadequate long-term fundamentals will opt to adjust.

Eichengreen takes issue with this argument, noting that in practice the assumption that high interest rates on IMF loans will filter out those borrowers with serious structural problems is problematic. It assumes that officials have the same discount rates as society, despite the limited life expectancy of governments; an expectancy that is likely to be especially limited in the face of a crisis. If the burden of making the distinction is placed on the Fund, it is still highly questionable whether they will be able to identify the true cases. For example, even now, observers continue to disagree about the extent to which the Korean crisis (1997) was the result of liquidity or deeper structural problems. Pinpointing the cause of the crisis when it occurs without the benefit of three years of hindsight would be substantially more complicated. More fundamentally, this solution plays down the domestic consequences and systemic repercussions of having the IMF stand aside. Even if it makes economic sense, inaction is unlikely to be politically palatable so long as society's poorest bear the costs.

Eichengreen reaches the same conclusion regarding the Fund's current ad hoc approach to involving the private sector – i.e. making the extension of multilateral assistance conditional upon a prior commitment by the private sector to roll over maturing claims, provide new money, or restructure existing debts. To date, there have been four experiments with this approach: Pakistan, Ecuador, Romania and Ukraine – see Eichengreen and Ruehl, DP2427, for a more detailed analysis. In each case, the debt has been bonds and the debtors have been sovereigns. Each of these experiments has failed to varying degrees, again reflecting the lack of credibility in IMF commitments to stand aside under present institutional arrangements.

The problem with the ad hoc approach, notes Eichengreen, is that default and restructuring are so difficult under the present arrangements that it is simply not credible for the Fund to threaten to stand aside if the markets refuse to participate, especially if the country in question is 'systemically significant'. Changes in the framework for negotiations are required if the Fund's threat to withhold assistance is to be credible; such changes in contracts or institutions are therefore a prerequisite for making bail-ins work. The form that these changes should take depends on the diagnosis of the nature and causes of the crisis. Eichengreen distinguishes two circumstances under which crises arise – when there are fundamental problems with a country's economic policies and performance (i.e. first generation crises) and when investors panic (i.e. second generation crises) – and proposes two solutions tailored to address each type of crisis.

Investor Panic and Payment Standstills

Theoretical models of investor panic are driven by the assumption of asymmetric information. Not only is information incomplete, but assessments of that information vary across investors. In such situations, individual investors may base their inferences on the actions of other, potentially better-informed investors. This can lead them to scramble out of a market when they see others doing likewise. Asymmetric information can thus encourage herding, which amplifies market volatility. An extreme form of the phenomenon is investor panic; dispelling a panic requires a cooling-off period for investors to collect their wits, for the authorities to signal their commitment to sound and stable policies, and for calm to return to the markets.

Eichengreen argues that a payment standstill can create this breathing space. It would give creditors time to reflect and agree on mutually beneficial actions, allow the authorities to communicate their commitment to policies that maintain consumer confidence, and ensure the country's finances were not undermined by the attempts of hedge funds and others to seize assets. Disruption to the financial system and the recession induced by the crisis would be moderated and, insofar as economic activity was stabilized, payments to the creditors could be greater than if investors engaged in a disruptive race to grab assets. The appeal of this idea stems from the analogy with national bankruptcy codes, which in many cases include standstill provisions designed to prevent creditors from engaging in such a race. With the commercialization and securitization of international lending this analogy acquires additional force.

The problem is that countries are reluctant to declare a standstill unilaterally, as this tends to have large costs in terms of reputation and subsequently in the price and availability of external finance. This creates the argument for the IMF (or a related body) to sanction or endorse the policy. Formally, the IMF's Articles of Agreement could be amended to give the Fund the power to impose the standstill, and creditor countries could pass legislation designed to give the amendment force in their courts. Less formally, the IMF's Executive Directors could simply declare that they were prepared to voice their approval of a crisis country's decision to impose capital controls and to lend into sovereign arrears under appropriate conditions (which is not very different from the status quo). The first, more formal, approach is less tractable and realistic politically, but the second would not shelter the country from disruptive legal action by its creditors.

Critics of this policy contend that by making it harder for investors to withdraw their money, a payment standstill could similarly render them more reluctant to commit their funds in the first place. In particular, they argue that the IMF does not have powers akin to a bankruptcy judge, who can replace the managers of a company in receivership, reorganize its financial affairs and impose terms on uncooperative creditors. Yet there are arguments pointing in the other direction: an officially sanctioned standstill may avert unnecessary crises by halting investor panics, which in turn could reduce borrowing costs. Which effect dominates is an empirical question.

Empirical analysis of the standstill proposal is difficult as no such policy is in place. Hence Eichengreen uses the features of domestic legislation for national bankruptcy and insolvency laws in emerging markets, which include provisions for payment standstills, to infer the likely effect of an IMF-sanctioned measure. Using data on over 2,000 international bonds (sovereign and corporate) from 24 emerging-market countries, his results suggest that countries with domestic standstill provisions are in fact able to borrow for less. Of course, an international standstill would differ from its domestic counterpart in that the IMF would not have the power to replace a government in the same way that a court can replace the management of a corporation. This raises the danger that an international standstill on sovereign obligations would increase moral hazard. While this danger cannot be dismissed, the results presented in the Report do not suggest that the favourable impact of the standstill in fact hinges on the possession of these powers.

Flawed Policies and Collective Action Clauses

Investor panic is not the only reason crises occur. Far more important in the mainstream view are problems with economic policy and performance that prevent a country from continuing to service its debts. If fundamental

Health and Labour Economics

A CEPR/ESRC Workshop on 'Health and Labour Economics' was held in London on 26 June 2000. Organized by Simon Burgess (University of Bristol and CEPR), Jonathan Haskel (Queen Mary and Westfield College, London, and CEPR) and Christian Dustmann (University College London and CEPR), the programme contained the following papers:

'Maternal Employment, Child Care and Childhood Obesity', Patricia Anderson (Dartmouth College), Kristin F Butcher (MacArthur Foundation, Chicago) and Phillip B Levine (Wellesely College)

'Health and the Work of the Elderly', Marcel Kerkhofs (OSA, Tilburg University) and Maarten Lindeboom (Free University, Amsterdam)

'Gender, Race, Pay and Promotion in the British Nursing Profession: Estimation of a Generalised Ordered Probit Model', Stephen Pudney (University of Leicester) and Michael Shields (University of Leicester)

'Smoking and Health over the Life Cycle: Theory and Evidence', Jerome Adda (University College London) and Valerie Lechene (University of Oxford)

'Employment, Disability and Work Incapacity', Owen O'Donnell (University of Kent)

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problems are the main cause of crises, then the idea of a standstill designed to create temporary breathing space is less appealing. If the debtor government is not committed to the policy adjustments needed to rectify the crisis, then an IMF-sanctioned standstill that puts off the inevitable restructuring will only worsen the underlying problem. The appropriate policy in this case is one that is designed to facilitate a restructuring of the debts and put the debtor back on a solid footing.

In practice, this has proved extremely difficult. Most emerging-market bonds are bearer bonds: their owners are not registered with the debtor or the underwriter. Furthermore, American-style instruments typically require the unanimous consent of the bondholders for any restructuring. The answer to this problem, claims Eichengreen, is the inclusion of collective action clauses (CACs) in the bond contracts. CACs refer to sharing clauses, which require individual creditors to share with other bondholders any amount recovered from the debtors; majority-voting clauses, which enable decisions on debt restructuring to be taken by a (qualified) majority of creditors; and collective-representation clauses, which make provisions for a bondholders' meeting and specify who speaks for the bondholders.

Majority-voting and sharing clauses would discourage maverick creditors (including 'vulture funds') from resorting to lawsuits and erecting other obstacles to a settlement beneficial to the debtor and the majority of creditors. Clauses that specify who represents the bondholders and make provision for a bondholders' assembly would allow orderly solutions to be reached. The introduction of such clauses would change the pay-offs in the game between creditors, debtors and the IMF. As with the standstill approach, the dilemma for reformers lies in whether these clauses will raise borrowing costs. Critics argue that CACs would weaken the bonding role of debt, which would disrupt credit-market access and raise borrowing costs – essentially replacing one kind of moral hazard for another. Yet the provision for orderly restructuring would also make emerging-market debt more attractive by minimizing the number of disputes and unproductive negotiations. Hence the impact on borrowing costs cuts both ways, and the question of which effect dominates is, again, an empirical one.

The Report documents research by Eichengreen and Mody, who compare the borrowing costs of equivalent bonds issued under UK and US law – bonds issued under UK law typically include CAC-style provisions, whereas those governed by US law do not. The results indicate that the type of governing law has a negligible impact on borrowing costs. Yet this small impact disguises different effects of borrowers with different credit ratings: CACs lower borrowing costs for the most creditworthy issuers and raise these costs for the least creditworthy. Eichengreen and Mody conjecture that for the less creditworthy borrowers the advantages of CACs are offset by the moral hazard and additional default premium that they induce. These different effects suggest that CACs should become more attractive as emerging markets improve their creditworthiness.

Of course, no emerging-market borrower will unilaterally include CACs in their bond contracts as their inclusion can be viewed as a sign they will be used. But if the inclusion of CACs were unanimous, brought about by the requirement of the regulatory authorities, then there would be no such stigma. According to Eichengreen, the inclusion of CACs as one of the factors needed to qualify for the IMF's Contingent Credit Line is a step in the right direction, but more needs to be done – only about a third of emerging market debt issued in the last ten years was subject to UK law. In addition, including CACs in all future bond contracts does not address the problems created by the existing stock

Transition Economics and the Chinese Economy

A joint CEPR/ESRC 'Transition Economics and the Chinese Economy' Conference was held in Edinburgh on 24/25 August 2000. Organized by Mark Schaffer (CERT, Heriot-Watt University, Edinburgh) and Haiyan Song (University of Surrey), the programme contained the following papers:

'Trade Policy during the Transition: Lessons from the 1990s', Paul Hare (CERT, Heriot-Watt University, Edinburgh)

'Openness and Economic Performance: A Comparative Study of China and the Asian NIEs', Shujie Yao (University of Portsmouth) and Zongyi Zhang (University of Portsmouth)

'Comparative Performance of Foreign and Local Firms in Chinese Industry', Xiaming Liu (Aston Business School)

'Competition and Enterprise Performance in Transition Economies: Evidence from a Cross-country Survey', Wendy Carlin (University College London), Steven Fries (EBRD), Mark Schaffer (CERT, Heriot-Watt University, Edinburgh) and Paul Seabright (University of Cambridge and CEPR)

'The Hazard of Chinese Enterprises under Restructuring', Qing Gong Yang (University of Surrey)

'Coping with Financial Sector Reform. What Have We Learnt?', Parminder Bahra (University of Loughborough), Christopher J Green (University of Loughborough) and Victor Murinde (University of Birmingham)

'The Relation between Policies and Growth in Transition Countries', David Barlow (University of Newcastle) and Roxana Radulescu (University of Newcastle)

'How the Chinese Rural Workers Choose Occupation: A Case Study of Nine Villages in North-East China', Qingjie Xia (University of Bath)

'Transition Strategies: The Second Round of Debate', Wing Thye Woo (University of California at Davis)

'Reform and Opening: Sequencing or Parallel Partial Changing', Gang Fan (China Reform Foundation, Beijing)

'Defying the Odds - Initial Conditions, Reforms and Growth in the First Decade of Transition', Elisabetta Falcetti (London School of Economics), Martin Raiser (EBRD) and Peter Sanfey (EBRD)

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of bonds, some of which have as long as 20 years to maturity. To address this difficulty, Eichengreen recommends a voluntary exchange of old for new bonds, subsidized, where necessary, by the international financial institutions.

The evidence presented in the Report does not support the presumption that CACs and internationally sanctioned standstills would raise borrowing costs. Which of these initiatives is given higher priority therefore depends on the dominant cause of crises. Echoing the majority view, Eichengreen states that most crises are caused by fundamental problems. Indeed, in modern models of speculative attacks, the possibility of multiple equilibria arises only when fundamentals deteriorate sufficiently to place the country in a zone of vulnerability. Even the Korean crisis, the favourite case of proponents of the investor-panic view, can be interpreted as being caused by fundamentals. Furthermore, there are many political and practical problems involved with implementing an internationally sanctioned payment standstill. These judgements indicate that collective action clauses should be the priority for those seeking to strengthen the international financial architecture.

Geneva Reports on the World Economy Special Report No. 1 'Can the Moral Hazard Caused by IMF Bailouts be Reduced' by Barry Eichengreen (University of California, Berkeley, and CEPR) – **www.cepr.org/pubs/books/p139.asp**

DP2343: 'Would Collective Action Clauses Raise Borrowing Costs?' by Barry Eichengreen (University of California, Berkeley, and CEPR) and Ashoka Mody (The World Bank) – **www.cepr.org/pubs/dps/dp2343.asp**

DP2427: 'The Bail-In Problem: Systematic Goals, Ad Hoc Means' by Barry Eichengreen (University of California, Berkeley, and CEPR) and Christof Ruehl (The World Bank) – **www.cepr.org/pubs/dps/dp2427.asp**

EMU and Portfolio Adjustment

Development in financial markets is an ongoing process. In European financial markets the pressures arise from several sources: new technologies (telecommunications and computing), repackaging assets (securitization), the demand for pension reform (demographic change) and changing regulations. The euro represents just one further shock to which investors have to respond. The elimination of currency risk potentially creates a level playing field in that funding costs are becoming more transparent. This enhances competition within the financial industry and introduces new investment strategies.

The fifth CEPR *Policy Paper* examines the factors influencing the portfolio reallocation process following the introduction of the euro and identifies the remaining barriers to cross-border transactions. The *Policy Paper* thus offers a progress report on the integration of European securities markets. Aside from currency risk, a range of factors – such as expected future inflation and default risk – affect portfolio allocation and the authors recognise the difficulties in identifying these risks. Their empirical analysis focuses on three broad categories of possible portfolio allocation: domestic versus international investment, debt versus equity investment, and public- versus private-debt investment.

European Security Markets

The 'home bias' effect (i.e. the observed lack of international diversification of actual portfolios relative to the portfolio which the standard theory would suggest as optimal) is central to any analysis of the impact of EMU on portfolio structure. The percentage of total financial wealth invested in foreign assets has increased over the last ten years, but the level of diversification remains quite low – e.g. UK (24%), the Netherlands, Germany and Italy (17%), France (12%), and Spain and the US (5%). Although the home bias is pervasive throughout Europe, the Report notes that its extent varies according to investor types. In addition, the benefit of international diversification depends heavily on the kinds of assets agents hold: it is higher for equities, less so for bonds and subject to significant practical difficulties in the case of other assets such as real estate.

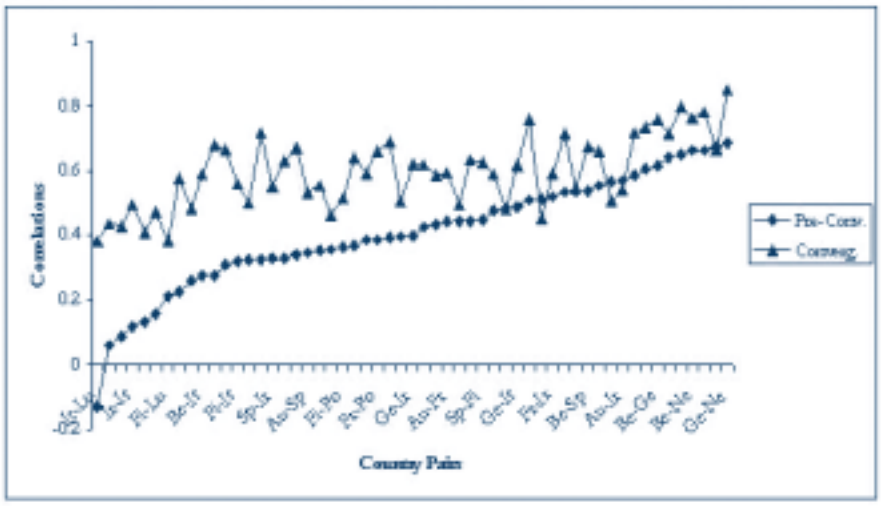
The Report reviews the current composition of financial wealth for five European countries: France, Italy, the Netherlands, Spain and the UK. Households are found to play a major role as they hold between 40% (in the UK) and more than 54% (in Italy) of financial assets. Banks are the second biggest agent, holding between 31% (in Italy) and 59% (in the Netherlands). However, in the last decade the role of households and banks has declined in favour of institutional investors, who hold far more of their wealth in foreign assets. In the case of equities, if banks and households are excluded, the level of diversification is close to what portfolio theory would have predicted for some types of institutional investor in Italy, the Netherlands and the UK. The results also show that investors who own a higher share of equities tend to invest more in foreign assets. This analysis leads the authors to conjecture that the increasing importance of institutional investors and the growing equity culture will lead to the erosion of the home bias effect.

The transaction costs associated with investing across national borders also provide a barrier to international diversification. For example, cross-border payments and securities settlements are still substantially more expensive than domestic ones. Broadly speaking, cross-border transactions seem to cost 10 to 20 times more than domestic transactions: a domestic transaction costs from $1 to $5; a transaction between two European markets costs $10 to $50. Since Europe has a fragmented banking system and the ECB has only limited authority in this area, the authors envisage some difficulties in achieving a satisfactory payments system without public intervention.

The authors predict the greatest changes will take place in the corporate bond market. Since the launch of the euro, European pension, insurance and mutual funds have joined banks as significant buyers of corporate bonds. This in part reflects the historically low yields available on European government bonds and the need of investors to find higher-yielding alternatives. Yet the market for private-sector debt is still relatively small compared with the volume of the public-sector market. This reflects the extensive use of bank loans, as opposed to capital markets, by European firms. The authors argue, however, that the traditionally close relationship between European companies and their principal banks is not likely to disappear quickly. Nevertheless, the average credit rating of companies issuing bonds has fallen sharply since the launch of the euro, reflecting the increasing depth of the European market: in 1998 22% of European corporate bonds had a credit rating of A, by 1999 this had risen to 46%. Previously AAA and AA-rated quasi-sovereign and financial bonds dominated Europe's debt markets.

Although the market is still in its infancy, several features have emerged. First, the market is sector specific: half of the high-yield bonds issued in 1999 stem from the cable and telecommunications sector. As a result, investors seeking high-yield returns in the European market are unable to fully

diversify. Second, spreads between junk (BB rated) bonds and a risk-free (AAA) bond are higher in Europe than in the US. In many cases, the difference is more than 100 basis points. And third, growth in the European corporate bond market has been uneven: the corporate bond market for Germany, France, Spain and Italy grew 78.4% over the first three quarters of 1999, compared with only 9.2% for the remaining seven EMU countries.



Evolution of country pair correlations before and during convergence

The emergence of globalization and virtual exchanges means that stock exchanges are now less about having a physical presence, buildings, traders, history or a culture, and more about providing attractive services to a footloose clientele. Electronic communications networks (ECNs) represent the most serious challenge to traditional exchanges; they can settle transactions more efficiently in terms of cost and time and tailor themselves more readily to the demands of the individual investors. Currently, ECNs handle between 25% and 30% of the volume on the Nasdaq and 4% of the NYSE. Their future success depends on the liquidity generated from online trading, which settles a large share of trades with ECNs.

The Impact of EMU

Portfolio theory states that diversification is valuable precisely because there is imperfect correlation between the returns on different assets. In the context of the euro zone, international diversification is performance improving to the extent that national stock markets are imperfectly correlated. The euro has at least two possible implications in this respect. First, it is necessarily equivalent to the disappearance of currency risk, and second, it is part of a broader set of structural changes likely to alter the traditional forces underlying asset returns and thus the relevant correlations between stock indices. To shed light on these issues and their implications for portfolio allocation decisions, the Report focuses on how the euro has affected the characteristics of the variance-covariance matrix of asset returns within the euro area.

The Report uses data on national stock market indices as well as specific sector indices for the 11 countries in the euro area for the period 1990-99. The data is split into two periods: a pre-convergence period, defined as preceding the Maastricht Treaty of January 1995, and a convergence period after it. The authors then calculate both correlation and variance-covariance matrices for all possible country pairs in the euro area. The above graph illustrates the pre-convergence and convergence correlations. Aside from a few exceptions, every convergence period correlation is higher than its pre-convergence counterpart. The formal Jenrich tests confirm these differences as statistically significant.

Of course, this pattern of increasing return correlations is not necessarily caused by or even associated with the process of EMU; it could merely be a reflection of a broader worldwide trend, possibly as a consequence of increasingly mobile international capital flows. Evidence on this question is provided in the Report, with the evolution of the return correlations between stock indices representing the major regions of the world. The results show that while there is some increase in the level of correlation across the world, the increase in the correlations was much more pronounced in the case of euro area countries. The global average for region pair correlations was 0.454 during the pre-convergence period and 0.585 during the convergence period; whereas the average country pair correlation for the euro area was 0.333 for the pre-convergence period and 0.585 for the convergence period. The result of increasing country-to-country correlations is robust to both changes in the date for splitting the pre-convergence and convergence periods and for neutralizing the currency fluctuations.

In the euro area, the rise in the correlation of countries' stock market returns were accompanied by an increase in the standard deviations of returns. It is not clear whether

Corporate Finance, Market Microstructure and Asset Prices

A Caixa Manresa/CEPR/EER/IAE Conference on Finance was held in Manresa, Spain, on 22/23 September 2000. Organized by Bruno Biais (Université des Sciences Sociales de Toulouse and CEPR) and Xavier Vives (Institut d'Anàlisi Econòmica (CSIC), Barcelona, and CEPR), the programme featured the following papers:

'Inducing Liquidities in Thin Financial Markets through Combined-Value Mechanisms', Peter Bossaerts (California Institute of Technology and CEPR), Leslie Fine (California Institute of Technology) and John Ledyard (California Institute of Technology)

'The 'Spark Spread': An Equilibrium Model of Cross-Commodity Price Relationships in Electricity', Bryan R Routledge (Carnegie Mellon University), Duane J Seppi (Carnegie Mellon University) and Chester S Spatt (Carnegie Mellon University)

'Don't Put All Your Eggs in One Basket? Diversification and Specialization in Lending', Andrew Winton (University of Minnesota)

'Deposit Insurance and Moral Hazard: Does the Counterfactual Matter?', Reint Gropp (European Central Bank) and Jukka Vesala (European Central Bank)

'Pre-Emptive Policy for Systemic Banking Crises', Enrico C Perotti (Universiteit van Amsterdam and CEPR) and Javier Suárez (CEMFI, Madrid, and CEPR)

'Insider Trading Legislation and Corporate Governance', Ernst Maug (Humboldt-Universität zu Berlin)

'Trade Credit Chains and Liquidity Supply', Loránd Ambrus-Lakatos (Central European University, Budapest, and CEPR) and Ulrich Hege (CentER, Tilburg University, and CEPR)

'Excessive Continuation and Dynamic Agency Costs of Debt', Jean-Paul Décamps (Université des Sciences Sociales de Toulouse) and Antoine Faure-Grimaud (London School of Economics and CEPR)

'Inventory Effects and Trading Horizons', Giovanni Cespa (Ente Einaudi and Universitat Pompeu Fabra, Barcelona)

'Intraday Trade in Dealership Markets', Dan Bernhardt (University of Illinois) and Eric Hughson (University of Colorado)

A full report of this Workshop is available at **www.cepr.org/pubs/bulletin/meets/561.htm**

The above papers can be downloaded from **www.cepr.org/meets/wkcn/5/561/papers/**

this increase in the level of risk has any causal relationship with EMU, but it is interesting to note that there is some presumption that return correlations increase during periods of high volatility – e.g. see the contagion literature. The increase in the standard deviations in returns may in this sense explain part of the common increase in correlations both in the euro area and elsewhere in the developed world.

The authors conclude from this analysis that the conditions under which portfolio investors diversify across the euro area equity markets have changed in the 1990s. With an increased degree of correlation between national stock indices, diversification opportunities have been significantly reduced. It seems difficult not to attribute this to the process of economic and monetary integration. Within this process the disappearance of currency risk seems to have been less important to investors than the convergence of economic structures or the homogenization of economic shocks across the EU. A similar but less pronounced process of increasing correlations among country or regional indices seems to be at work elsewhere in the world, suggesting that EMU is not the only factor at work.

In order to gain further insights into the process, the authors repeat the above analyses using sector indices for the euro area economies – i.e. they examine in each euro area member equity returns for certain types of industry. Two levels of disaggregation are considered: four sectors and ten sectors per country. Although not as pronounced as the country analyses, the sectoral analyses exhibit the same pattern: the sectoral indices in individual countries are more correlated with the same sectors in other countries. What implications does this have for the portfolio manager? The results suggest that the advent of the euro means the end of pure country allocation strategies within Europe: the increased correlation of stock returns across countries implies that international diversification across the euro area on the basis of a pure country allocation model has increasingly smaller benefits.

Europe's Role in the Global Economy

A joint Bank of Israel/CEPR/Eitan Berglas School of Economics Workshop on 'The Analysis of International Capital Markets: Understanding Europe's Role in the Global Economy' was held in Tel Aviv on 26/27 November 2000. Organized by Giancarlo Corsetti (Yale University, Università di Bologna and CEPR), Philip Lane (Trinity College Dublin and CEPR), Leonardo Leiderman (Deutsche Bank and CEPR) and Assaf Razin (Eitan Berglas School of Economics, Tel Aviv University, and CEPR), the programme contained the following papers:

'Balance Sheet Effects, Bailout Guarantees and Financial Crises', Martin Schneider (University of Rochester) and Aaron Tornell (University of California, Los Angeles)

'Competition and Prices in a Dynamic Trade Model with Comparative Advantage', Morten O Ravn (London Business School and CEPR)

'Currency Unions and International Integration', Charles Engel (University of Wisconsin) and Andrew K Rose (University of California, Berkeley, and CEPR)

'Interdependent Banking and Currency Crisis in a Model of Self-Fulfilling Beliefs', Itay Goldstein (Princeton University)

'International Tax Coordination: Regionalism versus Globalism', Peter Birch Sørensen (University of Copenhagen)

'Withholding Taxes or Information Exchange: The Taxation of International Interest Flows', Harry Huizinga (Tilburg University, European Commission and CEPR) and Søren Bo Nielsen (Copenhagen Business School and CEPR)

'Globalization and Capital Markets', Maurice Obstfeld (University of California, Berkeley, and CEPR) and Alan M Taylor (University of California, Davis)

'Capital Flows, Exchange Rates and Asset Prices', Harald Hau (ESSEC, Cergy-Pontoise, and CEPR) and Hélène Rey (Princeton University and CEPR)

The above papers can be downloaded from **www.cepr.org/meets/wkcn/1/1471/papers/**

These results also have implications for the 'home bias', the propensity of most investors to invest disproportionately in their home market. They suggest that the changing economic structures within Europe and the disappearance of currency risks may have actually lowered the cost of the home bias within the euro area. This intuition is confirmed if the alternative to staying at home is to diversify using a pure country allocation model. In some cases, the cost of the home bias (measured in this way) has decreased to zero. Further analysis by the authors, however, shows that diversification across both countries and sectors remains a far superior investment strategy and that, measured against this alternative strategy, the cost of the home bias continues to be significant in Europe.

In sum, this study shows that for asset returns, the importance of EMU may come from the evolving economic structures that affect return correlations rather than the mechanical effect associated with the disappearance of currency risk. This conclusion would confirm the prognosis of those who have proclaimed that the euro would be only a minor event for investors while also asserting that currency risk is not the explanation for the home bias. In spite of the theoretical debate, the report's analyses suggest that the cost of the home bias effect will remain high and may even increase, and that the traditional country allocation model should be scrapped with appropriate diversification proceeding along sectoral as well as geographic lines. These are non-trivial consequences for European investors.

CEPR Policy Paper No. 5 'EMU and Portfolio Adjustment' by Kpate Adjaouté (Université de Lausanne), Laura Bottazzi (IGIER, Università Bocconi, Milano, and CEPR), Jean-Pierre Danthine (Université de Lausanne and CEPR), Andreas Fischer (Swiss National Bank and CEPR), Rony Hamaui (Banca Commerciale Italiana), Richard Portes (London Business School and CEPR) and Mike Wickens (University of York and CEPR).

See **www.cepr.org/pubs/books/pp5.asp** *for summary and online ordering.*

An audio interview with Laura Bottazzi and Jean-Pierre Danthinen on the above paper is available at: ***www.cepr.org/press/audio/***

One Money, Three and a Half Times as Much Trade

Question: what is the effect of a common currency on international trade? Answer: large. So began Andrew Rose's lunchtime meeting, held in London on 6 October 2000. Rose had used a large cross-country panel data set in order to show that countries with the same currency trade over three times more with each other than comparable countries with their own currencies.

The increase in trade stemming from a common currency is one of the few undisputed gains from EMU: substituting a single currency for several national ones eliminates exchange rate volatility and reduces the transaction costs of trade within the group of countries. Yet most commentators (and most economists?) believe that EMU's effect on trade will be reasonably small – this is certainly the view of commentators in *The FT* and *The Economist*. First, exchange rate volatility was low before EMU and could be inexpensively hedged with the use of forward contracts and derivatives. And second, most economists assume that a common currency is equivalent to reducing exchange rate volatility to zero. Although, intuitively at least, the elimination of currency variations should tend to increase trade, the empirical literature on this subject has not found a consistent relationship – even in those papers that do find a negative relationship between volatility and trade, it is generally weak.

Yet, Rose argued, a single currency and zero exchange rate volatility are not synonymous: sharing a common currency is a much more serious and durable commitment than a fixed exchange rate. So it is surprising that until now this issue has not been addressed. It is still too early to assess the effect on trade for the EMU 11, but there is no reason to rely on European before and after data to quantify the consequences of a shared currency; the world is full of currency unions. In addition to the EMU 11, 91 'countries' are currently in some kind of official common currency scheme – 32 of these are official dependencies or territories. Hence Rose exploits cross-sectional variation, using evidence across countries, to trace the effects of both currency unions and exchange rate volatility.

Rose used the gravity model of international trade (one of the few empirical models in economics that works consistently well) to isolate the individual determinants of the level of bilateral trade between two countries. The equation is estimated using a data set with 33,903 bilateral trade observations from 186 'countries' for five different years – 1970, 1975, 1980, 1985, 1990. 330 of the observations involve two countries using the same currency. The dependent variable is bilateral trade flows. The independent variables are GDP, GDP per capita, distance between countries, and dummy variables for a common language, a land border, membership of a regional trade agreement and past colonial ties. In addition to these, Rose added the standard deviation of the percentage change in the bilateral nominal exchange rate and a dummy variable for a common currency.

Estimating this equation with ordinary least squares gives reasonable results. Higher GDP and GDP per capita increase trade, whereas the greater the distance between the two countries reduces trade. These three effects are usually found in traditional gravity models: Rose's estimates are similar in magnitude and statistically significant. Sharing a language, a land border, a regional trade agreement or a shared colonial past also increases trade by economically and statistically significant amounts. Yet above and beyond all of these real factors, Rose finds compelling evidence that the international monetary regime matters.

Holding all other factors constant, countries with a common currency trade much more than comparable countries with different currencies. This effect is economically large and statistically significant: the estimated parameter for the common currency dummy variable is 3.35 – i.e. countries with the same currency trade approximately three and a half times as much with each other as countries with different currencies. Exchange rate volatility is found to exert a small negative effect on trade. Specifically, reducing exchange rate volatility from its average level to zero would increase trade by approximately 13%. Hence Rose's estimates seem to distinguish a currency union from zero exchange rate volatility quite markedly: entering a currency union delivers an effect approximately 25 times larger than eliminating exchange rate movements.

The results of the model are robust. Rose had estimated the equation over 60 different ways, using different samples, different ways of measuring the exchange rate and currency

union variables, different estimation methods and different specifications of the gravity model. All of these robustness checks confirm that the general results do not depend on the exact way the equation is specified or estimated. Rose also conducted a robustness check that allowed exchange rate volatility to be modelled as an endogenous variable, since countries may try to reduce exchange rate volatility in order to stimulate trade. Even after allowing for this feedback, the strong effect of currency unions on trade remains.

Rose conceded that even he had found the scale of his results surprising. Yet, he argued, when viewed in the context of trade within countries rather than between countries, the result seems far more feasible. Trade within countries is huge compared with trade between countries. McCallum[1] (1995) found that a typical Canadian province trades 22 times more with other provinces than with US states of similar size and distance. Countries have a number of important factors that encourage commercial trade, such as a common legal system, common cultural norms, common history, in addition to a common currency. In this sense, a tripling of trade from a currency union alone seems plausible.

Rose had emphasized throughout that to concentrate on the scale of the result was missing the point. Even if his model had overestimated the effects by a factor of seven, a 50% increase in trade is still highly significant. Recent estimates suggest that increasing the ratio of trade to GDP by one percentage point raises income per person by 0.5-2%. Given potential gains of this magnitude, trade need not triple for a common currency to induce large welfare gains.

Rose concluded that if a common currency does substantially increase trade, then there will be important repercussions. There may be an increase in trade disputes and frictions simply because the volume of international trade rises. These will certainly occur inside Europe because of EMU (as competitive pressures lead special interests to cry out for protectionism) and may also occur between Europe and the rest of the world. Although a common currency can create trade, it may also divert trade away from low-cost non-European producers to less efficient European ones. As a result, there may be pressures to maintain, or even increase, the social safety net both in and out of Europe. Furthermore, an increase in trade could not only increase the benefits of a currency union but may also reduce its costs: Rose argued that, historically, closer international trade between countries has been associated with more synchronized business cycles, which will reduce the incidence of asymmetric shocks.

The decision to enter a currency union is based on many criteria, nearly all of which Rose had ignored. Still, the idea that trade increases because of a single currency is far from contentious. The magnitude of the increase is, however, highly contentious. The vast majority of economists believe the effect to be small, based on arguments involving the effect of eliminating exchange rate volatility. The case for a common currency is weaker accordingly. Rose had contended in his talk that such scepticism was unwarranted, in that a potent argument in favour of currency unions had been understated in the literature. Even after taking a number of other considerations into account, countries that share a common currency engage in substantially higher international trade, he said.

Discussion Paper No. 2329: 'One Money, One Market: Estimating the Effect of Common Currencies on Trade' by Andrew K Rose (University of California, Berkeley, and CEPR).

See www.cepr.org/pubs/dps/dp2329.asp for abstract and online ordering.

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[1]*McCallum, J (1995) 'National Borders Matter: Canada-US Regional Trade Patterns', American Economic Review 85-3.*

Empirical Studies of Innovation

The annual CEPR/WDI 'International Conference in Transition Economics' took place in Moscow on 2/5 July 2000. Held in conjunction with the European Bank for Reconstruction and Development (EBRD), the Economics Education and Research Consortium, the New Economic School and the Russian-European Centre for Economic Policy (RECEP), the Conference was Organized by Erik Berglöf (SITE, Stockholm School of Economics, RECEP and CEPR), Gérard Roland (ECARES, Université Libre de Bruxelles, and CEPR) and Jan Svejnar (CERGE-EI, Prague, CEPR and WDI). Topics included 'Corporate Governance', 'Law and Transition', 'State Governance', 'Foreign Direct Investment', 'Wage Differentials', 'Income Distribution', 'Privatization', 'The Virtual Economy', 'Barter in Transition', and 'A Strategy for Russia's Long-Term Economic Development'. A total of 43 papers were presented.

The Conference papers can be downloaded from **www.cepr.org/meets/wkcn/7/745/papers/**

Ireland in EMU

Ireland's startling rate of economic growth has not faltered since it entered EMU. But soaring property prices, accelerating real wages and consumer price inflation (CPI) running at 6.2% have lead some to view Ireland as a runaway economy escaping from the ECB's goal of price level stability. At a lunchtime meeting held in London on 13 October 2000, Patrick Honohan argued that the focus on CPI inflation is fundamentally misplaced, as the surge in inflation is an equilibrium response to the euro's movements on the forex market. He reviewed the sources of Ireland's economic growth, the role of EMU in accelerating it and speculated on how the current boom is likely to end.

After decades of underperformance since the country's independence, Ireland's current expansion has been uninterrupted for the last 12 years. Output growth accelerated sharply after 1993, and over the last five years GDP growth rates have fluctuated between 7% and 11%. In fact Irish GDP per capita is now higher than the UK's. Honohan argued that these often quoted GDP figures were, however, highly misleading as a measure of aggregate growth and tended to exaggerate the productivity element of the expansion. He described Ireland as the '*entrepôt economy*', in that Ireland's relatively low corporation tax encourages multinationals to announce profits in Ireland rather than elsewhere. Even GNP figures give an exaggerated impression of the growth in Irish living standards; the short product-cycle of many of the high-tech exports means there is a systematic tendency for the terms of trade to deteriorate for Ireland. A more accurate measure, claimed Honohan, is Gross National Disposable Income adjusted for terms of trade, which takes account of this problem. Over the 1990s, this grew by an average of 5.4%, compared with 6.7% for GDP.

Honohan stressed that the main characteristic of the expansion had been employment growth not productivity growth – productivity growth has occurred but it has been healthy rather than miraculous. The last 12 years have seen unemployment fall from over 16% to its present level of 3.8%, a level unknown for a generation and essentially corresponding to conventional concepts of full employment. Even the long-term unemployed have fallen to under 2% of the total workforce. As a result, measures of poverty have declined from a range of 9-15% in 1994 to 6-8% in 1998.

Sources of Expansion

No single explanation can account for Ireland's expansion, and Honohan believed it essential to think in terms of factors occurring at three different frequencies: a series of short-term boosts, which together with a medium-term change in public attitude had been superimposed on longer-term foundations. The short-term effects began with the defensive devaluation of the punt in mid-1986, responding to a phase of sterling weakness, which was turned into a valuable competitive edge by the subsequent strengthening of sterling during the Lawson boom. At roughly the same time, world interest rates were falling, a crucial boost for a heavily over-indebted public sector. And the doubling of the EU structural funds came at a crucial moment, allowing many urgently needed public infrastructure programmes to move forward. The EU funds peaked in 1993 at about 3% of GDP and have continued to fall since. As the fiscal position became sustainable, internal and external confidence was boosted. This may explain the surge in inward investment from the US that kicked in just as EU funds were winding down. It is not the actual investment that makes the difference, but the transfer of technology and working practices, noted Honohan.

Honohan believed there had been a substantial change in attitudes, which owed much to a shared realization that the way forward had to be built on a realistic self-help approach. This realization extended not only to the new generation of trade union and business leaders, coming together in restrained pay agreements that undoubtedly contributed to the climate for recovery, but also to the individual decisions made by young labour market entrants, who adopted a more pro-active approach in the labour market. The key long-term factors were the steady growth in human capital, dating back to the introduction of free secondary education in the 1960s, and the high birth rate, which delivered a steady supply of labour market entrants. Finally, Honohan argued that the increased demand for new technology products favoured Ireland's circumstances: 'computer-based work is more forgiving of imprecision and a casual approach, more rewarding of impatience and impetuosity', he said.

The Role of EMU

The question of whether EMU was a suitable regime for Ireland had been discussed endlessly in economic terms before the decision was made – on political grounds. Evidently the euro does not offer an ideal peg. A very low share of Ireland's transactions (less than 30%) are with the euro area. Euroland accounts for a much higher proportion (about 40%) of Ireland's goods exports than of imports (about 20%). About 50% of goods imports come from the UK and US and reliance on imports from these hard currency sources has had an impact on CPI inflation.

Still, Honohan highlighted how EMU had delivered substantial changes to Ireland. It was assumed that the euro would mean a vulnerability to movements in sterling. A fall in sterling was the principal risk envisaged, but the reality has been the opposite. Lower interest rates were also expected as a consequence of EMU, and this is one area where the single currency has delivered – real interest rates are currently negative. These lower interest rates must surely have fuelled the property boom, but longer term they are beneficial, as the former exchange rate risk premium put a wedge between the cost of capital and the expected rate of return to savers.

Ireland has proved to be an EMU outlier, its boom contrasting with the more subdued conditions in euroland as a whole. The loss of autonomy over monetary policy can be regretted, but Honohan noted that the current situation of the ECB essentially ignoring Ireland when setting interest rates is not too dissimilar to the previous administration, the Central Bank of Ireland, which itself often paid little attention to the Irish economy when setting rates. Lower financial transaction costs were expected, but they have not arrived. Retail money transmission charges were, Honohan argued, still extraordinarily high.

The Current Boom

Most current commentary focuses on the relatively sharp increase in CPI inflation to 6.2%. This is more than three times the ECB's ceiling, but Honohan stressed that it was important to realize inflation has been driven primarily by the fall in the euro. Imports from the non-euro area account for a vastly higher share of GDP than in any other member country, and it is therefore not surprising that the depreciation of the euro should have had a much larger impact in Ireland than elsewhere. Up to the start of EMU, and for the next three quarters afterwards, Irish CPI inflation hovered around a 2% average. It is only since the end of 1999 that there has been a sharp acceleration.

CPI inflation is not the only problem. The most immediate danger is that the current wage deal may unwind in the face of higher than expected inflation. Helped by the pay round that took effect in 1997, real wages have been rising steadily since then and had increased by about 10% by late 1999. Although the jump in real wages began well before EMU started, the CPI acceleration must now be adding its own twist to wage developments as the surge in prices represents a fall in living standards for the affected workers. Of course, the increased wage payments will not help reduce inflation, but neither are they its central cause. The risk is that an excessive permanent boost to wages could prove a costly mistake if the euro should rebound.

Furthermore, Ireland has seen rapid increases in property prices, which are not fully captured by the CPI. Driven by the fall in interest rates brought about by EMU, house price inflation now stands at a figure of approximately 20%. With unemployment at such low levels, Ireland has started to attract immigrants, especially from Eastern Europe. Many of these, said Honohan, are young people who wish to learn English but do not stay long because of high property prices.

The Future

Higher wages mean lower profitability and lower labour competitiveness. But Honohan thought this was not necessarily a bad thing: congestion and full employment point to the need for a relative price adjustment. International comparisons suggest that, even after a further 10-15% increase in relative wage rates, Ireland still has some way to go before reaching the average wage costs of Germany. Spiralling house prices are also a worry: Ireland has never seen such a rise in house prices that has not ended in a crash. However, it seems a financial meltdown is unlikely. Lenders insist that they have mortgaged houses only to a modest percentage of market value – about 70% on average for the largest mortgage lender. A fall of 30% in house prices would not, therefore, trigger much fear of default.

With monetary policy now determined from Frankfurt, fiscal policy would seem to gain more potency. Yet if domestic

Economic Theory Symposium

CEPR's annual 'European Summer Symposium in Economic Theory' took place in Gerzensee on 3/14 July 2000. Held in conjunction with the Studienzentrum and the Review of Economic Studies, the Conference was organized by C Mark Armstrong (Nuffield College, Oxford, and CEPR), Philippe Bacchetta (Studienzentrum Gerzensee, Université de Lausanne and CEPR), Philippe Jéhiel (CERAS, Paris, and CEPR), Patrick Legros (ECARES, Université Libre de Bruxelles, Université de Liège and CEPR), Margaret A Meyer (Nuffield College, Oxford, and CEPR), Georg Nöldeke (Universität Basel and CEPR), Klaus Schmidt (Universität München and CEPR) and Xavier Vives (Institut d'Anàlisi Econòmica (CSIC), Barcelona, and CEPR). Among the specific topics this year were 'Micro and Macro Models of Financial Crises', 'Human Resource Management' and 'Multiparty Contracting'. A total of 36 papers were presented.

The Conference papers can be downloaded from **www.cepr.org/meets/wkcn/6/665/papers/**

Institutions of Restraint

A CEPR/IDEI Conference on 'The Political Economy of Economic Policy' was held in Toulouse on 24/29 June 2000. The Conference was organized around the theme of Institutions of Restraint – i.e. institutions that limit and shape governmental action at sub-national, national and international levels. Organized by Timothy Besley (London School of Economics and CEPR) and Jean Tirole (IDEI, Toulouse, and CEPR), the programme contained the following papers:

'Radio's Impact on Public Spending', David Stromberg (Stockholm University and CEPR)

'Regulatory Inertia', David Martimort (IDEI, Toulouse, and CEPR)

'Citizen Candidacy, Party Formation and Duverger's Law', Anouk Riviere (Royal Holloway College, University of London)

'The Fiscal Pact with the Devil: A Positive Fiscal Federalism, Revenue Sharing and Good Governance', Barry Weingast (Stanford University)

'The Politician and the Judge', Jean Tirole (IDEI, Toulouse, and CEPR)

'Non-Majoritarian Policy Outcomes and the Roles of Citizens' Initiatives', Stephen Coate (Cornell University)

'The Survival of the Welfare State', Fabrizio Zilibotti (Stockholm University and CEPR)

'Do Parties Matter for Fiscal Policy Choices?' Per Petterson (Stockholm University)

'Electoral Laws and the Scope for Radicalism', Estelle Cantillon (Yale University)

'Capture By Threat', Ernesto Dal Bo (University of Oxford)

'Information Acquisition and Electoral Turnout: Theory and Evidence from Britain', Valentino Larcinese (London School of Economics)

'Electoral Rules, Corruption and Government Spending', Guido Tabellini (IGIER, Università Bocconi, and CEPR) and Torsten Persson (Stockholm University, Sweden)

'Lobbying Legislatures', Sven Feldmann (University of Chicago) and Morten Bennedsen (Copenhagen Business School)

'Games Played Through Agents', Andrea Prat (London School of Economics and CEPR)

'The Drawbacks of Electoral Competition', Alessandro Lizzeri (Princeton University)

'What Makes Democracies Credible?', Gilat Levy (London School of Economics)

'Participation in Heterogeneous Communities', Alberto Alesina (Harvard University and CEPR)

'Colonial Origins of Comparative Development', James Robinson (University of California at Berkley)

demand factors are not central to the recent price surge, then adjusting the fiscal balance is misplaced. Instead, Honohan recommended focusing on the microeconomics of budgetary policy: ensuring adequate government spending not only to ease congestion and provide the physical infrastructure needed to sustain the higher level of economic activity, but also to pay for those social, educational, health and childcare requirements which a more prosperous population is entitled to expect (some of which, under current arrangements, will not be adequately provided if not subsidized by the state).

Honohan concluded that the economy looks quite capable of a soft landing. Unlike the economies of East Asia in the mid-1990s, Ireland is not especially overborrowed and is actually running a current account surplus – about 4% of GDP. But the surplus is shrinking. Full employment has been reached, and the natural increase in population is steadily slowing. Real wages are catching up. EMU has been only one, generally positive, shock among many which have contributed to the Irish boom. The fall in the euro makes nominal wage policy now especially tricky, but manageable given flexibility and ingenuity.

Patrick Honohan is at the Economic and Social Research Institute, Dublin, and is a Fellow in CEPR's International Macroeconomics Research Programme.

The Design of Primary Equity Markets

The dramatic growth of equity markets throughout the last decade has, to a large extent, been a result of the increasing number of companies that chose to list their stock on public markets via an initial public offering (IPO). The number and frequency of IPOs has risen impressively in the US, in Europe and in many developing countries. This is part of a worldwide shift away from private or bank finance, towards funding via public security markets. The process is commonly explained by the decreased cost of equity capital and the increased availability of equity finance associated with more integrated capital markets and faster information linkages. Improvements in the design and performance of primary equity markets may also have contributed to this process. Among these are the diffusion of book-building techniques, better disclosure rules, greater expertise and competition among investment banks and, possibly, competition among stock markets.

Held in Capri on 16/18 June 2000, a joint CEPR/CSEF/NYSE/TMR Conference assessed the improvements in the design and performance of primary equity markets and their subsequent implications. The insights that could be taken away from the papers presented fall broadly in two classes: those concerning the microeconomic aspects of IPOs, and those concerning the overall performance and macroeconomic impact of the primary equity market.

The Microeconomics of IPOs

It is well known that 'IPO underpricing' is a key determinant of the cost of equity capital for companies that tap the stock market for the first time. Typically, the price at which the shares of an IPO are placed with investors is below the level that they reach on the market a few days or weeks later, when more complete public information is available. Most research by financial economists relates such underpricing to the presence of some investors endowed with superior information about the value of the IPO shares, or to the need to compensate professional investors for the costs of producing information about the company.

The conference added three important insights to this much-researched topic. First, IPO underpricing is lower when other companies go public, because each IPO generates beneficial information externalities for other companies that are about to go public. Second, designing the IPO procedure also matters: bookbuilding allows substantial cost savings, but these savings materialize only if underwriters are willing to let the issue price vary outside the range initially chosen in response to demand. The third insight concerns the motivation itself of the IPO process: the going public decision is influenced by firms' ownership structure. When their shares are held by only one owner and when banks own shares, then companies are more likely to prefer private rather than public sales of equity.

The first paper, entitled 'Evidence of Information Spillovers in the Production of Investment Banking Services' by Lawrence Benveniste (Carlson School of Management, University of Minnesota), William Wilhelm (Boston College) and Xiaoyun Yu, highlighted various implications for information externalities in the IPO process: bunching by industry, implicit subsidies from the leader to the followers and the tendency for monopolistic financial intermediaries to engage in less underpricing when many companies go public. These predictions are consistent with the evidence from US IPOs, where the contemporaneous number of IPOs affects the estimated proceeds in the pre-offer period, and IPO underpricing is reduced by clustering and by firm-specific information that was not publicly available. Moreover, the information spillover is twice as large for information-sensitive industries than for other industries.

The second paper, entitled 'Has the Introduction of Bookbuilding Increased the Efficiency of International IPOs?' and co-authored by Tim Jenkinson (University of Oxford and CEPR), Alexander Ljungqvist (University of Oxford and CEPR) and William Wilhelm, used a large cross-country data set to show that bookbuilding can reduce costs if certain other conditions are also met. The authors illustrate that bookbuilding has higher costs but countervailing benefits when the IPO is marketed by US banks and sold to US investors. Jenkinson *et al* attribute these benefits to the US underwriters' willingness to price outside the initial range: placements directed to US investors are often priced outside the initial range by as much as 30%. This may reflect the lack of legal or regulatory impediments as well as greater transparency and competition for issues marketed by US banks to US investors. Non-US banks appear reluctant to respond to unexpectedly high demand by raising prices outside the initial range, possibly due to the power of large investors, and this undermines bookbuilding.

The above result was confirmed by Francesca Cornelli (London Business School and CEPR) and David Goldreich (London Business School) in their paper 'Bookbuilding: How Informative is the Order Book?'. The two authors explore the actual order books for 64 international issues sold by a

Dynamic Aspects of Taxation

A CEPR/CentER Conference on 'Dynamic Aspects of Taxation' was held in Tilburg on 8/10 September 2000. The Conference marks the first of a series of three meetings intended to address the long- and short-run consequences of tax and public expenditure policy. Organized by Timothy Besley (London School of Economics and CEPR), Lans A Bovenberg (CentER, Tilburg University, and CEPR), Albert Marcet (Universitat Pompeu Fabra, Barcelona, and CEPR) and Thomas I Renström (University of Birmingham), the programme contained the following papers:

'Capital Income Taxation When Inherited Wealth is not Observable', Helmuth Cremer (IDEI, Université de Toulouse, and CEPR), Pierre Pestieau (CREPP, University of Liège, and CEPR) and Jean-Charles Rochet (IDEI, Université de Toulouse, and CEPR)

'On Optimal Taxation in Overlapping Generations Economies' Thomas I Renström (University of Birmingham)

'Growth Effects of a Flat Tax', Steven P Cassou (Kansas State University) and Kevin J Lansing (Federal Reserve Bank of San Francisco)

'The Transitional Dynamics of Fiscal Policy: Long-Run Capital Accumulation and Growth', Stephen J Turnovsky (University of Washington)

'Factor Taxation with Heterogeneous Agents', David Domeij (Stockholm School of Economics) and Jonathan Heathcote (Stockholm School of Economics)

'Optimal Maturity of Government Debt with Incomplete Markets', Francisco Buera (University of Chicago) and Juan Pablo Nicolini (Instituto Torcuato di Tella)

'Government Debt and Incomplete Markets', Albert Marcet (Universitat Pompeu Fabra, Barcelona, and CEPR) and Andrew Scott (London Business School and CEPR)

'The Aging Population and the Size of the Welfare State', Assaf Razin (Tel Aviv University and CEPR), Efraim Sadka (Tel Aviv University) and Phillip Swagel (Northwestern University)

'The Survival of the Welfare State', John Hassler (IIES, Stockholm University, and CEPR), José V Rodríguez Mora (Universitat Pompeu Fabra, Barcelona, and CEPR), Kjetil Storesletten (IIES, Stockholm University, and CEPR) and Fabrizio Zilibotti (IIES, Stockholm University, and CEPR)

European investment bank. The results show a high percentage of issues priced at the top of the initial price range, with a substantial oversubscription at the issue price (the average IPO being oversubscribed 10 times).

The discussion of these two papers brought to the fore the idea that underpricing depends not just on the sale method (bookbuilding versus other mechanisms) but also on the objective function of underwriters and their regulatory constraints. If underwriters try to design the optimal mechanism to maximize the seller's objective function and are unconstrained by regulation, then almost by definition they should do best with a bookbuilding mechanism, which allows them to extract information useful to set the issue price, as shown by Cornelli and Goldreich.

The real question is whether underwriters have the 'right' objective function, face tough competition and are unrestricted by regulatory constraints. For the US underwriters, this seems to be the case, which helps explain why they dominate the IPO industry. By the same token, insufficient competition among bidders and collusion between investment bankers and bidders may explain the higher IPO underpricing when US banks are not involved. This may change in the future, partly because more sophisticated auction methods via the Internet may enhance the competition among bidders and the transparency of IPO sales.

The conference also added new insights into the motives of companies that go public. The identity of the initial owners of the company appears to play an important role in this decision. Ekkehart Böehmer (US Securities and Exchange Commission) and Alexander Ljungqvist, in their paper 'The Choice of Outside Equity: Evidence on Privately-held Firms', analyse 266 German firms that have pre-announced their intention to go public and show that firms that issue new shares are more likely to complete the IPO process. In contrast, other companies, and in particular those that have majority owners or a bank among the shareholders, tend to use the pre-announcement to signal their willingness to find new partners but eventually remain private.

Dynamic Aspects of Taxation (Continued)

'Public Investment and Intergenerational Distribution Under Alternative Models of Financing', Ben Heijdra (University of Groningen), Albert van der Horst (University of Amsterdam) and Lex Meijdam (CentER, Tilburg University)

'The Optimal Nonlinear Taxation of Bequests in Models with Uninsurable Income Risk', Michael Reiter (Universitat Pompeu Fabra, Barcelona)

'Do R&D Tax Credits Work? Evidence from a Panel of Countries 1979-97', Nick Bloom (IFS), Rachel Griffith (IFS and CEPR) and John van Reenan (University College London and CEPR)

'Innovation Finance, Taxation and Growth', Christian Keuschnigg (Universität des Saarlandes and CEPR)

'International Tax Coordination: Regionalism versus Globalism', Peter Birch Sørensen (University of Copenhagen)

'Is Tax Policy Coordination Necessary?', Tryphon Kollintzas (Athens University of Economics and Business and CEPR), Apostolis Philippopoulos (Athens University of Economics and Business) and Vanghelis Vassilatos (University of Ioannina)

'Optimal and Time-Consistent Fiscal Policy with International Mobility of Capital: Why Does the US Tax Capital more than Europe?', Paul Klein (IIES, Stockholm University), Vincenzo Quadrini (Duke University and CEPR) and José-Victor Ríos-Rull (University of Pennsylvania and CEPR)

'Taxation, Risk-Taking, and Growth: A Continuous-Time Stochastic General Equilibrium Analysis with Labour-Leisure Choice', Turalay Kenc (University of Manchester)

'Tax Policy, Venture Capital, and Entrepreneurship', Christian Keuschnigg (Universität des Saarlandes and CEPR) and Soren Bo Nielsen (Copenhagen Business School and CEPR)

'Age, Wages, and Unemployment', Peter Broer (Erasmus Universiteit Rotterdam)

'Trading with the Unborn: A New Perspective on Capital Income Taxation', Kent Smetters (University of Pennsylvania)

'Tax Smoothing versus Tax Shifting', Dirk F Niepelt (IIES, Stockholm University)

The above papers can be downloaded from **www.cepr.org/meets/wkcn/3/3504/papers/**

In 'Why do Governments List Privatized Companies Abroad?' Bernardo Bortolotti (FEEM, Università di Torino), Marcella Fantini and Carlo Scarpa (Università di Bologna) demonstrate that when a company is being privatized, political variables also play an important role in the decision to go public. In particular, the decision to list companies abroad appears to reflect a desire to lock them into a more investor-friendly legal framework, presumably in order to sell their shares at a better price. Examining 342 listings of privatized companies in 42 countries, the authors find that privatized companies from OECD countries tend to cross-list abroad in countries offering better legal protection of shareholders.

Overall Performance and Macroeconomic Impact of the Primary Equity Market

Even if market participants do as well as possible in designing the sale mechanisms of new stock issues, two important questions still remain. First, is it possible (and worthwhile) to try to encourage IPOs by fostering the venture capital industry and by setting up special markets such as the 'new markets' that have recently sprung up in Europe? And second, should the markets where these new issues are traded be designed and regulated in any special way?

Claudio Michelacci and Javier Suárez (CEMFI, Madrid, and CEPR) shed some light on the first issue with their theoretical paper on 'Business Creation and the Stock Market'. They show that the 'informed capital' of venture capitalists and the stock market play complementary roles: the stock market allows venture capitalists to recycle their scarce informed capital. The logic of their model is that new businesses require a special type of capitalist who can solve information and incentive problems, and thereby allow these firms to postpone their IPO until their profitability prospects are clearer. The scarcity of this informed capital

Family, Children and Demand

A CEPR/ESRC Labour Economics Workshop on 'Family, Children and Demand' was held in London on 13 November 2000. Organized by Simon Burgess (University of Bristol and CEPR), Christian Dustmann (University College London and CEPR) and Jonathan Haskel (Queen Mary & Westfield College, London, and CEPR), the programme featured the following papers:

'Young People in Europe: Two Models of Household Formation', Maria Iacovou (University of Essex)

'Demand around Child Birth: Evidence from Spanish Panel Data', José Maria Labeaga (Universidad Nacional de Educacion a Distancia, Madrid), Ian Preston (University College London) and Juan Sanchis Llopis (Universitat de Valencia)

'Investigating Separability of Parent and Child Labour', Sonia Bhalotra (University of Cambridge and University of Bristol)

'Children and Demand: Direct and Non-Direct Effects', Martin Browning (Institute of Economics, Copenhagen) and Valérie Lechene (University of Oxford)

The above papers can be downloaded from **www.cepr.org/meets.wkcn/4/4520/papers/**

therefore acts as a constraint on the rate of business creation. The lower the listing costs of firms, the faster venture capitalists can unload the firms they have catered for on the stock market and 'recycle' their informed capital with new businesses.

This suggests that any policy that can reduce the listing costs of new businesses will translate into faster recycling of informed capital and faster real growth. Within this framework, the difference between the IPO market (and the rate of business creation) in Europe and in the US could be attributed to higher listing costs and lower availability of venture capital in Europe. But, as Patrick Bolton (Princeton University and CEPR) noted, it is not clear if the European bottleneck lies in a scarcity of informed capital or in a scarcity of valuable and innovative projects to be funded.

Even assuming that listing costs are higher in Europe than in the US (an assumption for which currently there is no solid evidence), the evidence provided by Asher Blass and Yishay Yafeh (Hebrew University of Jerusalem) suggests that listing costs are not of crucial importance in the decision to go public. In their paper 'Vagabond Shoes Longing to Stray: Why Foreign Firms List in the United States', they show that high-tech, high-growth, export-oriented Israeli companies flock on to the Nasdaq, forgoing the substantial tax benefits of listing in Tel Aviv. These companies do not even try to reap such benefits by cross-listing their shares in Israel after listing in the US. In fact, Blass and Yafeh argue that these Israeli companies list in the US precisely because listing there is costlier than in Israel: they do so in order to signal their superior quality. Only firms with very large growth and profit opportunities can face the larger costs of an IPO in the US, in terms of lower private benefits of control, larger underpricing and underwriting fees, and forgone tax benefits in Israel.

A similar signalling story was told by Jörg Kukies (University of Chicago) to explain why the recent IPO boom in Germany was associated with the creation of the Neuer Markt (NM) in 1997. Firms admitted for listing to the NM must be first admitted to the traditional exchange of the Deutsche Börse. Additionally, they must fulfil other requirements, especially in terms of information dissemination and accounting rules. Therefore the companies that went public on the NM could have gone public before, but did not. In his paper on 'The Effects of Introducing a New Stock Exchange on the IPO process', Kukies argues that the NM's stringent information disclosure requirements provided a precommitment device that did not exist before. Listing on the NM acted as a signalling device for the most promising companies, in the same way as listing on Nasdaq does for the best Israeli companies, according to Blass and Yafeh.

However, as Oren Sussman (Ben-Gurion University of the Negev) remarked, the requirements imposed by the 'new markets' in Europe are not uniformly stricter. They are stricter about information disclosure but less restrictive about age, past profitability and size, and also allow companies to sell a smaller fraction of their shares to outside shareholders than traditional exchanges. Hence it is natural to ask which matters more, the strictness on disclosure or the greater leniency in these other dimensions? The evidence provided by Kukies is not based on a 'clean' experiment. At the same time as the NM was being created, US investment banks entered the German IPO market, German banks themselves became more supportive of IPOs and the demand for stocks rose dramatically, especially for high-tech stocks.

Whatever the intrinsic merits of the requirements imposed by the Nasdaq and the NM, it should be evident that both the design of these markets and the listing choices of the companies across markets are endogenous. Increasingly,

Psychology and Economics

A CEPR/ECARES Conference on 'Psychology and Economics' was held in Brussels on 9/11 June 2000. Organized by Isabelle Brocas (ECARES, Université Libre de Bruxelles, and CEPR) and Juan Carrillo (ECARES, Université Libre de Bruxelles, and CEPR), the programme contained the following papers:

'Experimental Practices in Economics: A Challenge for Psychologists?', Ralph Hertwig (Max Planck Institute for Human Development, Berlin) and Andreas Ortmann (Max Planck Institute for Human Development, Berlin)

'Psychological Traits and Trading Strategies', Bruno Biais (Université des Sciences Sociales de Toulouse and CEPR), Denis Hilton (Université de Toulouse II), Karine Mazurier (Université de Toulouse II) and Sébastien Pouget (Università degli Studi di Salerno)

'Cognitive Foundations of Inductive Inference and Probability: An Axiomatic Approach', Itzhak Gilboa (Eitan Berglas School of Economics, Tel Aviv University) and David Schmeidler (Tel Aviv University and Ohio State University)

'Experienced Utility and Objective Happiness: A Moment-Based Approach', Daniel Kahneman (Princeton University)

'The Pursuit of Happiness Can be Self-Defeating', Jonathan W Schooler (University of Pittsburgh), Daniel Ariely (Massachusetts Institute of Technology) and George Loewenstein (Carnegie Mellon University)

'Why Happiness is Like Food, and Why People Don't Know It', Timothy D Wilson (University of Virginia)

'The Diagnostic Value of Actions in a Self-Signaling Model', Ronit Bodner and Drazen Prelec (Massachusetts Institute of Technology)

'Entry Mistakes, Entrepreneurial Boldness and Optimism', Isabelle Brocas (ECARES, Université Libre de Bruxelles) and Juan Carrillo (ECARES, Université Libre de Bruxelles, and CEPR)

'The Psychology of Irrationality: Why People Make Foolish, Self-Defeating Choices', Roy F Baumeister (Case Western Reserve University)

'Personal Rules', Roland Bénabou (Princeton University and CEPR) and Jean Tirole (Université des Sciences Sociales de Toulouse and CEPR)

'Temporal Construal and Time-Dependent Changes in Preference', Yaacov Trope (New York University)

'Does Money Illusion Matter?', Ernst Fehr (Universität Zürich and CEPR) and Jean-Robert Tyran (Universität St Gallen)

'Bounded Rationality and Directed Cognition', Xavier Gabaix (Massachusetts Institute of Technology and University of Chicago) and David Laibson (Harvard University)

'Maximized Utility Meets Irrational Choice: Wanting Versus Liking', Kent Berridge (University of Michigan)

The above papers can be downloaded from **www.cepr.org/meets/wkcn/3/3503/papers/**

stock markets tend to compete for listings with each other, and will tend to differentiate their listing requirements and trading mechanisms so as to soften such competition. This is illustrated by Thierry Foucault (HEC School of Management, Jouy en Josas, and CEPR) and Christine Parlour in their paper 'Competition for Listings'. For instance, a possible equilibrium configuration is one in which one market displays low trading costs but high listing fees while another does the opposite. The first market will be attractive for large companies, which will be ready to pay the high listing fees in return for a more liquid market for their shares, whereas the second market will specialize in smaller companies – an example strikingly reminiscent of the differences between the NYSE and Nasdaq.

Rapporteur: Marco Pagano (Università di Salerno and CEPR)

The Conference papers can be downloaded from ***www.cepr.org/meets/wkcn/5/554/***

Does Europe Need to Harmonize Tax Rates?

To many, the idea that closer economic integration will require tax harmonization is indisputable. In Europe, proponents of this view argue that failure to align taxation, particularly capital taxation, will result in a destructive competition among countries which will ultimately undermine Europe's generous welfare systems. This 'race to the bottom' scenario is underpinned by the view that, other things being equal, producers will move to whichever country has the lowest taxes. At a lunchtime meeting held in London on 13 February 2001, Richard Baldwin challenged this view, arguing that tax harmonization is not only unnecessary but also potentially damaging.

Baldwin argued that the inclusion of agglomeration forces in the analysis leads to conclusions far subtler than a simple 'race to the bottom'. In this alternative worldview, he noted that countries with generous welfare states paid for by high tax rates tend to be countries that have been wealthy for a relatively long time. These countries offer capital advantages such as an excellent infrastructure, established customer and supplier bases, accumulated experience and a well-trained workforce. In short, rich countries are an attractive location for production since they are rich. Within certain limits, this allows rich countries to hold on to mobile factors of production even while levying higher tax rates than poorer countries. There are limits, however: should the tax rate rise too high, the results could be catastrophic; not only will capital move abroad, but because this movement itself undermines the attractiveness of the rich region, delocation may be massive and irreversible. This alternative worldview, termed the 'economic geography view', leads to radically different conclusions about the desirability of tax harmonization than the traditional 'tax competition view'. To begin his presentation Baldwin laid out the reasoning behind the traditional paradigm and examined how it stood up to empirical scrutiny.

The Tax Competition View

Most of the tax competition literature starts from the assumptions of a neo-classical world in which capital flows smoothly and faces diminishing returns. Subsequently, a slightly higher return to capital in one country attracts only slightly more capital. Governments are assumed to choose their tax rates so as to attract a tax base. During the process of increased economic integration (defined by lower trade costs), capital becomes more footloose and countries begin to compete to attract it by cutting their tax rates. Cutting tax rates may not necessarily be a bad thing in itself, but it may reach a point where a country is forced to provide a public sector that is smaller than its citizens would otherwise wish.

In this context, tax harmonization, or indeed any way of restraining tax competition, seems an entirely reasonable proposition: tax competition has produced only sub-optimal tax rates. No government can afford to charge taxes that would allow it to provide the level of service that its citizens would like, but since the tax cutting is matched by all nations, no nation gains a tax advantage. A tax harmonization agreement among governments would seem to be like price-fixing cartels among firms (i.e. very attractive to all negotiating parties). This does not square with the facts, however. Baldwin noted that European trade barriers (and barriers to capital mobility) had been falling almost continuously since the 1950s. Therefore if the traditional view of tax competition were correct, then EU countries should have already experienced a degree of tax competition, and falling tax rates would be expected.

In analysing this question, Baldwin had divided Europe into two parts: an advanced 'core' that benefits from the agglomeration economies associated with being an established centre, and a 'periphery' that does not. He associated these two ideal types with specific countries: Benelux, France, Germany and Italy with the core, and

Core = Benelux, France, Germany and Italy
Periphery = Spain, Portugal, Greece and Ireland

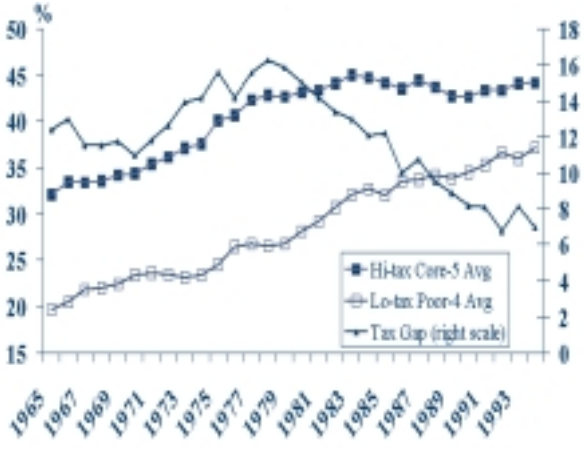

Figure 1: Evolution of EU average tax rates

Greece, Portugal, Spain and Ireland with the periphery. Figure 1 shows how the aggregate tax rate has varied in the two groups since the mid-1960s. It is immediately apparent that nothing like a 'race to the bottom' has been going on. Throughout a period in which European integration was steadily increasing, the average tax rate has climbed.

It has by no means been uniformly the case that integration has led to a narrowing of tax differentials. Tax rates have always been higher in the core than in the periphery, and the gap between them actually widened until the late 1970s. Evidently, the growing integration of Europe in the decades following the Treaty of Rome did not make core nations feel more constrained by tax competition from low-wage nations. Since the late 1970s, the difference between core and periphery tax rates has narrowed, producing a hump-shaped tax gap. Yet this narrowing has gone in the opposite direction to that predicted by the tax competition view: rather than a 'race to the bottom' the EU countries seem to have been engaged in a race to the top. Baldwin repeated this exercise with the same countries for tax rates for mobile capital (i.e. corporation tax rates). This painted a broadly similar picture.

The Economic Geography View

Underpinned by the 'new economic geography', the economic geography view emphasises the self-reinforcing nature of firm location by taking full account of the importance of both backward linkages (i.e. near suppliers) and forward linkages (i.e. near customers). Put simply, spatial concentration encourages spatial concentration. This results in a very uneven distribution of economic activity, with industry and high-end service sectors clustered together. The circularity of the agglomeration force means that capital is lumpy – i.e. little relocation of capital is observed for most of the time, but when a certain threshold is passed capital suddenly moves in large quantities. And the strength of the agglomeration force depends on the degree of economic integration: at very low levels of economic integration (i.e. high trade barriers) agglomeration is not feasible; at very high levels of integration agglomeration is not necessary; while at intermediate levels agglomeration is both necessary and feasible. These factors imply that the strength of the agglomeration force initially rises with the degree of economic integration and then falls after reaching an intermediate level. Figure 2 plots this bell-shaped relationship.

Moving these arguments to the context of Europe, Baldwin aligned the economic geography view with the evolution of tax rates in the EU as seen in Figure 1. Up to the end of the

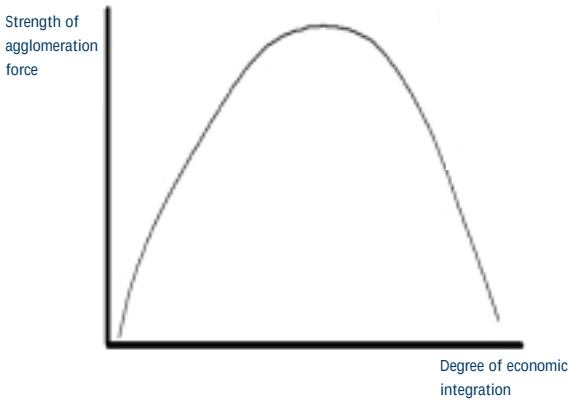

Figure 2: Bell-shaped curve

1970s, lowering trade barriers increased agglomeration forces, and this allowed core nations to raise their tax rates faster than periphery nations. More recently, the advantage of being in the core has eroded. Cheap transportation, communications and liberalization have made it less important to be located in a spatial concentration of industry. In response, core governments moderated the rate at which they raised the tax burden. At the same time, liberalization also raised incomes in the periphery, inducing their citizens to demand better, more expensive public services while at the same time boosting their ability to pay higher tax bills. In response, periphery governments increased their tax rates.

Baldwin considered tax competition in the context of this alternate worldview. As in the traditional case, governments set their tax rates so as to attract a tax base. However, whereas in the conventional view the movement of capital is smooth, in the economic geography view it is lumpy. Consequently, tax competition with lumpy capital is a winner-take-all situation, in that a country with a high degree of agglomeration can always win if it sets its rates low enough. For example, core countries start with lots of industry and sophisticated service sectors. Periphery countries start with little. In principle, the periphery countries could try to lure the core's industrial bases by charging low taxes. But since the core has an agglomeration advantage, even a zero tax rate in the periphery might not be enough to induce firms to move. Moreover, the core can meet almost any tax-cutting challenge by lowering rates, so any challenge is ultimately futile. Periphery countries are therefore likely to abandon attempts to compete head-to-head for the core's industry,

International Finance and Economic Activity

A CEPR/LIFE/Weiss Center of the Wharton School Conference on 'International Finance and Economic Activity' was hosted by the National Bank of Greece in Vouliagmeni on 11/12 June 2000. The Conference covered topics such as equilibrium and asset pricing in international financial markets, especially in a general equilibrium context. In particular, it analysed the links between international stock and bond returns and business cycles. Organized by Bernard Dumas (INSEAD, Fontainebleau, and CEPR), Gikas Hardouvelis (National Bank of Greece, University of Piraeus and CEPR), Richard C Marston (Wharton School, University of Pennsylvania) and Christian Wolff (LIFE, Maastricht University, and CEPR), the programme contained the following papers:

'Using Asset Prices to Measure the Cost of Business Cycles', Fernando Alvarez (University of Chicago) and Urban Jermann (Wharton School, University of Pennsylvania)

'Correlation of International Stock Returns and the Benefits from Diversification', Timothy K Chue (Hong Kong University of Science and Technology)

'A Re-examination of the Predictability of the Yield Spread for Real Economic Activity', James D Hamilton (University of California, San Diego) and Dong Heon Kim (University of California, San Diego)

'The Term Structure of Real Interest Rates: Theory and Evidence from the UK Index-Linked Bonds', Juha Seppälä (University of Chicago)

'Why Are Asset Returns More Volatile During Recessions? A Theoretical Explanation', Monique C Ebell (Universitat Pompeu Fabra, Barcelona)

'The Foreign Exchange Risk Premium: Real and Nominal Factors', Burton Hollifield (Carnegie Mellon University) and Amir Yaron (Wharton School, University of Pennsylvania)

'Patience, Persistence and Properties of Two-Country Incomplete Market Models', Sunghyun Henry Kim (Brandeis University), Jinill Kim (University of Virginia) and Andrew Levin (Federal Reserve Board, Washington)

'Financial Super-markets: Size Matters for Asset Trade', Philippe Martin (CERAS, Paris, and CEPR) and Hélène Rey (London School of Economics and CEPR)

A full report of the Conference is available at **www.cepr.org/pubs/bulletin/meets/558.htm**

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choosing instead to set their tax rates on criteria that are unrelated to tax competition.

Hence tax competition in this worldview is very much a one-sided affair. The possibility of tax competition from the periphery continually bothers core governments, but since periphery countries know they are unlikely to win on tax rates alone, periphery tax rates are not constrained by tax competition. Subsequently, the periphery set their tax rates mainly with an eye to domestic concerns. However, the core are constrained in that they set their rates low enough so the periphery do not find it attractive to lower their taxes in order to steal the agglomeration. So would tax harmonization be beneficial in the economic geography case?

Baldwin argued that the most natural way to harmonize taxes in Europe would be to 'split the difference' – i.e. to converge on the common rate that is somewhere between the high core rates and the low periphery rates. This would entail core nations lowering their rates and periphery nations raising theirs and would maintain the core-periphery pattern of industry location. After all, with identical tax rates firms would continue to prefer to concentrate where other firms are already concentrated. Indeed, the one-tax-fits-all harmonization might even worsen the distribution of industry since it would neutralize the periphery's tax advantage for economic activities that are not subject to agglomeration forces.

Given this, higher rates would be unambiguously bad for the periphery. Their initially lower rates were freely chosen, so a scheme that forced them to raise taxes without affecting the location of industry would make no sense. Likewise, the core (which is continually bothered by

Labour Market Effects of FDI

A CEPR Workshop on 'Labour Market Effects of Foreign Direct Investments' was held in Madrid on 20/21 October 2000. Organized by Klaus Desmet (Universidad Carlos III de Madrid) and Praveen Kujal (Universidad Carlos III de Madrid), the programme contained the following papers:

'A Simple Dynamic Model of Uneven Development and Overtaking', Klaus Desmet (Universidad Carlos III de Madrid)

'MNCs and New Trade Theory: Evidence for the Convergence Hypothesis', Salvador Barrios (University of Manchester), Holger Görg (University of Nottingham) and Eric Strobl (Trinity College Dublin)

'Industry and Labour Market Structure and the Regional Effects of Monetary Union', Frank Barry (University College Dublin)

'Measuring the Effects of Globalisation on Labour Demand Elasticity: An Empirical Assessment', Giovanni Bruno (Università Bocconi, Milano), Anna Falzoni (Università Bocconi, Milano) and Rodolfo Helg (CESPRI, Università Bocconi, and Università Carlo Cattaneo, Castellanza)

'Employment, Risk and Multinational Firms', Dieter Urban (Università Bocconi, Milano)

'Agglomeration and Inward Foreign Direct Investments in Ireland', Holger Görg (University of Nottingham)

'Are there Regional Spillovers from FDI in the UK?', Katharine Wakelin (University of Nottingham)

'Combining FDI, Trade and Industry Data at the Sector Level', Karolina Ekholm (Stockholm School of Economics and CEPR)

'A Comparison between Existing Firm-Level FDI Data', Dieter Urban (Università Bocconi, Milano)

'A New Firm-Level Data Set on Ireland', Frank Barry (University College Dublin)

'A New Firm-Level Data Set on Italy', Giorgio Barba Navaretti (Università di Ancona and Centro Studi Luca d'Agliano)

'Firm-Level Data Sets in the UK (ARD vs. ABI)', Anthony Venables (London School of Economics and CEPR) and Katharine Wakelin (University of Nottingham)

'Firm-Level Data in Spain', Cesar Alonso Borrego (Universidad Carlos III de Madrid)

'Options for a European Panel Data Set', Giorgio Barba Navaretti (Università di Ancona and Centro Studi Luca d'Agliano)

A full report of this Workshop is available at **www.cepr.org/pubs/bulletin/meets/561.htm**

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potential tax competition) is only interested in raising rates. A scheme that forced them to lower taxes, and therefore the quality of public services, would be a move in the wrong direction. A split-the-difference tax harmonization would make all countries worse off. So is the best policy to do nothing? No – policy can improve on the current equilibrium. Baldwin highlighted a scheme that seemed to offer gains to all countries: a tax rate floor placed just under the initial rate of the low-tax region. By construction, this would not affect the low tax region (since it has already chosen a rate above the floor). It would, however, rule out the possibility that the periphery would engage in fiscal competition. Once the core knows that a tax war cannot be started, it can raise its rates somewhat, because the very possibility that the periphery might cut taxes affects the rate charged by the core. Specifically, the core has to set a rate that is low enough so that the periphery would not want to compete for the core. When this is a tax floor that rules out the competition, the core can set its rate closer to the social optimal level.

Discussion Paper No. 2630: 'Agglomeration, Integration and Tax Harmonization' by Richard E Baldwin (Graduate Institute of International Studies, Geneva, and CEPR) and Paul Krugman (Princeton University and CEPR).

See www.cepr.org/pubs/dps/dp2630.asp for abstract and online ordering.

An audio interview with Richard Baldwin is available at: www.cepr.org/press/audio/

The World Trading System Post-Seattle: Institutional Design, Governance and Ownership

Following the failure of the Seattle Ministerial meeting, there have been widespread calls for fundamental reform of the governance of the WTO. A number of concrete proposals have been made, ranging from allowing direct access to the WTO for NGOs, to the establishment of an Executive Committee and a parliament. A joint CEPR/ECARES/World Bank Conference, entitled 'The World Trading System Post-Seattle: Institutional Design, Governance and Ownership', analysed the functioning of the WTO as an international forum for cooperation on trade-related issues and assessed options for institutional reform. Held in Brussels on 14/15 July 2000, the Conference was organized by Bernard Hoekman (World Bank and CEPR), André Sapir (ECARES, Université Libre de Bruxelles, European Commission and CEPR) and L Alan Winters (University of Sussex and CEPR).

The first paper of the conference, 'GATT-Think', was presented by Kyle Bagwell (Columbia University) and co-authored by Robert Staiger. Drawing on the theoretical literature on trade agreements, the authors described a foundation for the GATT and the WTO. In particular, they asked: what problem does a trade agreement solve? Bagwell argued that the answer is a terms-of-trade externality that arises when the trade-policy decisions of one government affect the welfare of another government. In this context, he asked whether the GATT/WTO rules make any economic sense and focused on the principles of reciprocity and non-discrimination (MFN) which are recognized as the pillars of the GATT. On the whole, reciprocity neutralizes the problem. MFN is also necessary for reciprocity to work, and further helps to protect third countries.

In his discussion of the paper, Robert Madelin (European Commission) addressed two questions. First, what can these theories on trade agreements tell us about appropriate design, and how can they be developed so as to be useful and relevant in Geneva? Second, how can they be presented and extended in order to help the trade community defend the WTO against globaphobia? Madelin stressed that the notion of cost-shifting, which is highlighted in the paper, is potentially illuminating and is one direction in which research could usefully be expanded. He argued that cost-shifting is a powerful notion, which raises the question of what rules should we make about rules?

In 'The WTO Trading Regime: Functioning, Equity and Democratic Legitimacy', Paolo Guerrieri (University of Rome 'La Sapienza') examines the main structural weaknesses of the current WTO trading regime and highlights the most urgent changes and procedural reforms needed in the governance of the international trade system. He grouped these weaknesses into three main categories: functioning, equity and legitimacy. First, a number of steps could be taken to improve the functioning of the organization and increase its transparency. Second, equity is related to the fact that LDCs were disappointed with the fulfilment of the commitments made in the Uruguay Round and the WTO in Seattle, and these countries should be brought more effectively into the trading system. And third, many parties have criticized the WTO in recent years for becoming involved in issues previously thought to fall under the domain of domestic sovereignty. Guerrieri also called for easier access to WTO documents and a strengthening of its links with the NGOs.

Jim Rollo (University of Sussex) began by saying that he did not disagree with the main philosophical issues raised in Guerrieri's paper. However, he claimed that there are a number of different ways to think about legitimacy, which might help to clarify the organization of the WTO. 'Output legitimacy' addresses the problem of what the WTO is producing and whether people like it. 'Process legitimacy' includes issues such as transparency and accountability. He remarked that one of the main reasons for the failure of Seattle was that LDCs were not given a substantive and meaningful role in the negotiations.

André Sapir presented 'NGOs, Civil Society and the WTO', in which he argued that the work of NGOs should be evaluated in terms of whether it increases or decreases both the level of transparency in trade policy decisions and the quality of the WTO's work. He argued that there are two classes of NGOs: 'consumer' NGOs and those whose agendas have nothing to do with trade (but with other issues such as environment, human rights etc). Among the non-consumer NGOs that are concerned with the trade agenda, he further distinguished two more types: the 'fundamentalists', who are opposed to global capitalism on ideological grounds, and the 'realists', who know that the WTO is different from the other international organizations because of the Dispute Settlement Mechanism. Sapir concluded by calling for greater transparency in the trade policy of Member States and for the continued work of NGOs to improve this transparency at the domestic level.

In terms of what NGOs can bring to trade policy, Jayanti Durai (Consumers International, London) argued that they represent different stakeholders' interests in the multilateral trading system. She thought they were able to produce original policy and data analysis; act as consultants, watchdogs or enforcement agents; and improve the awareness of the general public. They enrich public dialogue, enhance legitimacy and bring new perspectives to old problems. Durai argued that NGOs can strengthen developing countries because they represent an alternative source of information, improve the transparency of local markets and strengthen the competitiveness of domestic consumers. She conceded that not all NGOs are the same and highlighted the need to balance different interests and to ensure equal representation from different regions.

The last paper of the Friday session, 'Do We Need an Undertaker for the Single Undertaking? Considering the Angles of Variables Geometry', was presented by Philip I Levy (Yale University). He posed four questions relating to the scope of the next round. Are broad rounds too complicated (such as the Uruguay Round, for instance)? Are single-sector negotiations a good alternative? Where can we draw the line on the inclusion of topics? What is the effect of the 'Single Undertaking' requirement? The main policy implications obtained from Levy's analysis suggest that single-sector negotiations are dangerous. Broad rounds are more desirable. He concluded that instead of repeating the Uruguay Round's Single Undertaking Approach in future rounds, the WTO should pursue broad rounds with 'variable geometry' – i.e. countries would be able to sign up to only those parts to which they agreed.

Balkrishan Zutshi (former Ambassador of India to the World Trade Organisation) agreed with the idea that single-sector, sector-by-sector negotiations are not likely to take place or to succeed in the future. He claimed that there is a distinction between the information technology agreement (ITA) negotiations, which are genuinely single-sector negotiations, and negotiations in telecommunications and financial services. Within these sectors there is a possibility of exchange of concessions, especially in ITA where it was perceived by developing countries that the sector was of interest to them. Zutshi thought that a much deeper analysis of what happened in these sectors would be useful, but that they would not be a good guide to the likely outcome in other sectors. The theory in the paper was very useful, but it is necessary to be aware that other than in the case of tariffs, it is difficult to estimate the costs and benefits of different approaches. In his view, much insight can be extracted by studying the actual negotiation process and the outcomes.

Labour Economics Symposium

Hosted by IZA, CEPR's 'European Summer Symposium in Labour Economics' took place in Ammersee on 26/30 September 2000. The conference was organized by Juan J Dolado (Universidad Carlos III, Madrid, and CEPR) and Klaus F Zimmermann (IZA, Bonn University, DIW and CEPR). A total of 23 papers were presented.

The Conference papers can be downloaded from **www.cepr.org/meets/wkcn/4/4508/papers/**

The Saturday session started with John Odell (University of Southern California) who presented 'The Seattle Impasse and Its Implications for the World Trade Organization'. Odell began by highlighting the differences between Seattle and the Uruguay Round. Some of the 1999 proposals would have authorized the WTO to encroach upon issues usually regulated at the national level. Other disadvantages were the WTO's stronger enforcement capacity as compared to the pre-1994 GATT, which induced a much greater sense of caution over what might be agreed. Conversely, in 1999 the macroeconomic environment of many countries was better than in 1982. Also, the end of the cold war proved to be an impulse for the expansion and further integration of the trading system. However, the process suffered from problems relating to the parties' negotiating tactics, the WTO's preparatory process in Geneva and the management of the Seattle meeting. Odell concluded that in the future governments should adopt more effective negotiating strategies, small countries should not be excluded from the negotiation and the US should not chair the WTO negotiations.

Hervé Jouanjean (European Commission) noted that in Geneva a number of extreme issues managed to dominate the agenda at the expense of more important questions. He felt that in Seattle the difficulties between the EU and the US played a major role in the disputes as did the negative mood that was created, especially among the LDCs. He insisted on the need to reinforce the internal transparency of the WTO, not only at the national level, in the organization, but also *vis-à-vis* the LDCs.

In discussing the Odell paper, David Luke (Organization for African Unity, Geneva) focused on the need to improve the WTO's decision-making. He noted that the Seattle conference was managed in a way that did not fully take into account

Public Policy Symposium

CEPR's first Public Policy Symposium, hosted by Instituto Flores de Lemus, Universidad Carlos III, and sponsored by Instituto de Estudios Fiscales, was held in Colmenarejo on 22/23 September 2000. The conference was organized by Public Policy Programme Directors Timothy Besley (London School of Economics and CEPR) and Raquel Fernández (New York University and CEPR). A total of 12 papers were presented.

The Conference papers can be downloaded from **www.cepr.org/meets/wkcn/3/3505/papers/**

the fact that the membership of the WTO had grown substantially since the Uruguay Round. African ministers went to Seattle with the expectation that they would be fully involved in the deals that needed to be made for the launching of a new round, yet they were mostly excluded from the negotiations. After Seattle, the African Group at the WTO proposed to enhance the internal transparency of the WTO as well as the effective participation of all members. On the management of meetings, they pointed to the need to rationalize the scheduling. In terms of the ministerial conferences, the Group made two main proposals: substantial preparatory work should be completed before such conferences, and a committee should be established as the main forum for decision-making.

Michael Finger (World Bank) and Julio Nogues (UNIDO and Ministry of Economy, Argentina) presented 'WTO Negotiations and the Domestic Politics of Protection and Reform'. Nogues began by explaining the outcome of the Uruguay Round for developing countries in terms of imbalance. Specifically from the perspective of Argentina, he outlined the dynamic effects that began to emerge from areas where Argentina both gave and received concessions. First, Argentina introduced liberalization in most categories of tradable services, and the outperformance of services in some sectors (e.g. communications) was astonishing – imports in tradable services increased by 62% between 1992 and 1998. The quality of services and the stock of FDI flows have also increased – FDI flows have more than tripled. In terms of trade in goods, average tariff rates have decreased considerably. Export taxes were dismantled, and the biggest remaining non-tariff barrier is in the auto sector with Brazil. However, there were some increasing deficits for trade in goods with OECD countries. This was due to Argentina facing increasing imports from industrialized countries, mainly in capital goods, combined with stagnant exports because of the increased level of assistance that most industrialized countries gave to agriculture.

Michael Finger argued that the implementation of the Uruguay Round agreements is proving to be very costly for developing countries in terms of the expenditure of real resources that it entails. This situation contrasts sharply with the earlier rounds, when tariff reductions, which cost nothing in resource terms to implement, were more central to the outcome. He also argued that the US entered the round with virtually no flexibility, because US trade policy is essentially set by the private sector via the various consultative committees that are required and the the political system is dependent on private funding. In response, Balkrishan Zutshi argued that the international negotiations have two structural weaknesses: the constitutional scheme of the US and the EU's structure. In the US, it is the legislator who is in charge of the policy; in the EU, there are negotiations between Member States beforehand. Zutshi was unsure whether this situation could ever be resolved.

In 'Governance Challenges for the WTO: How to Increase the Benefits of Participation for Developing Countries', Diana Tussie (Latin American School for Social Sciences (FLACSO), Argentina) analysed the developing countries' agenda. She looked at the demand from LDCs from three perspectives: the use of the WTO code, which is useful for international institutions but allows some autonomy of government decisions; 'put your house in order', implying the need for signals that there is better access to the market for LDCs; and 'give us a place at the table', necessitating some representation rules. Jamel Zarrouk (Arab Monetary Fund) noted that Tussie's paper was related to the previous paper presented by André Sapir, whose arguments he supported. Although he agreed that NGOs have a larger role to play at the national rather than at the international level, he argued that the World Bank model presented in the paper is not appropriate for the WTO. The World Bank has used NGOs and created a friendly atmosphere for the NGOs to work in, but this is not possible for the WTO. He added that it is not sufficient to allow LDCs to sit around the table; more has to be done such as developing the capacity-building of LDCs.

Bernard Hoekman and Petros Mavroidis (Université de Neuchâtel and CEPR) presented 'Enforcing WTO Commitments: Dispute Settlements and Developing Countries – Something Happened on the Way to Heaven'. The authors examined whether the WTO's 'Dispute Settlement Understanding' was biased against LDCs. They highlighted the incentives that existed to use the system, noting that it was first necessary to have information on illegal acts and, in terms of information access, there is an asymmetry between LDCs and industrialized countries. The

authors suggested that there is an 'upstream' and a 'downstream' dimension of enforcement in WTO obligations. They argued that strengthening national enforcement mechanisms can help make the WTO a more relevant instrument from an economic development perspective by increasing the ownership of negotiated commitments. It may also relax the constraint of having to convince a government to bring a case to the WTO and reduce the burden of dispute settlement procedures at the WTO level. They also added that the private sector must play a much greater role in enforcement.

Marco Bronckers (Stibbe Simont Monahan Duhot, Brussels) raised two main criticisms. First, the emphasis on remedies was misplaced. As a lawyer, he believed that a finding of illegality should receive greater attention. In this case, developed and developing countries become symmetric. Second, Bronckers felt that the solution given by the authors (i.e. that the developed countries should be obliged to renegotiate with the developing countries) would not make any difference. He thought that other proposals should be made such as introducing a system of penalties as in the EU with the European Court of Justice.

'Reciprocity and the Political Economy of Harmonization and Mutual Recognition of Regulatory Measures', was presented by Thierry Verdier (DELTA, Paris, and CEPR) and Akiko Suwa-Eisenmann (INRA-LEA and DELTA, Paris). The authors discussed issues relating to negotiations on regulations when the WTO is involved. The two questions raised were whether it is legitimate for the WTO to be involved in these issues, and whether the WTO is equipped to do so. The authors considered a map of country characteristics, such as market size and different technologies, and linked them to the setting of international rules. The main conclusions obtained from their analysis are as follows. First, in a unilateral setting, the sectors that are in the medium range for a number of dimensions (e.g. local market size) are the ones that will also be most prone to the implementation of regulation for protectionist reasons. Second, reciprocity and bilateral regulation negotiations are likely to be more effective in counteracting regulatory protectionism when the countries are symmetric. And third, Mutual Recognition Agreements (MRA) are likely to share the same characteristics as harmonization schemes for symmetric countries.

Natalie Chen (ECARES, Université Libre de Bruxelles) concentrated on the possible extensions of the model. In the basic bilateral trade model used, there is no assumption of the types of goods that are produced. Regulations are more difficult to define because they get more and more complex if the good in question has a large number of characteristics. Dynamics could also be introduced by considering the role of research and development. Chen also questioned whether the hypothesis made in the model that 'each country trusts the other and believes in the certification system of the partner country' is not too optimistic, especially when considering LDC.

The last paper of the conference, 'Coherence with No 'Here': WTO Co-operation with the World Bank and the IMF', was presented by Alan Winters. Winters considered coherence from the point of view of the WTO. He defined it as a situation in which different policies are all pulling in the same direction, or, at least, not pulling in different directions. Yet he claimed that incoherence is a very likely state of the world given that different actors have different objectives and different views about how policies are linked to outcomes. As an illustration of areas where there is incoherence, Winters listed monetary and fiscal policy, international macroeconomic coordination and domestic policy regimes. On the whole, he argued that the WTO and the Bretton Woods Institutions are already highly coherent, in that they are mutually supportive in many domains. To conclude, Winters thought that coherence is primarily a rhetorical device: when we refer to it in specific circumstances and propose concrete actions it is useful, but otherwise coherence really means 'I want you to try harder to achieve my goals'.

Patrick Low (World Trade Organization) began by stating that there has never been a real sense given to the concept of coherence. When the discussion started, the LDCs were

ERWIT

The annual 'European Research Workshop in International Trade', held under the auspices of CEPR and EPRU, was held in Copenhagen on 17/20 June 2000. Organized by Richard E Baldwin (Graduate Institute of International Studies, Geneva, and CEPR) Jan I Haaland (Norwegian School of Economics and Business Administration, Bergen, and CEPR) Pascalis Raimondos-Møller (Copenhagen Business School, EPRU and CEPR) and Anthony J Venables (London School of Economics and CEPR). A total of 17 papers were presented.

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Understanding Financial Architecture

A CEPR/CFS Workshop entitled 'Understanding Financial Architecture: Legal and Political Frameworks and Economic Efficiency' was held in Frankfurt on 3/4 November 2000. Organized by Erik Berglöf (SITE, Stockholm, and CEPR), Patrick Bolton (Princeton University and CEPR), Jan Pieter Krahnen (CFS, Universität Frankfurt, and CEPR) and Ernst-Ludwig von Thadden (Université de Lausanne and CEPR), the Workshop covered topics such as the political determinants of capital markets, the politics of financial legislation, the impact of finance on politics, financial systems architecture, competition and consolidation of financial institutions, insolvency codes, corporate governance and institutional change in European capital markets. The programme contained the following papers:

'The Great Reversals: The Politics of Financial Development in the 20th Century', Raghuram G Rajan (University of Chicago) and Luigi Zingales (University of Chicago and CEPR)

'Do Better Institutions Mitigate Agency Problems? Evidence from Corporate Finance Choices', Mariassunta Giannetti (SITE, Stockholm)

'Obstacles to Optimal Policy: The Interplay of Politics and Economics in Shaping Bank Supervision and Regulation Reforms', Randall S Kroszner (University of Chicago) and Philip E Strahan (Federal Reserve Bank of New York and MIT)

'The Political Economy of American Bankruptcy: The Evidence from Roll Call Voting, 1800-1978', Erik Berglöf (SITE, Stockholm, and CEPR) and Howard Rosenthal (Princeton University)

'Optimal Corporate Governance Structures', Andres Almazan (University of Texas, Austin) and Javier Suárez (CEMFI, Madrid, and CEPR)

'Agency Conflicts, Owner Concentration and Legal Shareholder Protection', Mike Burkart (SITE, Stockhom, and CEPR) and Fausto Panunzi (Università Bocconi, Milano, and CEPR)

'Legal Origins', Edward L Glaeser (Harvard University) and Andrei Shleifer (Harvard University)

'The Political Economy of Corporate Governance', Marco Pagano (CSEF, Università di Salerno, and CEPR) and Paolo Volpin (London Business School)

'Capture of Bankruptcy: Theory and Evidence from Russia', Ariane Lambert-Mogiliansky (CERAS-ENPC, Paris, and NES), Constantin Sonin (CEFIR, Moscow, and NES) and Ekaterina V Zhuravskaya (CEFIR, Moscow, and CEPR)

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particularly nervous because they saw it as a vehicle that would be used to bring compliance with WTO and Bank conditionality lending. He agreed with the idea that information played an important role in any discussion of coherence. He also emphasized the concept of ownership. One aspect of coherence activities that was not mentioned in the paper relates to the integrated framework that relates to technical assistance for developing countries.

The conference ended with a 'Summing Up Panel Session'. Rashad Cassim (Trade and Industrial Policy Secretariat, South Africa) noted that he found André Sapir's characterization of NGOs in terms of 'fundamentalists' and 'realists' very useful. He added a few additional reasons why policy-makers in developing countries tend to be marginalized from the negotiations. One obvious reason was the resource asymmetry of these countries, since their human capital is relatively low. Another need is to focus on identifying very clearly the convergence between domestic interests and the WTO disciplines. This is an area that requires a lot of research in national countries and is linked to reducing the role of the WTO in the national economic and political process.

Pierre Defraigne (European Commission) noted the lessons that could be learned from the messages brought back from Seattle by Pascal Lamy, the EU Commissioner for Trade. First, civil society wants a rule-based system. Second, LDCs want effective market access. And third, the business community wants a new round. Defraigne concluded that the real challenge of the Uruguay Round is the effective integration of LDCs in an open and rule-based trading system. This led him to ask whether the usual mercantilist approach ('markets for markets'), which is unfair for the developing

The Evolution of Market Structure in Network Industries

A CEPR Conference on 'The Evolution of Market Structure in Network Industries' was held in Heidelberg on 27/28 October 2000. The Conference focused on three main topics: competition and regulation in networks; investment in new networks; and networks and geography. Organized by Lars Hendrik Röller (Wissenschaftszentrum Berlin für Sozialforschung and CEPR) and Konrad O Stahl (Universität Mannheim, ZEW and CEPR), the programme contained the following papes:

'Universal Service and Entry: The Role of Uniform Pricing and Coverage Constraints', Pedro Luis Pita Barros (Universidade Nova de Lisboa and CEPR), Steffen Hoernig (Universidade Nova de Lisboa), Tommaso Valletti (London School of Economics and CEPR)

'Competition, Inertia, and Network Effects', Tobias Kretschmer (INSEAD, Fontainebleau)

'The Political Economy of the Access Pricing Problem', Francesc Trillas (London Business School)

'Agglomeration in R&D Intensive Industries', Heiko A Gerlach (Universität Mannheim), Thomas Roende (Universität Mannheim) and Konrad O Stahl (Universität Mannheim, ZEW and CEPR)

'Innovation and Vertical Integration in Complementary Markets', Randal Heeb (INSEAD, Fontainebleau)

'License Auctions and Market Structure', Philippe Jéhiel (CERAS, Paris, and CEPR) and Benny Moldovanu (Universität Mannheim and CEPR)

'Selecting Negotiation Processes with Health Care Providers', Pedro Luis Pita Barros (Universidade Nova de Lisboa and CEPR) and Xavier Martinez-Giralt (Universitat Autónoma de Barcelona)

'Competing Cybermediaries', Bernard Caillaud (CERAS-ENPC, Paris), Bruno Jullien (GREMAQ, IDEI, Université des Sciences Sociales de Toulouse and CEPR)

'Competing for Ownership', Patrick Legros (ECARES, Université Libre de Bruxelles, Université de Liège and CEPR) and Andrew F Newman (University College London)

'Oligopoly Theory and Demand Uncertainty', Johan Lagerlöf (Wissenschaftszentrum Berlin für Sozialforschung)

'Venture Capital Investment, Product Innovation, and Exit Decision', Armin Schwienbacher (FUNDP, CeReFiM, University of Namur)

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countries, is still a valid one, and whether there is not the need to adopt a new paradigm. He also suggested that there is a need to strengthen the three pillars of the global governance system; this would improve coherence and so help disentangle the WTO from social and environmental debates. There is also a need to reform the internal functioning of the WTO as a precursor for a new round. Finally, he claimed that the three main features that all international organizations should provide in a context of a globalized world economy are inclusiveness, effectiveness and transparency.

Finally, Constantine Michalopoulos (World Bank) stated that the international architecture typically evolves incrementally. He noted that major changes (for instance, the Uruguay Round and the WTO) occurred as a result of major catastrophes in the 1980s. During the conference, much had been said about trade protectionism but nothing about the debt crisis that most developing countries were facing in the 1980s. The system needs greater ownership by LDCs, which can only come from greater responsiveness to LDCs' concerns. Michalopoulos felt that the agriculture agreement was a major improvement, but unfortunately focused on developed countries and not on LDCs. In conclusion, Michalopoulos wondered how many of the existing issues will be resolved in advance of a new round and how many will be left for a new round.

Rapporteur: Natalie Chen (ECARES, Université Libre de Bruxelles)

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2730	Olof Åslund, Per-Anders Edin, Peter Fredriksson	Settlement Policies and the Economic Success of Immigrants	LE	03/01
2729	Olof Åslund, Per-Anders Edin, Peter Fredriksson	Ethnic Enclaves and the Economic Success of Immigrants - Evidence from a Natural Experiment	LE	03/01

2728	Luigi Guiso, Monica Paiella	Risk Aversion, Wealth and Background Risk	IM	03/01
2727	Oded Galor, Omer Moav	Natural Selection and the Origin of Economic Growth	IM	03/01
2726	Alan Sutherland	Inflation Targeting in a Small Open Economy	IM	03/01
2725	Timothy Besley, Maitreesh Ghatak	Government versus Private Ownership of Public Goods	IO/PP	03/01
2724	Charles Wyplosz	How Risky is Financial Liberalization in the Developing Countries?	IM	03/01
2723	Charles Wyplosz	Exchange Rate Regimes: Some Lessons from Postwar Europe	IM	03/01
2722	Charles Wyplosz	Do We Know How Low Inflation Should Be?	IM	03/01
2721	Timothy Besley, Robin Burgess	The Political Economy of Government Responsiveness: Theory and Evidence from India	PP	03/01
2720	Pascal Courty, Gerald Marschke	Performance Incentives with Award Constraints	IO	03/01
2719	Giacomo Corneo, Rafael Rob	Working in Public and Private Firms	PP	03/01
2718	Pierre Mella-Barral, Paolo Vitale	Equilibrium Exchange Rate Policies: Complicit Renegotiation-Proof Outcomes	IM	03/01
2717	Maria Concetta Chiuri, Tullio Jappelli	Financial Market Imperfections and Home Ownership: A Comparative Study	FE/IM	03/01
2716	Timothy Frye, Ekaterina Zhuravskaya	Rackets, Regulation and the Rule of Law	TE	03/01
2715	Eric Maskin, Chenggang Xu	Soft Budget Constraint Theories: From Centralization to the Market	TE	03/01
2714	Jaime de Melo, Jean-Marie Grether, Tobias Müller	The Political Economy of International Migration in a Ricardo-Viner Model	IT	02/01
2713	Olivier J Blanchard, Francesco Giavazzi	Macroeconomic Effects of Regulation and Deregulation in Goods and Labour Markets	IM/LE	02/01
2712	Pierre Mohnen, Lars-Hendrik Röller	Complementarities in Innovation Policy	IO	02/01
2711	Thorsten Lehnert, Christian C Wolff	Modelling Scale-Consistent VaR with the Truncated Lévy Flight	FE	02/01
2710	Michelle Haynes, Richard Upward, Peter Wright	Estimating the Wage Costs of Inter- and Intra-Sectoral Adjustment	IT	02/01
2709	John Fingleton, Michael Raith	Open Covenants, Privately Arrived At	IO	02/01
2708	Mike Burkart, Fausto Panunzi	Agency Conflicts, Ownership Concentration, and Legal Shareholder Protection	FE	02/01

2707	Helmut Bester, Emmanuel Petrakis	Wages and Productivity Growth in a Dynamic Monopoly	IO	02/01
2706	Wolfgang Keller	Geographic Localization of International Technology Diffusion	IT	02/01
2705	Sven-Olof Fridolfsson, Johan Stennek	Should Mergers Be Controlled?	IO	02/01
2704	Barry Eichengreen	The EMS Crisis in Retrospect	IM	02/01
2703	Ernst Fehr, Klaus Schmidt	Theories of Fairness and Reciprocity - Evidence and Economic Applications	IO	02/01
2702	Christian Dustmann, Christoph M Schmidt	The Wage Performance of Immigrant Women: Full-Time Jobs, Part-Time Jobs, and the Role of Selection	LE	02/01
2701	Oded Galor, Omer Moav	Das Human Kapital	IM	02/01
2700	David Martimort, Thierry Verdier	Monopolies Life Cycle, Bureaucratization, and Schumpeterian Growth	IM/IO	02/01
2699	Eugenio J Miravete	Quantity Discounts for Time-Varying Consumers	IO	02/01
2698	Stephanie Rosenkranz, Patrick Schmitz	Optimal Allocation of Ownership Rights in Dynamic R&D Alliances	IO	02/01
2697	Marc Ivaldi, Frank Verboven	Quantifying the Effects from Horizontal Mergers in European Competition Policy	IO	02/01
2696	Cláudia Costa, Paul De Grauwe	Monetary Policy in a Cashless Society	IM	02/01
2695	Kai A Konrad	Repeated Expropriation Contests and Foreign Direct Investment	PP/TE	02/01
2694	Giacomo Corneo, Hans Peter Grüner	Individual Preferences for Political Redistribution	IM	02/01
2693	Per Krusell, Burhanettin Kuruscu, Anthony A Smith Jr	Equilibrium Welfare and Government Policy with Quasi-Geometric Discounting	IM	02/01
2692	Antonio Fatás, Andrew K Rose	Do Monetary Handcuffs Restrain Leviathan? Fiscal Policy in Extreme Exchange Rate Regimes	IM	02/01
2691	Sylvester C W Eijffinger, Wolf Wagner	The Feasible Gains from International Risk Sharing	IM	02/01
2690	Lucio Sarno, Mark P Taylor	Official Intervention in the Foreign Exchange Market: Is It Effective, and, If So, How Does It Work?	IM	02/01
2689	Henrik Jensen	Optimal Degrees of Transparency in Monetary Policymaking	IM	02/01
2688	Stephanie Schmitt-Grohé, Martin Uribe	Optimal Fiscal and Monetary Policy under Imperfect Competition	IM	02/01

2687	Nancy H Chau, Ravi Kanbur	The Race To the Bottom, From the Bottom	IT/PP	02/01
2686	Sergei M Guriev, Igor Makarov, Mathilde Maurel	Debt Overhang and Barter in Russia	TE	02/01
2685	Ventzislav Ivanov, Lutz Kilian	A Practitioner's Guide to Lag-Order Selection for Vector Autoregressions	IM	01/01
2684	Jordi Galí, Mark Gertler, J David López Salido	European Inflation Dynamics	IM	01/01
2683	Marco Pagano, Otto Randl, Ailsa A Röell, Josef Zechner	What Makes Stock Exchanges Succeed? Evidence from Cross-Listing Decisions	FE	01/01
2682	Marco Pagano, Paolo Volpin	The Political Economy of Corporate Governance	FE	01/01
2681	Marco Pagano, Ailsa A Röell, Josef Zechner	The Geography of Equity Listing: Why Do Companies List Abroad?	FE	01/01
2680	Juan D Carrillo, Mathias Dewatripont	Promises, Promises...	IO/PP	01/01
2679	Stephanie Rosenkranz, Patrick Schmitz	Joint Ownership and Incomplete Contracts: The Case of Perfectly Substitutable Investments	IO	02/01
2678	Simon Messner, Xavier Vives	Allocative and Productive Efficiency in REE with Asymmetric Information	IO	01/01
2677	Karolina Ekholm, Karen-Helene Midelfart Knarvik	Relative Wages and Trade-Induced Changes in Technology	IT	01/01
2676	Leandro Arozamena, Estelle Cantillon	Investment Incentives in Procurement Auctions	IO	01/01
2675	Estelle Cantillon	The Effect of Bidders' Asymmetries on Expected Revenues	IO	01/01
2674	Gilles Saint-Paul	The Economics of Human Cloning	IM/LE	01/01
2673	Antonio S Mello, Martin Ruckes	Diversity in Organizations	FE/IO	01/01
2672	Mukarram Attari, Antonio S Mello	Arbitrage with Inelastic Liquidity Demand and Financial Constraints	FE	01/01
2671	Andrew Hughes Hallett, Nicola Viegi	Credibility, Transparency and Asymmetric Information in Monetary Policy	IM	01/01
2670	Patrick A Puhani	On the Identification of Relative Wage Rigidity Dynamics: A Proposal for a Methodology on Cross-Section Data and Empirical Evidence for Poland in Transition	LE/TE	01/01
2669	Joseph Francois, Ian Wooton	Market Structure, Trade Liberalization, and the GATS	IT	01/01

2668	Bernardino Adao, Isabel Horta Correia, Pedro Teles	Gaps and Triangles	IM	02/01
2667	Alessandra Casella	Market Mechanisms for Policy Decisions	IM/PP	01/01
2666	Edward Nelson	Direct Effects of Base Money on Aggregate Demand: Theory and Evidence	IM	01/01
2665	Berthold Herrendorf, Akos Valentinyi	Determinacy with Capital Adjustment Costs and Sector-Specific Externalities	IM	01/01
2664	Neil Rankin	Time Consistency When Open Market Operations are the Monetary Policy Instrument: Is There Really a Deflation Bias?	IM	01/01
2663	Gian Maria Milesi-Ferretti	Good, Bad or Ugly? On the Effects of Fiscal Rules with Creative Accounting	IM	01/01
2662	Ralf Hepp, Jürgen von Hagen	Regional Risksharing and Redistribution in the German Federation	IM/PP	01/01
2661	Karl-Martin Ehrhart, Roy J Gardner, Claudia Keser, Jürgen von Hagen	Budget Processes: Theory and Experimental Evidence	PP	01/01
2660	Jan Haaland, Ian Wooton	Multinational Firms: Easy Come, Easy Go?	IT	01/01
2659	Charles M Engel, Andrew K Rose	Currency Unions and International Integration	IM	01/01
2658	David Peel, Lucio Sarno, Mark P Taylor	Nonlinear Mean-Reversion in Real Exchange Rates: Towards a Solution to the Purchasing Power Parity Puzzles	IM	01/01
2657	Fredrik Andersson, Kai A Konrad	Globalization and Human Capital Formation	PP	01/01
2656	Janine Aron, John Muellbauer	Personal and Corporate Saving in South Africa	IM	12/00
2655	Pierpaolo Benigno, Francesco Giavazzi, Alessandro Missale	How is the Debt Managed? Learning from Fiscal Stabilizations	IM	01/01
2654	Nauro F Campos	Back to the Future: the Growth Prospects of Transition Economies Reconsidered	TE	12/00
2653	Jody Overland, Kenneth Simons, Michael Spagat	Political Instability and Growth in Dictatorships	PP/TE	12/00
2652	Gregor Irwin, David Vines	Government Guarantees, Investment and Vulnerability to Financial Crises	IM	12/00
2651	Per Krusell, Anthony A Smith, Jr	Consumption-Savings Decisions with Quasi-Geometric Discounting	IM	01/01

2650	Paul A Geroski, Mariana Mazzucato	Modelling the Dynamics of Industry Populations	IO	12/00
2649	Paul A Geroski	Exploring the Niche Overlaps Between Organizational Ecology and Industrial Economics	IO	12/00
2648	David B Audretsch, A R Roy Thurik	Impeded Industrial Restructuring: The Growth Penalty	IO	12/00
2647	Gilles Chemla	Downstream Competition, Foreclosure, and Vertical Integration	IO	12/00
2646	Alberto F Alesina, Eliana La Ferrara	Who Trusts Others?	PP	12/00
2645	Tomoya Mori Mori, Alessandro Turrini	Skills, Agglomeration and Segmentation	IT/LE	12/00
2644	Konstantine Gatsios	Capital Mobility, the Real Exchange Rate, and the Rate of Return to Capital in the Presence of Non-Traded Goods	IT	12/00
2643	Andres Almazan, Javier Suárez	Managerial Compensation and the Market Reaction to Bank Loans	FE	12/00
2642	Jean Imbs, Romain Wacziarg	Stages of Diversification	IM	12/00
2641	Jan Fidrmuc, Jarko Fidrmuc	Disintegration and Trade	IT/TE	12/00
2640	Enrique Sentana	Did the EMS Reduce the Cost of Capital?	FE	12/00
2639	Rafael Repullo	A Model of Takeovers of Foreign Banks	FE	12/00
2638	Alan Bevan, Saul Estrin	The Determinants of Foreign Direct Investment in Transition Economies	TE	12/00
2637	David Begg	Beyond the Design of Monetary Policy Alone: Fiscal Commitment, Macro Coordination, and Structural Adjustment	IM/TE	12/00
2636	Jan Boone	Competition	IO	12/00
2635	Eugenio J Miravete	Estimating Demand for Local Telephone Service with Asymmetric Information and Optional Calling Plans	IO	12/00
2634	Olivier de Bandt, Philipp Hartmann	Systemic Risk: A Survey	FE/IM	12/00
2633	Daniel Cohen, Olivier Loisel	Why was the Euro Weak? Markets and Policies	IM	12/00
2632	Daniel Cohen	The HIPC Initiative: True and False Promises	IM	12/00
2631	Jeffrey A Frankel, Andrew K Rose	An Estimate of the Effect of Currency Unions on Trade and Output	IM	12/00

2630	Richard Baldwin, Paul Krugman	Agglomeration, Integration and Tax Harmonization	IT/PP	11/00
2629	André Sapir	EC Regionalism at the Turn of the Millennium: Towards a New Paradigm?	IT	11/00
2628	Rob Euwals, Melanie Ward	What Matters Most: Teaching or Research? Empirical Evidence on the Remuneration of British Academics	LE	11/00
2627	Ramón Caminal	Personal Redistribution and the Regional Allocation of Public Investment	PP	11/00
2626	Christian Keuschnigg, Soren Bo Nielsen	Tax Policy, Venture Capital and Entrepreneurship	FE/IO/PP	11/00
2625	Marcus Asplund, Volker Nocke	Imperfect Competition, Market Size and Firm Turnover	IO	11/00
2624	Hylke Vandenbussche, Xavier Wauthy	European Antidumping Policy and Firms' Strategic Choice of Quality	IT	11/00
2623	Richard Baldwin, Erik Berglöf, Francesco Giavazzi, Mika Widgrén	EU Reforms for Tomorrow's Europe	IM/IT/TE	11/00
2622	Bruno Cassiman, J David Pérez-Castrillo, Reinhilde Veugelers	Endogenizing Know-How Flows Through the Nature of R&D Investments	IO	11/00
2621	Damien J Neven, Lars-Hendrik Röller	The Scope of Conflict in International Merger Control	IO	11/00
2620	Damien J Neven, Lars-Hendrik Röller	Consumer Surplus vs. Welfare Standard in a Political Economy Model of Merger Control	IO	11/00
2619	Luisa Affuso, David M G Newbery	Investment, Reprocurement and Franchise Contract Length in the British Railway Industry	IO	11/00
2618	Karen-Helene Midelfart Knarvik, Henry Overman, Anthony J. Venables	Comparative Advantage and Economic Geography: Estimating the Location of Production in the EU	IT	11/00
2617	Lars-Hendrik Röller, Ralph Siebert, Mihkel Tombak	Strategic Choice of Partners: Research Joint Ventures and Market Power	IO	11/00
2616	Patrick Minford, Eric Nowell	Optimal Monetary Policy with Endogenous Contracts: Should we Return to a Commodity Standard?	IM	11/00
2615	Kenneth Kletzer, Jürgen von Hagen	Monetary Union and Fiscal Federalism	IM	11/00
2614	Avner Ahituv, Joseph Zeira	Technical Progress and Early Retirement	IM	11/00
2613	Damien J Neven	How Should 'Protection' be Evaluated in Art. III GATT Disputes?	IT	11/00

2612	Jan Brueckner, Jacques-François Thisse, Yves Zenou	Local Labour Markets, Job Matching and Urban Location	IT/LE	11/00
2611	José Manuel Campa, P H Kevin Chang, James F Refalo	An Options-Based Analysis of Emerging Market Exchange Rate Expectations: Brazil's Real Plan, 1994-1999	IM	11/00
2610	Giancarlo Corsetti, Amil Dasgupta, Stephen Morris, Hyun Song Shin	Does One Soros Make a Difference? A Theory of Currency Crises with Large and Small Traders	IM	11/00
2609	Nauro F Campos, Jeffrey B Nugent	Investment and Instability	IM/TE	11/00
2608	Robert J Gordon	Interpreting the 'One Big Wave' in US Long-Term Productivity Growth	IM	11/00
2607	Robert J Gordon	Does the 'New Economy' Measure up to the Great Inventions of the Past?	IM	11/00
2606	José Manuel Campa	Exchange Rates and Trade: How Important is Hysteresis in Trade?	IM/IT	11/00
2605	Juan Ayuso, Rafael Repullo	A Model of the Open Market Operations of the European Central Bank	FE/IM	11/00
2604	Thomas Brodaty, Bruno Crépon, Denis Fougère	Using Matching Estimators to Evaluate Alternative Youth Employment Programs: Evidence from France, 1986-1988	LE	11/00
2603	Patrick Francois, Jan C van Ours	Gender Wage Differentials in a Competitive Labour Market: The Household Interaction Effect	LE	11/00
2602	Gil S Epstein	Labour Market Interactions Between Legal and Illegal Immigrants	LE	11/00
2601	Petros C Mavroidis, Damien J Neven	The International Dimension of the Antitrust Practice in Poland, Hungary and the Czech Republic	IO/TE	11/00
2600	Mike Burkart, Klaus Wallner	Club Enlargement: Early Versus Late Admittance	FE/TE	11/00
2599	Antonio Ciccone, Giovanni Peri	Human Capital and Externalities in Cities	IM/LE/PP	11/00
2598	Nuno Cadima, Pedro Luis Pita Barros	The Impact of Mobile Phone Diffusion on the Fixed-Link Network	IO	10/00
2597	Sudipto Bhattacharya, Manfred Plank, Günter Strobl, Josef Zechner	Bank Capital Regulation with Random Audits	FE	10/00
2596	Joop Hartog, Rainer Winkelmann	Dutch Migrants in New Zealand - Did They Fare Well?	LE	10/00
2595	André Sapir	Who is Afraid of Globalization? The Challenge of Domestic Adjustment in Europe and America	IT	10/00
2594	Thorvaldur Gylfason	Natural Resources, Education, and Economic Development	IM	10/00

CEPR News

CEPR has recently been awarded two grants for High Level Scientific Conferences: 'Enterprise Reform and the Institutional Environment in Transition Economies' (Philippe Aghion) and 'Empirical Macro Models of the Euro Economy' (Jürgen von Hagen). A grant has also been awarded for an EC study on 'Sustainable Regimes Of Capital Movements In Accession Countries' (David Begg, Barry Eichengreen, László Halpern, Jürgen von Hagen, Charles Wyplosz). The Centre is a partner in a Socio-economic Research Network, 'A Dynamic Approach to Europe's Unemployment Problem', which was awarded at the beginning of 2001 and will be led by Simon Burgess. The European Science Foundation awarded CEPR a grant for an Exploratory Workshop on 'European Corporate Governance and the New Economy' (Marco Becht), whilst the Japan Foundation awarded a grant to part-fund a conference on 'Recent Economic Issues in Japan and Europe, (Jenny Corbett). Finally, Fondation Banque de France awarded CEPR a grant on 'Pension Provision, Risk and Capital Flows' (David Miles).

CEPR is delighted to welcome Banca di Roma, CGNU, MPS Finance Banca Mobiliare, Société Générale and West LB as corporate members. Information about CEPR's corporate membership programme can be obtained from Rita Gilbert, External Relations Officer, CEPR, 90-98 Goswell Road, London EC1V 7RR. Tel (44 20) 7878 2917, Fax (44 20) 7878 2999, Email rgilbert@cepr.org

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The CEPR Bulletin (ISSN 0256-7996) is issued to inform academic, business and policy communities of the current and forthcoming activities of the Centre. It also lists Discussion Papers produced under the auspices of the Centre. The Centre's Executive Committee does not give prior review to the Bulletin. Reports of meetings, conferences and workshops attempt to convey the sense and substance of the papers presented and the discussions which took place. The reports have not been authorized by the authors and discussants concerned, nor does the Centre endorse the views expressed. The Bulletin is not copyrighted and may be reproduced with the appropriate attribution. Further information on the background, objectives and operations of CEPR is available on request. Edited by Niall Flynn.

Forthcoming Events

The following events will take place under the auspices of the Centre. For further information about CEPR meetings, contact: Janet Seabrook, tel: (44 20) 7878 2907.

Conferences and Workshops are indicated in blue and attendance is by invitation only. Lunchtime meetings, however, are open and are indicated in Orange.

A full list of forthcoming events is available at **www.cepr.org** .

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25/26 MAY

Product Markets, Financial Markets, and the Pace of Innovation in Europe (organized in conjunction with ECARES), Brussels.

30/02 MAY/JUNE

European Summer Symposium in International Macroeconomics (hosted by the Bank of Israel and the Economic Departments of Israel), Maaleh Hachamisha, Israel.

31/02 MAY/JUNE

The Regulation of Financial Institutions (organized in conjunction with the Universidad de la Laguna), Tenerife.

08/10 JUNE

Psychology and Economics (hosted by ECARES), Brussels.

10/12 JUNE

Labour Demand, Education and the Dynamics of Social Exclusion (hosted by the European University Institute), Florence.

16/19 JUNE

European Research Workshop in International Trade (ERWIT) (hosted by the Centre for Economic Performance, LSE), London.

22/23 JUNE

The Analysis of International Capital Markets: Understanding Europe's Role in the Global Economy (organized in conjuction with EPRU), Copenhagen.

23 JUNE

Corporate Governance and Disclosure in the Accession Process (organized in conjunction with the University of Ljubljana), Portoroz, Slovenia.

23/26 JUNE

International Conference in Transition Economics (organized in conjunction with the University of Ljubljana and WDI), Portoroz, Slovenia.

27/05 JUNE/JULY

Transition Economics Workshop for Young Academics (organized in conjunction with the University of Ljubljana), Portoroz, Slovenia.

29/01 JUNE/JULY

Social Policies and the Cities (hosted by DIW), Berlin.

29/30 JUNE

Psychology and Finance (organized in conjunction with Universität Mannheim), Mannheim

02/13 JULY

European Summer Symposium in Economic Theory (organized in conjunction with Studienzentrum Gerzensee), Gerzensee

06/07 JULY

Labour Market Effects of European Foreign Investments (hosted by University College Dublin), Dublin

16/27 JULY

European Summer Symposium in Financial Markets (organized in conjunction with Studienzentrum Gerzensee), Gerzensee