Growth Management and Sustainability

A Challenge for Spatial Planning and Property Development

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Environmental Risk and Residential Property Prices.
Kwame Addae-Dapaah, National University of Singapore
Session D5

Environmental risk has become one of the hotly debated topics in political, social, economic, investment and financial circles over the past decade. In addition to danger to public health, environmental risk can adversely affect the economy, and thus, the investment prospects of a place. In relation to real property, environmental risk can substantially reduce market values because of direct and indirect costs of remediation and stigmatization attendant to environmental contamination. There are two kinds of stigma: "residual" and "proximity" stigma. Residual risk is the permanent negative impact on property value resulting from the public's desire to avoid legal and toxicological risk while proximity stigma is the negative impact suffered by properties that are in close proximity to contaminated site(s). The extant literature mainly focuses on residual stigma. This paper, on the other hand, specifically focuses on the effect that deteriorated environmental amenity exposed by contiguous contaminated sites has on residential properties (HDB flats, private apartments and Condos) in Singapore. In other words, the paper deals with proximity stigma to address three issues. The first issue relates to the price-distance relationship between residential properties and the industrial estates (source of contamination) in Singapore. The second issue deals with the extent to which environmental risk affects proximate residential properties within specific concentric zones around the industrial estates while the third issue relates to time-environmental-risk relationship. The paper employs the hedonic model to analyse two property sub-markets, HDB (i.e. public housing) and private housing sub-markets. The results show that proximity to industrial estates does have a negative impact on residential property prices. However, the price-distance relationship is not monotonic. Similarly, time affects the market's perception of environmental risk.

Shaping the Process: Initiatives, Standards and Projects for Public Private Partnerships in Germany
Hans Wilhelm Alfen, Bauhaus-Universität Weimar and Katrin Fischer, Bauhaus-Universität Weimar
Session H2

The management of public buildings is very much on the way to change. As a step along the road Public Private Partnerships (PPP) function as a new procurement route in order to deliver public buildings in an efficient manner under life cycle aspects. The paper begins by a brief overview of the structure of institutional arrangements within public authorities and evaluates the political support. It then reviews the quality and level of acceptance of the guidance provided by Task Forces and Competence Centres on the federal (Bundes) as well as on the state (Länder) level. The paper briefly examines the ongoing major legislative changes and initiatives (Beschleunigungsgesetz) in Germany. These particular developments will contribute to the attractiveness of the market not only for national but also for foreign real estate investors, banks, operators and construction companies. In the second part, the paper presents research results from project analysis in different sectors in Germany such as the hospital and defence sector and compares it to foreign experience. It deals with the problems and constraints in the decision making and tendering process and describes the difficulties in estimating life cycle costs and risks by setting up a Public Sector Comparator.

The REIT Appetite for Residential Investments
Nigel Almond, Jones Lang LaSalle
Session A1

One of the recommendations from the Barker Review into the supply of housing in the UK has been to promote the use of greater institutional investment in the residential market as a means of not only increasing and improving the supply of property, but also to increase flexibility in the housing market through increasing supply in the private rented sector. The subsequent Government consultation paper on the creation of REITs in the UK made specific mention of residential as a segment of the market which could potentially benefit from such a structure. REITs have emerged across the globe over recent years as a means of increasing investment and liquidity into property markets. While they predominantly invest in commercial property, there are also examples of vehicles investing in the residential sector, with the US a prime example of how successful these vehicles can be for the market. Based on a detailed analysis of markets elsewhere, the paper considers the prospects for the creation of residential REITs in the UK. The paper will review the structure of markets, and in particular undertake a more detailed analysis of the US market as a means of understanding the performance of the sector. Based on this analysis and comparisons with the UK market, and the prospects for alternative investor routes, the paper will assess the likely success of a residential focussed REIT in the UK.

Outlook for the Private Investor?

Nigel Almond, Jones Lang LaSalle and Sotiris Tsolacos, Jones Lang LaSalle
Session D1

The past five years have seen an explosion in activity from high net worth private individuals investing directly in real estate reflecting the relative strong returns provided by real estate, at a time when the cost of finance has fallen providing a positive arbitrage over the property yield. However the 'lumpiness' of property, its illiquidity and size of investment required to gain access to just a single property means that it is often only in reach of high net worth individuals. With significant investment required to invest in limited partnerships, and relatively few authorised vehicles for the smaller private individual, access to real estate largely remains the preserve of the wealthy. Moreover, the closing gap between yields and cost of debt raises question as to whether the private investor will flee the property market particularly if other asset markets begin delivering strong returns. The aim of the paper is to assess the extent to which the private investor will be part of the future property investment landscape, a topical question in the property investment community. The prospect of Real Estate Investment Trusts will provide challenges through enabling smaller private individuals to gain access to real estate performance and offering an alternative investment to wealthier individuals. Another objective of the paper is to highlight likely risks to the property investor from exposure to both existing and future vehicles. The methodology to examine the above issues is a combination of quantitative and behavioural analysis. We make use both of external and Jones Lang LaSalle data sources including the IPD/Jones Lang LaSalle Auction Results Analysis System.

The Austrian System of Social Housing Finance

Wolfgang Amann, FGW, Research Institute for Housing, Building and Planning and Julia Jedelhauser, FHS-Kurstein Tirol-University of Applied Science
Session H2

In the international discussion on housing finance plenty of contributions are given on the system of mortgage backed securities (MBS), as practiced in USA, about the contract saving scheme ("Bausparkassen"), as a basic housing financing model in Central Europe, little about alternative models as the Canadian mortgage insurance scheme or the Danish Mortgage Bank. But rarely any discussion is taking place on the widely unique Austrian model of housing finance, despite the fairly persuasive results, as shown below. In the paper in hand the author tries to give a brief overlook to the Austrian system of social housing finance in all its aspects. Therefore it is necessary to touch as different fields as law, finance and political economy. The complexity of the model, as a result of an ongoing process of improvement, is one of the reasons of its success. But of course it is as well a reason of the difficulty to bring the model to international discussion.

REIT Returns and Pricing: Another Look at the Stock Market Factor

Randy I. Anderson, Florida International University, Jim Clayton, University of Cincinnati, Greg MacKinnon, Saint Mary's University and Rajneesh Sharma, Baruch College
Session C2

The explosive growth in REITs over the past decade suggests that they provide an important alternative investment vehicle. Since REITs are a representation of the real estate market, they should theoretically provide similar diversification benefits of holding direct real estate in a portfolio. Even though in the long run REIT performance may be governed by real estate fundamentals, investigations in the return dynamics of REITs show that they do not necessarily move in tandem with the private real estate market, but rather exhibit properties similar to common stocks. This study examines the return dynamics of REITs using different models. While we find that REIT returns have a significant real estate factor, we show that the most significant determinant of REIT return performance is the returns of small cap value stocks. We also find that REITs behave more like small cap value stocks than small cap growth stocks or large stocks. In addition, we find a decline in the explanatory power of large stocks.

Explaining the Route To Owner Occupation: A Transatlantic Comparison

Mark Andrew, The University of Reading, Donald Haurin, Ohio State University and Abdul Munasib, Ohio State University
Session D4

Young adult homeownership rates in the U.S. are considerably lower than in Britain, even though overall homeownership rates in the two countries are almost identical. By implication, U.S. young adults have a slower rate of transition into homeownership. This paper employs a common theoretical and methodological framework to examine the reasons behind the differences in transition rates. The paper also highlights the main issues and barriers associated with entry into this housing tenure in each country. Based on our empirical results, partial simulations are conducted to assess whether the US and the UK require similar or different polices to resolve these issues and help young adults to make their first house purchase.

Corporate Real Estate that Stimulates Cooperation when Innovating

Rianne H.A.J.A. Appel-Meulenbroek, Eindhoven University of Technology
Session D2

In this paper a conceptual model is set up with regard to stimulating innovation-output of employees through supplying them with the right Corporate Real Estate (CRE). Literature study confirms that the existing relationship between different levels of cooperation and innovation output is strongly present. However, a knowledge gap can be identified for the effect that the physical environment can have on innovation and cooperation in particular. The conceptual model shows the way in which ongoing research is trying to reduce this gap by proving a link between CRE and cooperation within a company and with other parties of the so-called innovation system. Different levels of cooperation are distinguished and an extensive literature study on the link with CRE is described for each level. Both the advantages as possible dilemmas in choosing the right CRE-solutions are discussed.

Real Estate Journalism: An International Comparison
Jenny Arens, European Business School
Session F2

The increasing demand for market transparency and the growing number of real estate publications are evidence for the process of professionalization of both the real estate industry and the real estate media landscape. In order to meet the demand for rising quality standards, real estate journalists need to understand real estate markets and media systems not only in their home markets but in foreign markets as well. The knowledge and understanding of different market structures helps real estate journalists to improve working processes, the interaction with different market players and the output of their work. This paper provides insight into the structure of real estate journalism in Europe, especially in Austria, France, Germany, Spain, Switzerland and the UK. Different types of newspapers and special interest literature are examined. Real estate journalism is analysed reflecting the general structure of the media landscape and the real estate market structure in each country.

Managing Cultural Heritage: Heritage Listing and Property Value
Lynne Armitage, University of Melbourne and Janine Irons, Curtin University
Session D7

Local governments across Australia are often placed in the invidious position of acknowledging the long term value to the community of a property or place by including it in a heritage register whilst alienating some current, often vocal, sectors of that community who raise concerns over an actual or perceived loss of individual, usually proprietary, rights. Whilst such conflicts of interest are inevitable, the necessity to manage such situations sensitively and effectively remains the lot of the local authority. In order to assist with the appropriate management of such situations, a study has been undertaken into the effects of heritage listing on property value in the context of the management of Queensland's cultural heritage. This has been achieved through a review of key domestic and international studies and seven themes – impacting upon a range of stakeholders across the community - have been elicited from the research and are reported in this paper. Despite the diversity of the material reviewed, a number of defining variables were nominated by the studies as providing useful bench marks – such as geographical context, building type and other variables, and a range of methodologies. A matrix has been generated which is one original contribution of this research and which it is anticipated will be developed from the subsequent field research. The methodologies identified in the literature fell into three main groups – macro, micro and attitudinal – and it is proposed that this broad structure will be used as the basis of the second stage of this study.

Effects of Urban Planning on Real Estate Property Values
Kerem Arslanli, Istanbul Technical University, Denizhan Yalyn, Istanbul Technical University and Vedia Dokmeci, Istanbul Technical University
Session D7

Urban Planning and Real Estate values, are became essential to be researched deeply on a basis of the economic structure, which is shaped by the variable conditions of the country and the world which are lately having an increasing importance in our country. In the same way, the arrangements on the real estate which are made considering the decisions taken from the planning activities on the urban and rural areas, and the new structure considering this, make the real estate valuation and the planning activities necessary to be studied together. Real estate valuation, which has many lacks about the legal arrangements in our country, makes the problems worse due to the false applications of the laws and regulations. This paper will evaluate the effects of urban planning on the price of newly zoned rural areas of Istanbul. In this study, urban

planning applications in small town at the periphery of Istanbul Metropolitan Area have been examined. Industrial zoned area well developed under very short period of time after planning application. Although surrounded by industrial vacant land, application of urban plans gets attraction of local and international companies. Infrastructure and amenities that provided by municipality leveraged the value of property values both on industrial and housing zones. Statistical analysis and geographical information systems (GIS) used to find out the evidence of value changes caused by urban planning. Data collection and statistical analysis are combined with GIS applications to reveal more sophisticated results. Another finding of the study is the social feedback from urban plans. Premium that gained by controlled growth; lead peoples prejudice on Urban Planning to change and surrounding towns start a development under Master Plan for more strong sustainable city development.

Does Government Support Matter For Home Ownership Rates? An International Survey and Analysis.

Mikael Atterhög, Royal Institute of Technology
Session D4

Home ownership rates increased in most countries after World War II. In a sample of 13 industrialized economies, home ownership rates increased from 56 percent in 1970 to 65 percent in 1990. However, in most countries analysed for this article it appears that home ownership rates have not changed significantly after 1990. Most governments have supported the home ownership sector with various policy measures such as interest subsidies, building grants, income support, etc. This article presents a unique compilation of data on home ownership rates for the majority of the more industrialized countries, presents a model of the determinants of home ownership rates and attempts to explain the increase in home ownership rates, especially the role of government support. Data on government support policies has been collected by questionnaires completed by researchers in a large number of countries. A panel data set consisting of thirteen developed countries was developed and analysed with and without a fixed-effect model. The results indicate that there may be a positive correlation between home ownership rates and government support systems. Moreover, it appears that government policies to support home ownership implemented in non-anglophone countries may have been more effective than policies in anglophone countries. However, the sample size only allowed a preliminary evaluation of any patterns between the included variables.

Growth Management and Sustainability: A Challenge for Spatial Planning and Property Development

Christian Aunsborg, Aalborg University, Michael Tophøj Sørensen, Aalborg University and Marta Bottero, Politecnico di Torino
Session I3

In European countries property development has to take place within the frames of public planning regulations. The character and strenght of the public regulation may vary considerably from country to country, but generally they must be considered as a tool to pursue the spatial development policies of the planning authority. Traditionally, functional and aesthetic matters have been the core focus of spatial planning and tools have been developed to manage this challenge. However, spatial planning faces a much broader range of challenges including the ability to facilitate growth and sustainability. Furthermore these policy areas have to be integrated in such a way that the outcome is a relatively clear information to the landowners, how they are supposed and/or allowed to develop their property. In most countries the responsibility for the spatial planning is decentralized to local and regional political authorities and the facilitation of growth in the local or regional economy is given a key priority on the political agenda. Economic development strategies and spatial planning are linked together: this calls for a coordination with some specific tools and mechanisms. Furthermore, the overall development has to take place in a sustainable way. Speaking of sustainable development in the field of spatial planning means to solve the relationships between environment, development and economic growth by superseding the specific approaches with more integrated methods. The EU policy is stressing the environmental considerations in a very concrete way by virtue of the EIA- and SEA-directives, demanding that projects, programs and plans have to be subject to environmental assessments. The SEA-directive is putting this demand directly on the individual planning authorities so the provision of all local and regional plans have to conform to the procedures prescribed. Meeting the extended challenges is obviously a task for the planning authorities and with it the public sector. However, it will also influence the private sector as the demands and policies inevitably will affect the planning regulations and the interplay between public and private actors. Based on Danish and Italian experiences the paper aims to explore the main challenges in urban development and to provide a conceptual framework for these challenges, mainly from a sustainable land use management point of view. Next, the paper aims to outline the strengths and weaknesses of the two countries' planning systems facing these challenges. Finally, the paper will try to identify necessary urban development tools to implement sustainable spatial strategies and to facilitate the interplay between the land owners and the authorities.

The Impact of Land-Use Regulation on Industrial Structures: The Case of the UK Housebuilding Industry

Michael Ball, The University of Reading
Session A3

Regulatory regimes can influence the structures of the industries being regulated and the residential development industry is no exception. Such industrial effects are often the direct goals of regulation policy but in the case of housebuilding it is a generally unrecognised by-product of land-use planning policies. The UK has both one of the most concentrated housebuilding industries in the world and one of the most restrictive land-use planning regimes. This paper examines the degree of concentration in the UK housebuilding industry, nationally and regionally, and examines various potential benefits of scale in housebuilding. Empirical evidence suggests many scale economies seem to be exhausted at relatively small firm sizes. However, this is not the case for land purchase and planning negotiation. Greater size does not seem to provide firms with higher profit margins, even so the resultant industrial structure may have implications for market efficiency and the elasticity of housing supply.

The Importance of Industrial Structure in Regional Property Market Analysis

Michael Ball, The University of Reading and Michael White, University of Aberdeen
Session A3

This paper seeks to examine the changes in regional commercial property markets over the last 30 years. This period has seen substantial change in industrial structure as comparative advantage has shifted internationally. User requirements reflecting these changes have redefined office, retail and industrial property sectors. These changes are regionally differentiated and have been superimposed on property and economic cycles. While previous research has focussed on analysing shocks affecting the commercial property market, this research will examine the interaction of the above factors and develop a theoretical model upon which to analyse the impact of structural change on regional property market behaviour. Specifically, the research will consider the impact of structural change on convergence in regional property market behaviour, the relative stability of regional property markets and the role of agglomeration economies. It will also consider the relationship between agglomeration, convergence, relative stability and structural change. The paper argues that a more general theory is required to understand regional property market behaviour.

Estimating Hedonic Price Models by Stein Variance Double *k*-class estimators
Helen X. H. Bao, City University of Hong Kong and Alan T. K. Wan, City University of Hong Kong
Session E1

In this paper the Stein variance Double *k*-class estimator is utilized to address the omitted variable issue in hedonic price modelling. If important housing attributes are excluded from the model, the estimated implicit prices of housing attributes would drift away from the true parameter value. Real estate researchers and practitioners are not completely ignorant about the parameters to be estimated. Experience and expertise usually provide them with tacit understanding of the likely range in which the true parameter value belongs. Under this scenario the subjective knowledge about the parameter value could be incorporated as non-sample information in the hedonic price model. The Stein variance Double *k*-class estimator is a biased estimator of linear regression coefficient with improved mean squared error terms. Theoretical and empirical research suggests that this methodology can effectively improve the precision of standard linear regression coefficient estimates and in-sample prediction within certain range of parameter space. The empirical evidence coincides with previous findings. Compared with traditional OLS approach, the Stein variance Double *k*-class estimators have more accurate predictive mean squared error terms and more precise parameter estimates.

Monte-Carlo Simulations for Building Appraisal
Michel Baroni, ESSEC Business School, Fabrice Barthélémy, University of Cergy-Pontoise and Mahdi Mokrane, IXIS-AEW Europe
Session E2

This paper considers the use of simulated cash flows to value assets and options in assets in real estate investment. We motivate the use of Monte-Carlo simulation methods for the measurement of complex cash generating assets such as real estate assets return distribution. Important simulation inputs, such as the physical real estate price volatility estimator, are provided by results on real estate indices for Paris derived in a companion paper by Baroni, Barthélémy and Mokrane (2004). Based on a building example, simulated cash flows (i) provide more robust valuations than traditional DCF valuations, (ii) permit the user to estimate the building's price distribution for any time horizon, (iii) permit easy Values-at-Risk (VaR) computations, and (iv) facilitate the pricing of a wide variety of contingent claims.

Unlisted Real Estate Vehicles: A Research Agenda
Andrew Baum, The University of Reading
Session D1

This paper uses a proprietary database of over 500 unlisted real estate vehicles in Europe to describe the rapid growth in unlisted real estate vehicles over the last 15 years and the typical features of these investment products. It considers the reported reasons for the rapid growth in this market as an alternative to direct and listed property. It then uses the existing body of real estate research and current research in alternative assets to pose questions that have, as yet, remained unanswered, and suggests some hypotheses that might for the basis of new research work. For example: should/will shares in these vehicles trade at a discount to NAV? What will be the performance characteristics of unlisted vehicles using leverage? How will efficient portfolios of vehicles be constructed?

A Comparison of Company and Project-Level Partnerships between Real Estate Developers and External Investors

Sascha Becker, European Business School
Session G6

Partnerships have always played an important role in real estate development, as in most cases small- and medium-sized developers do not have the necessary human resources and competencies in-house. Furthermore, due to the New Basel Capital Accord (Basel II), equity represents the scarce resource for these developers more than ever. It can be assumed, that the prove of creditworthiness and the acquisition of equity will become the main critical factors for developers within the next years. In order to overcome these fundamental problems, real estate developers frequently form strategic alliances with external investors on company- or project-level. Both alternatives bare advantages and disadvantages for the developer. However, only few research exists on the question, which alternative under certain circumstances turns out to be preferable. The paper critically analyses and compares the different alternatives from a developer's point of view. The analysis will presumably be based on transaction cost theory.

Restitution of Jewish Real Property within the Territory of Poland Formerly Occupied by German Reich.

Stanisław Belniak, Cracow University of Economics
Session E7

The paper presents the volume and the structure of Jewish real estate property, located within the present territory of Poland (before WWII German Reich), included in the restitution proceedings. The problem of restitution has been shown against the background of legislative proceedings. The paper describes the subject of the proceedings and provides the characteristics of the Regulatory Commission. It also shows agreement proceedings which are quite common in such cases. The paper discusses the principles of appraisal of the contested real property, and presents the cases of waiving the right to restitution by the applicants. Further the author provides the characteristics of real property included in the restitution proceedings. Various classification criteria have been applied, such as: location of real property, type of real property, its present function, title to property, value of property, historic value of property, useful area, technical condition and designated use. The author describes some special cases of restituted property, such as destroyed cemeteries. Quite an interesting aspect of the discussed problem is such development of the restituted property which does not allow the former owners to change its function. It seems that the subject of real property restitution is one of the problems which have not yet been solved by the new member states of the European Union and it needs further studies and analyses.

The German Property Market: Data Basis and Transparency

Thomas Beyerle, DEGI Deutsche Gesellschaft für Immobilienfonds mbH and Maike Dziomba, Technische Universität Hamburg
Session E3

For longer than 10 years, gif's working group II "Market Analyses and Forecasts" has been working to enhance the German property market's transparency. As German official statistics hardly publish any data on the property market, nearly all information and market data is based on the reports of several real estate consultants and property advisors. Problems occur as these market reports by the private sector usually are published without common definitions and data differs widely between the single reports. gif's working group has initiated a discussion amongst the researchers working for these real estate advisors publishing market reports. As a result, a common set of harmonised definitions has been agreed on. This will help the market to be

provided with data, that actually refers to common geographical areas and that has been generated by coordinated methods. At the same time, the gif working group has taken great effort to gather the relevant market players in a group exchanging information in order to improve the data quality. These definitions are now being presented to the public and posed for discussion.

Cell Phone Tower Impacts on House Prices: A New Zealand Case Study Using GIS Analysis

Sandy Bond and James Xue, University of Auckland
Session F8

Studies show that there are concerns about devices that emit electromagnetic fields (EMFs) due to the potential health hazards from these. One such device that has become widely used throughout the world in recent years is cellular phones. Health consequences of long-term use of cellular phones are not known in detail, but available data indicate that development of non-specific health symptoms is possible (Szmigielski & Sobiczewska, 2000). Conversely, it appears health effects from cellular phone equipment (antennas and base stations) pose few (if any) known health hazards (Barnes, 1999). Despite research reports to the contrary there appears to be ongoing concern about the siting of cellular phone transmitting antennas (CPTAs) and base stations (CPBSs) due to fears of health risks from exposure to EMFs, changes in neighborhood aesthetics and loss in property values. However, the extent to which such attitudes are reflected in lower property values affected by cellular base stations is not known in New Zealand (NZ). This paper outlines the results of research carried out in NZ in 2004 to show the effect of CPBSs on residential property values. The study involves analysis of residential property sales transaction data using GIS and multiple regression analysis in a hedonic framework to determine the effect of proximity to CPBSs on residential property values. Christchurch, NZ was selected as the case study area for this research due to the large amount of media attention this area has received in recent years relating to the siting of CPTAs and CPBSs. The results of this research will be of interest to chartered surveyors when valuing properties in close proximity to CPBSs and for determining compensation, if any, to affected property owners.

Lease Maturity and Rent: Is There a Term Structure for UK Commercial Property Leases?

Shaun A. Bond, University of Cambridge, Pavlos Loizou, CB Richard Ellis and Patrick McAllister, The University of Reading
Session G3

This paper investigates the relationship between lease maturity and rent in commercial property. Over the last decade market-led changes to lease structures, the threat of government intervention and the associated emergence of codes of practice for commercial leases have stimulated growing interest in pricing of commercial property leases. Seminal work by Grenadier (1995) derived a set of hypotheses about the pricing of different lease lengths in different market conditions. Drawing upon the explicit parallel with the term structure of interest rates, three possible term structure shapes were derived – downward-sloping, upward-sloping and single-humped. Whilst there is a compelling theoretical case for and a strong intuitive expectation of differential pricing of different lease maturities, to date the empirical evidence is inconclusive. Two Swedish studies have found mixed results (Gunnelin and Soderbergh 2003 and Englund *et al* 2003). In only half the cases is the null hypothesis that lease length has no effect rejected. In the UK, Crosby *et al* (2003) report counterintuitive results. In some markets, they find that short lease terms are associated with low rents, whilst in others they are associated with high rents. Drawing upon a substantial database of commercial lettings in central London (West End and City of London) over the last decade, we investigate the relationship between rent and lease maturity. In particular, we test whether a building quality variable omitted in previous studies provides empirical results that are more consistent with the theoretical and intuitive *a priori* expectations.

Trends in German Institutional Real Estate Investment

Stephan Bone-Winkel, European Business School, Ramon Sotelo, Bauhaus-Universität Weimar and Martin Becker, European Business School
Session F1

In autumn 2004 FERI Institutional Management GmbH in collaboration with the Department of Real Estate at the European Business School, Germany designed and carried out the first broad interview based research study on the German institutional real estate market. Representatives of 50 German pension funds, 30 insurance, 25 financial and 11 industrial companies, with a total investment volume of app. € 775 billion and real estate assets of € 51 billion have been interviewed. The interviews focused on the current real estate asset allocation and the portfolio strategies for future real estate investments. Moreover, a competition analysis of German real estate vehicles and asset managers has been derived. The direct and indirect investments and asset allocation strategies of German institutional investors provide a valuable insight into their future investment behaviour. The study broadly predicts a further shift from direct to indirect investments. Further on, the features of institutional investment behaviour set the scene for a successful introduction of German REITs.

Growing the Local Economy. The Property Implications of a Focus on the Knowledge Economy.

Ann Boon, Oxford Brookes University
Session H4

European political leaders, including the UK prime minister, have put the knowledge economy at the centre of policies for future economic growth. This has become an accepted philosophy for which the property implications need to be addressed since much of this type of development favours areas already under a great deal of pressure from development. This paper examines the outcomes of a policy to develop the biotechnology cluster in Oxfordshire, part of the highly developed south east region of the UK. Space to grown on successful innovative biotech companies many of which have been spun out from Oxford University and are at the second stage of funding, is at a premium. This paper addresses the issues and suggests solutions that require serious policy consideration. Accommodating the industry per se is only one part of growing a local economy successfully. The biotechnology industry attracts a range of supporting companies – the 'churn' – who seek locations in close proximity in order to maximise cluster and network advantages. This paper will demonstrate how a holistic approach to understanding a local economy can enhance its expansion by identifying profit maximising property solutions for knowledge based companies. This approach could be applied across the European Union.

Forecasting Consumer Choices: The Conjoint Analysis (CA) in Real Estate Market Research

Marina Bravi, Politecnico di Torino and Sergio Giaccaria, Politecnico di Torino
Session A5

Adaptive Conjoint Analysis (ACA) is a well established PC-based market research technique (Johnson, 1987; Green *et al.*, 1990) used in marketing to determine the optimal features of projected, as yet, undeveloped products and services. The premise of ACA is that every product and service has multiple attributes, each with a different utility value to the consumer and that individual values can be quantified, summed, and forecasting in a market simulation perspective. Our paper intends to show an ACA application to the real estate market and it is organised in the followed sections: the first compares the performances of different formats of CA – CVA (*Conjoint Value Analysis*), ACA (*Adaptive Conjoint Analysis*) and CBC (*Choice Based Analysis*) – given the availability of several alternative procedures for consumer preferences measurement and it focuses on the best format when a larger and qualitatives number of attributes do exist. The second section presents the case-study: the real estate market area of Turin (Italy) and its own present trend within the market cycle, while the third shows the results of the empirical observations and stress on the problem of real estate market simulation and demand forecasting.

Portfolio Management Intensity and Performance Implications: An International Empirical Investigation

Dirk Brounen, Erasmus University, Piet Eichholtz, Maastricht University and David Ling, University of Florida
Session J1

This paper studies the value added arising from the skills of active real estate portfolio managers by exploring a database of listed property companies for Australia, the United Kingdom and the United States. We develops three indicators of portfolio management intensity, and investigates whether these indicators are related to various market- and accounting-based performance measures. Our empirical results suggest that it is difficult to explain variations in outperformance on the basis of the management intensity indicators developed in this paper. This suggests that even if commercial real estate markets do exhibit the persistent inefficiencies often attributed to them by practitioners, these inefficiencies are not big enough to compensate for the additional trading costs associated with the intensive portfolio strategies investigated in this study.

House Prices and Affordability: A First and Second Look Across Countries

Dirk Brounen, Erasmus University, Peter Neuteboom, Delft University of Technology and Arjen van Dijkhuizen, De Nederlandsche Bank
Session E5

In this paper we analyze the development of house prices for ten different countries over the period 1970-2004. First we look at real house price dynamics of the United States, the United Kingdom, France, Germany, Italy, Sweden, Denmark, the Netherlands, Ireland and Belgium. After discussing the observable similarities and variations in national house prices, we continue by analyzing structural differences in legislation and mortgage markets, which might help us to understand the cross-sectional variation in prices levels and price developments. Next, we construct a comprehensive affordability model in which nominal house prices are corrected for household income changes and the financing costs of mortgage payments. This model grants us a second look on the cross-section of international house price dynamics. We finish our study with elasticity tests, which give a first glance on the stability of each price level on the basis of affordability.

Exploring the European Non-listed Real Estate Arena

Dirk Brounen, Erasmus University, Hans Op't Veld, IPD Equity Research and Ville Raitio, INREV
Session B1

This paper describes the development of the European universe of non-listed real estate companies. For decades non-listed real estate vehicles have been famous for their lack of transparency, limited size and their complicated structures. Over the last fifteen years more and

more of the vehicles have been raised across Europe. The European Association for Investors in Non-listed Real Estate Vehicles (INREV) has started to gather information on this real estate investment. Using these data, this paper looks back on the rise of the market both in values and number, discusses the current state and composition of the supply of European vehicles and presents a comprehensive overview of the most dominant styles and structures in this market. The paper ends with an outlook on the years to come by discussing the fund terminations that lie ahead and the continuation alternatives that are at hand.

Real Estate Bubbles: A New Analysis Based on the Lender-Borrower Relationship.
Roger J. Brown, San Diego State University and Beate Klingenberg, Marist College
Session B4

Markets are cyclical. In early 2005, anecdotal evidence suggests that some United States real estate market sectors are in a "bubble". Furthermore, it is widely accepted that timing is everything. Easy to say and hard to implement, knowing when to get out is very often the key to investment success. In this paper the authors examine the interaction of lender risk management tools as an early warning sign to head for the door. The analysis centers on if and when the lender-borrower difference of opinion about the future suggests the market has gone as high as it can be expected to. There is a three-way relationship between capitalization rates, interest rates and inflation. When inflation expectations increase, interest rates rise as lenders build inflation expectations into their rates. Since capitalization rates include the cost of funds (interest rates), one would expect capitalization rates to increase also. That this is not always true is an anomaly. Buyers of income property, anticipating higher future income, bid up prices causing capitalization rates to *fall*. Tension is created by this anomaly because everyone knows that it cannot continue forever. Price inflation traceable to this anomaly introduces concern about a bubble in the market. Much has been written about the difference between expected and unexpected inflation. However, our interest is about how two parties to a transaction behave when their separate opinions differ in these areas. Previous research define bubbles in the context of irrational investing, where momentum drives prices higher as irrational investors or consumers find the assets more attractive, see for example the discussion in Hendershott, Hendershott, and Ward (2003). What is missing in that analysis is the role of the lender. Lenders operate as a sort of governor, acting out the unpopular role of guarding the punch bowl, adding just enough joy juice (easy credit) to keep the party interesting but not enough to allow it to become unruly. Why would lenders provide capital to sustain such a bubble? Indeed, consider the lender's concern that the buyer is overpaying. Suppose that for a period of time buyers gradually abandon the use of better analysis tools in favor of short cuts. This sort of behavior is met with lender restraint, a sort of benign paternalism. The manifestation of that restraint is in the lender's choice of underwriting tool. The theoretical model and empirical analysis presented in this paper supports the hypothesis that behavior of lenders is an indicator. In fact, one should be alert to changes in the direction of capitalization rates when setting loan underwriting policy. Furthermore, changes in underwriting standards affect both the quality of loan portfolio and market transaction prices.

Definition of Real Estate Investment Management (REIM) Services: A Guideline Report from the REIM Working Group of Gif E.V. (German Society of Property Researchers)
Juergen Bruebach, LGT Bank in Liechtenstein and Holger Ladewig, L/A/M GmbH
Session E3

The paper is dealing at first with the definition of "Real Estate Investment Management". Prior to this no definition could be found in Germany. The participants in this working group are practitioners (Banker, Investment, Portfolio and Asset Manager, Advisor) and scientists. Secondly the paper discusses and explains in detail the different levels comprising REIM: the investment level, the portfolio level, the property level and reporting and research. The

distinction between REIM and other areas of Real Estate Management like Asset Management, Corporate Real Estate Management and Facility Management are explored. In order to assist Investors and Investment Managers in contractual matters a guidance to best practice "Reporting Standards" has been developed by the working group. A brief overview on the content of these standards will be presented. The working group is now concentrating on defining key expressions used in the area of REIM and intensifying marketing and public relations in order to broaden the general use of the agreed definitions and standards in Germany.

Housing Development, Slow Growth Policies and Leviathan Government

Richard Buttimer, University of North Carolina at Charlotte and Steven P. Clark, University of North Carolina at Charlotte
Session E1

In the presence of increasing demand for single-family housing in suburban areas, many local jurisdictions have implemented land use strategies in order to curb the growth rate in new development. Such "slow-growth" strategies are aimed ostensibly at limiting development patterns referred to as "sprawl." In terms of spatial characteristics, sprawl has been defined as a region of scattered, low-density development consisting of areas of homogeneous land usage (Burchell (1998)). Opponents of sprawl argue that it begets a profusion of deleterious social outcomes such as air pollution, traffic problems, and poverty in urban areas, to name just a few (Ewing, Pendall, and Chen(2002)). Although typically a pejorative, sprawl has been linked to certain positive social outcomes such as increased housing affordability and greater equality of housing opportunity (Kahn (2001)). Based on these reasons, slow-growth policies have been attacked politically as veiled attempts by communities to render housing unaffordable for certain demographic groups such as first-time buyers, minorities, immigrants and median-income families. Paradoxically, slow-growth policies may even be contributing to sprawl. As Glaeser and Kahn (2003) explain, the implementation of land use controls by small jurisdictions close to city centers simply pushes developers farther out to more rural jurisdictions that do not have such controls. The purpose of this paper is to formulate a theory of slow-growth policies as instruments of rational tax-revenue maximizing policy-makers. Buchanan and Brennan (1980) introduce such a characterization of governmental preferences, referring to it as a "Leviathan" model. Central to Buchanan's theory of Leviathan government is that politicians seek to extend the purview of government (Buchanan (1975)). Moreover, these expansive tendencies result regardless of an individual politician's motives for holding elected office. As a more analytically tractable analogue of these preferences, the Leviathan model takes tax-revenue maximization as the policy-maker's objective function. The other basic feature of the Leviathan model is that the coercive powers of the government are constitutionally constrained by the governed.

Commercial Real Estate Valuation and Development with Leasing Uncertainty

Richard Buttimer, University of North Carolina at Charlotte and Steven H. Ott, University of North Carolina at Charlotte
Session B4

A theoretical model of commercial property valuation is developed where individual property owners are price takers with respect to the spot lease price, new tenants randomly arrive to lease space, and existing tenants may choose to vacate space. The timing of tenant arrivals and departures is uncertain, the probability of which is determined stochastically based on the relative values of the lease and reservation prices. Upon tenant arrival, lessors have the option to lease space at the market rate. Both the spot lease and tenant reservation prices are stochastic and correlated and can divert from, but eventually revert to, a market equilibrium relationship. Within this framework, we will examine, through the simulation of the model for competed building values, structural (expected) vacancy rates and their distribution for varying parameters sets, each

representing different market conditions or property types. Given the values for completed buildings, we will then examine how potential and existing vacancies, spot lease prices, and tenant reservation prices feedback into optimal vacant land valuation and development decisions. The model will allow for the examination of the factors that drive the development of additional vacant space (speculative building) and/or the development of already leased space, i.e., preleasing to hedge leasing uncertainty.

A Geography of the UK Commercial Real Estate Market? Some Findings.

Peter Byrne, The University of Reading
Session E4

This paper revisits some ideas that were first raised seriously in the mid-90s; that it should be possible to establish linkages (in spatial terms) between local economic factors and sector performance in commercial real estate markets. There have been a number of developments in the quality and quantity of relevant data over the intervening period that make it appropriate to return to have another look at some of these ideas in a more 'modern' technological context. Using data from a variety of sources this exploratory paper seeks therefore to look at some of the spatial patterns that can be derived from the in the data. It examines the extent to which it is possible to make linkages and visualise the geographical structure of those markets and their change over time. Naturally there remain strong limitations on the extent to which it is possible to achieve 'good' results in this kind of analysis, and one major intention of the paper is to encourage a debate about how data sets can be developed and improved to allow these methods to be taken further.

An Analysis of Mortgage Arrears Using the British Household Panel Survey

Hollie Cairns, University of Glasgow and Gwilym Pryce, University of Glasgow
Session B6

In this paper we present the results of a household level model of mortgage arrears based on twelve waves of the British Household Panel Survey (BHPS). We use the model to bridge the gap in the UK mortgage default literature between models that emphasize an equity explanation of default, and those that assume an ability to pay explanation. Our model is also the first to examine the effectiveness of Mortgage Payment Protection Insurance in a large sample context (research on MPPI has tended to focus on take-up or has used relatively small sample analysis of effectiveness). We also develop the first hedonic panel model of housing equity to be based on the BHPS and we offer suggestions as to how our BHPS equity variable could be used in other analysis. We find that the odds of arrears increase as the probability of unemployment, separation or divorce, and unsecured debt increase. Savings and MPPI, on the other hand, tend to reduce the odds of arrears. We use our model to predict what the pattern of mortgage arrears would have been over the past decade if unemployment and interest rates had remained constant, and we consider whether the significant differences in the incidence of arrears between Scotland and England persist when household level determinants are held constant.

A Tale of Two Cities: How Greater Shanghai and Greater London Cope with the Housing Boom?

J. Albert Cao, Oxford Brookes University and Professor Yongyue Zhang, East China Normal University
Session A5

In the last several years both the UK and China have experienced housing booms that result in substantial price inflation and threaten the financial stability and economic sustainability in the both countries. This paper compares the causes of the housing boom in both countries and the macro and micro control measures adopted by the central and local governments to achieve a soft landing of the housing market, using Greater London and Greater Shanghai as case studies. It examines the differences in the operational mechanisms of the housing market, defined here as the set of institutional arrangements that guide policy formulation and market operation, and the impact of such differences in institutional arrangements in property rights protection, planning control, financing, agency, and specific government policies towards the housing market. The paper then examines the recent housing market trends in Greater London and Greater Shanghai and government policies to contain the overheating. It argues that macro economic control measures are more mature in the UK, whose property market has long been a free market, and are often complicated by the coordination of economic policies and political needs in China, which result in heavy government interventions. The paper explores the recent measures taken by the Shanghai government to mitigate the price inflation. Finally, the paper evaluates the effectiveness of the measures to avoid the negative fallout of the housing boom and the control measures in the two cities.

Development of the Chinese Property Investment Market

J. Albert Cao, Oxford Brookes University and Ramin Keivani, Oxford Brookes University
Session

Over the years China has made tremendous success in using its land resources and the property market to promote production and economic growth. In 2002 China became the largest destination for foreign direct investment, most of which was in manufacturing. Coupled with huge domestic investment in manufacturing, China has emerged as a hub of Asian manufacturing and the third largest trading nation in the world in 2004. Meanwhile, the property industry has become a significant growth engine of the Chinese economy. The average growth of investment in property development was 32.3% in the last 15 years. The successful conclusion of the housing privatisation programme brought sustained prosperity in the housing market. Huge amount of space has also been made available to businesses. There are over 5.2 and 3.3 million square metres of modern quality office space in Beijing and Shanghai, respectively. Almost all of these offices were built after 1990 and are occupied by mainly international firms. The provision of quality retail space is speeding up and industrial space has been always in oversupply. Nevertheless, the quality of property as a major investment type is not yet completely understood by the policy makers. As a result the property investment market is still in its infancy. Major property developments are held by their developers and are rarely traded. Foreign involvement in property development and investment has been restricted to Chinese nationals from Hong Kong and Taiwan and ethnic Chinese from Southeast Asia and North America. Western financial institutions are absent from the market. This paper provides a preliminary analysis of an ongoing study of the property investment market in China. The paper focuses on the current status of the property investment markets in the two major cities of Beijing and Shanghai. It will identify areas requiring institutional reform to allow the property investment market to function efficiently, and provide policy and business strategy recommendations to government and businesses to optimise financial and social benefits from commercial property development. Data will be gathered by extensive literature review, interview survey and focus groups in the two cities.

Disclosing Rental Values through Sampling Procedures – Property Owners' Behaviour and Alternative Information Systems for Real Estate Market Analysis
João Manuel Carvalho, Universidade Técnica de Lisboa
Session C4

Information for real estate market analysis is being provided mainly through three basic procedures – project-specific data collection, agents' reports and large country/city samples designed to benchmark management and compare returns with non-real estate assets. The former is becoming less important as the other two become weightier references for analysis. It seems that space analysis devices (such as GIS) and methods (such as space syntax) can contribute to define intra-urban space boundaries that constitute a geographical reference for sampling. Within these boundaries building categories can be conceived and sampling referred to each of them. Property-owners' collaboration is a core feature of this procedure, but some difficulties are to be met there. An international cooperation network for the implementation of the procedure would be welcome and would make it more attractive to some types of property-owners.

Automated Valuation Products: Past, Present & Future
Vicky Cassens Zillioux, Strategic Development Worldwide
Session A6

Automated valuation products were introduced into the lending community in the mid 90's and have changed the business from both a credit risk and operational standpoint. The products have developed over time from black box technology and now are expanding to appraiser assisted AVM's and insured products. They are being paired with products used to detect fraudulent transactions. The rating agencies and secondary markets are now working with their clients to accept these products. The GSE's are developing and reselling their own AVM products. The new question is, with the change in the market, will delinquencies be affected and fraud be increased through the use of these statistical products as opposed to the traditional valuation methods. The topic is particularly timely in light of the slowing of the real estate market in most of the US. The rating agencies are putting out comment papers that address their concerns over the soft markets and the use of automated valuations. Also pertinent is the increasing use of AVM products in Europe.

Bringing the Outside In: The Coalescence of Industry and Academics in Real Estate Education
Lisa C. Chambers, University of San Diego and Elaine Worzala, University of San Diego
Session J6

Past research has indicated that it is essential for real estate programs to provide up-to-date, expert quality real estate education. One source of current market information is the industry professional. Our current research will examine the coalescence of industry and the classroom in 10 well-recognized real estate graduate programs from around the world. All of the academics that will be participating in the project are leaders within each of the sister societies that make up the International Real Estate Society (ARES, LaRES, ERES, AsRES, PRRES and AfRES). We will examine how the various programs are enhanced when professionals are directly incorporated in to the real estate course work. This study will summarize and compare the results of 10 in-depth surveys we will conduct on the coalescence of industry professionals and live projects into academic programs. These case studies will identify ways that real estate professionals are connected to the students, such as through project-based courses, mentoring programs, speaker series, shadow-an-executive programs, internships, networking events, executives-in-residence, career fairs, guest lecturers, and field trips. In summary, the study will compare and contrast the integration of industry and academics in ten graduate real estate programs.

The Wealth Effect of Housing Price Changes in Sweden
Jie Chen, Uppsala University and Yinghong Chen, Gothenburg University
Session D4

Due to the critical significance of housing wealth for both the households and aggregate economy, the impact of changes in housing wealth on consumption has received considerable attentions in the literature. A number of prior studies have suggested that variations in housing wealth have substantial impacts on consumption and tend to be much larger than equivalent variations in financial wealth. However, there is little empirical analysis of this issue within the Sweden context. Swedish housing market has some peculiar characteristics that favourable to the investigation of housing wealth effects. The housing equity is widely held by households and the distribution is fairly even. Further, the rent level in Sweden is highly regulated so that the homeowners are easier to capitalize gains in the private owner-occupied housing market. In this paper, we test the wealth effects of housing on consumption using the Sweden quarterly data ranging from 1981K1 to 2004K4. A key concern in our paper is how the volatility of price movement affects the levels and timing of wealth effects of housing. We also investigate whether the financial deregulation and the reform of housing finance system yield structural changes in the wealth effects of housing.

Information Technology and Riskiness in Real Estate Transactions
Lawrence Chin, National University of Singapore
Session H4

Information technology has been increasingly applied in real estate transactions so as to improve trading effectiveness and efficiency. Although the usage has reached phenomenal levels in the past decade, the inherent risks associated with applying the Internet is still not very much understood. Moreover, significant barriers still remain in applying this kind of technology. Even though the internet is widely predicted to revolutionize commerce over the next few years, the full potential of electronic commerce (e-commerce) will only be realized if both buyers and sellers have sufficient confidence to trade electronically (Skevington, 1998). However, when these risks are carefully managed, electronic transactions could provide potential benefits in terms of transaction costs, accessibility to market and speed of transaction. This paper develops a model to optimize the risk management of real estate electronic transactions and suggests methods to mitigate its adverse effects in these transactions.

The Modern UK Housebuilding Industry: Diversification or Specialisation?
Youngha Cho, Oxford Brookes University and Lorraine Morrisey, Oxford Brookes University
Session B5

This paper aims at understanding the restructuring process of the modern UK housebuilding industry and at investigating how the business strategies and the concurrent production structure influence business efficiency and the growth of firms. The targeted objectives for addressing the above aim are three fold; to identify the prominent types of business strategy of UK housebuilding firms - diversification or specialisation; to evaluate whether the production structure of the UK housebuilding firms as an outcome of their business strategy is economically efficient; and to investigate the relationship of the production structure to the building firms' performance (growth). To achieve these objectives, primary and secondary data will be collected for the largest 100 housebuilding firms based on output volume. Market concentration and size structure will be examined. All types of businesses that the housebuilding firms are involved in each year will be surveyed and classified according to the UK Standard Industry Classification (SIC). This paper reports on early results based on the information collected. The extent of diversity or speciality of the housebuilding firms will be examined. Statistical modelling analyses will be used to analyse whether the current production structure of the UK housebuilding firms is cost efficient. Based on this model, the optimal scale and scope of the housebuilding firms, in response to the changing market might also be derived. These analyses will give the future direction of the housebuilding firms' business strategy.

Low Cost Home Ownership in Different Housing Markets

Youngha Cho, Oxford Brookes University and Christine Whitehead, London School of Economics

Session D4

The UK government has identified the need to concentrate investment, both public and private, on the provision of low-cost homeownership (LCHO) as first time buyers find it more and more difficult to access owner-occupation through traditional open market routes. New initiatives are concerned with increasing the role of private finance through equity mortgages as well as providing a range of shared ownership schemes aimed at key workers and pressure areas. This raises important issues for both these institutions and for government: the institutions are taking on new risks about which they know little, while government wishes to target assistance closely on those who cannot achieve owner-occupation in other ways. This paper reports on early results of a project looking at how the benefits and risks vary between areas. Using secondary data from 1999 – 2004. The paper aims to identify key issues relating to the demand for existing low cost homeownership schemes concentrated on:

i whether the pattern of LCHO sales varies across different types of local housing markets (measured by the extent of pressure in the market and the gap between social housing and market housing costs);

ii the attributes of LCHO purchasers and how they differ between areas; and

iii the extent to which these groups and the dwellings they purchase represent different financial risks by identifying how the LCHO group fits within the local income distribution, and the property values compare to the distribution of the local house prices.

Conclusions will then be drawn about the extent to which schemes are supporting appropriate groups from the point of view of government and financial institutions.

Rents and Prices in the German Apartment Sector: an Asset Pricing View

Marcus Cieleback, MEAG MUNICH ERGO AssetManagement GmbH

Session F3

In Germany new construction in the rented apartment sector is on a downward trend since the mid 1990ies. At the same time Germany has in a European context a low owner occupation rate of approximately 43%, as from a household's point of view renting is more attractive than owning. The higher attractiveness is due to the strict regulation of the rented sector, government intervention and the fact that roughly 50% of the rented apartment sector are privately owned, and therefore not managed very professionally. The professional institutional German investors, like e.g. insurance companies and pension funds, until recently had the goal to get out of the rented apartment sector. Despite this, in 2002 and 2003 increasing interest of opportunity funds for portfolios deals in the German residential sector was seen. This paper tries to analyze yields and yield spreads in the German apartment sector to gain insights why there is an increased international interest for rented apartments in Germany.

Which House Price?
Ben Clarke, DTZ Research and Ermina Topintzi, DTZ Research
Session F3

The Land Registry House price index is considered the most reliable estimate of regional house price series for the UK. However, it is published with a lag. Forecasting more timely house prices therefore requires a judgement call deciding which of the other house price series the forecaster should use. This paper applies a number of filtering techniques to Land Registry the Halifax, the ODPM, the Nationwide and RICS estimates of regional house prices to construct the "ideal" house price index for each region of the UK. We find that whilst a composite of indices provides a more accurate measure of house prices this varies over time.

Corporate Exit Strategies: Evidence from Real Estate Investment Trusts (REITs)
Lisa Cottrell, University of Connecticut, Robert D. Campbell, Hofstra University and Zhilan Feng, Union University
Session F4

This study examines a cohort of 195 public Equity REITs that are NAREIT members in 1998, and measures changes in corporate status 1998-2002. Sixty five firms, a full one third of the cohort group, exit from NAREIT membership during the four-year period of study. The most commonly used vehicle for exit is public-public merger, but many REITs exit by merging private or by liquidation. Abnormal returns to shareholders are measured around the announcement of the exit event. Returns are positive for announcements of exits of all types, but not significantly so for the case of liquidations. ARs of +3% in public-public mergers are consistent with previous literature. ARs are best when firms merge private, at +11%. Logistic analysis of the conditional probability of each exit type produces evidence that traditionally-structured REITs are significantly more likely to exit by merging public, and less likely to exit by merging private, than UPREITs are. Also, Diversified REITs are less likely to exit by merger of any sort, and more likely to liquidate, than are REITs with specialized property portfolios.

Office Market Forecasts: Towards a Precinct Approach
Mervyn Cowley, Queensland University of Technology
Session J5

Significant commercial real estate research published internationally over the past 20 years has focused on modelling office property markets in endeavours to identify and quantify the determinants of changes in the levels of rents, values and construction activity. A specific objective of much of this research has been to generate property market forecasts. A review of 37 published office rent and space supply models provides a clear indication of the perceived dominant explanatory variables adopted by the researchers. Despite some consensus on these variables, a number of these studies demonstrated shortcomings in the accuracy of model derived out-of-sample forecasts as compared to actual market movements. Modern commercial real estate valuation and project viability study methods place significant reliance on forecasts of market demand and supply variables. However, a survey of office building valuers in the Australian city of Brisbane found inconsistencies among firms in the formulation of forecasts applied in discounted cash flow based property assessments. This aspect adds a further complication to the challenge of developing plausible market forecasts. The literature also provides evidence of an evolution of office market forecasting down from a national level to an individual city level and, more recently, down to a sub-market level. However, there has been a reluctance to recognise that values, rents and vacancy levels do not move in a homogenous manner within individual central business districts. Hence, citywide forecasts are applied in

assessments of individual properties or projects without regard to the heterogeneous market trends evident within central business districts. After reviewing these issues, this paper examines the Brisbane city office market with the assistance of geographic information system technology to map the transition of land values over time in order to demonstrate the lack of market uniformity and to identify declining and emerging locations. Other built form, planning and market data is also mapped with the aim of segmenting the city into definable market precincts. This method is also used to plot potential redevelopment sites, having space supply implications for individual precincts. The study is a precursor to the incorporation of precinct variables in an econometric model with the objective of potentially enhancing office rent forecasts for properties within the sample market.

Do Small Business Tenants Need Protecting in Commercial Lease Negotiations?

Neil Crosby, The University of Reading, Cathy Hughes, The University of Reading and Sandi Murdoch, The University of Reading
Session C1

During 2003 and 2004, the authors were commissioned by the UK Government to provide evidence on the operation of a voluntary code of practice agreed between landlords and tenants of commercial property in the UK and introduced in April 2002. One of the Government's objectives for the Code of Practice was to increase the awareness of small business tenants. Previous research (DETR, 2000) had suggested that small business tenants did not always take professional advice when taking leases, particularly from agents prior to agreeing the basic heads of terms. Solicitors were more frequently consulted but often after the commercial terms were agreed. This paper aims to identify the current situation of small business tenants when negotiating leases in the UK. The objectives are to examine both the process by which leases are negotiated and the outcome. It compares the available lease data on small businesses with larger tenants and will identify whether any differences exist in the negotiation process and the outcome of that process. The research will isolate gaps in this data and suggest a research agenda to fill those gaps. The research for the paper includes a preliminary interview survey of 46 agents and solicitors carried out in 2003 which informed a set of questionnaire surveys of tenants, landlords, agents and solicitors carried out in 2004. The surveys provide evidence of the negotiation process and the incidence of representation of small business tenants. In addition, analysis of data from the Valuation Office Agency and from the Investment Property Databank gives detailed information of trends in actual lease terms such as lease length, break clauses and rent review patterns, and data on business survival rates is available from Government.

Are property agents to blame for upward only rent reviews in the UK?

Neil Crosby, The University of Reading, Cathy Hughes, The University of Reading and Sandi Murdoch, The University of Reading
Session C1

Leases of commercial property in the UK that are for more than 5 years typically have rent review that is upward only (i.e. at review the rent will be the higher of the current rent or the open market rent). Whilst the rent review clause is freely negotiated, several tenant groups have argued that they have in practice no choice; the UK government has applied pressure on landlords to offer alternatives to the upward only rent review through a Code of Practice, although this appears to have had little effect and the government is currently considering whether to introduce legislation. In negotiating commercial leases, many landlords and tenants employ property agents to act on their behalf. The question arises whether the upward only rent review is a real issue for the parties and if so whether the agents are proving to be an obstacle rather than an aid to negotiation on this point. The agent is involved in the negotiation of a package comprising the major lease terms and it may be that their role in perpetuating this form of rent review is significant. The research uses a set of case studies of specific transactions to explore the role of the property agent in these negotiations and how it varies with factors such as property and client type. It considers whether the agent influences the outcome of negotiations on rent review type and whether factors such as their own expectations play a major role.

Fostering Competition in Real Estate Services: Domestic Supervision or Global Standards?

Éamonn D'Arcy, The University of Reading

Real estate services in common with other professional business services are rapidly becoming more globalized reflecting the elimination of most technological, logistical and legal barriers to global trade in such services. A key feature of this process in real estate services has been a significant consolidation of the sector through a process of mergers and acquisitions resulting in the emergence of a small number of global delivery platforms. While the sector will inevitably remain fragmented given the intrinsic characteristics of real estate an important consequence of this process of consolidation has been a reduction in competition, in particular in the provision of high-value added commercial real estate services. Which this process of consolidation has in part been a product of client pressure, its outcome raises many questions about competition and regulation in the sector. Moreover, given the partial evolution of many global real estate service firms into full–blown specialist financial service providers the type of regulatory and competition issues raised in the context of financial service markets may also be relevant. This paper is a first attempt at identifying the key regulatory and competition issues which arise from this process of consolidation and globalisation in the sector. In particular it examines how existing legal and supervisory frameworks such as professional bodies have adjusted or not to the changed market circumstances. It questions the relevance of traditional regulatory frameworks in the sector and assesses how the competitive landscape of the sector may have changed through a consideration of issues such as information provision, product differentiation and barriers to entry. The paper concludes with an assessment of the merits and suitability of domestically based regulation as compared to a set of global supervisory standards.

Cash Flow Volatility and Dividend Policy for U.S. REITs

Jing Dai, National University of Singapore and Seow Eng Ong, National University of Singapore
Session F4

The dividend debate between agency cost theory and information signaling theory provides contrasting explanations of the relationship between dividend payout and cash flow volatility. This paper attempts to test these two theories empirically using data from 135 public US equity REITs from 1985 to 2003. We explore the role of expected cash flow volatility as a determinant of dividend policy for REITs, by employing panel regressions on excess dividend. The paper finds strong evidence suggesting that REITs pay out substantial excess dividend to avoid agency cost when the cash flow is more volatile. The information signaling theory plays a relatively minor role in REIT firms' dividend policy concerning the cash flow volatility.

Time Series Relationships between Bonds, Real Estate and Share Returns for the Australian Investment Market.

Anthony De Francesco, Colonial First State Property, Sydney
Session I2

Asset diversification has the potential to deliver enhanced risk-adjusted returns on investment portfolios. These gains are usually gauged by examining the contemporaneous correlation matrix. While this approach maybe appropriate when formulating tactical investment decisions, strategic

asset allocation can be more appropriately formulated by examining the long-run correlation using cointegrating analysis. This paper explores various relationships between bonds, real estate and shares for the Australian investment market. Empirical findings suggest that no long-run bivariate relationships exist between these asset classes. However, when the models are augmented with real economy variables, there is evidence of cointegrating relationships. A long-run equilibrium relationship is found between listed property, direct property and employment. This implies that diversification benefits are limited to short and medium term investment horizons across these two asset classes. Furthermore, the short-term influence of economic factors indicates their relevance in tactical allocation strategies.

Sealed Bid Auctions and Buyer Behavior: Evidence from Scottish Housing Markets

Carolyn Dehring, University of Georgia, Neil Dunse, University of Aberdeen, and Henry Munneke, University of Georgia

In Scotland, sellers of houses are typically faced with choosing from one of two pricing systems - offers over or fixed price – to market their property and achieve the "best" price in the open market. In the offers over system, sellers set a reserve price and interested parties bid through the submission of sealed bids. The highest bid is normally accepted. In the fixed price system, the first written offer to be submitted which matches (or is close to) the list price is typically accepted. We show that informed sellers will select the offers over system because in a competitive situation it generates a higher expected selling price relative to the fixed price system. If we assume that buyers must repeat the search process until they bid successfully, the sealed bid format induces rational buyers to overbid in an attempt to avoid expected future search and transactions costs. Inefficiencies persist because buyers are non-cooperative. Using 15,500 residential sales data between 1998 and 2002, we model the seller's choice of marketing system. Specifically, we estimate a hedonic price function based on transactions under both marketing system acknowledging that the choice of marketing system should be treated endogenously within the empirical estimation. The empirical procedure allows us to compare the price under each system against the unobservable price of each house under the alternate system. From this comparison, we hope to provide additional insights into the selection of and price received under each system.

Managing University Real Estate Portfolios: Generating Management Information for Performance Based Portfolio Strategies and Real Estate Decisions.

Alexandra den Heijer, Delft University of Technology

Ten years ago Dutch universities became owners of their real estate portfolios. Their real estate portfolios contain many academic buildings and laboratories. Some of the universities own (monumental) buildings in historical inner cities (Amsterdam, Utrecht, Groningen, Maastricht) and most of them have large real estate portfolios, both in terms or gross floor area and in terms of land property. Together they own as much as 4,5 million square meters (equals 48.5 million square feet) gross floor area and 4000 acres of land. Ever since the universities have dealt with many corporate real estate (CRE) issues: adding value to strategic management, coping with diminishing public (financial) support, improving customer satisfaction and managing many complicated building projects. Meanwhile developments in higher education and research created a very dynamic context with many uncertainties. Corporate real estate managers of all 13 Dutch universities joined forces to discuss the opportunities and threats of their new responsibilities and to generate more management information for their own situation. Delft University of Technology was asked to assist them with research projects that combined theory and practice - in an international context of managing university real estate portfolios – and has done that for more than 5 years now. This paper summarizes the results of 5 years of research on managing university real estate portfolios. It emphasises on the latest results (2004/2005) that focus on

CRE-performance measurement in general and on benchmarking costs in relation to quality and use of buildings and real estate (data analysis in February/March 2005) in particular. The paper will contain theories – applied to universities but relevant for CREM in general – and will include results of quantitative and qualitative surveys, both on portfolio level and on (building) project level. Conclusions will concentrate on methods for measuring performance of CREM and for generating management information for CRE-managers to communicate and negotiate with policy makers, strategic planners, controllers, building users and parties in construction management.

Corporate Location Decision Making in Light of Terrorism Threaten City Environments: The Cases of New York and Chicago

Sofia V. Dermisi, Roosevelt University
Session D2

Corporate location decision making has been based, for many years, on proximity to transit sources, concentration of qualified employees, relationship with peer and other institutions, among numerous factors. Downtowns of major cities have always offered significant benefits in all the aforementioned areas compared to remote locations, attracting corporations in significant numbers. After the terrorist attacks of September 11, 2001 in the U.S., corporations are highly concerned with their security at high risk downtown locations as well as the increasing cost associated with these locations. This paper examines the corporate relocation patterns of tenants of the World Trade Center complex after its collapse and the psychological shockwaves the terrorist attack spread to Chicago, a city with a major concentration of corporate headquarters and the site of the tallest office building in the U.S. The results of the study indicate a very limited disperse of corporate tenants of the former World Trade Center complex beyond Manhattan, a trend not followed by Chicago. The paper also highlights additional reasoning for the diverse effect of terrorism in an impacted city (New York) versus a city under threat (Chicago).

Real Estate Portfolio Size and Risk Reduction

Steven Devaney, Investment Property Databank and Stephen Lee, The University of Reading
Session B3

Risk diversification is important to all investors. However, commercial real estate investors in the UK tend to concentrate their holdings in relatively few properties; as a consequence they are vulnerable to significant risk of underperforming the overall market or a target rate of return. Given the potentially high risk of owning only a few properties, we follow de Vassal (2001) and examine the return/risk benefits of holding more properties in a portfolio. The analysis uses Monte Carlo techniques to simulate total returns of real estate portfolios with varying numbers of properties using individual property data over the period 1994-2003.

Individual Assets, Market Structure and the Drivers of Returns

Steven Devaney, Investment Property Databank and Colin Lizieri, The University of Reading
Session B3

Studies of the patterns of risk and returns in commercial property and of the application of portfolio theory in real estate typically have based their analysis on data aggregated by geography and sector. Thus, for example, UK studies seeking to identify ways of structuring a real estate portfolio have clustered IPD segment or town level data in an attempt to identify optimal groupings; other research has sought to imply individual asset volatility from aggregated data, often making heroic assumptions. However, given the heterogeneity of property assets, the behaviour of individual asset returns within those groupings may be very different. Those few studies that have used individual data have often suffered from small sample size problems. In this paper, both portfolio groupings and drivers of individual returns are re-evaluated through the application of multivariate, exploratory statistical methods to individual level property data from the IPD UK databank. The aims are to discover whether widely accepted views about the structure and drivers of the real estate market are empirically supported by evidence from individual investments; and to identify any additional dimensions in the return generating process.

How wide is the gap? A Panel Data Analysis of the Housing Satisfaction between Owners and Renters across the EU

Luis Diaz-Serrano, National University of Ireland Maynooth

Session G4

Housing Policies and the supply and demand for housing largely differs across the EU. Such marked differences may end up to large discrepancies in the quality of the housing stock in both the property and the rental housing market of each country. In this sense, the rental residential market is probably the one that might better pick up these differentials. In those countries where the tenure imbalance is high enough in favour of homeownership we could expect large differences in terms of the quality of the supplied housing stock. However, in more mature housing markets where the tenure status is more balanced, property and rental markets compete to attract the demand. Hence, it should be expected that due to this competition the quality of the housing stock raises in countries with higher tenure imbalance, where minimum standards of quality, especially in the rental market, can only be achieved by paying more. In this paper we aim to analyse these differentials across the EU. To do so we use the ECHP to determine the socio-economic determinants of the level of housing satisfaction. From this analysis we observe that the levels of housing satisfaction and its determinants varies significantly between owners and renters across the EUcountries.

Connectivity, Technological Change and Commercial Real Estate in the New Economy: A New Research Agenda

Tim Dixon, College of Estate Management, Reading, Samantha Damon, ColoAdvisors and Bob Thompson, RETRI Group

Session H4

The New Economy, founded on Information and Communications Technology (ICT), is a cornerstone of technology-driven frameworks for economic growth, and can not only potentially recombine existing physical spaces to produce new urban forms, but also impact on real estate, in terms of space requirements and speed of turnover. The paper examines some key conceptual frameworks and argues for a 'socio-technical' conceptual framework to aid understanding of ICT in the commercial property sector. It deconstructs the myths of the 'death of real estate' and 'productivity increase means jobs loss', in relation to commercial property. Finally, it examines some of the ways in which ICT is impacting on commercial property through empirical research, with examples from the new PIREC (Partners in Real Estate Connectivity) research consortium. The paper concludes by highlighting the most important components for a future research agenda in the field of real estate connectivity.

A National Survey of the Role of the UK Development Industry in UK Brownfield Regeneration

Tim Dixon, College of Estate Management, Reading, Gaye Pottinger, College of Estate Management, Reading, Yasmin Pocock, College of Estate Management, Reading and Mike Waters, College of Estate Management, Reading

Session F2

UK Government policy currently places a strong emphasis on the reuse of brownfield land as part of its sustainable development and regeneration agendas, including the Sustainable Communities Plan. The Barker Review has also been important in the continuing debate for highlighting not only the chronic undersupply of new dwellings, but also in arguing that improvements in both the housebuilding industry and the planning system could deliver an increased supply of low cost, new homes. This has implications for the use and reuse of both brownfield and greenfield sites. Policy makers have therefore realised that fundamental change is needed, albeit within the context of (so far) relatively 'light touch' policies, working in conjunction with the market. The current development landscape therefore is a complex one, with a range of policy measures being debated, but with inherent uncertainty, tensions and conflicts still present. The question arises therefore, how are developers approaching brownfield and contaminated land issues today? Previous research has focused on the barriers surrounding brownfield reuse, but there has been little research that has focused on how the housebuilding industry interacts with other players or stakeholders, in terms of market dynamics at a national and regional level. This paper is based around the Stage 1 survey results (carried out in mid-2004) of commercial and residential developers of a two and half year EPSRC-funded project, based at The College of Estate Management in Reading. The paper briefly provides an overview to the brownfield issue in an international context, in terms of conceptual models of brownfield, and critically reviews the key literature relating to the housebuilding industry and brownfield land in the UK, highlighting recent UK government policy in relation to brownfield land. Commercial developers have a long history of developing on brownfield sites, but key results from the survey suggest that housebuilding on recycled land is no longer the preserve of specialists, and is now widespread throughout the industry. Attitudes towards developing on contaminated sites appear to have changed as developers have gained more experience of building on brownfield land. As a result, developers are personified by distinct 'cultures' and varying attitudes towards brownfield/contaminated land issues, in terms of risk perception, and remediation technology adoption. As the survey suggests, although brownfield redevelopment is becoming 'mainstream', the redevelopment of contaminated sites for residential use could, however, be threatened by the impact of the EU Landfill Directive. Its implementation was likely to dissuade over two-fifths of housebuilders in the survey (particularly the smaller operators) from undertaking development on land requiring remedial treatment. These findings and others covered in the paper have important ramifications for brownfield regeneration. This may also have consequences for increasing housing supply in the key growth areas targeted in the Government's Sustainable Communities Plan.

Are Sentiment Indicators Good Predictors of Yields?

Samuel Duah, Jones Lang LaSalle and Sotiris Tsolacos, Jones Lang LaSalle

Session G3

The fall in property yields since 2001 and in particular in 2004 that resulted in strong total property returns both in the UK and the continent had three major implications for future research on property yields. First, it highlighted the need to assess models and methodologies of yield forecasting since the fall in yields and, especially the magnitude of the fall in a period of rather weak occupier markets, was not predicted by the industry. With the exception of papers such as McGough and Tsolacos (2001) and Krystaloyianni and Tsolacos (2004) the forecasting capacity of yield models is not assessed. Second, a belief is developing that fundamental models of property yields, those be models linking yields to the occupier market and the wider investment environment, were unable to predict the yield movements in 2003 and 2004, and that sentiment and behavioural factors played a role during that period. A key issue is therefore whether we have full knowledge of what these factors or indicators tell us about yield shifts in the short-run. Third, a clear need has emerged to model the direction in yields in the short-term (twelve months ahead). Asset allocators require information as to which sectors will see yield

shifts before the stock selection process is initiated. Therefore early signals for yield movements offer significant information to property investors. This paper responds to these research requirements. It aims to identify how closely widely publicised sentiment indicators are correlated with yield movements and to assess their information content for near future yield movements. In particular it examines the usefulness of consumer and business surveys in forecasting the direction of retail yield shifts. To that effect, the empirical relationship between sentiment indicators and retail yields is explored through VAR models and causality tests. The aim of the empirical analysis is to construct VAR models to forecast the direction of yields two to four quarters out of sample. That is whether yields will be lower or higher in two and four quarters ahead than their current level, using advance information to replicate what a practitioner would do. The forecasts of the VAR models are then compared to those of an autoregressive model and other naïve methodologies. The forecasts are estimated on a recursively basis but the performance of models in turning points receives specific attention.

Betterment in the UK: Past Present and Future.

Nigel Dubben, Kinsgton University and Frances Plimmer, Kingston University
Session B5

In early 2004, a review of UK housing supply undertaken by Kate Barker (the Barker Review) was published. The review looked at a range of issues which might be constraining the number of houses being built in the UK. In the final report, one of the solutions proposed to encourage the supply of land for residential development is a form of betterment tax. The UK has a disastrous history of betterment taxes, each of which failed in its aims of securing for the state added value from development rights. The property industry has reacted with concern at the recent proposals for a new development tax and this paper discusses the issue of using a development tax as a device both to secure the supply of residential land to meet the UK's needs and to provide funding for much needed infrastructure to support the new developments. The paper also discusses the valuation issues which have underpinned earlier attempts at recapturing betterment for the community and, in the light of these, reviews the taxation proposals of the Barker Review.

Regulating the Rented Residential Sector of the Housing Market, an Irish Solution to a Europe Wide Problem

Tom Dunne, Dublin Institute of Technology
Session H5

The Residential Tenancies Act 2004 provided for major reforms of the private rented residential sector in the Republic of Ireland and established a statutory Private Residential Tenancies Board. Provisions of the Act include a dispute resolution service using mediation and adjudication, registration of tenancies, statutory rights and obligations for landlords and tenants and greater security of tenure for tenants. It also provided that rents should be set at market levels. The legislation is unique in the EU and could be a model for reform elsewhere. The Act closely followed the recommendations of a government commission which reported in 2000 and which was chaired by the author. The paper reviews the genesis of the legislation, outlines the main provisions, considers some of the practical difficulties in implementing aspects of the legislation, reports on experiences of the Private Residential Tenancies Board and presents some early reflections on the operation of the Act and its effect on the sector.

Spatial Analysis of Residential Prices in Istanbul

Guldehan Egdemir, Istanbul Technical University, Vedia Dokmeci, Istanbul Technical University, Gulay Kiroglu, Istanbul Technical University and Zeynep Önder, Bilkent University

Session J3

This paper analyzes the factors that affect house pricing in Istanbul. As a large metropolitan area, Istanbul has many sub-markets with unique natural and historical settings surrounded by the sea. These amenities are reflected in its housing prices and create sharp differences between the different sub-markets. In the analysis, first, building and environmental characteristics are taken into consideration. Different hedonic price functions are estimated at the metropolitan level and for different housing markets depending on house size, age and price groups. At the metropolitan level, it is found that sub-district is the most important factor to affect housing prices. Second, the models are extended to incorporate spatial neighborhood dynamics and spatial variation with respect to the influence of housing attributes on housing prices is examined. The results of the study reflect the concept of the widely accepted hypothesis that housing price is determined by two types of characteristics: structural and locational. The results have important implications for the understanding of urban structure and urban dynamics; what makes the study interesting is the unique setting and timing of this process in an urban structure transforming from a mono-center into a multi-center city.

Delistings in the Global Property Share Market
Piet M.A. Eichholtz, Maastricht University and Nils Kok, Maastricht University
Session F4

The literature regarding mergers and acquisitions suggests various motives for delisting: improving managerial efficiency, undervalued shares, size effect, agency costs, and, most importantly, taking on extra debt to reduce cost of capital and decrease agency problems. These arguments could also apply to property companies, but the extent to which this is the case will probably differ across countries, since different countries have strongly varying institutional regimes regarding publicly listed property companies. For example, the debt argument does not hold for countries having a REIT structure, because these are tax-exempt. This leads to our main research question: what are the elementary drivers of delistings in international property markets? Between January 2000 and December 2004, more than 200 property company delistings took place globally, and of these, enough information for in-depth analysis is available for 175 executed delistings. Based on this sample, we will compare targets and acquirers with respect to a wide range of factors that might potentially influence delistings and subsequently build a logit model to determine takeover probability. We expect a negative relationship between the takeover probability and size, stock performance and liquidity.

Public Private Partnerships in Europe – Track to Success, Bottlenecks and Lessons Learned from Different Countries
Clemens Elbing, Bauhaus-University Weimar and Amber Yu-Chien Jan, Bauhaus-University Weimar
Session C7

All over Europe Public Private Partnerships (PPP) are becoming an alternative for public sector finance of infrastructure, real estates and services. Current focus for public real estates as PPP is in most countries on schools, hospitals and prisons however all European countries focus on different objectives, implementation strategies and are in a different position on the track to successful implementation of PPPs. Britain is a mature market with over 600 PPP projects in diverse sectors, a continuous project pipeline now certainly exists for schools (Building Schools for the Future programme) and hospitals (NHS LIFT programme), standardisation is under continuous development, there is a strong political support, a public sector comparator test is in place and a secondary financial market for refinancing and restructuring PPP projects already exists. Other countries such as Germany, Italy or Netherlands have already made some experience but all European countries can learn from each other. A key issue of the paper is to present the evolution of PPPs in different European countries, reasons for success, bottlenecks and lessons learned on the basis of a systematic research framework applied to the identified countries. The research framework covers the framework conditions, amount of standardisation, existence of government taskforces, tendering procedures, investment needs, sector focus, applied contractual models, strategic selection of pilot projects as well as different objectives with the implementation of PPPs and different approaches to implement public real estates as PPP projects.

Adjustment in Property Space Markets: Estimates from the Stockholm Office Market
Peter Englund, Stockholm School of Economics, Åke Gunnelin, Royal Institute of Technology, Patric H. Hendershott, University of Aberdeen and Bo Söderberg, University of Gävle
Session D3

Rent setting behavior of landlords relates to rental rates on new leases, while tenant demand for space depends on the average rental rate on existing space. Thus models of the space market need to identify the roles of these two rates. A market or new lease rent series is constructed for the Stockholm office rental market for the time-period 1977–2002 by applying a standard hedonic approach to a data-set of some 2,400 individual leases. Given the market rent series and the lease length distribution, we estimate a time series on the average rent on existing leases. We explain the adjustment of both real market rent and vacancies and show the role played by "hidden vacancies" in the stock (the difference between space demand at the new and existing lease rates divided by the existing stock) in this process. We further calculate the natural vacancy rate assuming a trending equilibrium in the Stockholm office market. Simulations illustrate the importance of the lease length to the adjustment process.

Urban Planning and Property Markets: Proactive Tools of Public Authorities for the Control of the Urban Residential Property Market.
Stig Enemark, Aalborg University, Isabella Lami, Polytechnic of Turin and Uberto Visconti di Massino, Valori Urbani
Session B5

The Urban planning mission is to produce an image of the future town as it will show after all the developments have taken place. But do Urban Plans and regulations effectively control and guide urban private development? What are the public tools or practices that are used to regulate the current and future urban market through effective land zoning in Italy and in Denmark? How are these tools appraised and considered before becoming effective land regulations? How effective are the different analyzed methodologies in terms of controlling commercial property development and urban quality? And finally, how does the planning and zoning regulations influence the urban property market in terms of property values? The paper will investigate these issues in two European countries, Italy and Denmark, with quite different planning practices as well as quite different property markets.

Urban Change and Owner Occupation
Alan W. Evans, The University of Reading
Session A4

In analysing urban growth and change, economists assume that it makes little difference whether land or property is rented or owner-occupied. This paper argues that this is a false assumption, particularly in the case of housing. When property is rented the division between landlord and tenant separates the owner from the occupier. So if the demand for property in an area increases then landlords increase rents forcing renters to pay up or move. But for owner occupiers the

increased demand increases the value of their property so that, as owners, they make a capital profit which cancels out the increased opportunity cost of occupying the property and significantly reduces, indeed virtually eliminates, the pressure to move. Thus owner occupation lengthens the adjustment process, possibly by decades. In theory, of course, they should move to downsize in order to readjust the risk element in their portfolio of investments, since they are now overinvested in housing. But they do not do this for a number of economic and psychological reasons which are developed in the paper building on ideas put forward in Evans (2004). So adjustment in the market depends on retirement or death and requires decades. In the meantime relative prices are out of equilibrium on a virtually permanent basis. One result, as in the Tokyo metropolitan area, may be increased sprawl. Another result, as in south east England, may be prices significantly higher than they would be otherwise as a large proportion of the older population continues to occupy properties that are unaffordable by younger families with similar incomes.

Real Estate Agency Practice and Profitability: An Analysis of House Sales and Agency Numbers in Sydney

Chris Eves, University Western Sydney
Session F6

Large cities provide a broad range of residential property types, as well as a range of socio-economic locations. This results in a significant variation in residential property prices across both the city itself and the individual suburbs. The only constant across such a diverse range of residential property is the need for the majority of residential property owners to employ the services of a real estate agent to sell their property or to purchase a residential property. This paper will analyse the Sydney residential property market over the period 1992 to 2003 to determine the change in real estate offices numbers over the period, the profitability of real estate agency offices based on the residential house price performance of houses and units in these specific locations and the extent of changing residential house prices on agency profitability. Suburbs have been selected to provide a full range of housing types, socio-economic areas, older established and developing residential suburbs and location from the CBD.

Modelling Regime Shifts in the City of London Office Rental Cycle

Kieran Farrelly, Prudential Property Investment Managers and Ben Sanderson, Prudential Property Investment Managers
Session F6

Real estate rental adjustment models have taken on numerous forms and specifications, but have typically been estimated in both a linear and univariate fashion. However, it is clear that real estate actors, both developers and occupiers, can behave differently at various points of the business cycle, in ways that linear-models may not be able to adequately account for. This paper extends previous work on market analysis and forecasting by using regime switching modelling techniques which have been popularised in contemporary empirical macroeconomic research. Evidence of non-linearity in the rental adjustment process is found in the City of London office market and then explicitly modelled using the smooth-transition regression technique. The non-linear model describes the in-sample movements of rents better than the equivalent linear model, particularly in the late 1980s and early 1990s.

Residential Real Estate as a Potential Investment Alternative for Institutional Investors? - An Empirical Examination

Patricia Feigl, European Business School

Session I4

Due to restrictive capital markets, global economic stagnation and political unsteadiness, institutional investors have aligned their former proactive portfolio strategies to a more conservative asset allocation. As a consequence, institutional investors increasingly regard residential real estate as an attractive investment alternative. The deflection of the investment behaviour raises several questions that will be examined in this survey. Is residential property an alternative investment asset for institutional investors? How should investors allocate their investments in residential real estate? Compared to other asset classes, which strengths and weaknesses are unique for residential real estate investments? In order to analyse these questions, an empirical study of direct and indirect investment opportunities in the United States has been conducted. The historical NCREIF database held between 1984:1 and 2003:4 has been used. In the first step, the relative performance of unsecuritized residential properties in a real-estate-only portfolio is assessed. In the next step, the performance of securitized residential properties is examined by scrutinizing the historical returns of Equity REITs clustered by property types. Ultimately, both unsecuritized and securitized residential investments are included in a mixed-asset portfolio to determine efficient frontiers for institutional investors. This empirical study attempts to reveal the implications of residential real estate investments, possibly enhancing portfolio returns by mitigating downside risks.

The Success of Branding Activities in Real Estate Development

Philipp Feldmann, European Business School

Session F7

As real estate markets for commercial spaces get saturated and demand regresses, the competition between products offered increases significantly due to increased vacancies, new project developments and falling rents. As a result, a variety of marketing tools are applied in order to promote the individual project development and support the leasing process. The goal is the generation of a brand that acts as a carrier of implicit and explicit information on the consumer's perception and as a consequence differentiates the individual building from its competition and sometimes even attains a higher rent. But the essential question, whether these branding strategies prove to be efficient is often neglected. This paper examines the success factors of a brand and the potential of real estate branding strategies. By executing a user oriented analysis, the perception especially of the end-user is observed and strategies that improve the success of real estate branding is explored. It is shown, how a comprehensive view of the branding strategy can improve the marketing activities and lead to desired success. References to actual real estate developments support the description of key findings.

The Consumer Preference Structure of the Demand for Social Housing in Spain

Montserrat Diaz Fernandez, University of Oviedo, Laura Galguera Garcia, University of Oviedo and Christos I. Giannikos, Columbia University & Baruch College

Session H2

The purpose of this paper is to examine the use of Housing under Controlled Prices (HCP) within the framework of the Housing Plans of the Spanish Government during the period 1992-1999. HCP gave low income families the possibility to choose between new or existing housing by trading off characteristics (like price, area and location) according to their preferences. These tradeoffs and their relationship to the preferences of the families are the subject of our study. We find that the price of the housing is the most important factor followed by the family size and the total area of the dwelling. Finally we document the differences in the profiles of families choosing existing as opposed to new housing.

A Quarterly Transactions-Based Index of Institutional Real Estate Investment Performance and Movements in Supply and Demand

Jeff Fisher, University of Indiana, David Geltner, MIT and Henry Pollakowski, MIT

Session D3

The purpose of this paper is to describe and hone a methodology by which a quarterly transactions-based index of property-level investment performance could be regularly produced for the U.S. institutional real estate investment industry. The objective is to produce a series of indices of investment periodic total returns and capital appreciation (or price-changes) for the major property type and geographic market segments included in the NCREIF Property Index. The index is based on transaction prices so as to avoid appraisal-based sources of index "smoothing" and lagging bias. In addition to producing variable-liquidity indices, the approach developed in this paper employs the Fisher-Gatzlaff-Geltner-Haurin (*REE* 2003) methodology to produce separate indices tracking movements on the demand and supply sides of the investment market, including "constant-liquidity" (demand side) indices. Extensions of Bayesian noise filtering techniques developed by Gatzlaff & Geltner (*REF* 1998) and Geltner & Goetzmann (*JREFE* 2000) are employed to allow development of quarterly frequency, market segment specific indices. The basic hedonic price model is based on an extension of the Clapp & Giacotto (*JASA* 1992) "assessed value method", using a NCREIF-reported recent appraised value of each property as the composite "hedonic" variable, thus allowing time-dummy coefficients to represent the difference each period between the (lagged) appraisals and the transaction prices. The index is used to produce a *mass appraisal* of the NCREIF property database each quarter, a byproduct of which will be the ability to provide "automated valuation model" estimates of property value (either variable liquidity or constant liquidity) for each NCREIF property each quarter.

The Disposal of Local Authority Owned Sites by Development Competition

Peter Fisher, Northumbria University, Simon Robson, Northumbria University and Suzanne Todd, Sanderson Weatherall

Session G6

A development competition is a sale by tender of publicly owned land with development potential where the bidders are asked also to submit design proposals. A competition must provide a market to secure best value in the sale of a land asset; this also enables the vendor to select from the design ideas, development expertise and financial resources of a range of bidders. This should help to secure high quality in urban design, environmental and other benefits for the local community. While there is a clear policy overlap with town planning, and in particular with planning agreements, there is a legal requirement to keep the sale separate from formal planning decisions. Development agreements are usually made between the parties to cover the building period after which the site is conveyed. Large numbers of such competitions are held in the UK each year and they thus provide the basis for many residential, commercial development projects and regeneration of urban locales. Disposal of sites in this way has become more significant due to the concentration of activity on brown-field land. In future, the need to assemble and repackage urban land in the sustainable city is likely to make such competitions yet more frequent. While there are clear advantages in theory, in practice competitions are not without problems. There is often conflict between the aims and tension over the evaluation of bids, especially between the different professions and personnel involved. The paper reports on research that combines quantitative and qualitative methodologies. A postal survey was carried out of UK Local Authority Estates Officers covering their use, experience and views on development competitions. A response rate of 40% was achieved from a sample of 225. A case study of development competitions in Tyne and Wear, UK was also carried out, which involved in-depth interviews with 5 Local Authority Estates Officers and 13 developers. Finally an

interview survey of property consultants specialising in advising vendors and developers was undertaken.

Real Estate Franchise Systems in New Zealand: Antecedents and Growth Stages
Susan Flint-Hartle, Massey University
Session G2

This paper reports on an ongoing New Zealand study of franchising in the real estate agency sector and focuses on the franchisor perspective. It identifies industry specific antecedents for franchise growth and competitive advantage. These include market share; acculturation; direct office ownership; focus and parallelism. Of particular interest are the two notions of acculturation and parallelism. Acculturation involves the process of adopting and adapting - assimilation into the culture of first the industry and then that of the franchisor. Parallelism describes two separate business identities that exist side by side in real estate franchise groups. The franchisor business endorses the service quality of a series of independently owned, locally bound franchisees, enabling them to tap into a client base by positioning themselves in the local market more quickly than they could do single-handedly. The franchisee endorses the brand. Thus two entrepreneurial ventures exist parallel to each other, operating in a co-dependent manner. Parallelism is perhaps best illustrated in the international operations of real estate franchise groups where two brands are recognisable. Franchised businesses are able to draw on the strength of a globally recognised brand name, but also retain local branding. Hence real estate franchises allow parallel business venturing, where the sum of the whole is greater than the parts. An important strand of discussion in the paper is the delineation of progression through stages of growth. A model of these stages and interacting issues is provided using the case of a New Zealand franchisor.

Market Value and Depreciated Replacement Cost: Contradictory or Complementary?
Nick French, The University of Reading and Laura Gabrielli, Venice University of Architecture
Session C1

In January 2005, the International Valuation Standards Committee (IVSC) published the International Valuation Guidance Note No. 8 entitled The Cost Approach for Financial Reporting - (DRC). This guidance note provides background to the use of Depreciated Replacement Cost (DRC) in connection with International Valuation Application 1 (IVA 1), Valuation for Financial Reporting and suggests that the valuer reports the result of a DRC valuation as Market Value subject to the test of adequate profitability or service potential. This suggestion has caused a lot of debate and consternation in the UK where the DRC approach has always been considered as a method of last resort and not a Market Valuation. However, in continental Europe the cost approach (DRC) is often the principal method of valuation and has always been considered to produce Market Value. In this paper, we discuss the concept of Market Value and its relationship to DRC in an attempt to identify the principal areas of concern in the UK and, through the use of Italian and UK case studies, show how the DRC approach can be adopted as an appropriate method or basis for calculating Market Value.

The Relative Importance Sector and Regional Factors on Italy
Laura Gabrielli, Venice University of Architecture and Stephen Lee, The University of Reading
Session D6

The benefits of sector and regional diversification have been well documented in the literature but have not previously been investigated in Italy. Using annual data from 1989 to 2003 we decompose property returns into a national effect three sector specific-effects and four economic

regional factors. In contrast, to previous studies we find that regional factors effects in Italy have a much greater influence on property returns than sector-specific effects. This maybe the result of using economically defined regions rather than those based on geographical location. Nonetheless, the results strongly suggest that that diversification across the regions of Italy used here is likely to offer larger risk reduction benefits than a sector diversification strategy within a region. A fund manager in Italy must, therefore, monitor the regional composition of their portfolios more closely than its sector allocation.

Holding Periods and Investment Performance: Analysing Office Returns

Alan Gardner, Gerald Eve and George Matysiak, The University of Reading
Session E4

Do holding periods matter? Holding periods are an important factor impacting on the performance of asset classes that are traded in open markets. The length of time investors have held or intend to hold an asset has a major input into investors' considerations at both a strategic and tactical level. Property is assumed to have much longer holding periods than those in other financial markets, reflecting the costs of transaction, lack of liquidity and opportunities for active management. At a time when property has enjoyed a renaissance in a multi-asset investment context, investors require an assessment of the contribution that holding periods make to performance. Based on a specially constructed database at IPD, this paper reports how office holding periods have contributed to performance, providing results across funds types and locations.

Towards a Segmentation of Office Users: Empirical Evidence from Germany

Nicolai Gerstner, European Business School, and Björn-Martin Kurzrock, European Business School & DID Deutsche Immobilien Datenbank GmbH
Session F1

Office markets in Europe are currently going through a severe downturn. At this point proprietors become more aware of the fact that tenants and their office space needs are more or less unfamiliar to them. In contrary to the retail sector, where market research on consumer behaviour is yet more sophisticated, office space is still not designed as a customized product. To be able to create products fit to the market, the anonymous collective of different types of space users has to be analysed and structured. In order to make out systematic differences between types of users, office space users shall be segmented into groups with homogeneous space preferences. Relevant segmentation factors may include the preferred micro and macro location, building type, office design or rent level. As a first empirical examination this study is designed to indicate differences and reveal patterns in time-adjusted rent levels for various types. The empirical analysis investigates (effective) rents considering specific contractual parameters. The geographically coded data comprise a range of building characteristics as well as tenant details like industry, credit score, company size etc. The study is based on the DID Rental Database – an internet based system recently developed by DID Deutsche Immobilien Datenbank GmbH which enables the analysis of original rental contract data provided by institutional investors and property consultants. DID, as part of the Investment Property Databank (IPD) network, is dedicated to the supply of independent market indices and portfolio benchmarks to the property industry.

Privatization in Eastern Europe: The Impact on Economic Development through the Protection of Property Rights.

Tom G. Geurts, Marist College
Session E7

The transitional economies of Eastern Europe are in the long process of making the switch of a planned economy to a more capitalist economy. An important aspect of a capitalist economy, if not the most important aspect that characterizes the degree of capitalism, is the protection of private property rights. It is well documented that a weak protection of private property rights will lead to fewer investments, in particular in real estate, given the fact that real estate is very illiquid. On the other hand investments in real estate are essential for the economic development of a country, given its importance as a capital good. Building on earlier research, the author will explore the success of privatization legislation in some Eastern European countries. Using data on real estate investment returns and variables proven to indicate protection of private property rights, the author examines the impact of the separate privatization legislation. Indeed, in a previous paper it was found that legal institutions are an important factor in explaining investment returns. Given the fact that different countries in Eastern Europe have passed different privatization laws, it is time to try to identify which one has been the most effective. In the previous study the following model was used: Returns = f(Institutional Variables). Although it is not claimed that institutional variables explain returns alone, it is expected that there is a significant relationship. From this analysis it will hopefully become possible to make a qualitative judgement on the future success of these transitional economies and to make suggestions for changes that some countries will need to make.

The Impact of 9/11 on US REIT Returns: Fundamental or Financial?
Andrea Gheno, University of Rome III and Stephen L. Lee, The University of Reading
Session C2

Following the attack on the World Trade Center on 9/11 volatility of daily returns of the US stock market rose sharply. This increase in volatility may reflect fundamental changes in the economic determinants of prices such as expected earnings, interest rates, real growth and inflation. In particular, Baen (2003) argues that the terrorist attack added another dimension to property investment risk in the US and as such has serious implications for the future value and net operating income (NOI) to institutional, investment-grade real estate. Alternatively, the increase in volatility may simply reflect the effects of increased uncertainty in the financial markets. This study therefore sets out to determine if the effects of the attack on the World Trade Center on 9/11 had a fundamental or purely financial impact on US Real estate Investment Trust (REIT) returns. In order to do this we compare pre- and post-9/11 crisis returns for a number of US REIT indexes using an approach suggested by French and Roll (1986), as extended by Seiler et al (2002). In general we find little evidence that the effects of 9/11 had a fundamental effect on REIT returns. In other words, we find that the effect of the attack on the World Trade Center on 9/11 had only a financial effect on the REIT returns and therefore transitory.

The Evolution of Social Housing Policy in Britain: A Neo-Institutional Perspective
Kenneth Gibb, University of Glasgow and Andi Nygaard, University of Glasgow
Session G4

Social housing policy in the UK mirrors wider processes associated with shifts in broad welfare regimes. Social housing has moved from dominance by council housing provision to the funding of new investment through voluntary sector housing associations to a greater focus on the regulation and private financing of these not-for-profit bodies. If these trends run their course, we are likely to see a range of not-for-profit bodies (council, arms-length management bodies and different forms of housing association) providing non-market housing in a highly regulated quasi-market strongly shaped by commercial considerations and the statutory requirements levied on them by Government and regulatory agency alike. In this paper we examine these issues through

the lens of neo-institutional economics, which we believe can provide important insights into the fundamental contractual and regulatory relationships that are coming to dominate social housing from the perspective of the key actors in the sector (not-for-profit housing organisations, their tenants, private lenders and the regulatory state). The paper draws on evidence recently collected from a study evaluating more than 100 stock transfer organisations that inherited ex-public housing in Scotland, including 12 detailed case studies. The focus of the empirical material is the operation (and performance thereof) of these (often new) organisations in a challenging regulatory environment while seeking to provide tenant involvement in decision-making, contribute positively to community development, retain pledges on rents, repairs and investment, work within tough sale and purchase agreements and manage a long term debt-funded business plan. This material also allows us to reflect further on the implications for the future of the sector in a context of the reasonable expectation of many more new social landlords, statutory housing standards, a strong if not an onerous regulatory framework, pricing and benefit reforms, preference-based allocations systems and common housing registers. The paper concludes that social housing stakeholders need to be aware of the risks (and their management) faced across the sector and that the State needs to have clear objectives for social housing and coherent policy instruments to achieve those ends.

Momentum Profitability and Market Trend: Evidence from REITs

John L. Glascock, University of Cambridge, Szu-Yin Hung, George Washington University
Session J1

This study investigates REIT's momentum returns in different market states, and explains the momentum phenomenon with a risk-based dividend growth theory of Johnson (2002). Results show that momentum returns of REITs are higher during up markets. This study finds that winners' dividend/price ratios are higher than those of losers, and that conditioning on different market states, momentum returns are positively correlated with the difference between winners' and losers' dividend/price ratios. We also find that momentum returns are higher after the legislation change of REITs in 1992, and that dividend/price ratios of REITs are also higher after 1992, suggesting that the persistent shock to REIT's dividend/price ratios in 1992 partly explains REITs' higher momentum returns after 1992. In sum, results of this study suggest that momentum returns of REITs can be jointly explained by time-varying factors (market states) and cross-sectional variance in dividend yields.

Segmenting Polish Housing Market: Correspondence and Cluster Analysis of Potential Buyer Preferences.

Michal Gluszak, Cracow University of Economics
Session C6

Polish real estate market is relatively young and unpredictable. Moreover, as every market, it is heterogeneous in its every dimension. In author's opinion, one of the most interesting fields of real estate market analysis is house buyers' behavior. The paper discusses some of the marketing research techniques that can be used to analyze consumer preferences. The fundamental aim of the article is to evaluate the utility of cluster analysis in segmenting the housing market based on similarity of preferences (by clustering house buyers to arrive at homogeneous preference segments). Additionally, in the article the author studies correspondence between preferences of potential house buyers and their socio-economical status. Second part of the article discusses the results of the questionnaire research conducted on potential house buyers in Cracow. Both multi correspondence analysis (MCA) and hierarchical cluster analysis will be used to explore consumer preferences on the local housing market.

The Privatisation of Housing Space: Market Potential and Market Participants in Germany

Martin Greiner, European Business School
Session J3

In connection with financial difficulties of the federal government, the federal states and the local authorities as well as the need for private and public companies to restructure due to economic restraints, the privatisation of housing space has gained great importance in Germany. Privatisation can create significant perspectives, because the capital freed up is available for new investments in the more profitable core business of private companies and for other duties and responsibilities of the public authorities. Privatisation can take place by selling separate apartments, larger portfolios or whole housing companies. Privatisation models are the sale of apartments to tenants or other private persons, the portfolio sale to investors or going public. Because the privatisation to tenants is often difficult, many sales to investors are being conducted. For investors the purchase of residential portfolios offers a multitude of chances to achieve acceptable profits. Possible measures are the reorganization of housing companies, the activation of unrealised gains and the realisation of potential to raise rents. The privatisation through sales to investors is an emotionalized topic. Reports in the media concerning this subject are mostly affected by negative headlines. But the largest part of the sales proceeds smoothly and unnoticed by the public. As explained, the up-to-dateness of the topic housing privatisation is primarily given because of the difficult economic situation in Germany, which affects both the public authorities and the economy. Since this situation is not going to ease up in the foreseeable future, the tendency towards privatisation is probably going to continue. On the other hand the legislator is planning a couple of changes, especially regarding tax legislation. This could have significant influence on the process of housing space privatisation. Objective of the paper is to determine the current housing privatisation potential of the public authorities and the non-property-companies in Germany. This includes an analysis of the different market participants involved on the demand and supply side and their goals. Furthermore, it is evaluated in how far the privatisation potential is going to be realised. The considerations are made against the background of the probable introduction of REITs in Germany.

Market-Orientation in Social Housing Management: Limitations and Opportunities of European and Australian Landlords

Vincent Gruis, Delft University of Technology and Nico Nieboer, Delft University of Technology
Session H2

In the past ten to twenty years, governments in various countries have introduced or reinforced market principles in their housing systems. As a consequence, social landlords have increased opportunities to adopt a more market-oriented approach towards the management of their housing stock. Nevertheless, in many countries government regulations still have a substantial influence on the management of social rented housing. In this paper we analyse the government's influence on the management of the social rented housing stock in Europe and Australia, in order to assess to what extent government regulations help or impede the development of a market-oriented asset management. We start with an overview of general arguments for government intervention on (housing) markets. We discuss if these arguments can justify intervention in the specific area of social landlords' asset management. Also, we discuss as the potential benefits of increased market orientation. Subsequently, we describe government restrictions to social housing management in eight European countries and Australia. We confront current policies with their implications and negative side effects regarding asset management on the one hand, and their legitimation on the basis of fundamental reasons for government intervention on the other. From this confrontation we distract some general considerations for policy.

Modelling Paris Office Market Dynamics
Beatrice Guedj, Grosvenor, Ruth Hollies, Grosvenor, and Darren Rawcliffe, Grosvenor
Session C3

Many existing studies of office markets involve an office rent adjustment process, incorporating demand and supply side factors. This paper develops an empirical model of the Paris office market using four overlapped equations of key variables: take up, rental value, capital value, and new construction. Some of the equations are specified in an ECM (Error Correction Model), which provides information on both the long-run relationship and short-run dynamics. Two theoretical concepts have been created and used within the model framework: (i) a market pressure variable which reflects the tightness of the market: a construct of take-up, total stock and new construction; (ii) the theoretical capital value is based on an asset valuation method: establishing the expected value that 'should' be observed in the market given the underlying fundamentals. Within the model system: take up is driven by macro variables and changes in office rent, which along with new construction depend on macro and real estate variables and capital value is based on macro variables, market pressure and theoretical capital value. Therefore, a divergence of the observed capital value from the theoretical capital value, would suggest disequilibrium in the market. The empirical results of the overall framework are appropriate to explain the bubble phenomenon in the early nineties, the peak observed in the millennium and the downturn of the Paris office market in line with the recent economic slowdown.

How IXIS CIB Applies Value-At-Risk Calculation to Real Estate Investments
Olivier Guigné, IXIS Corporate and Investment Bank
Session E3

One of the activities of IXIS CIB, the investment bank of Groupe Caisse d'Epargne (3rd French bank) consists in structuring real estate investments and retaining part of the risk associated in its books. The transactions involved are generally highly leveraged sale and lease back transactions. Within the bank, Risk Control is in charge of quantifying risk associated with those investments and expressing opinion on the opportunity of these transactions. This is carried out through a 3 steps framework.First, Risk Control values the whole transaction in a completely independent manner, with its own model and assumptions for the business plan. Second, stress scenarios are applied on the various risk factors of the transactions which include exit prices, inflation rate, vacancy rates, capital expenditures… But such scenarios may be more or less biased, depending on traders' experience or market expectations.Third, we move from deterministic scenarios to stochastic ones and let random processes explore what future prices could be. Associating then a probability to occur to each scenario, we run Value-at-risk calculation. Therefore, Monte Carlo techniques, that are already widely used within the bank to value complex options or assess risks, have been adapted to Real Estate transactions. This approach is mainly risk oriented but it is also a powerful tool to compare projects between them in bid processes. Presentation shows step by step how this methodology works, one of the most interesting output is a distribution of the profit of the transaction. It also presents how, using the Merton's scheme of the firm, investor and debtor have opposite interest and how the profit distribution that was produced through Monte Carlo simulations could be used by the lender also to estimate his risks and expected returns.

Owner-Used Capital Goods and the Exchange Rate Determination.
Constantin T. Gurdgiev, University of Dublin, Trinity College
Session I1

Present paper addresses the issue of the short and long run determination of the exchange rates in the Redux model of Obstfeld and Rogoff (1995). Current extension of the Redux model includes the investment projects that simultaneously can serve as investment allocation subject to the capital gains, as well as a regular consumption good. In contrast to the standard theoretical results, our model produces the exchange rate overshooting both in presence and in absence of price rigidities in the markets for final goods. This effect depends on the size of the owner-used capital goods expenditure relative to the total consumption expenditure, as well as the initial level of inflation at home. Depending on parameter values, and the initial conditions, the model supports possibility for exchange rate dynamics that include either overshooting or undershooting..

Housing Regeneration and Low-income Community in Seoul

Seong-Kyu Ha, Chung-Ang University
Session J3

Traditionally, city governments had seen such 'informal settlements' as illegal slums, lacking proper services or layout and damaging both to the health of the occupants and to the appearance of the city. They attempt hastily to push through settlement schemes, which are based on misconceptions and spurious assumption. Since the 1960s, Korea has achieved remarkable success in reducing poverty. But behind this picture of growth and progress, Korean housing has experienced serious problems. Nearly a quarter of all households in 2000 lived in accommodation that did not meet minimum standards in terms of floor space and basic facilities. New housing can be a driver of urban regeneration and decent housing stimulates both physical and economic improvement. In Korea, the housing regeneration projects tend to construct multi-family housing units and to pay less attention to rehabilitation of existing housing and community. The key issues covered in this paper are: (1) the characteristics of low-income community and housing poverty, (2) causal model of housing regeneration, and (3) policy implications and issues. The issue of housing insecurity and inequality arises most acutely in the case of urban redevelopment projects in low-income residential areas. The following questions are still raised here: what role has the government played in the housing regeneration process? Who has benefited directly from the redevelopment of substandard housing areas? The primary goal of housing regeneration should be given actively involving local residents and tenants in the planning and management of housing provision and redevelopment as a prerequisite to successful programme delivery; and experimentation with different models of housing construction appropriate to local needs and the achievement of 'balanced' and sustainable regeneration.

Developments in the Valuation of Contemporary Lease Structures in UK Practice

Tim Havard,, University of Salford, M.M.C.Shepherd, University of Salford and W.A.Arneston, University of Salford
Session C1

This paper explores the hypothesis that valuers are increasingly adopting investment appraisal techniques rather than traditional valuation methods based on comparable evidence. The hypothesis was tested using interviews, case study and questionnaire carried out in London and in various centres in the UK during late 2004/ early 2005. The studies' findings are presented.

Do Sale and Leasebacks Add to Shareholder Value or Detract from it?

Natalie Hayward, DTZ
Session H3

Three sale and leaseback deals including two from Sainsbury's and one from Tesco are analysed from the point of view of their impact on shareholder value. These deals combined raised £1.2 billion. Event study methodology was employed to determine if abnormal returns could be found following the sale and leaseback announcement. These results were analysed for statistical significance. These three transactions were also studied from the standpoint of shareholder risk as represented by changes in equity Beta following the deal announcement. Finally from a balance sheet perspective changes in net operating profit after tax were analysed for indications of shareholder value or erosion before and following the announcements. Of the three deals studied only one showed positive abnormal returns, which were found to be statistically significant. One of the other two was found to demonstrate statistical significance for negative abnormal returns. Results for the third deal were not statistically significant. These results are discussed within the context of the firm's balance sheet positions prior to and following the sale and leaseback. Where shareholder value was found to be growing, sale and leaseback announcements appear to be viewed more favourably. However where shareholder value erosion is taking place the market does not appear to view a sale and leaseback as sufficient to reverse the trend.

Planning Regimes and Behavioural Patterns in Commercial Property Investment Pricing.

John Henneberry, University of Sheffield and Fotis Mouzakis, Cass Business School, City University

Session A3

This paper departs from the outcome of three different pieces of recent research by the authors. One used a conceptualisation of a local property market to develop a structural theory for the impact of planning on local business rents and on the behaviour of the wider local economy. Another attempted to gather empirical evidence to support the relationship of that the structure mentioned above is a key determinant of property investment pricing, by means of econometric modelling of commercial property yields. A third study proposed a behavioural decomposition of the yield equation with the risk premiums in focus, which also included a mechanism for depreciation rates. Although all three pieces of research were supported by significant statistical evidence from UK data for the links they tried to establish. Each study focused on a special aspect of commercial property pricing, allowing so for simplicity in the examination of it, allowing however for distortions in the composition of the big picture from missing variable bias in the separate studies. This paper attempts to consolidate the findings of previous works and propose a complete structure for commercial property investment value. First it brings together the most powerful elements of the previous approaches and examines their theoretical validity. Investors' behaviour in pricing is assumed to follow a mix of both rational and behavioural patterns reflected in the yield movement. Rational patterns include an efficient reflection of yields on available information on rental growth, depreciation, interest rates and market risks. An important rational leading indicator of rental growth is the planning regime of the market in question, along with traditional ones such as anticipated economic activity, relating to tenant and investment markets by liking directly investment pricing with the proposed fundamental variables of commercial property industry. The behavioural mechanisms in consideration focus on the formation of views for risk premiums and pricing inertia, including an irrational leveraging of local market views from the performance of central markets. The empirical study of UK markets that follows tests the validity of this generalised theoretical approach and examines a range of alternative model specifications and dynamic structures and data series. It seeks for patterns of causality, in particular for the link of planning regime in its role as an investment performance leading indicator.

Structural Prepayment Risk Analysis of Residential Mortgage Life Insurance in a Developing Market

Kim Hin Ho, National University of Singapore and Yok Lain Wong, National University of Singapore
Session H1

As with pools of residential mortgages, the survival analysis for the prepayment of Chinese residential mortgage life insurances (RMLIs) in Shanghai is influenced by a combination of risk factors such as macroeconomic factors, loan specific factors and borrower specific factors. Survival analysis estimates the structural impact analysis of these risk factors on prepayment risk. This paper investigates the prepayment behavior of insured residential mortgagors (borrowers) in Shanghai through an analysis of the maximum likelihood estimates and the Cox proportional hazard model, which in turn is concerned with measures of prepayment variations by selected key risk factors. The investigation is based on the prepayment experience of the underlying mortgagors. The findings highlight that the hazard rate for prepayment is largely dependent on the combined income of co-borrowers, the geographical region where the borrower lives, growth in gross domestic product, number of co-borrowers and the initial loan-to-value (ILTV) ratio. Other less important risk factors include the age, gender, marital status, employment status of the borrower, house price inflation and the length of the mortgage term. The relationship between age of the loan and other risk factors, on the basis of the cumulative hazard graphs, indicate a higher hazard of prepayment for the insured mortgage life borrowers with 'less than 3%' and 'above 6%' of house price inflation; with 'less than 30% of growth in GDP; with '6 to 15 years' of length of loan (mortgage) term; with 'less than 40%' of ILTV ratio; with 'above 40 years old' and '30 to 40 years old' for the age of borrower; with the 'male' borrower; the 'married' borrower; the 'self-employed' borrower; with 'above RMB8,000' and 'RMB5,000 to RMB7,999' for combined income; with the borrowers who live 'not in Shanghai but within China'; and finally with 'above three co-borrowers'.

Suggested vs. Actual Institutional Allocations to Real Estate: A Matter of Size?

Martin Hoesli, University of Geneva, University of Aberdeen & Bordeaux Business School and Jon Lekander, Aberdeen Property Investors
Session B3

The discrepancy between suggested and actual allocations to real estate by institutional investors constitutes a puzzle. The allocation to real estate, however, has increased in recent years and as a result the flows to the market are now of great magnitude. In this paper, we argue that an increased allocation is made possible mainly by the development of new investment vehicles, in particular of private real estate funds, but also of the growing integration of economic regions and of other factors such as the development of investment benchmarks. The increased inflow of capital is suggested to be a function of two factors; an increased focus on absolute return target investments amongst institutional investors and an increased target allocation to real estate. The flows to the market for the actual allocation to match the suggested allocation are found to constitute at least 31% of the real estate equity universe held by owner occupiers. We estimate that seven years would be needed to reach the target allocation, but it is unlikely that sufficient investment opportunities will arise unless the willingness of owner occupiers to sell off real estate assets from their balance sheets increases.

Real Estate Development Services in Germany: Business Model and Success Factors

Philip Hofmann, European Business School
Session G2

The Real Estate Development business in Germany is currently undergoing major structural changes caused by continuing weak real estate market conditions and tightened lending guidelines (Basel II) by the financing banks. As a consequence, traditional speculative development is

increasingly replaced by alternative forms of development. In addition to cooperative forms such as Joint Ventures and equity partnerships, developers begin to focus on real estate development service, i.e. they offer their professional skills as services for institutional investors seeking to profit directly from real estate developments and corporations planning to extend their facilities. This service alternative brings about a change in the developer's perspective from an entrepreneurial towards an agent's point of view and poses new challenges for the developer's business model. Of special concern is the risk allocation within service development projects. While speculative and cooperative projects involve equity financing by the developer and therefore lead to an alignment of interests, service development projects require different measures such as transparency and close collaboration. Thus, the purpose of this paper is to introduce a service-orientated business model for real estate development which includes methods and tools to cope with the specific requirements of real estate development services. The main focus is on the identification of the performance elements and the definition of process steps and modules as key success factors for development services. Furthermore, the client's role in the development process will be analyzed and suggestions will be given as to which extent he or she can be integrated into the process.

Apartment House Prices and the Macroeconomy: Theoretical Analysis and Empirical Evidence

Oliver Holtemöller, RWTH Aachen University and Rainer Schulz, University of Aberdeen
Session A5

We study the impact of macroeconomic factors on apartment house prices. A simple version of the so-called new IS/LM model is used to analyze the interaction of macroeconomic variables and prices. It is assumed that prices follow the rational valuation formula (RVF), which states that prices correspond to the sum of discounted expected future cash flows. The model allows for time-varying discount factors, tax effects and systematic interdependence between macroeconomic factors. We construct a price-rent ratio for apartment houses in Berlin from transaction data between 1980 and 2000. It turns out that the rational valuation formula can explain the dynamics of price-rent ratios for apartment houses quite well. We then compare the stylised facts generated by the structural model with the observed empirical time series behavior.

Multi-Projects Interactive Effects and Investment Strategy

Yingying Huang, National University of Singapore, Tien Foo Sing, National University of Singapore and Seow Eng Ong, National University of Singapore
Session B4

Optimal timing and investment strategies are critical in markets when project demand is uncertain. When developer has more than one project located in close proximity to each other, interactive effects will have significant effects on the optimal timing decision. If positive interactive effects can be created by integrating the two projects, the values of the two projects could be collectively enhanced when they are developed jointly by the developer. Similarly, if the projects are developed by two competing developers, development strategy may be adopted such that the completion of one project may create negative externality on the neighboring project owned by another developer. This paper aims to develop a deterministic model to examine multi-project interactive effects on developer's investment and development strategies. The model will also evaluate how investment strategies change under different market situation and for different project type, either homogeneous or heterogeneous. Under the constant demand and cost functions, portfolio effects of multiple projects are examined. The portfolio effects, in this context, refer to the spill-over benefits generated by second projects when two projects located in close proximity enjoy positive externality. The spill-over effects may include higher revenue or lower cost for the second development projects vis-à-vis the case when the two projects are

developed as if they are independent or by two independent developers. This paper sets a basic optimal development timing model with only one developer, who will develop two homogenous projects. We further extend the model to incorporate heterogeneous projects. We find that the developer will abort the project when the demand is weak, and he will choose to develop single project when the demand curve is steep. In a market with flat demand curve, it will be more optimal economically for the developer to develop the two projects simultaneously. The positive portfolio effects shorten the time to wait to develop for the two projects, and the developer will prefer to undertake the two projects simultaneously.

A Real Options Approach to Development Land Valuation
Norman E. Hutchison, University of Aberdeen and Rainer Schulz, University of Aberdeen
Session B4

Flexibility is an inherent part of project developments, and the value associated with flexibility is an integral part of the total value of undeveloped sites. The standard decision rule states that the development should be undertaken when the residual value is positive and left undone if it is negative. However, if it is possible to postpone the development decision, then the standard rule can lead to premature development and an underassessment of land value. The real options approach treats explicitly the flexibility that is inherent in any project development and seems to be an attractive complement to standard valuation approaches. Empirical studies on real options are generally in short supply. A way to assess the content of the theory and its applicability is to compare valuations undertaken using a real options approach, with observed transaction prices.

The Distributional Characteristics of REIT Returns
Elaine Hutson, University College Dublin and Simon Stevenson, University College Dublin & Cass Business School, City University
Session C2

This paper examines the distributional characteristics of REITs using the daily NAREIT indices for the period 1997-2004. While previous studies have examined the distributional properties of REITs, they have largely used lower frequency monthly data. This paper has two primary aims. Firstly, it extends the existing literature on REITs by utilising the approaches proposed by Peiro (1999, 2002) and illustrating that the conventional skewness statistic, which is normally used to test for normality in return distributions, may provide erroneous inferences regarding the distribution as it is based on the normal distribution. We test for non-normality using a variety of alternative tests that make minimal assumptions about the shape of the underlying distribution. Secondly, building on the reported findings we analyse the implications for risk measurement. We estimate value-at-risk measures on a daily basis for REITs. While VaR has over the last ten years become a main standard risk measure it does suffer from a number of problems, especially concerning the assumptions made regarding normality in the basic estimation of the measure (Hull & White, 1998). We therefore use of Extreme Value Theory in examining the tail behaviour of REITs and integrate this with the estimation of daily value-at-risk figures.

Corporate Real Estate of an Emerging Market: Evidence from Bursa Malaysia
Ting Kien Hwa, University of Technology MARA
Session A2

This study examines the extent of corporate real estate holdings by corporate non-property companies listed on Bursa Malaysia for the 1995 to 2001 period. Several asset and capital structure ratios are used to determine the extent of real estate ownership. The results of this study provided strong evidence that corporate real estate is a significant asset in the balance sheets of

Malaysian listed companies. On average real estate comprises 36% of net tangible assets, 34% of shareholders' equity, 35% of market capitalization, 27% of total capital employed and 19% of total tangible assets of listed companies for the 1995-2001 period. The level of property ownership of a non-property company is affected by its industry sector. Property holdings vary from 7% for the Mining Sector to 50% in the Hotel Sector. The Plantation and Hotel Sectors are the sectors having a high level of property holdings. The one way ANOVA shows that the real estate asset intensities are significantly different from one sector to another. The Scheffe tests confirms that the Plantation and Hotel Sectors are significantly different other sectors. Property intensity is negatively related to shareholders' equity, market capitalization, and total long term asset. But it is positively related to total liability.

The Dividend Pricing Model: New Evidence from the Korean Housing Market

Min Hwang, National University of Singapore and John Quigley, University of California at Berkeley
Session I1

There is now considerable research devoted to testing the dividend pricing model as a predictor of the actual prices of shares traded in financial markets. A general finding is that present value models are not good predictors of asset prices. This lack of fit is interpreted as excess volatility, or alternatively as a failure of the maintained hypothesis that the discount rate for shares is constant. Considerable discretion in the payout of dividends is vested in the managers of firms who may follow rules of thumb in awarding dividends. Managers may also be reluctant to increase dividends unless they expect that the payout can be maintained subsequently. The failure of the present value model can thus be attributed to the dividend process followed by firm managers with considerable discretion over timing and payout forms, which may be substantially different from the process assumed in econometric models. In this paper, we present rather powerful tests of the dividend pricing relation using a unique data set in which dividends are set by market forces independent of managers' preferences. We rely, not upon observations on shares traded on organized financial markets, but on observations taken from the market for condominium dwellings in Korea – perhaps the only market in which dividends are publicly available to consumers and investors for assets bought and sold over short-term intervals. We test the present value model using large panels of observations on asset price movements and dividends. First, we analyze the cross sectional characteristics of returns to investment in housing of differing types and locations, noting the importance of lags and analyzing simple investment strategies. Second, we analyze the "dividend-price ratio model" proposed by Campbell and Shiller (1988) using panels of housing returns differentiated by type and location. In contrast with much of the existing literature, we find broad support for the dividend pricing model in this more general framework. Lastly, the third body of evidence we present involves tests for the stationarity of these ratios in each of our panels. We conduct a series of unit root tests based upon panels of investment returns and dividends, differentiated by type of housing, investigating the stationarity of dividend price ratios. We find that most of the time series are consistent with stationary processes. This provides further support for our finding that the dividend pricing model is consistent with the pattern of housing returns observed in the Korean housing market.

Multinational Companies Real Asset Ownership and its Impact on Diversification

Eun Sun Hwang, Hawaii Pacific University, Vicky L. Seiler, Hawaii Pacific University and Michael J. Seiler, Hawaii Pacific University
Session H3

This study examines the risk, return, and diversification impacts of U.S. based multinational companies' real assets. The results of this study show that U.S. based multinational companies do

have lower betas. However, U.S. based multinational companies' cross border real asset holdings do not affect diversification and do not provide significantly higher risk-adjusted returns to stockholders.

Appraiser Behaviour in Estonian Real Estate Market: Experimental Case Study Analysis

Veronika Ilsjan, Tallinn University of Technology and Kaia Kask, University of Tartu

Session I5

During the past few years there have been many changes in financial reporting rules in EU countries. One significant change from the real estate point of view has taken place in balance sheet, where property investment account is switched to the asset side of the balance sheet, separate from the property, plant and equipment. Since 2005, all companies listed in the stock market, have the obligation to apply International Accounting Standards/International Financial Reporting Standards (IAS/IFRS) in their everyday practice. At the same time, more and more researchers have pointed to the problem of valuation accuracy and to the uncertainty of the valuation product. Since the behavioural finance theory has came along, the researches about the influence of the behaviour of appraisers to their valuation estimation has emerged to the field. Although plenty of work has been done in this area, it is still unclear what factors play the most significant role in making the valuation uncertain. The aim of the paper is two-sided – firstly, to point out the practical problems in implementing the income approach in valuation for financial reporting purposes in Estonia and secondly, to bring out behavioural aspects in valuation process within the Estonian appraisers. There is an intention to conduct an experimental valuation case study among all 42 certified general appraisers in Estonia to achieve the aim of the paper. The main research question is, how and to what extent does the appraisers' behaviour influence their implementation of income approach in estimating the market value of commercial real estate for financial reporting purposes?

Turin Automatic Metro Line: Effects on Real Estate Market and on Commerce

Luisa Ingaramo, Politecnico di Torino and Manuela Rebaudengo, Politecnico di Torino

Session F8

Construction of Turin's Automatic Metro Line is part of the programme for improving the public transport system in the town's metropolitan area. In addition to railway connection with Caselle Airport opened in April 2001, the plan includes completion by 2010 of the Railway Junction and the metropolitan railway system, the new Porta Susa Station due to become the town's main inter-exchange node, extension and development of public transport with completion of important tram axes and development of the traffic control system, integrated into the overall transportation system. Line 1 of the Turin's Automatic Metro will cover the Rivoli-Collegno-Porta Nuova-Lingotto-Nichelino route (one of the most important axes of metropolitan transport). Works carried out in 2002 at first on the Collegno-Porta Nuova leg (first functional segment) and subsequently the Porta Nuova-Lingotto leg (second functional segment or southern extension) works on which should commence in 2005. The first leg (Fermi Station, located in Collegno municipality, to Porta Susa Station) will be operational by end 2005, in time for the 2006 Winter Olympic Games. This paper presents the first results of a project that is carrying out an in-depth study of effects of subway construction on commerce and on real estate market, both in terms of valuation of real estate value increment and of definition, about commerce, of some trends that should develop in Turin in the next years. At first, we needed to characterize the Automatic Metro Line's areas of influence, disaggregating the City of Turin into statistical zones: the restricted area consists of placed on lay-out of Automatic Metro Line or close to the stations zones; the extended area, consists of distant zones that, however, will be certainly influenced by the Metro. On these areas of influence we have carried out a cluster analysis in order to characterize the social-economic context; it will be used as reference point to

estimate, on the second phase of the study, changes induced by the new infrastructure. In the future, commerce (aggregate of stores and shops and open-air market places) will probably have the greatest changes: in general a weakening of the farthest stores and shops and a strenghtening of those nearest. At last, we have analysed the induced changes on real estate market: comparing the City's average with every increase in value of the districts interested by the subway, we have calculated some introductory remarks on differential increase of real estate price in each zone. The results confirm, as expected, that the Automatic Metro Line's areas of influence show an higher increase in value than the average of Turin.

Rented Housing in Piedmont: New Rules and Returns for Property-Owners
Luisa Ingaramo, Politecnico di Torino and Manuela Rebaudengo, Politecnico di Torino
Session J3

It is well known that over the last few years profound changes have taken hold in legislation to the rented housing market in Italy. In actual fact, this market has been progressively liberalized and new rules have been introduced to assist low-income families, either by way of direct benefits or through tax concessions for property-owners. The main area of change within this project may be briefly listed as follows. The housing phenomenon and the analysis of demand (public or private, deriving from university students and disadvantaged social groups);tthe structure of the rented housing market (its size, the impact of this sector on the total housing stock, the impact of the secondary rent-housing market periodically rented out to the business community and the student population on the total estate) and the levels of the free and controlled rent markets; the national social fund (demand, need and efficiency); the tenant's level of income and the impact of rent levels on that income; returns from investments in rented property. This paper proposes to present the results of research on rented housing, both with regards to demand (through data collected by sample surveys of tenant families resident in the Piedmont Region) and supply (through analysis of the attractiveness of rental investments for property-owners), while also considering the impact of the new legislation proposed.

The Conversion of Agricultural Paddy Land and the Impact to the Paddy Production
Wan Ibrisam Fikry bin Wan Ismail, Universiti Teknologi, Malaysia and Norhayati binti Zakaria, Universiti Teknologi, Malaysia
Session G7

Generally, the rapid urbanization process of an area would affect the pattern of land use. This is mostly influenced by the economic factor that strongly focuses on the highest return that can be derived from the land. In Alor Setar, the agricultural sector, which was a core economic previously, now has moved towards more productive sectors. This has raised the number of converted agricultural land, in case to fulfill the demand from the housing, commercial, infrastructure and industrial sectors. This study is focused on the conversion of paddy land, which has been developed with various types of building. Based on the qualitative and quantitative methods, it is found that a lot of housing projects are being carried out on the paddy land. This research also finds that the conversion activities do make an impact to the paddy production. On the other hand, it is not such a major issue since Alor Setar has already gazetted for the future development even though those paddy lands are located within the rice bowl area of Malaysia. Hence, the conversion of paddy land, especially in other rice bowl area needs to be perpetually controlled so that the importance of paddy sector can fulfill the country's needs.

Impacts of Recent Slovak Structural and Economic Reforms on the Real Estate Sector
Koloman Ivanicka, Slovak University of Technology and Daniela Spirkova, Slovak University of Technology

Session J4

The development of the real estate sector depends on the business environment and economic development of the country. In the last several years Slovakia has undergone the serious structural changes which augmented FDI inflow and induced the growth of industrial clusters. This inflow had the serious implication in the real estate development. The whole business environment has been changed, flat income tax introduced, the pension reform started, some competencies situated at the central government were shifted to the local level, the government is trying to find the path toward the knowledge based society. Joining the European Union brought the new impulses for the development of real estate at the transborder regions. The proposed paper deals with above mentioned factors, shows their impact on the development of the real estate (housing, administrative and logistic premises etc), in Slovakia, and particularly in capital city Bratislava, where the changes are most visible. At the same time it analyses the institutional impediments for the development of the sector and sketches the future perspectives.

NY-LON: Does a Single Cross-Continental Office Market Exist?

Cath Jackson, Cass Business School, City University, Simon Stevenson, University College Dublin & Cass Business School, City University and Craig Watkins, University of Sheffield
Session D6

This paper aims to examine the issue of economic diversification in the context of the office markets in New York and London. These two markets are two of the most liquid office markets and attract a large degree of international investment. However, both cities are key financial service centres and are heavily interlinked. The paper analyses the diversification opportunities available and the linkages between the two markets. These results are then compared against tests concerning the entire UK and US markets. The paper also examines the key driving forces behind the two markets, incorporating key financial indicators in the modeling. Markets such as New York and London will be heavily influenced by the actual performance of the capital markets and the financial institutions. If the markets are performing well, the profitability of institutions will on average tend to increase, leading to increased occupational demand. Ironically, therefore, an institution's own corporate performance may be a highly influential factor on the performance of its real estate portfolio. In addition, the linkages between the stock and real estate markets would also potentially have implications for the role of such markets within a mixed-asset portfolio framework. If markets such as New York and London are linked in a fundamental sense to the stock markets, then investment in such markets may provide reduced diversification benefits when the real estate portfolio is considered as part of an overall mixed-asset portfolio.

Supply-Side Policies and Retail Property Market Performance

Cath Jackson, Cass Business School, City University and Craig Watkins, University of Sheffield
Session A3

Many challenges currently face those operating in the retail sector. In the UK, where city centres form the focus for the majority of retail activity and investment, policy intervention is restricting growth outside this central area. This is forcing those responsible for the planning and management of the retail environment to identify new solutions to the pressures exerted by retailers demanding additional or new space; consumers who are increasingly demanding in terms of variety and scope of retail offer and accessibility, safety and environmental concerns; and, crucially, investors seeking to estimate future investment market potential. This paper seeks to unravel some of these issues and identify ways in which those responsible for the management of the supply of real estate in the retail core can best achieve future success of the market, attracting and maintaining an increasing market share of consumer spending and presenting vital investment opportunities. This paper explicitly considers supply-side issues using data aggregated at the functional market level to investigate the impact of the policies of local planning authorities within the local retail market. This requires the continued development of the methodological approach begun by Jackson and Watkins (2005) and involves the systematic analysis of the differential investment performance of local retail markets, specifically focusing on estimating the extent to which key supply-side factors are important in the determination of retail real estate investment market indicators.

Monte Carlo Simulations for Real Estate Valuation

Elion Jani, University of Geneva, Martin Hoesli, University of Geneva, University of Aberdeen & Bordeaux Business School and André Bender, University of Geneva
Session E2

In this paper, we use the adjusted present value methodology with Monte Carlo simulations in a real estate valuation context. Monte Carlo simulations make it possible to incorporate the uncertainty in the components of future cash flows and in the discount rate. We use empirical data to extract information about the probability distributions of the various parameters. In particular, we propose a simple model to compute the appropriate discount rate. We forecast the term structure of interest rates using a Cox Ingersoll Ross (1985) model, and then add a premium that is function of both the real estate market and of selected hedonic characteristics of the buildings. Our empirical results suggest that the central values of our simulations are close to the hedonic values. Not surprisingly, the confidence intervals are found to be most sensitive to the discount rate and the exit cap rate being used.

German Real Estate: Without a Future or Prosperity and Growth?

Robert Janke, Lisney
Session F1

Germany is the biggest real estate market in Europe. Germany's great turn into the 21st century appears to be a challenge. Measured in terms of growth rates, its economic strength has slipped from first to last place among all neighbouring European countries. Even when it comes to economic performance per capita of the population, countries like England, France and Italy have surpassed the Germans. Some four million people are officially unemployed and another two million are being re-educated and retained at the government's expense. Government budgets are heavily indebted, and the debt limits in accordance with the Maastricht criteria that Germany forced through have been exceeded this year the third time. The social system is fragile. Some cities have been forced to take out short-term loans to pay their employees' salaries. While opinion leaders in the German real estate industry are complaining about the bleak investment climate and an oversupply of office space of unimaginable proportions, foreign funds are preparing to buy in Germany. Internationally operating opportunity funds have progressively discovered Germany. The economic trend in Germany needs visions for prosperity and growth. Domestic creativity and international capital are required. The acquisition of Gagfah, the Essen based housing association and its 80,000 apartments for 2.1 billion euros and the assumption of 1.4 billion euros in liabilities by the American investment group Fortress is viewed internationally as a signal that the time is right to invest in the German real estate and investment market.

Developer's Tenant Mix Policies for Planned Shopping Centres in the Netherlands

Ingrid I. Janssen , Eindhoven University of Technology
Session B7

The tenant mix is one of the major factors that influence the performance of planned shopping centres. Past research dealing with this topic resulted in rules of thumb about how to create a

tenant mix that leads to the highest pedestrian flow and the highest rent income. Less is known about the way developers actually approach the variety and location of retailers within a shopping centre. It is hypothesised that the differences between the ideal tenant mix and the actual tenant mix created by developers can be explained through factors that are related to the developer's decision-making process. In this paper the decision making process of developers that deal with the tenant mix puzzle has been made transparent. The results are based upon findings from in-depth interviews with developers. The conclusion outlines different types of tenant mix policies of developers.

Spatial Diffusion in English Regional Housing Markets

Chris Jensen-Butler, University of St. Andrews and Arnab Bhattacharjee, University of St. Andrews
Session F3

We explore the nature of spatial diffusion of demand in regional housing markets in England. Our structural model, at the regional level, includes a demand function and a rental adjustment relationship expressed in terms of prices. We use a microeconomic model of housing market matching and search to identify the wedge between demand and supply, using data on time-on-the-market and degree of overpricing. We model space using different alternative notions, such as geographical distance, travel time, transport costs and socio-cultural distance. This methodology enables us to capture the nature and socio-economic drivers of price-change diffusions in space and time more explicitly, and to derive implications for housing and land-use policy.

The Impact of Specialization on Residential Real Estate Licensee Income

Ken H. Johnson, Auburn University, Randy I. Anderson, Florida International University and Leonard V. Zumpano, University of Alabama
Session F5

While there has been a great deal of research into the factors determining residential real estate agent/salesperson/broker income, little attention has been directed at how this income is generated. Numerous authors [including, but not limited to, Follain, Lutes and Meier (1987), Glower and Hendershott (1988), Crellin, Frew, and Jud (1988), Abelson, Kacmar, and Jackofsky (1990), Sirmans and Swicegood (1997), and Jud and Winkler (1998) and Sirmans and Swicegood (2000)] have found that factors such as experience, education, firm size, and hours worked positively impact agent earnings. These studies assume, if only implicitly, that brokers are indifferent as to the way this income is produced, whether from listings or from the sale of other agents' listings. This, in fact, may not be the case. It may be that certain activities have greater income producing potential than other types of actions, here categorized as listing versus selling. That is, the effort spent in generating property listings may prove more productive than the same amount of effort spent trying to locate and market properties to buyers. On the other hand, specializing in selling could prove more cost effective and profitable than prospecting for listings. If these conjectures are true, then we should expect specialization in sales activities provides the greatest potential for income production. Agents are not all created equally. Those salespeople who have the talent or skills set that makes them more effective at listing may also earn more than agents specializing in sales or vice versa. Alternatively, a balanced output of both listing and sales may prove optimal. Unfortunately, there is very little empirical research available to support any of these suppositions. Zumpano, Elder, and Crellin (1993) along with Zumpano and Elder (1994) did find the presence of firm level economies of both scale and scope in the residential real estate industry. As firms grow in size the resulting increase in workforce allows agents to specialize in listing or selling, providing more effective utilization of sharable inputs such as equipment, office staff, and the multiple listing service (MLS) that, in turn, allows for more co-op and in-house sales, and, hence, a more balanced, aggregate production of both listing and sales at the firm level. Is this true for individual agents' income? Or, is it possible that agents and firms, while both seeking to maximize their gains, do so in a different manner. The purpose of this research is to examine whether or not specializing in one side of the real estate transaction, or a balanced production of both significantly, differentially affects agent income. We hypothesize, that due to the interaction of the exclusive nature of listing agreements, Multiple Listing Service (MLS) participation, current institutional arrangements, and the logistical problems of working with multiple buyers at one time, it may be more beneficial for a broker to specialize in listings. Quite simply, a salesperson with ten listings in a given time period has a greater probability of generating a sell via MLS showings than a broker working with 10 buyers in the same time frame. Therefore, all else being equal, the broker that specializes in listings should have a greater expected income than the broker that specializes in selling property to buyers.

Local Housing Markets and Urban Form

Colin Jones, Heriot-Watt University, Chris Leishman, Heriot-Watt University and Charlotte MacDonald, Heriot-Watt University
Session J2

Models of urban housing markets were originally developed with simplified assumptions including a featureless plain. Urban form in these models is a one dimensional output in the shape of housing density. Subsequent empirical developments using hedonic price modeling and sub-market models have not attempted to link inputs or outputs to urban form. This paper explores the nature of urban form and the relationship between urban form and local housing markets. First, it reviews the theoretical inter-relationships and develops a set of hypotheses. These hypotheses are empirically tested on housing markets in five British cities – Edinburgh, Glasgow, Leicester, Oxford and Sheffield. House price data from HM Land Registry and from the Council of Mortgage Lenders are combined with Census data and primary data on urban form to yield a unique database rich in the physical attributes of neighbourhoods and characteristics of housing . The empirical results obtained from this data are then used to determine the nature of the relationship between urban form and local housing markets.

The Information Sources of Real Estate in Poland

Katarzyna Kania, Cracow University of Economics and Malgorzata Uhruska, Cracow University of Economics
Session J4

The main purpose of this paper is to present the existing real estate information sources in Poland, indicating the range of information included and the target of each register. Authors will also present the importance of those registers in creating the Polish land register in order to implementing the planned reform of property taxation based on the property value. The information sources of real estate are conducted by public institutions including municipal offices and local courts, in order to keep a real estate record. However, the range of information contained in every information source is various, hindering the real estate turnover and investment activity in Poland.

Rethinking Brownfields: Discourses, Networks and Space-Time Relations

Nikos Karadimitriou, The University of Reading, Joe Doak, The University of Reading and Elisabete Cidre (University College London)
Session F2

This paper argues that the current UK policy fixation on 'brownfield redevelopment' is built on a particular conceptualisation of the land redevelopment process, which is based on a set of discourses to justify its existence and legitimacy. These discourses intertwine the economic logic of neo-classical economics (and/or other economic theory?) with the emphasis placed on 'environmental efficiency' by proponents of 'sustainable development'. The lack of temporal sophistication in this model of the land redevelopment process leads to a simplistic and partial conceptualisation, which downplays the dynamic network processes that create and use the places and structures that are 'inscribed' into time and space. The space-time configurations of 'brownfields' are explored focusing on the networks of actors and material artefacts that go to make-up these places and structures and the evolving relations that give meaning to them. By focusing on the 'heritage' dimension of brownfield redevelopment, the paper suggests that the existing conceptualisation prioritises certain interests and actors over others. Only by reconceptualising the space-time dimensions using a more holistic (network) approach can these interests and networks be understood as a living component of these 'dead' spaces.

A Comparative Analysis of Commercial Rents in Finland

Olga Karakozova, Swedish School of Economics
Session C3

This paper investigates short-run variations in office, retail and industrial rents in nine major cities in Finland over the 1990-2002 period. The study is motivated by the lack of research on modelling local rents in continental Europe and by the need to understand more fully the relationship between local rents and their drivers at different spatial scales. A reduced form demand -supply model is used to explain movements in commercial rents by a number of national and local factors. To alleviate the problem of relatively short time-series, panel analysis is applied. The nine cities are grouped based on the similarities between markets into two panels: the Helsinki Metropolitan Area and the rest of Finland. Dynamic panel models are estimated using an instrumental variable technique. The results demonstrate that the demand-side variables show a greater significance than a measure of changes in supply. Although both national and local factors were found to be important in explaining movements in local rents, national macroeconomic factors, in particular, lagged one year national GDP growth emerges as the strongest influence for all three property types. This suggests that it is possible to derive good models of local commercial rents on the basis of national economic variables. The results also indicate that there are some differences in the timing and magnitude of rents' responses to changes in economic activity and in supply across the examined cities; however, commercial rents in all of them behave in broadly the same way.

The Spatial Housing Market Structure in Budapest and the Dynamics of Selected Neighbourhoods

Tom Kauko, Delft University of Technology
Session G4

The study deals with urban economic residential location modelling of Budapest, Hungary, using a pragmatical neural network approach. First the analysis pertains to the city level spatial housing market structure through identifying a number of factors related to housing supply, demand and price. After that, the analysis is zoomed in to involve the dynamics of two selected inner city neighbourhoods: the middle-parts of the districts VIII (Józsefváros) and IX (Ferencváros) respectively. These areas in the south-eastern part of the inner city have both received attention as subjects for substantial rehabilitation in recent decades. The two districts are adjacent, but different: the former is stigmatized in all discourse although it comprises a great variety of micro-locations and also housing stock; the latter district in turn is more homogeneous, partly gentrified area and undoubtedly the most dynamic neighbourhood in the city with the best quality apartments on the Pest side. Earlier results (reported elsewhere) based on a small set of individual mortgage valuations suggested the Budapest housing market to be spatially and functionally extremely fragmented, as a mosaic of various house types, age-categories and price-levels, as well as micro-locations, could be identified. A follow-up analysis of street- and district-wise aggregated data with the same neural network modelling techniques, namely the self-organizing map (the SOM) and the learning vector quantification (the LVQ), shows further evidence about the balance between physical and socio-demographic characteristics and house price levels. The new results are synchronised with the earlier findings: also here the administrative district is found less important determinant of the market position of the dwelling than its price, type and immediate vicinity. After that the case-study areas were modelled using the SOM for each cross-section during the observed six-year period from 1997 to 2002. Two types of dynamics could be identified, as the housing market dynamics in the selected 'slice' of the urban area has differentiated the micro-locations in terms of house price escalations on one hand, and in terms of changes in the urban structure on the other. Above all the evidence reveals how the housing market development is related to the most localized processes of social and physical upgrading taking place in an urban setting.

The Green Residential Area Certification Scheme: Can it Promote Sustainability in the Market-led Housing Development in China?

Miles Keeping Oxford Brookes University, J. Albert Cao, Oxford Brookes University and Zhiquan Chen, Guangdong Real Estate Society
Session C6

From 1980 to 2003 urbanisation in China has made huge strides the world has ever seen, with 290% increase in urban population and 230% increase in per capita urban housing space. Recently, housing development, dominated by the market, has favoured large scale housing estates, which create whole new neighbourhood and even towns. The housing market is thus crucial to the realisation of the goal of urban sustainability set by more and more cities in China. However, the implementation mechanisms towards achieving such a goal are not fully provided for in the existing administrative and legal framework. On the contrary, some local governments, often working together with developers, are distorting and bypassing the existing development control mechanisms in pursuit of faster economic growth. In a fast-growing economy the outcome is often housing that consumes huge amount of material and energy but soon becomes inconvertibly sub-standard in physical and social terms. The Green Residential Area Certification (GRAC) Scheme was initiated by the Guangdong Real Estate Society (GRES) in Guangdong Province, which has been the pioneer in the China's reform and opening-up campaign. This paper examines the nature and operation of the scheme and its implications to the market-led housing development and urban sustainability in China. It evaluates the GRAC scheme, which scrutinises estate planning and design, construction materials, environmental quality, energy use, estate management and estate culture creation, and contrast it with prevailing British and international practices on sustainable housing development. With case studies and based on an interview survey conducted by GRES the paper explains its initial success in adding value to those housing estates that are certified, the increasing acceptance of the scheme by developers and greater awareness of its merits by home buyers. It then investigates the implications of the scheme on urban sustainability and housing development in China. Finally the paper explores the prospects and problems of the scheme in the technical and institutional contexts, and makes recommendations on improving the technical standards and promoting its wider adoption in other provinces in China.

An Improved Specification of Performance: The Interaction Effect in Attribution Analysis

Willem G. Keeris, Delft University of Technology
Session H1

The IPD provides insight to its members of their benchmark-indices in the structuring of the portfolio, in terms of allocating investments to asset classes and selecting the individual assets. These two factors are marked in general as the explanatory indicators for the achieved results in regard to the benchmark. Former research pointed out that selection has the largest impact, however, investors tend to believe that allocation is the most important factor. This research is nevertheless focused on a third – in practice not mentioned – factor, namely the interaction effect between allocation and selection. Research pointed out that the influence of the interaction effect on the return is of such an importance one cannot ignore it while making a portfolio analysis and attribution report. Therefore more attention should be paid to the aspects of structuring and building up the investment portfolio.

An Alternative Approach for Presenting the Return/Risk-Profile of the Real Estate Market, due to Difficulties in Constructing Long Term Total Return Benchmark Indices.
Willem G. Keeris, Delft University of Technology
Session E6

In cooperation with the IPD the ROZ - the Dutch real estate umbrella organization - developed a long term index covering the period 1976 – 2003. Because the original ROZ/IPD-index started as late as 1995, the information related to the earlier years had to be constructed due to lack of historical data. The researchers acknowledged that the so gathered information is not fully reliable. From their point of views “anything is better than nothing”, however, that’s not in every case a good point of departure – as it is in this situation. The problem is that the so constructed long term-index in a short time enjoyed such a huge positive image, that the governmental branch supervisor has prescribed the use of it for Asset Liability Studies. The dubious reliability of the information on which the index is based, causes the return/risk-profile to show a too high level of risk. This is due to the stable course of the direct return vs. the volatility of the indirect return – and therefore of the total rate of return. The research attempts to solve that problem and an alternative approach is suggested. That might also be of interest for those real estate markets which, like the Dutch, don’t have reliable long term historical data.

Momentum Strategies for Long-Memory Processes
Tony Key, Cass Business School, City University and Gianluca Marcato, Cass Business School, City University
Session B3

Several papers analyse the issue of serial correlation in real estate markets and the impact of this stylised fact on asset allocation choices. However, while momentum and contrarian strategies have been thoroughly tested for equities, their application to real estate markets has been mainly restricted to REITs and other investment vehicles (e.g.property companies). The finance literature suggests that serial correlation in asset returns represents only one of the possible explanations of underreaction and overreaction behaviours in equity markets, other main factors being cross-serial covariances and systematic overperformance. We test the impact of long-memory processes on momentum strategies. We choose to explore direct real estate investments because their monthly returns show a high pattern of autocorrelation. In line with previous empirical studies – e.g. Lo-MacKinlay [RFS,1990], Lewellen [RFS, 2002], Pan et al [JEF, 2004] – we find that the “smoothing factor” is not sufficient to explain the presence of significant overperformances. We also prove that momentum strategies still earn a higher performance when returns are unsmoothed.

Obsolete Housing in the UK: An Enquiry
Keith Kintrea, University of Glasgow
Session E5

This paper aims to investigate whether there is a significant problem of housing obsolescence in the UK, and England especially, and if so, what its main dimensions are. Obsolescence is starting to be identified as independent and separable from low demand *per se*. The UK housing stock is very old and replacement rates are very sluggish. Until recently older housing has been improved and altered to meet changing demands and needs. However, there are a number of reasons to think that obsolescence is now starting to grow as a problem owing to a combination of societal, housing demand and technological factors. Of these, rising expectations of what housing should deliver as part of a consumer society that is growing more affluent may be especially important. New housing supply is also changing as builders start to react to changing demands and new technology. Government policy to raise housing standards, and to manage low demand in housing, may also lie behind incipient obsolescence. The paper is based on an ongoing study which is investigating housing obsolescence through a review of demand and supply tendencies, including case studies in English cities/ city regions. The study aims to construct a set of possible scenarios for future obsolescence and to consider whether obsolescence may represent a barrier to achieving housing and urban policy objectives, especially relating to balancing supply and demand and achieving sustainable communities.

Calculation of habitable dwelling surfaces – an empirical analysis for the agglomerations of Munich and Sydney
Stephan Kippes, Nuertingen University, Chris Eves, University of Western Sydney and Peter Wills University of Western Sydney
Session D5

In many countries the calculation of habitable dwelling surface is characterised by a chaotic variety of calculation variants hardly comprehensible for the end user - sometimes not even reproducible for the expert. Therefore dossiers were analysed on the basis of a random choice in order to determine the method according to which the habitable dwelling surface was measured and to find out whether customers can scrutinize the calculations. The paper compares Sydney and Munich, where in both cases property prices are situated at the high end of the market.

Diversification When It Hurts? The Joint Distributions of Property and Other Asset Classes.
John Knight, University of Western Ontario, Colin Lizieri, The University of Reading and Stephen Satchell, University of Cambridge
Session E4

Research on the role of real estate in the mixed asset portfolio, whether in the form of direct private holdings or indirect securitised forms of property investment, has focused on the diversification potential of the asset class. In addition to the investment characteristics of real estate (stable base income but growth potential), it has been argued that portfolios containing real estate has superior risk adjusted performance compared to portfolios excluding property. Initial naïve analyses relied on unadjusted appraisal-based ex-post portfolio indices and contemporaneous covariance measures. More recently, there has been greater sophistication in analyses, with careful treatment of lag structures, data transformation, consideration of the uncertainties inherent in a forward-looking expectations framework, use of downside-risk measures and the search for "unique" priced real estate factors. While the more advanced models add greatly to our understanding of the nature of real estate as an asset class, further extensions are possible. In this paper, we explore whether the relationship between real estate performance and the return distributions of other investment assets is constant over time and cycle. For example, of real estate has a generally low correlation with other assets but exhibits a high correlation in poor economic conditions (that is, strong correlations in the negative tails), then diversification benefits may be illusory or, at best, muted.

The investigation of relationships between variables across the whole of their distribution has been an area of considerable technical development in financial economics and econometrics. We will use some of the new techniques available, including the use of copulas and dynamic conditional correlation models, to explore the relationship between UK real estate performance and the other main asset classes. Briefly, copulas model the joint distribution of multiple variables and allow researchers to characterise common movement patterns at different points on the joint distribution surface, while DCC approaches allow for time-varying correlation structures between variables. While such models have been used primarily to analyse high frequency public market data series, they are sufficiently robust to generate results for lower frequency direct property market variables, in both raw and transformed forms. There are many practical applications of such analyses: the aim is to enhance our understanding of the nature of real estate as in asset class.

Housing in Russia: Who Rules the Process?
Yuri Kochetkov
Session B5

The purpose of this paper is the wide analysis of real estate development and housing issues in the Russian cities, especially with regard to market aspects (prices, supply etc.). Point is that one of the most notable trends of the last years in Russian was the tremendous increase in the construction of apartment buildings together with the growth in prices. This trend attracted considerable attention of real estate and financial specialists, politicians, journalists and became a very popular topic for debates last year. That is why researches here have a significant interest. The paper aims to address the following questions: what impacts on housing process in cities (subjective and objective aspects) and how we can analyze this process using the affordable data. The paper consists of three parts: (1) large overview of housing process in Russia in the last 3-4 years, (2) price dynamic, supply, and demand in cities, (3) quantitative analysis of the impact of current economic aspects on the prices. The key conclusion of this study is that the housing process (together with market trends) in Russian cities has the common laws which can be described within the range of uniform theory.

Real Estate Market Development in Estonia: Demand and Supply
Ene Kolbre, Tallinn University of Technology
Session J5

The history of Estonian real estate market dates back to the early 1990s and its development, starting from its early days, has been fast in general, though variable in rates in different sectors of the real estate market. The article seeks to provide an overview of and analyse development of different real estate market sectors over the last decade, discussing separately the supply and demand side. The development of the market has been investigated from three main aspects. First, we evaluate the development and changes of Estonian economic environments and provide linkages to the general development of the real estate market. The subjects of research here are: GDP, inflation, interest rates, total turnover of the real estate market and real estate prices. Second, in greater detail we analyse demand and factors that influence demand in individual real estate market sectors. Third, we investigate supply of the real estate market, or real estate development activity, the factors that facilitate and inhibit this development.

Segmenting the Office Market and Predicting Urban Office Rent
Philip W. Koppels, Delft University of Technology
Session D3

In this paper a theoretical framework is presented which can be used to understand and predict urban office rent. The proposed theoretical framework recognizes different segments in the office market and makes a distinction between different types of organizations and their preferred office characteristics. Urban office rent is influenced by building specific characteristics, location specific characteristics and internal and external economic conditions. Provisional analysis, for the Dutch context, shows low price-quality elasticity for building specific characteristics of urban offices. Furthermore it is not correct to approach the office market as one big single market; there are sound theoretical arguments for segmenting the office market into distinct submarkets. Office markets are traditionally segmented on base of location, size etc. An office building should support and enhance activities performed by organizations and the fitness for use depends on a fit between building and organization. Different types of organizations have different office requirements and will value building characteristics differently. It is not only the supply (the available office buildings) that should be segmented but also the demand side (organizations). In addition the author addresses the following questions: - On which location, building and organization characteristics should a meaningful segmentation of office buildings and organizations be based? - How does segmenting the office market help to understand and predict office rent and capital value?

International Real Estate Market Integration and Price Discovery: Evidence from Nonlinear Cointegration Analysis
Alexandra Krystalogianni, Property Market Analysis and George Matysiak, The University of Reading
Session I2

This paper employs newly developed techniques of nonlinear cointegration analysis to study international real estate market integration and price discovery. The countries considered in this study are UK, USA, Netherlands and France. Direct (NCREIF, IPD) and indirect (EPRA) real estate price indexes are used in both linear and nonlinear cointegration tests on bivariate and a variety of multivariate models. The objective is two-fold: a) to examine whether there is price discovery between the direct and indirect real estate market b) to determine the degree of integration between international real estate markets. The models will be evaluated within a portfolio investment framework. Much more evidence of market integration emerges from nonlinear cointegration analysis than linear analysis. It appears, therefore, that many of the conclusions reached in prior work that have used traditional methodologies need to be reconsidered. The degree of market integration has significant implications for portfolio investment where managers seek to develop well diversified portfolios.

Uncertainty of Valuation in the Emerging Markets. The Polish Case
Hab. E. Kucharska-Stasiak, University of Łódź,
Session I5

According to experience gained by valuers operating in mature markets uncertainty is the immanent feature of valuation. Its source should be sought in the unreliability of the input data used to value a single property, which makes the resulting value ambiguous. Another type of uncertainty is represented by the variability of valuation that is differences between valuations of the same property appraised at the same time and for the same purpose. The uncertainty of

valuation (arising from uncertain data and variations in the appraised values) is definitely larger in the emerging markets in transition from a central command economy toward a market economy, whose economic structures, as well as political, legal and institutional environment is being profoundly modified. In those markets, it is much more difficult to find the market value. One reason for this is low activity in many property segments and geographical markets, their changeability and low reliability of the market data, which factors seriously impede market objectivization in the process of valuation. The diversity of understanding of the general valuation rules can play an important part as well. The paper discusses the uncertainty of valuation in Poland. It purposes to indicate the range of variations in the valuation results and their causes.

The Valuation of Interests in Real Estate Limited Partnerships

Nina Kutsch, The University of Reading and Patrick McAllister, The University of Reading

Session D1

The growth of private real estate vehicles in the last decade has been one of the most significant shifts in UK and European commercial real estate markets. In 1991, investment in such vehicles in the UK was recorded at approximately £13bn by 2003 the comparable figure was £48bn (PVD, 2004). Building on earlier work in Australia by Newell and Fife (2002), this paper focuses on the valuation of (fractional) interests in Limited Partnerships in the UK. In addition to being diverse in terms of size, number of investors and number, quality and type of assets limited partnership vehicles also vary according to fee levels, terms of legal agreement and management quality. An investment in a Limited Partnership that owns a real estate portfolio or asset offers different investment qualities than direct ownership of the same portfolio or asset. These can be categorised in terms of costs and benefits. In terms of costs, relative to direct ownership the investor is faced with a range of potential costs generated by lack of secondary trading, high management fees, additional complexity of Limited Partnership structure, potential for conflict with co-owners and inappropriate gearing structures. On the other hand, key benefits are that investors can gain exposure to assets that are normally too 'lumpy', has limited liability, tax efficiency, interest alignment with managers and access to gearing. A key question has been whether such interests have underlying values that generate a premium or discount relative to their proportion of net asset value. Due to the thin trading and a high degree of confidentiality in the market, it is difficult to draw any useful information from actual trades that have taken place. Despite the differences from direct ownership, the standard appraisal approach is a pro-rata division of the net asset value of the real estate assets. Based on a survey of major (mainly real estate) investors, we use an analytical hierarchy process (AHP) to measure the relative significance of the various costs and benefits of LP interests relative to direct ownership of the assets. The reported results will provide insights into the key factors in pricing interests on UK Limited Partnership vehicles.

Is The Decision to Retire Affected by Housing Choices and Mortgage Financing Options in the United States?

Karen Eilers Lahey, University of Akron, Doseong Kim, University of Akron and Melinda L. Newman, University of Akron

Session B6

Historically, financial planners have recommended that households should have their mortgages paid-in-full prior to retiring so that they will have more funds available for other expenses and reduce the risk of not being able to afford the mortgage payment. Recent research (Storms, 2001) suggests that this advice may not be followed by those households who have decided to retire versus those who continue to work and are considered to be of retirement age. What options are available to those who are considering retirement and still have a mortgage? First, they can decide to pay off the mortgage with some of their other accumulated financial assets. This will have the effect of removing a fixed payment, but it may be at the cost of reducing more liquid assets. Second, they can downsize to a smaller unit which would allow them to pay off their mortgage and invest any equity that is left for retirement income. Third, they can take the option to keep an existing mortgage in their retirement years and instead build-up a cash reserve for liquidity purposes, obtaining tax benefits if they want to itemize their deductions, and/or a protection against the ravages of inflation by making payments with ever less expensive fixed dollars. There is very little research on the impact of the option to have a mortgage on the primary and/or secondary residence during the retirement years because of the assumption that those who retire will have paid-off mortgages. The purpose of this study is to examine the impact of the option to finance the residence on those who retire versus those who continue to work. We hypothesize that individuals who have more expensive homes and larger mortgages may be less likely to retire.

Bank Lending Effect on German Commercial Property Prices

Gabriel S. Lee, University of Regensburg, Johannes Gruber, University of Regensburg and Klaus Edenhoffer, University of Regensburg
Session H1

This paper analyzes the e¤ects of bank lending on German commercial property prices. The theory on the role of .nancial intermediaries in business cycle activity (with variations on this theme referred to as models of the credit channel, agency cost models, or .nancial accelerator models) states that lending activity is characterized by asymmetric information between borrowers and lenders. As a consequence, interest rates may not move to clear lending markets (as in models with moral hazard and adverse selection elements) or .rms.net worth may play a critical role as collateral in in.uencing lending activity (as in models with agency costs). While the theory is concrete, the debate on the empirical support for these models continues. In this paper, our goal is to continue in exploring this debate by estimating a structural VAR model using German commercial property data from 1975 to 2003. Unlike other previous empirical results in this literature, our results show a strong negative correlation between growth in property prices and growth in credit. Moreover, the regional German commercial property sector is a¤ected by its own idiosyncratic factor rather than aggregate macroeconomic variables.

Effects of Resale and Purchase Taxes on Primary and Secondary Real Estate Markets

Gabriel S. Lee, University of Regensburg and Hao Li, University of Toronto
Session C5

This paper analyzes the effects of speculative taxes on real estate market. The government of Hong Kong has repeatly adopted various anti-speculative measures to curve rapidly rising housing prices in recent years. In Hong Kong, developers typically sell apartment units one year before the completion of the apartment buildings. Moreover, nearly half of all newly built residential houses are resold within one year during a typical boom cycle. One of the government's proposals to control speculation is through taxes in the resale market. In this paper, we present a theoretical analysis of implications of such policy that focuses on consumer demand uncertainty as well as the interaction between the primary and the secondary markets. We ask: Do taxes lower prices in the primary market? How do taxes affect developers' incentive to build? Is it possible that taxes actually increase housing shortage and therefore housing prices by discouraging builders? Our model predicts that under certain conditions, speculative taxes in the secondary market do not necessarily reduce prices in the primary market.

Gauging the Investment Potential of International Real Estate Markets

Stephen Lee, The University of Reading
Session D6

Investing in real estate markets overseas means venturing into the unknown, where you meet unfamiliar political and economic environments, unstable currencies, strange cultures and languages, and so although the advantages of international diversification might appear attractive, the risks of and constraints on international real estate investment must not be overlooked. However, capital markets are becoming global markets and commercial real estate markets are no exception accordingly despite the difficulties posed by venturing overseas, no investor can overlook the potential international investment holds out. However, what strategies are appropriate for capitalising on this potential? Three issues must be considered: (1) the potential of the countries real estate market in general; (2) the potential of the individual market sectors; and (3) the investment process itself. Although each step in foreign real estate investment is critical, the initial assessment of opportunities is especially important. Various methods can be used to achieve this but a formal and systematic analysis of aggregate market potential should prove particularly fruitful. The work reported here, therefore, develops and illustrates such a methodology for the 51 real estate markets analysed by Jones Lang LaSalle (JLL) in their Real Estate Transparency Index (RETI) 2004.

Indirect Real Estate Investments in the Finnish Private Pension Insurance Companies

Jaakko Leinonen, Finnish Association of Building Owners and Construction Clients
Session I2

This paper includes general and short information on the Finnish Real Estate market. It clarifies the role of private Finnish pension insurance companies in the real estate market in Finland. The purpose of this study is to figure out indirect real estate investment in investment portfolios of Finnish private pension insurance companies. In this paper the private insurance companies mean the following five private pension insurance companies; Etera Mutual Pension Insurance Company, Ilmarinen Mutual Pension Insurance Company, Tapiola Mutual Pension Insurance Company, Varma Mutual Pension Insurance Company and Pension-Fennia. This study reveals how much Finnish private pension insurance companies invest to indirect real estate investments in 2005/2006 and also presents changes in their allocations. The study shows how new financial solidity instruction guides affects to investment strategies between Finnish and abroad investments.

Measuring the Demand for Housing at Local and Neighbourhood Level

Chris Leishman, Heriot-Watt University
Session E5

Until relatively recently, housing transaction data were generally unavailable at the unit level in the UK. Partly as a result of this, the development of local indicators of housing demand has generally not kept pace with availability of indices at national and regional levels. The housing market literature is dominated by models of the national and regional housing market. In June 2000, HM Land Registry restored transaction price data to the publicly available registers and from 2005 these data became generally available to the public and the research community. This paper makes use of HM Land Registry data to contribute to the gap in the availability of housing market data at the local and neighbourhood level. Significantly, the paper also compares the results of several different approaches to modelling and estimating demand for housing including hedonic index construction, behavioural modelling and spatial interaction modelling. The analysis draws on a uniquely large and detailed dataset including information on unit level housing transaction prices, characteristics and neighbourhood descriptors drawn from the 2001 Census.

A Study of Cross-city Housing Supply in China

Xinhua Liang, National University of Singapore and Sau Kim Lum, National University of Singapore

Session J2

Housing supply plays an important role in the volatility of macroeconomic cycles and in the response speed of house prices to changes in demand. However, it is understudied relative to many other aspects of market behavior. To date, few works have been done on the China housing market—potentially the biggest housing market in the future. This paper aims to explore the cross-city housing supply conditions of China's main cities. The determinants of housing supply such as housing price, material cost, financial cost and labor cost will be examined under the institutional set-up of China's mixed economy. In addition, this study will focus on identifying government regulations which may impede supply-side response. It will test for how these supply restrictions such as the degree of regulatory stringency of the local planning authority decreases the response of producers to demand.

Residential Property Taxation in Northern Ireland – A Question of Reform?

Lay Cheng Lim, University of Ulster, Peadar Davis, University of Ulster and William McCluskey, University of Ulster

Session I6

The rating system has remained largely unchanged in Northern Ireland since its introduction in 1852, the date of the First General Valuation of Ireland when individual properties were given an individual assessment. While lettings are the most common way of holding property in the business sector, this is not the case for the housing sector. With over 70% of houses now owner occupied, private rented sector represents a very small proportion of housing stock. The domestic sector within Northern Ireland is valued on the basis of rental values prevalent in the late 1960s - for the 1976 Third General Revaluation (the last time domestic property was all revalued). The valuation list is therefore long out of date and there are significant anomalies in the way it distributes the rate burden due to lack of regular revaluations. This means that inequities have built up over the years with the loss of a clear relationship between rate bills and current circumstances. In recognition of the deficiencies within the current system, the Government announced that the existing rating system would be replaced by a tax based on the capital value of domestic properties. This research has been occasioned by the requirement of jurisdictions to examine the basis upon which domestic property is rated and taxed in light of concern regarding the cost, efficiency and fairness of the systems currently employed. The GB jurisdictions use a form of capital value banding under the auspices of the Council Tax, whilst Northern Ireland retains the Net Annual Rental Value (NAV) basis previously common across the UK and elsewhere in the former British Empires. In the USA, the common basis is discrete capital values, arrived at using complex computer assisted approaches. In order to assess the wider implications of a change to the domestic rating for Northern Ireland, this paper examines the use of capital value system in the taxation of residential property. It examines the options available and the underlying techniques involved in property taxation and utilising a dataset drawn from the Valuation and Lands Agency, suggests ways in which current practice can be modified to produce a more acceptable system. The paper provides an insight into the likely redistributive effects on the change in the rating basis which should inform policy makers and those charged with the ultimate decision on the future direction of domestic rating in Northern Ireland. A Geographic Information System (GIS) is also used to show the spatial distribution of district councils at ward levels and the effect of a shift from the current NAV based domestic rating system to one based on assessed capital values. The main recommendations indicate that a discrete value system performs best in terms of minimising the number of losers and providing a fairer and equitable local tax.

Estimation of Depreciation Path for Residential Properties
Tzu-Chin Lin, National Taipei University, Taiwan
Session A4

This paper estimates depreciation of residential properties in that it is an essential element of cost approach to property valuation. In Taiwan, a depreciation path is pre-specified in laws for calculating tax liability but few empirical works have so far been undertaken. A data set of 2099 transactions from October 1999 through March 2003 in Taipei City is examined. A hedonic pricing model in the double-log form is constructed with an age variable representing the impacts of structure deterioration on property values. A concave depreciation path is found; the property value decreases at a slower pace during the early years than during the later periods. This concave path differs from those specified in laws; the straight line and constant rate methods, and is better explained by sinking fund method. Moreover, properties of different structures depreciate at different rates although both in a concave path. This finding is consistent with the current regulations. Research finings all in all suggest that real depreciation path deviates from law-specified ones significantly and its consequent inequity in tax payments shall not be ignored. A more accurate estimation of structure depreciation for residential properties is urgently needed.

A Time-Series Intervention Analysis of the Effects of Major Political Incidents, Financial Crises, and Health Hazards (Severe Acute Respiratory Syndrome [SARS]) on Property Prices: A Hong Kong Case Study
Veronica Y.Y. Lin, University of Hong Kong
Session F8

Shock is defined as a sudden, unexpected and usually unpleasant event or experience. Hong Kong has suffered from several critical shocks over the last two decades. This paper uses an intervention analysis model to examine the impact of four major shocks, namely the announcement of China's decision to take back Hong Kong from Britain in 1982, the Tiananmen Square Incident of 4 June 1989, the Asian Financial Crisis of 1997, and the outbreak of Severe Acute Respiratory Syndrome (SARS) in 2003 on Hong Kong's residential property prices. The main contribution of this study is the use of multiple intervention analysis originated from Box and Tiao (1975) with various dynamic response functions to examine the effects of the four different natures of market events. Using adjusted quarterly data for 1975:1 to 2004:4, the data first are examined for unit roots. The tests reject the presence of seasonal unit roots but confirm the presence of non-seasonal unit roots. The empirical analysis therefore is based on logged first differences of property price index. An ARIMA model is estimated using the pre-intervention data for 1975:1 to 2003:4. This model is re-estimated for 1975:1 to 2003:4 with the intervention terms included.

Applications of Geographical Information System to Measuring Property Tax Inequity
Chi-Mei Lin, International Center for Land Policy Studies, and Tzu-Chin Lin, National Taipei University
Session C5

Property tax provides a significant amount of revenue to local governments. In order to maintain a just tax system, the tax base shall be constantly re-valued and potential tax inequity monitored. Valuation of real properties for tax purposes is in nature a mass appraisal and an method is needed to detect the potential appraisal inequity among properties. Regression analysis has been employed to measure the inequity of property tax and proven to be useful. However, the recent addition of geographic information system (GIS) to the analytical tool box seems to be

promising, particularly in processing spatial data. This paper explores the benefits of GIS in evaluating inequity of property tax through its unique functions. With the help of a data set of sale prices and their corresponding assessed values for taxation, the assessment ratio is estimated for individual properties. All these assessment ratios are identified as points in space through address-matching. Central tendency and dispersion of these points that represent assessment ratio are estimated. Through the distribution of assessment ratios, the properties whose ratios are far away from the average figure can be easily identified in location. The spatial data will be further analysed by other GIS functions and hope to uncover more information that is ignored in traditional non-spatial analytical methods.

Measuring the Added Value of Corporate Real Estate Management – Beyond Cost Minimization

Anna-Liisa Lindholm, Helsinki University of Technology and Karen M. Gibler, Georgia State University
Session D2

Corporate real estate management (CREM) performance needs to be measured and monitored so as to ensure the match between a company's business and real estate strategies. Performance measures used in CREM should be identified based on the company's core business goals instead of using traditional accounting measures focusing mainly on cost reductions or capital minimisation. The aim of the paper is to combine multidisciplinary approach and empirical research results to develop a balanced set of key performance indicators to evaluate how corporate real estate directly and indirectly adds value to the company's bottom line financial results. The empirical results are based on interviews with corporate real estate executives and service providers as well as corporate senior managers. Based on the model we have developed in our previous research, and the results from our two waves of interviews, we prepare a proposed set of key performance indicators tied to real estate strategies and operation decisions presented in our framework.

Owner-Occupied Retirement Housing And Differences In The Purchase Decision Determined By Gender or Marital Status

Martin Livette, University of Central England
Session F5

Retirement housing is a form of sheltered housing, being exclusively for older people and consisting of groups of independent accommodation, usually flats with communal facilities, linked to a resident warden by an alarm system. Various studies have consistently shown that nearly three quarters of older people living within such accommodation are female single persons, leading some researchers to argue that sheltered housing is essentially a gender related issue, which can be explained demographically. But, any suggestion that it is widows' accommodation seems both dismissive and pejorative; particularly if it has not been established whether differences in gender and marital status have a significant effect on the decision process when buying retirement housing. If men and women or single people and married couples do differ in their behaviour, then approaches adopted by not-for-profit agencies to improve the decision-making process may need to differentiate between the sexes and marital states. This paper, therefore, comments on the differences in the process that are determined by gender or marital status and contrasts some of the results of the research. Data were collected principally by questionnaire, to which there were 189 respondents, from a sample of all purchasers of retirement housing in the West Midlands region of the UK. The findings demonstrate that differences exist in respect of less than a fifth of the matters explored in the study.

An Analysis of Property Price Trends in Germany - Implications for Property Valuation Practice and Investment Decision Making

David Lorenz, Universität Karlsruhe, Stefan Trück, Universität Karlsruhe, and Thomas Lützkendorf, Universität Karlsruhe
Session B8

Press articles in Germany that predicted a severe decline in property prices within certain regions caused by demographic developments have recently served to undermine the people's sense of security. This lead to an intense debate if and to what extent property price trends are affected by certain macroeconomic variables. Therefore, this paper examines property price trends in Germany from 1971 until 2003 based on the property price indices of the Ring of German Estate Agents ('Ring Deutscher Makler'). The authors investigate correlations and dependencies between property price trends and financial as well as macroeconomic variables by using a multivariate regression model. The analysis is performed by taking into account structural breaks in the time series due to the German reunification or severe interference in the property market by the government. Furthermore, covariates like regional differences and the properties' different quality and performance characteristics are considered. Among other results, the analysis shows a different behaviour of property prices with regard to the properties' performance characteristics: While average and low-quality buildings' prices fell significantly under adverse macroeconomic conditions, high-quality buildings' prices remained stable in the most instances or even increased within the same time frame. The effects of the exogenous variables and covariates are quantified and implications for property valuation and investment decision making are deduced subsequently. In this regard it becomes evident that the regional economic attractiveness as well as the single buildings' characteristics need to be examined in more detail in order to produce appropriate assessment results.

Housing Supply Constraints: A Test of Regulatory Impact

Sau Kim Lum, National University of Singapore
Session J2

Land use regulations often introduce rigidities that constrain the ability of producers to respond to shifts in housing demand. This paper presents new evidence on the impact of such regulations on housing starts. We exploit a natural experiment in Singapore which avoids the need to construct measures of the regulatory environment. Land for private housing is supplied by the government and by private owners. Raw land sold by the state is virtually exempt from the costs of negotiating the development approval process whereas private land is not. We test for the impact of regulation on the determination of housing starts with the impulse response functions of a baseline VAR model. Using data from 1990:1 to 2004:1, the empirical strategy is to examine the short-run dynamics of the response in housing starts to our land supply variables as well as to other determinants of new supply in a flow-flow setting. We find that regulation depresses the response of housing starts. A key implication of the results is the importance of reducing supply-side rigidities for a more orderly market reaction to demand shocks.

Real Estate and Retail Banking - A New Formation for Research and Education

Stellan Lundström, KTH Centre for Banking & Finance
Session A8

The finance paradigm dominates Real estate curricula throughout the world since the beginning of the 1980s. Initially cash flow and investment analysis paved the way for capital asset pricing theory and option models. Real Estate has to a great extent been influenced by corporate finance. An initiative from the Swedish banking sector creates a new profile for research and teaching at the Royal Institute of Technology in Stockholm. Focus is on retail banking and the role of the

financial industry in the urban management process. Research projects are formulated that deals with the organizational, technical, ethnical and legal interface between the financial service provider and the customer, as well as projects that are about new techniques for market analysis related to housing and creative instruments for young house-buyers equity and debt financing. The research is complemented with new bachelor and master programs directed to both the real estate and banking sectors. The aim of the paper is to describe and evaluate the initiative in an international university context.

Investments in Logistics Real Estate
Kilian Mahler, European Business School
Session E8

The paper evaluates the situation of logistics service providers and real estate investors in Germany. Especially the effects of the New Basel Accord on service providers are analysed and the financing alternatives for the different kinds of companies in this segment are described. It takes into account that different financing structures have to be applied for publicly listed companies versus non listed companies. Additionally, aspects like the eastern enlargement of the EU, the increase in demand for contract logistics, globalisation, new technologies like RFID, e-commerce et cetera are considered. Besides the characteristics concerning logistics companies, it evaluates the portfolio situation of real estate investors. The structure of the existing portfolios and the yield returns of the different real estate types are being examined. Investment criteria for real estate investors are presented in general and in detail for investments in logistics real estate. As theoretical background, the resource based view and the modern portfolio theory are applied. The results of the study are based on the content analysis of interviews, literature reviews and logical considerations. In case data is available, correlations between different real estate types will be calculated in order to clarify, whether logistics real estate has a positive effect on yield return of office and retail real estate portfolios.

RMR Real Estate Indices in Markets with Thin Information
Gianluca Marcato, Cass Business School, City University
Session E6

A Valuation-Based Index (e.g. NCREIF and IPD) requires a set of information that is normally difficult to be collected – the main issue being the availability of annual valuations. This issue is even worse when we want to construct historical indices for markets with thin information. In this paper we identify a subset of information that is sufficient to construct a historical index reflecting the same characteristics a VBI would show. We use initial purchase prices, last valuations and annual capital expenditures/receipts, by applying three main repeated-measures regression (i.e. RMR) methods coming from the literature and a simple backward looking model. We then compare each one of the newly constructed series with both actual VBIs and unsmoothed versions. Not all RMR methods show same statistics and we find that a backward looking methodology (i.e. BW) is to be preferred to other models. Our BW index tends to lead the actual VBI and the two series are highly dependent – with dependency measures increasing if the BW index is lagged by one year.

UK Real Estate Market Forecast Variation
Patrick McAllister, The University of Reading, George Matysiak, The University of Reading and Graeme Newell, University of Western Sydney
Session F6

Forecasts play an important role in real estate investment decisions supporting broad asset allocation and real estate fund strategy, including sector and geographic allocation. It is believed that through modelling and forecasting real estate markets improved real estate investment decisions can be made. However, uncertainty and forecast error are intrinsic elements of any forecast. Outside real estate, the topic of forecast disagreement has generated a substantial body of research focussing on sources and causes of disagreement. In this paper we look at the performance of real estate forecasters in the UK and examine the extent of variation in the forecasts. This paper looks at differences in UK quarterly forecasts using the *Investment Property Forum* (IPF) survey data of independent forecasters over the period 1999-2004. On average 25 real estate forecasters participate in the survey. Consensus forecasts for all participants are presented, as well as separate results for the sub-groups of real estate advisors, real estate fund managers and real estate equity brokers. Results for individual real estate forecasters are not published. However, the IPF have made available this data for the purposes of this research.

The Implications for Regional Investment of Diversification Strategies in Commercial Real Estate Portfolios

Philip McCann, The University of Reading and Stephen Lee, The University of Reading
Session E4

A number of studies have examined the benefits of regional diversification strategies within commercial real estate portfolios with two approaches adopted; the first is based on primary contiguous geographical regions while the second employs areas based on economic function. In general, the conclusion is that diversifications strategies based on simple geographical areas adds little, if anything, while economic based regions have shown much greater potential. The economic regions approach to portfolio analysis appears to be a much more valuable tool in evaluating regional real estate investment opportunities and risks. The reason is that this method allows consistent risk measurement between aerial units and enables the portfolio manager to develop a geographically diversified portfolio through the use of economically cohesive regions. The aim of this paper is therefore to identify how the application of these portfolio investment techniques determines the flows of funds coming into regions, and the consequent impacts on regional investment in the regional built environment. Most previous research on this issue is based in the US with studies in other countries largely hampered by lack of real estate data and/or acceptable definitions of economic regions. This study therefore attempts to rectify this position in the UK using a large data set of real estate and socio-economic data.

Investing in Change: An Economic Analysis of Rural Development over Time

Iona McCarthy, Massey University
Session G7

When a change in rural land use occurs there is generally a period when considerable economic gains are made by those who take the high initial risk. Once viability of land use change is established this advantage tends to disappear. This study gives consideration to the economic viability of dairy conversion of land in forestry production, in the Central North Island of New Zealand, from 1999 to 2005. The physical feasibility of dairy conversion of forestry land is described and the financial viability of conversion in three consecutive time periods is investigated. Discounted cash flow methodology is used to determine return on investment in undeveloped land. Results of the financial models are then compared with prices paid in the market over the study period for developed dairy farms.

A Panel Analysis of European Office Market Dynamics

Tony McGough, Cass Business School, City University

Session G3

With the introduction of the Euro and continuing eastern expansion of the European Union, makes this a time of high volatility and vibrancy in the European market. This combined with the strains on some of Europe's largest markets in Germany and France mean that now is an important time to analyse the similarities and differences within the European real estate market. This paper will provide analyse of the dynamics of the main European office markets. Using individual location and pan-European panel data, statistical and econometric techniques will be employed to compare and contrast the drivers that influence the major office markets of Europe. The paper shall analyse the results to provide a comparative study of the European office markets across time and location. The paper will also make observations about structural differences and similarities between markets, in a comparative analysis of the many influences in this area. The analysis will include initial observations about the role of the Euro, and will thus be a useful benchmarking exercise for analysis in the future to compare markets once the expansion eastward has had time for its impacts to be fully registered on the data.

Developing Mixed Communities

Geoff Meen, The University of Reading

Session A4

In January 2005, the ODPM unveiled its Five-Year Plans for housing and for neighbourhood revitalisation in two companion documents, *Sustainable Communities: Homes for All* and *Sustainable Communities: People Places and Prosperity*. Key objectives in the second include:

"Faster progress to narrow the gap between the best and worst off to make sure opportunity and choice are for all, including a new more radical approach to renewal in a small number of very disadvantaged areas with the aim to create neighbourhoods with a more sustainable mix of tenures and incomes and address the problems of worklessness, skills, crime, poor environments and poor health."

This paper considers the problems associated with developing mixed communities. Even if everyone agrees that mixed communities are desirable as a way of reducing poverty and improving social justice, there are very good reasons why it is difficult to achieve this goal. In this paper, the results from a recently estimated model of the English local authorities and wards are presented. The model demonstrates how processes of economic segregation emerge, concentrating on the interrelationships between local housing markets and migration. From the model, a set of controversial policy proposals is put forward that attempt to maximise the probability of success in developing mixed communities.

Instruments of Spatial Planning Policy for Modernizing Economic Structure. Comparative Studies of Spatial Planning in Poland and Finland.

Malgorzata Mierzejewska, Helsinki University of Technology and Magdalena Zaleczna, University of Lodz

Session I3

Spatial Planning Policy is a subject of interest not only on a local, regional and national level but also from the perspective of European Spatial Development. In today's changing European context, the idea of spatial planning has undergone some changes. Increasingly cities are the subjects of interurban competition. There is often an approach that emphasizes the role of negotiation and public-private partnership in land development, to avoid tensions in decision making involved when establishing plans, and in order to accelerate implementation of planning. This paper concentrates on spatial planning policies and instruments which affect conditions for economic development, particularly at a local level. From the research perspective the spatial planning systems and instruments in Poland and Finland will be compared. Finland has a long tradition in supporting the implementation of urban development plans. The legislation, which strives for the promotion of the implementation of plans, has been developing gradually with time. Spatial planning system in Poland is the subject of growing criticism and consistent reforms. Cross-country studies can be useful for those, who are looking for improvements and possible adaptation of new mechanisms. The aim of the paper is to present some ideas for re-thinking the mechanisms and processes of land-use policy.

Explaining Deviations from NAV in UK Property Companies: Rationality and Sentimentality

Giacomo Morri, SDA Bocconi, Milan, Patrick McAllister, The University of Reading and Charles Ward, The University of Reading

Session J1

One of the most vexing issues for analysts and managers of property companies across Europe has been the existence and persistence of deviations of Net Asset Values of property companies from their market capitalisation. The issue has clear links to similar discounts and premiums in closed-end funds. The closed end fund puzzle is regarded as an important unsolved problem in financial economics undermining theories of market efficiency and the Law of One Price. Consequently, it has generated a huge body of research. Although it can be tempting to focus on the particular inefficiencies of real estate markets in attempting to explain deviations from NAV, the closed end fund discount puzzle indicates that divergences between underlying asset values and market capitalisation are not a 'pure' real estate phenomenon. When examining potential explanations, two recurring factors stand out in the closed end fund literature as often undermining the economic rationale for a discount – the existence of premiums and cross-sectional and periodic fluctuations in the level of discount/premium. These need to be borne in mind when considering potential explanations for real estate markets. There are two approaches to investigating the discount to net asset value in closed-end funds: the 'rational' approach and the 'noise trader' or 'sentiment' approach. The 'rational' approach hypothesizes the discount to net asset value as being the result of company specific factors relating to such factors as management quality, tax liability and the type of stocks held by the fund. Despite the intuitive appeal of the 'rational' approach to closed-end fund discounts the studies have not successfully explained the variance in closed-end fund discounts or why the discount to net asset value in closed-end funds varies so much over time. The variation over time in the average sector discount is not only a feature of closed-end funds but also property companies. This paper analyses changes in the deviations from NAV for UK property companies between 1999 and 2003. The paper addresses a number of questions.

i To what extent is there persistence in deviations from NAV between UK public real estate markets?

ii To what extent do 'rational' factors explain discount and premium in publicly traded real estate companies?

iii Are trading volume and historic performance a significant explanatory variable of deviation from NAV?

iv What role do market expectations play in explaining deviations from NAV?

On Balance, are Balances a Leading Indicator of Property Market Performance?

S Moyhuddin, DTZ Research and V Tayebi, DTZ Research

Session I2

This paper explores the time-series relationship between economic and commercial property market performance across the 12 regions of the UK from 1981 to 2004. In particular, it focuses on the role played by regional survey data in providing an indicator of property market performance across the manufacturing and service sectors. Whilst the inclusion of survey data in property forecasting models offers a potentially richer insight to property market performance we investigate the intrinsically more interesting question as to whether business confidence data are a leading indicator of property market performance.

The Role of Property Tax in Local Government Revenues in Poland

Adam Nalepka, Cracow University of Economics, Bartlomiej Marona, Cracow University of Economics and Agnieszka Malkowska, Cracow University of Economics
Session I6

In more than 130 countries property tax is an significant part of the national taxation system. In all member countries of Organisation for Economic Co-operation and Development (OECD) property tax constitutes an important source of local government revenues. The paper attempts to assess the share of property tax in local government revenues in Poland. Special attention is given to the transformation of the property tax system which will be based on the tax related to property value, so called ad valorem formula. The authors consider consequences for the local government budgets of the shift from property tax calculated on the basis of property function to the property value taxation.

Property Management and Corporate Real Estate within the French Companies: A Survey of the French CAC 40 Index Companies

Ingrid Nappi-Choulet, ESSEC Business School
Session D2

Over the past years, there has been a growing attention of the business world and of the academic research for corporate real estate management. It has been notably pointed out that real estate is a significant but under managed part of total corporate assets and that it could be source of value for companies. This paper reports on the results of an original survey of corporate real estate executives belonging to the largest and the most active companies listed in the French Stock Exchange, those tracking in the CAC 40 Index. This index is comprised of the 40 largest stocks trading on Euronext Paris and is a subset of the larger SBF 250. The survey, carried out in 2004, is the first survey to be performed on corporate real estate management in France. The results of the survey provide a basic understanding of the corporate real estate management in major French companies. Furthermore, the research identifies some key factors which can explain the size, structure and strategy of corporate real estate units within these companies.

A Hedonic Price Model for the Office Market: An Application for the Paris-La Défense District

Ingrid Nappi-Choulet, ESSEC Business School, Isabelle Maleyre, Paris XII-Val de Marne University and Tristan-Pierre Maury, ESSEC Business School
Session C3

A growing body of hedonic literature applied to the residential housing market has been developed during the last 30 years, mainly in North-America and UK. Office market has undergone several investigations in a more recent period. These studies typically have approached value indirectly through measures of rents. A smaller number of office market studies have focused on direct measures of actual or imputed property value. As a contribution to this literature, the aim of this paper is to provide what we consider, to the best of our knowledge, the first application of the hedonic approach to the office French market. We carried out a hedonic

analysis of office properties and develop a transaction-based index for the business district of Paris-La Défense.

A Post-Auction Evaluation of Auctioned Properties

Poh Har Neo, National University of Singapore, Seow Eng Ong, National University of Singapore and Tsur Somerville, University of British Columbia

Session I1

The auction mechanism has become an increasingly popular mechanism for price discovery where sellers seek to evaluate market interest. The winner's curse is a well established phenomenon associated with overbidding at auctions. However, auctioned properties could either be sold at the auction or through subsequent privately negotiated sales. Prior research indicates that the price from subsequent private sales could be higher than bids established at auctions. This study seeks to evaluate whether post-auction price movements differ with respect to at-auction or subsequent-to-auction transactions and with respect to non-auctioned sales. In so doing, we also seek to address the issue of winner's curse from a post-auction perspective.

Factors Influencing the Performance of Hong Kong Property Companies

Graeme Newell, University of Western Sydney, K.W. Chau, University of Hong Kong and Siu Kei Wong, University of Hong Kong

Session G1

Hong Kong property companies make a significant contribution to the Hong Kong stockmarket and general economy. A key issue is how much of Hong Kong property company performance is attributable to stockmarket performance and how much is attributable to direct property performance. Using a variance decomposition procedure, the proportion of Hong Kong property company volatility that is attributable to stock, bond and property factors over 1984-2004 is assessed. The dynamics of this Hong Kong property company performance is also assessed; particularly in relation to key economic and political factors.

Factors Influencing Hotel Investment Decision-Making

Graeme Newell, University of Western Sydney and Ross Seabrook, University of Newcastle

Session I4

Given the stature of international tourism, hotel properties are an important property investment sector. While considerable research has been conducted for office, retail and industrial property, only limited research is available concerning the hotel sector; particularly concerning hotel investment decision-making. Using the Analytic Hierarchy Process (AHP) as a multi-criteria decision-making procedure, the major hotel investors and hotel owners/operators in Australia were surveyed. The importance of 30 factors including the financial, location, economic, diversification and relationship factors influencing hotel investment decision-making were assessed. Weights attached to these 30 factors are determined, with three tiers of importance found amongst these factors influencing hotel investment decision-making.

Transaction Based Performance Measurement & Analysis of Real Estate Investments: An Alternative Approach to Measure Investment Success in a "Deal Driven" Industry

Sascha Noeske, Strategis AG/Real Estate Consulting and David Isaac, University of Greenwich

Session I4

Investors rely on insights concerning the question how successful their investments are performing. In a market with a low degree of liquidity and huge investment slices, this will be of outstanding importance. There are some existing models which are serving this purpose. This investigation grabs a quote from the prominent writers Brown and Matysiak, who state, that the property market "tends to be deal driven with the emphasis on selecting individual properties. If we accept this finding we imply that "the deal" attributes a lot to overall investment success. As a consequence we have to ask how accurately we control the ongoing relationship of "the deal" and periodically passing income. This investigation assesses how common measures cope with that and what could be done to extend the repertoire of such measurements for more focus on the guiding deal-assumption. This work tests existing techniques in their ability to cope with a "deal driven" context.

The European Challenge: An Evaluation of the Consistency of Belbin Team Role Types and Assessment Criteria in a Pan European Project

Nick Nunnington, Sheffield Hallam University and Declan McKeown, Dublin Institute of Technology
Session F7

Following on from the paper presented at the 2004 ERES conference by Nick Nunnington and Henriët Eilander**,** the authors examine two new aspect of the "European Challenge" project. Bringing together around 70 students and 9 tutors from 9 countries it provides one of the most complex case studies and action research vehicles of multi disciplinary and multi-national student projects in Europe. An ambitious and unique project it simulates the re-location of the European Headquarters of a US based corporation of 303 employees. In this paper the authors examine the impact of cultural norms, social backgrounds and expectations upon multi national team working and assessment. With increased globalisation the real estate profession and its students are moving towards European wide integration and becoming used to the reality of working in multi-national project teams. However, little research exists which examines the effectiveness of such teams and whether established team working models, such as that developed by Meredith Belbin with its nine team role types holds true in a Pan European or multi-national approach. This paper draws upon theories of psychology, psychometric assessment and team work analysis and utilises observation and analysis of two years of pan European student team working to examine both the team operations and assessment issues. The authors propose that models of team role types developed in the UK/US might not be appropriate for pan European working and suggest re-calibration may be required. In addition the authors examine the assessment of the project by a multi-national team of assessors and provide fascinating in-sight into the wide deviation of expectations and the problems inherent in the application of objective assessment criteria in a pan European context. The initial results show interesting findings in terms of how Belbin team role types might not translate completely across Europe and how (wide) variations exist between the perceptions of academics from a variety of European backgrounds as to the interpretation of assessment criteria for a student team presentation.

Analysis of Lending Policies and Procedures of Primary Mortgage Institutions in Nigeria

Peter Ogedengbe, Obafemi Awolowo University
Session B6

This paper focuses on the constraints of mortgage financing arrangements in Nigeria. The study tries to examine the lending policies and procedures of primary mortgage institutions with a view to determining the constraints that hamper effective mortgage financing. A total number of six primary mortgage institutions that are licensed to carry out mortgage business in Nigeria were examined in order to determine the constraints that are associated with mortgage finance. The data collected were analyzed and presented using simple descriptive statistical methods. The results show clearly that problems ranging from high interest rates to that of the numerous requirements from applicants for loan, which in most cases they find difficult to meet, bedeviled mortgage financing. Besides, the inflationary rate in the country also contributes to mortgage finance constraints. It recommended among others that the Nigerian government should try to solve its economic problems that plague the financing of real estate development.

Clients Perceptions of the Accuracy of Valuations in Lagos, Nigeria

Olusegun Ogunba, Obafemi Awolowo University, B.T., Aluko Obafemi Awolowo University and V. Alonge, Obafemi Awolowo University
Session I5

There is currently a worldwide debate on reliability and variation in property capital values. Empirical surveys in Nigeria have followed the general trend of statistical evaluations with a focus on valuers. However, the views of the Nigerian valuers' clients (defined in the paper as the public valuation offices, the mortgage, commercial and merchant lending institutions, and private/public property investors) on valuation accuracy are rarely aired, except where voice is given to their bitter official complaints of negligence to the valuers' professional institution. The paper reasoned that that a survey of clients' perceptions should complement the existing valuer surveys by providing valuer/client comparisons and valuable insights on touchy issues such as maximum acceptable percentage of error of estimates, the efficiency of valuations as a proxy for market prices, as well as inferences on the way forward to more client friendly valuations. The paper accordingly conducted a questionnaire survey of valuers' clients in Lagos metropolis, a metropolis where sixty per cent of Nigerian valuers are based. Results showed that the maximum acceptable margin of error from the viewpoint of clients was in the region of 5%. It was also deduced that a majority of respondents preferred capital value estimates to be presented as a range of likely estimates (with a point estimate showing the most likely estimate in the range), rather than as point estimates alone as is conventionally done. Generally, clients were evenly split on whether valuations were reliable or consistent; however, a slight majority was of the opinion that the valuations generally fell within the 5% acceptable margin of error. The dissenting group of clients pointed to valuations generally falling outside of this margin of error, and traced reasons for this to alleged valuer incapability, particularly in the alleged use of inappropriate - and sometimes conflicting - valuation methods. The paper concluded that the clients of Nigerian valuers expect a higher quality of valuation accuracy, presentation and analysis than their valuers are currently providing, and recommended that valuers embrace client oriented standards - incorporated into a valuation practice manual - as a framework for improving the quality of their valuations.

Performance of Real Property Investments in Nigeria: Analysis and Portfolio Consideration

Abel Olaleye, Obafemi Awolowo University, S. A. Oloyede, Obafemi Awolowo University and O. J. Adegoke, Obafemi Awolowo University
Session J5

Major organisations and institutional investors, in Nigeria, no doubt, are becoming increasingly interested in direct property investments. The market has witnessed an upsurge involvement of such organisations and investors, which has led to the listing of a property company in the Nigerian Stock Exchange. There is the need to examine the implications of this development on investors' portfolio. This paper therefore examines the performance of property investments vis-à-vis other investment media and establishes whether or not there is any gain, in terms of return/risk level, accruable to investors of a mixed assets portfolio when they invest in property assets. In achieving this aim, return data on different investment media, namely, Share, Treasury bill, Bank Saving Deposit, and Direct Property investment for the period of 1998-2002, were

collected/calculated. The collected/calculated data were analysed with the use of mean, standard deviation, co-efficient of variation and correlation analysis. The paper's preliminary analysis revealed that real estate investments, in Nigeria, provided better performance, in terms of return and risk, when compared to other investment media. It also suggests that there is a lot to be gained when real estate investments are included in a mixed assets portfolio.

Land Ownership Constraints within Inner City Redevelopment Process: The Nigerian Experience.

S.A. Oloyede, Obafemi Awolowo University, A. Olaleye, Obafemi Awolowo University and J.B. Oyedele, Obafemi Awolowo University
Session G7

Inner city redevelopment exercise is people oriented and their participation, at all stages, is most important. The land and quality of physical and social infrastructure within the central urban area stimulate and support the economic activity of a city as a whole. The paper seeks to define and classify land ownership constraints to redevelopment within the core area of cities and review their significance in two major cities within the Southwestern geo-political zone of Nigeria. The paper administered questionnaires to developers and interviewed Town Planning Authorities' officials in the two cities selected. The data, so collected, were analysed through the use of frequency counts. The paper's analysis revealed that land ownership constraints persist because past government failed to pursue sound policies, long term planning for the redevelopment of towns/cities and the rule of law. The paper concludes that to minimize the constraints to inner city redevelopment, government should embark on long term planning for inner city redevelopment through sound town and country planning policies and practices in addition to good governance.

Mortgage Markets in Asia

Seow Eng Ong, National University of Singapore
Session G1

Over the past several decades, mortgage markets have developed from a fairly primitive form to a rich and complex institution. Mortgage markets are no longer only a place in which borrowers meet lenders for the purpose of financing real estate transactions, but an arena in which innovative financial instruments exchange hands in huge masses on a daily basis, where banks are compelled to tightly manage the associated risk, where governments are often highly involved and use the ground for implementing and promoting their social and economic policies, etc. Moreover, frequently, the economic development of a local mortgage market is often a seismograph for the level of institutional development of the entire local economy. While the mortgage market in the United States has been studied extensively by academics and other researchers around the world, markets outside the U.S. generally gain much less attention. Particularly, the structure and other institutional aspects of the mortgage markets outside the U.S. attained a very limited focus. This paper thus intends to fill up this gap by highlighting various aspects of mortgage markets in Asia. The uniqueness of the chosen markets is they are in different stages of economic and financial development. This book will also examine questions relating to housing finance efficiency and contract heterogeneity. In addition, we will also examine the securitization experiences in these countries to provide lessons on how mortgage markets are integrated with capital markets and how particular institutional framework interacts with mortgage markets.

Strategic Marketing of New Developments: What Determines the Take-Up Rate?

Joseph T.L.Ooi, National University of Singapore

Session C4

This research paper examines the initial launches of residential development projects in Singapore. Whilst a number of studies have examined the Initial Public Offerings (IPOs) of quoted property companies, no studies have explored the strategic marketing initiatives of new development projects. Based on a comprehensive sample of new residential developments launched in Singapore between 1995 and 2004, the paper seeks to identify the key determinants of a successful initial property launch. Success is defined by the take-up rate of the project during its initial marketing launch and at the temporary occupation permit (TOP) stage. For real estate development, the success of a development project is often tied to the take-up rate of the project during the property launches. Based on the 4 Ps of marketing, the influence of product, pricing, promotions and place on the project's take-up rate is examined. Findings of this research have valuable practical implication for developers as well as marketers. In many instances, the developers' cash flows and risk exposure are tied to the performance at the initial launches.

The Emergence & Performance of REITs in Asia

Joseph T.L.Ooi, National University of Singapore and Professor Graeme Newell, University of Western Sydney

Session A1

Real Estate Investment Trusts (REITs) have been introduced in Asia since 2001 with Japan, Singapore and South Korea as the current market leaders. Besides these three countries, legislative frameworks for REITs have been set up in numerous countries such as Hong Kong, Taiwan and Malaysia. The Asian REITs are likely to continue to evolve rapidly, bringing greater sophistication and diversification to the property market. This research seeks to survey, examine and compare the experiences of the different markets in Asia that have introduced REITs. The paper firstly examines the background of the macroeconomic, financial market and property market development in the respective markets. The driving forces for REITs development on supply and demand sides and government initiatives, as well as obstacles will also covered. The initial performance of Asia REITs will be reviewed and contrasted with the common and real estate stocks in the respective markets. Finally, the future prospects of Asia REITs are assessed.

Investigating the Interaction Effects of Office Rent Determinants

V. A. Oven, Gebze Institute of Technology, Turkey and D. Pekdemir, Gebze Institute of Technology.

Session F6

The application of factorial design on product quality management is becoming increasingly more popular. The essence of the numerical technique lies with its efficiency on determining both the influence of the main effects and their combined effects on optimising the desired qualities of an end product. Considering office rent is a function of a large number of parameters (office rent determinants) it may be prudent to apply the factorial design technique treating office rent as an end product whose quality is measured by the highest yield of rent. Using the method, it is then possible to define the most influential parameters (main effects) as well as the parameter interactions (combined effects) dictating the highest office rent. In a previous work by the same authors, it was attempted to represent the large number of office rent determinants in terms of a limited number of factors, based on the incorporation of factor analysis into the well-established hedonic regression approach. By means of the numerical procedure, it was managed to condense an extensive number of office rent determinants into five distinct factor variables of those only three were statistically significant. In addition, among the three parameters which could not be incorporated in any of the determined factor groups, only one was found to be statistically worthwhile using in the model. Expanding the contract data used in the previous study, obtained from PQP (Property Quality Platform) members in Istanbul, 24=16 two-level factorial design was conducted in order to examine the influence of interaction effects of the factors of the previous work on office rent in Istanbul.

Multi Attribution Analysis: Better Measuring is Better Understanding

Theo Overbeeke, Corio Nederland Kantoren B.V., Bert Teuben, ROZ/IPD Property Index and Aart Hordijk, University of Amsterdam, the Real Estate Council of the Netherlands (ROZ) & the ROZ/IPD Property Index

Session E6

The ROZ/IPD Property index was established in 1994 to publicize an independent index on directly held real estate in the Netherlands. The real estate universe is split into the sectors: retail, offices, industrial, residential and mixed use/other. Based on the heterogeneous characteristics of properties for each sector attribution analyses are made. In the analyses the performance for the different characteristics of the sector could be compared. The office sector is segmented into centre location, office area, residential area, industrial park and other locations in common. Other analysis are also made for instance for geographic areas and the year of construction. Based on the segmentation for the office sector several analysis are already available with all different results for the benchmark's performance. The different kind of attribution analyses makes the used benchmark objective. A working group of the ROZ/IPD Property index called "hedonic benchmarking" carried out a study on the possibility to produce one single and uniform benchmark tool, including miscellaneous individual property characteristics. The tool produces a benchmark for each individual property, based on the properties characteristics: *"how would this property have performed, if it were compared with its peers?"*. The study is based on the method of hedonic pricing, which is frequently used in the real estate sector (mostly residential) for analysis on rental levels and purchase prices. The analysis is made for individual years and time intervals and carried out for the total return, capital growth and the income return. The paper describes the results of the return's explicability, based on the individual property characteristics.

A Comparison Between Regression Analysis and Rough Set Theory for Mass Appraisal: A Sample Study in Bari

Anita Marta Palmisano, The University Polytechnic of Bari

Session E2

Mass appraisal is a group valuation techniques, that replicate the property market behaviour through a representative model. In some property markets there are few market data and the information sources are uncertainty, therefore econometric modelling may be difficulty or unreliability. In these cases econometric modelling of relationship between the dependent variable (property price) and the independent variables (property characteristics), may be difficult. Rough Set Theory is a property valuation methodology recently applied to property market (d'Amato, 2002). The model permit to estimate a property without defining an econometric model. In this methodology the econometric relation is replaced by an if then rule. The RST has been improved with a 'value tolerance relation', in order to make more flexible the relationship between rules and sample of observation (d'Amato, 2004). Both methodology, Multiple Regression Analysis and Rough Set Theory, has been tested on sample of residential property transaction. The data comes from the Real Estate Market Observatory of the University Polytechnic of Bari.

Professional Socialisation of Valuers: What the Literature and Professional Bodies Offers

Geoff Page, University of South Australia

Session D7

Professional socialization refers to the acquisition of values, attitudes, skills and knowledge pertaining to a professional subculture. This paper reviews the literature about professional socialization and the dimensions that contribute to the process and definition of professional socialization. This literature analysis is undertaken of cognate professions because there is no direct literature relating to valuers. The summary of the legislative requirements within Australia and the membership requirements of professional valuation bodies are examined to determine if these include elements of professional socialization from a real world perspective.

A Comparative Study of Multiple Linear Regression Technique versus Artificial Neural Networks Theory for Real Estate Valuation

Elli Pagourtzi, National Technical University of Athens and V. Assimakopoulos,
National Technical University of Athens
Session E2

Real Estate Valuation in urban area is a very difficult task that has absorbed the interest of many academics in the last years. Many qualitative and quantitative variables affect the value of an estate in urban areas. As a result multivariate models are more suitable in the appraisal process. One of the most common approaches is multiple linear regression technique that is always used as a benchmark in various studies. A very promising way of dealing uncertainty in real estate analysis and producing sufficient evaluations is Artificial Neural Networks (ANNs). The purpose of this study is to compare these two approaches using data from the Attica urban area in Greece.

Lot Price Coefficient of Undeveloped Suburban Land Price: A Description of Markets or a Valuation Method?

Risto Peltola, National Land Survey of Finland
Session J2

The market for suburban undeveloped land in Finnish is thin. Because of public-private partnerships it may have got even thinner recently, and valuation of raw land is difficult. In valuation the business and legal practice has started to prefer income approach to sales comparison method. However, as there is a complete set of price attributes factored in the sales comparison method, it should perhaps be preferred to the income approach. In my paper I offer an elaboration to the sales comparison method, which is based on the relationship between lot prices and raw land prices, called "lot price coefficient approach". How is the lot price coefficient defined and measured? How can we use it to get a structured view of the markets of undeveloped land? Is it also possible to use this coefficient to valuation of undeveloped land? How to define a lot price coefficient? In the suburban context the most natural benchmark is the price of lots for single family houses. The market for such lots is thick, and a value of lots can be estimated almost anywhere. The demand for raw land is derived from the demand for housing and other real estate services. In an intermediate level the demand for raw land is derived from the demand for lots. Hence factors affecting the value of residential lots should affect the value of raw land. In practice the impact of most of these factors is impossible to measure in the context of raw land. There are factors that affect the value in all levels of the production chain. Some factors, on the other hand, are specific to certain level. The common factors are: time (trend and cycle), macro location (access to centres, administrative subdivision: local services and local taxation), micro location (mainly visavi sea, lakes and road network). If these general price factors, location and time, are dominant enough and if they affect similarly to lots and raw land, then the price of raw land can be valued by lot prices.

The empirical analysis supports the reasoning. The analysis is based on 8700 lot and 830 land transactions on larger Helsinki metropolitan area. Four hedonic price models were specified and estimated: Income approach and lot price coefficient approach have much in common: in both methods the value of raw land is derived from the lot value. The link, however, is derived in fundamentally different ways. In lot price coefficient approach comparable sales produce the link. In income approach the link is calculated by cash flow and discount interest rate. In my way, the income approach may be too hypothetical to use appropriately. The risk premium, which is factored in the discount rate, is a prime example of an utmost hypothetical parameter. In lot price coefficient approach basically two parameters are needed, both of which can easily by grasped intuitively and elaborated systematically if needed. The lot price coefficient is a useful way to give an overview of raw land market. At the same time the method gives a detailed look at the strong spatial effects affecting the value (see figure 4 in the appendix). With tables, pictures and hedonic and spatial models the effect of other factors in the lot price coefficient could be presented. How reliable the lot price coefficient approach is as a valuation method? The coefficient varies a lot in some dimensions, in other dimensions it's reasonably stable. Presumably the lot price coefficient approach is a general intuitive model, which is already widely used but perhaps unconsciously. As far as I know it's not used, however, in valuation statements, perhaps because it's regarded as unscientific. It's not unscientific, but has logical grounds on the derived demand of locational and other housing characteristics. It would be even more useful, if it were elaborated systematically with hedonic models and spatial economics. In my paper some elaboration is given. In some dimensions this coefficient is stable, in some other dimensions it varies a lot. This is critical in the choice of comparables. Knowing the critical and stable dimensions the best use of a limited number of comparable land transactions can be made not wasting any useful comparable. On the other hand, there usually is plenty of comparable lot transactions. With this information the undeveloped land can be valued in a very intuitive way. Based on empirical analysis included in the paper, some practical valuation rules are given.

Life Cycle Costs as a Benchmark

Andrea Pelzeter, European Business School

Session I3

Life Cycle Costs (LCC) are an indicator for economic sustainability. Its specific characteristic consists in the integration of all phases of a life cycle. LCC are utilised to prepare decisions between different alternatives in regard to its long-term advantage. But as the main part of considered costs has to be forecasted and no standardised method of LCC-calculation exists so far, LCC may only be used for the in-house comparison of alternatives. An external comparison based on LCC in the sense of a benchmark needs distinct conventions. This paper points out which aspects of the calculation of LCC have to be commonly defined, before LCC can be used as an external benchmark.

1. Structure of data

Which data are relevant in order to indicate the differences between possible alternatives? How can be assured hat all data refer to the same base? Which norms or circumstances are applicable to structure the data? Does one structure fit the needs for different types and life cycle phases of real estate?

2. Cost data

How is the dynamic of price trends addressed? Whose perspective on prices is regarded? Is it possible to create a common cost/price-pool? Which external costs are likely to be internalised in the near future and should therefore be integrated in a long-term prognosis?

3. Method of calculation

How is the time value of money considered? Which method of calculation shall be used? Which result suits for a benchmark? etc.

All those questions have to be discussed being aware that a balance has to be found between a desirable completeness of information and an acceptable effort to collect and process the data.

Real Estate Portfolio Transactions by German Corporates – Modelling Typical Frictions as Anomalies from Behavioral Decision Theory

Frank Pfirsching, European Business School & Sireo Real Estate Asset Management GmbH
Session H3

The objective of the paper is to propose anomalies from Behavioral Decision Theory as explanations for typical problems leading to the failure of very large sale and leaseback portfolio transactions by German corporates. The applicability of behavioural anomalies will be described and evidenced. The paper presents the quintessence of a wider research project on this matter. The author considers his work to be the first on the problem of large portfolio transactions failing in the German market. Moreover, the further application of anomalies from Behavioral Decision Theory will advance studies in the field of Behavioural Real Estate. This area has mainly focused yet on property valuation, now research will be extended to Real Estate Corporate Finance transactions. Furthermore, certain anomalies like mental accounting and ambiguity aversion have not been used in Real Estate research. The research presented in the paper will offer an integrated model of the seller's decision situation during the transaction. The outcomes of the transactions will be modelled as two lotteries for the seller: Owner's perspective (Will the transaction bring the desired cash-in or not) and User's perspective (Will the sell-off of self used property limit the delimit the property's use). In a descriptive element, the application of key behavioural anomalies (anchoring and adjustment, mental accounting, sunk-cost effect, ambiguity aversion) will be demonstrated, extending behavioural research to large real estate transactions. Moreover, a logic for the anomalies' applicability will be developed as well as empirical evidence from experiments will be provided. The application of behavioural anomalies will help to explain sellers' behaviour, clearly irrational to buyers and other market participants and until now having been summarized as "unexplainable emotionality". Furthermore, insights form debiasing literature will even allow recommendations for avoiding further frictions in transactions. From a theoretical point of view, the contribution will lie in extending Behavioural Real Estate research to large transactions as well as the first-time application of specific anomalies in a real estate context.

Divesting Corporate Real Estate. How to Overcome User and Market Restrictions

Andreas Pfnuer, Technical University of Darmstadt and Stefan Armonat, Technical University of Darmstadt
Session A2

The ratio of freehold corporate property among German companies was on average at 70 % in the year 2000. This represents a level of ownership being more than twice as high as with their international competitors. Generally, not only German but all continental European companies exhibit a ratio of freehold property that exceeds international standards. In this environment, worthwhile disinvestments of corporate real estate become a driving force of companies' success. However, as long as the majority of corporate property is managed as a negligible resource within companies, assets are prone to underperform. Low yields and risks due to intransparency discourage potential capital investors from acquiring company assets. Consequently, properties linger with the companies, cause high costs, and lock in capital. At the same time, real estate investors continue searching desperately for profitable real estate investment opportunities. As an unfavourable result, capital demand for real estate does not meet supply; the ratio of freehold property remains high. The success of effective disinvestment strategies depends on how to crack this vicious circle. The first contribution of this article is to explain the discrepancies as an organizational phenomenon resulting in market inefficiencies. Secondly, it sheds light on an optimal strategy for structuring corporate real estate holdings in order to divest property portfolios efficiently. A late-breaking empirical study of the authors in cooperation with Colliers International and CoreNet Global Germany demonstrates the effects and shortfalls in the corporate environment. Companies have exerted themselves increasingly for divesting corporate real estate holdings over the recent years. Empirical results show that the efforts render less successful than expected. Retaining the necessary property rights of real estate and the lacking possibilities to place heterogeneous property assets in the market prove to be the main obstacles against effective disinvestments. Therefore, the authors develop an ideal type disinvestment process for corporate real estate. This, in effect, can create clear objectives and higher transparency of real estate portfolios to be divested. Then, innovative financial vehicles can be brought in for refinancing the property portfolios. Companies protect their necessary property rights. The assets, in turn, can be diversified and taken under the management of entities that manage real estate as their core business. Yields are smoothed, risk falls, and more capital becomes available for real estate corporate finance. Matching the empirical results with ideal type process will lead to the main contribution of this article: a gap analysis guiding the steps from today's processes to the optimal real estate disinvestment process for companies.

Free Money - The Effects of Irish Government Philanthropy on Real Estate
Gerard Phelan, Institute of Technology Tallaght, Dublin
Session A7

At the height of the "Celtic Tiger", the Irish Government introduced a number of measures designed to reduce inflation, (particularly increases in Real Estate prices) and dampen domestic expenditure. Amongst these measures, in a unique experiment, the Irish Government offered Irish residents an unbelievable offer, they paid you to save! By saving a monthly sum, (up to €254 per month), in a "Special Saving Investment Account", (SSIA) for five years, the government would give you an extra 25% of the total invested, on top of any interest or dividends obtained. As a result almost 1.2 million SSIA accounts were initiated by Irish residents. Current projections estimate that the final sum in SSIA's accounts will be over €15bn. From April 2006 the SSIA accounts will begin to mature. A "wall of money" is about to hit the Irish economy. While Ireland is too small to influence world prices or the Euro interest rate, this "wall of money" may have a dramatic effect on non traded (internationally) goods, of which real estate is a prime example. This paper explores both the effects of the SSIA's on the real estate market since its inception and its potential effects on its fruition using micro, macro and survey data.

Financing the Conservation of the Architectural Heritage in Western Europe and North America
Tracy Pickerill, Dublin Institute of Technology
Session I3

The ability of government to provide financial assistance for the repair and maintenance of the architectural heritage is limited due to the finite nature of resources. This paper provides a comparative investigation of architectural heritage regulatory and allied funding mechanisms in operation in a number of countries in Western Europe and North America to encourage the repair and maintenance of heritage assets. The financial burden of public and private stakeholders in the conservation process is considered to secure sustainable conservation practices and cultural identities. The new 'governance' approach to architectural heritage conservation is highlighted through a collaboration of public/private partnership arrangements involving heritage trusts, foundations, limited liability companies and local communities. The paper identifies two bodies of knowledge that are critical to the new 'governance' of financing the conservation of the architectural heritage:

i. Tool knowledge: the operating characteristics of the different tools used to finance the conservation of the architectural heritage; the stakeholders they engage; and how they influence conservation activity;
ii. Design knowledge: how to match tools to architectural heritage funding problems in light of conservation objectives and political traditions.

Finally, a conceptual area-based architectural heritage funding model is developed to inform the future evolution of heritage funding policies.

Clustering Methods for Italian Residential Real Estate Market

Raffaella Pinto, Scenari Immobiliari

Session C6

Until yet, few attention has been given to the description of the residential market and its relationship with other macroeconomic variables for Italian market. To go through this relation, we have collected a large number of demographic and economic data besides the residential one on the 8.101 Italian communes on a short period of time, 1999-2003. Then we have made some hypothesis on how these data influence the real estate market by building some indicators representing the demand and supply side of the residential market. On the first step we have applied a principal component analysis in order to show the significance of the correlation between some indicators and the real estate market and then we have applied a clustering algorithm to the first four principal components. The aim of the cluster is to identify homogeneous groups of Italian cities, where real estate market variables, from the demand and supply side, have performed in a similar way. The final result provides support to the empirical evidence that some communes are similar in their real estate behaviour for the period observed. While the analysis is limited to aggregate different variables in a static model with only descriptive purposes, the result provides a guideline for the further application of cluster analisys to other types of real estate and economic information.

UK Historic Environments, Disabled Access and Tourism

Frances Plimmer, College of Estate Management, Henry Russell, College of Estate Management, Gaye Pottinger, College of Estate Management, Brian Goodall, The University of Reading and Tim Dixon, College of Estate Management

Session A6

Heritage tourism in the UK depends upon a physical resource base of historic environments, primarily listed buildings, scheduled monuments, conservation areas and registered parks / gardens. Visiting heritage attractions is at the heart of the tourism experience and staying in historic buildings that are hotels, guesthouses and self-catering accommodation can also add to the visitor experience. In 2002, 63 million visits were made to UK historic attractions generating an estimated £320m in ticket sales. Keeping historic environments in economic use through tourism has become crucial to their conservation, but historic environments date from eras when access for disabled people was not a consideration. Government now promotes social inclusion via an array of equal opportunities and anti-discrimination policies aimed at widening participation. This implies access for all, including people with disabilities to historic environments, especially sites with a primary tourism function open to the general public. The 1995 Disability Discrimination Act changed the legal obligations of service providers, including owners/operators of historic environment tourist attractions and visitor accommodation. Historic environments enjoy considerable legislative protection from inappropriate change, but now need to balance conservation with public access, including for the disabled. While the DDA made it unlawful from 2 December 1996 to treat disabled people less favourably for reasons of their disability, the Act gives room for manoeuvre by requiring reasonable adjustments to either the way the service is provided (by 1 October 1999) and/or to the physical features of the property to overcome physical barriers to access (by 1 October 2004). The most recently introduced provisions concerning physical barriers envisage circumstances where building alterations to accommodate disabled visitors could be deemed unreasonable and therefore unnecessary. However, the concept of what is 'reasonable' in the context of historic environments is still unclear and will only be determined by consulting disabled people and ultimately by the courts in response to actions brought by disabled visitors claiming inadequate accessibility.

This paper reports the findings from research that scopes the current literature and establishes, from pilot fieldwork in southern England and London, access issues facing stakeholders in the heritage tourism sector, particularly visitor attractions, visitor accommodation, disabled visitors, tourism organisations and heritage conservation bodies. At the start of 2004 the availability of design guidance and advice targeted at the sector had certainly increased, but until this study there had been no systematic research to document progress in making UK historic environments accessible to disabled people. The paper shows that insufficient progress has been made and highlights differences between large and small businesses in terms of awareness of the DDA, implementing access improvements and attitudes to responding to the legislation. All businesses could do more through focusing on the visitor experience and investigating organisational and procedural changes that could enhance disabled access before contemplating potentially expensive alterations to historic environments. The research recommendations highlight the need for more and better-trained access advisers as well for improved guidance.

Strategic Environmental Assessment of the Docklands Master Plan
Terry Prendergast, Dublin Institute of Technology
Session A7

Directive 2001/42/EC of the European Parliament and Council on Strategic Environmental Assessment or SEA, which entered into force on 21 July 2001, requires Member States to assess the likely significant environmental effects of plans and programmes prior to their adoption, thus providing for the assessment of strategic environmental considerations at an early stage of the decision-making process. The Directive requires the carrying out of an environmental assessment of those plans and programmes which are likely to have significant environmental effects and which set the framework for future development consent of projects which are subject to EIA or where an assessment is necessary due to the likely effect on sites governed by the Habitats Directive (Directive 92/43/EEC). Each Member State had until July 2004 to transpose the Directive into national law. The Directive applies to certain plans/programmes whose preparation or review commences after 21 July 2004. The Department of the Environment, Heritage and Local Government approached the Dublin Docklands Development Authority in June 2002 as it considered the Docklands Area to be an appropriate area to pilot test SEA on a non-statutory basis in tandem with the review of the 1997 Dublin Docklands Area Master Plan. It was anticipated that the experience gained by the Dublin Docklands Development Authority in piloting SEA would provide an input to the proposed guidelines for planning authorities on SEA which the Department intended drawing up as part of the process of the general implementation of the Directive. The carrying out of the SEA proved to be an invaluable learning process for those involved and this paper seeks to share the lessons gained from the experience.

Correcting for Sample Selection Bias in UK House Price Indices
Gwilym Pryce, University of Glasgow
Session E1

This paper aims to develop a practical way of correcting for sample selection bias in UK regional house price indices. Such indices are invariably based on transactions data (such as Land Registry data on house sales). Unfortunately, properties that transact in any given period are unlikely to be a random sample of all properties, either in terms of location or type. Consequently, such indices may not give a reliable measure of the rate of increase in the value of the housing stock, a variable that is crucial to our understanding of wealth inequality and a range of housing policy decisions. While correction methods have been developed in the US, there is currently no UK equivalent, partly because valuation records are not kept on the whole stock. This project explores the possibility of developing a reliable correction procedure using data readily available in the UK.

Theory and Practice of Real Estate Cycle Analysis

Stephen A. Pyhrr, Kennedy Wilson, Inc and Waldo L. Born, Eastern Illinois University
Session B8

Rigorous analysis of cycles in the economy began with Wesley Michell's Business Cycles: The Problem and the Setting. Michell's work was a much broader examination then Irving Fisher's much earlier study, The Rate of Interest, that formalized the linkage between inflation and interest rates. The most recent macroeconomic cycles study in Fabozzi and Greefield's The Handbook of Economic and Financial Measures presents differential effects on several sectors including real estate. The formal structure for linking inflation cycles to prices and interest rates was developed by Van Horne in the 1974 edition of Financial Management and Policy and was formalized in Copeland and Weston's Financial Theory and Corporate Policy. Pyhrr's "Computer Simulation Model to Measure Risk in Real Estate Investments" investigated the linkages between exogenous economic forces and cash flow variables in a discounted cash flow model (a capital budgeting problem). Lusht's "Inflation and Real Estate Investment Value", AREUEA Journal 1978, formalized inflation's linkage to cash flows and the required rate of return in a DCF model. Born in A Framework and Model for the Analysis of Income Producing Real Estate Investments Under Cyclical Inflationary Conditions, developed the operational discounter cash flow analysis model integrating cycles linkages to interest rate and dollar denominated variables evaluating cyclical effects on value. Pyhrr and Born refined this structure in later articles notably in Pyhrr, Born, Robinson and Lucas, "Real Property Valuation in a Changing Economic and Market Cycle" (Appraisal Journal 1996).

Theory has been extended into practice in Mueller's "Understanding Real Estate's Physical and Financial Market Cycles" (Real estate Finance 1994) that has been applied to periodic analysis by Legg Mason in their periodical Real Estate Market Cycle Monitor. In a broader sense the Royal Institute of Chartered Surveyors (RICS) has sponsored extensive applied cycles research, and probably the most comprehensive effort was their Understanding Property Cycles, 1994; Main Report: Economic Cycles and Property Cycles. In addition industry applications have appeared in a number of studies, notably by Jones Lang LaSalle. This study will summarize development of the underlying real estate cycle theory, the progressive development of real estate cycle analytical frameworks, and extensions to professional practice. This study will also integrate an extensive biographical reference list of real estate cycle theory and practice literature into the summary.

A Study of the Socio-Economical Effects of a Complex Project of Real Estate Development: An Analysis Method.

Manuela Rainini, REAG SpA, and Elena Zanlorenzi, REAG SpA
Session G6

The paper intends to develop an analysis method, studied in order to individuate the qualitative and quantitative aspects deriving by the settlement on the territory of new development that establish relations with the pre-existing tissue and influence it, changing. The variation to the state of things is determined through the study of the financial and productive flows of exchange between the project and the territory. The starting point of this analysis is the accurate evaluation of the area characteristics, where the project will be developed, in terms of environmental, historical-artistic, cultural, productive, financial and informative resources, in order to outline the peculiarity of the structures of the labour market, of the economical and social context and the technological and infrastructural potential of the area. Each destination use considered in the project (lodging, commercial spaces, offices, hotels, facilities and equipments, museum and port) is analysed separately as a part of a closed economical system, that generates financial and/or productive flows in input and output. For each type we analysed:

- The area of attraction of the development;
- The state of things pertinent to the real estate;
- The concurrent enterprises in the area;

Valuation of the possible effects during the carrying out phase and the phase of operation and quantification of the pertinent induced activity. In the end, through the SWOT analysis, the opportunities and the threats are determined, that derives from the settlement of the project in the territory, putting in evidence the strengths and weak points that emerged from the plan to the territorial system, and also evaluating before the development targets that might be reached.

An Analysis of Changes in Real Estate Use of Upper Silesia's Post Industrial Land – Case Studies.

Tomasz Ramian, University of Economics in Katowice, Jan Konowalczuk, University of Economics in Katowice, Katarzyna Śmietana, University of Economics in Katowice and Elżbieta Zagórska, University of Economics in Katowice
Session F2

Upper Silesia belongs to one of the most industrialized regions in Poland. In the last decade the industry has undergone significant changes in terms of the ownership structure, the number of employed individuals, as well as production profiles. Consequently, liquidation and restructuring processes are being implemented. The mentioned changes, which are taking place on a large scale, have contributed to the degradation of the region. As a result, the following questions need to be addressed: altering real property use, redeveloping post industrial land, protecting and sustaining those areas and buildings, which may qualify as cultural heritage. This paper concerns restructurization, rehabilitation, revitalisation and recultivation of post industrial land (brownfield sites). The directions of changes in Upper Silesia's post industrial land have been examined in the context of the regions characteristics. The results of the conducted analyses indicate a shift from heavy industry use to retail, office, residential, trade-expo, tourist, recreation uses as well as modern industrial use. Based on the conducted case studies an attempt has been made to identify the influence the above mentioned changes have had on the local real estate markets.

Capitalisation of Property Tax: Some Empirical Evidence for Greater Mumbai

Anita Rath, Tata Institute of Social Sciences
Session C5

During the course of my earlier research on property tax in Greater Mumbai it has been explicit that builders and construction industry quite often lobby with the municipal authorities to reduce the property tax rates for their jurisdiction. It is an intriguing question as to how precisely are the market value of properties affected by the property tax incidence in a segmented property market with enduring presence of Rent Control provisions. A testable implication of the famous and widely quoted 'Tiebout Hypothesis' in urban political economy is the concept of

"capitalization", which traces a theoretical link between the market values of properties and property tax liabilities. A plethora of studies attempts its empirical verification subsequently for cities in developed world and finds significant but varying degree of such linkage. In case of developing countries, however, such explorations are nonexistent, perhaps, primarily due to the lack of reliable information at the disaggregated level of city governments. The complex realities of the property market and property tax institutions in these countries also do not render an easy examination of such relationship and necessitates a number of crude assumptions. I make an attempt in this paper to estimate the inter-jurisdictional capitalization rate for recent residential properties in Greater Mumbai taking into consideration the institutional and data constraints. The wide prevalence of Rent Control Act in the city has segmented the rental market and the choice of only recent residential properties, which are outside the purview of this regulation, has been to ward off the distortionary impact. The capitalization model includes all feasible variables that the empirical literature in the field suggests; however, data constraint to some extent restricted the choice. A few alternative models are estimated taking into cognizance the often-highlighted methodological intricacies. This procedure also helps in purging the relevant variables for final estimation. The results of all alternative estimated models clearly suggest substantial over-capitalisation. The paper traces plausible grounds for this phenomenon. The class of properties chosen for this analysis falls outside the purview of Rent Control Provision and shoulders a disproportionate excessive share of the tax liability. Thus, these properties are most sensitive to the changes in tax liability. In addition, the institutional aspects, substantial inequity in the property tax incidence and strong consciousness of city dwellers regarding the impossibility of any reform in the noticeable time horizon render a very high capitalization rate for this susceptible property class. The study findings clearly demonstrate the urgent requirement of a major property tax reform followed by regular periodic assessments.

Latest changes in Russian real estate law and its implications to European markets

Dieter W. Rebitzer, Nuertingen-Geislingen University and Klaus W. Slapnicar, Schmalkalden University

Session G7

Duma, the Russian parliament, achieved within three days (August 20th, December 29th and 30th 2005) with an enormous effort to constitute a modern real estate law for its country. The big number of 27 Acts represents a complete legislation, consisting matters of planning settlement and developing housing. The several Acts begin with a new Housing Code, coming in force January 1st 2005 for new contracts, while the laws of former housing legislation remains in force to July 1st 2007. Besides new regulations to legal affairs in the public sector of house-building the Housing Code includes a right of home ownership to an apartment, belonging to a legal community, sharing flat and running maintenance costs of housing. A second complete part is the new Town Planning Code. It deals with the development of territories, towns and housing areas under legal aspect of construction and use regulations. The Town Planning Code also includes competence of administrative agency which has to decide various plans, legal zonings and settlements. Another modification concerns the Civil Code of Russian Federation. This Act abolishes the necessity of documenting loan-contracts on behalf of real estates by mortgages. Furthermore parents are free to decide. Another general aim is, to reduce the costs of transaction and to simplify investments and acquisitions in housing market. Another target is the comprehensive protection of the right of ownership. To reduce risks and costs of transactions a new Act of Registration perfects the imperfect state system of documentation real properties, acquisition, purchase and other interests of land and mortgages by a register of title, an institution like the German Grundbuch (property/land register). The new rules allow also an acquisition of ownership in good faith. The former owner acquires a claim for compensation against the State, limited on 1 million Rubel. At the same time the Acts of mortgages are renewed. First target is to make emissions of loans and mortgages easier, second to simplify the conditions for mortgagor and mortgagee in getting securities on real property.

Another new Act concerns the foundation of asset houses, dealing with credits and information about debts und securities, especially in the area of data processing. Another Act changes the rights of mortgagees to realise their securities and fix the legal circumstances in case of insolvency. In the Russian Civil Code the confidentiality in banking and the management of information is consequently adapted according to the new regulations of mortgages and her practical arrangements. A very actual Act creates a new legal person: the cooperative which saves and invests in housing and real estates. The consequences of new regulation in civil and real estate law are accomplished in changing fundamentally tax law by eight Acts. The costs for insinuation a mortgage are fixed between 200 at least to 3.000 Rubel at highest. The contract for sale of land will be no longer submitted the sales tax. Sales Profits will be taxed within a period restraint to December 31st 2006 with 9 %, later augmented on 15 %, in contrast of up to now 24 %. Many new regulations concern the taxation of natural persons to encourage them to spend money in the housing market. So income taxes will be fixed on 13% on profit. Another Act on property tax regulates two different taxes. One tax concerns the time of construction, the other when the construction is completed. A first evaluation of new Russian legislation to housing market shows a big legal step to more transparency in this field. It is an estimated step towards a continental European legal system concerning real estate law. There are quite few similarities between the Russian and the German state law. But on the other side Russia goes its own way. It depends on the cabinet of advisors, which legal design will win after the realisation passed the stony way of big transformation in a changing market. The strongly regulated market of socialism changed quickly to an open and liberal housing market. Because the Russian State gave up totally his Ownership, the inhabitants, received the socialist tower blocks free of charge, but they were without skills of management. This is a big opportunity for know-how-transfer. With a detailed comparison between Russian and the European real estate law we have the possibility to offer advice in all fields of housing law, its business management and financing. The new Russian Codes of Housing, Town Planning and Cooperatives are a huge step forward, but a second one must follow. Our legal and economical experiences are ready to be used. If there is a need, we can bring in our competence of our specialised universities in both Business Law and Real Estate Economics.

Understanding Residential Housing Markets - Expanding the Contribution of Social Area Analysis

Richard Reed, University of Melbourne
Session F5

A complete understanding of residential housing markets, particularly in relation to variations in house prices both within and between suburbs, continues to present challenges to property researchers and forecasters. Factors affecting changes in housing demand are not yet completely understood, and accordingly market changes cannot always be confidently predicted. Most urban cities contain precincts that have high or low house values at the same time, regardless of characteristics such as distance to the city centre, location of transport or topography. Exactly why these variations in suburb values occur is often unclear, although local residents are able to easily identify differences between the status of each suburb, especially when one area is clearly perceived as superior to another. Consequently, houses in premium suburbs are sold for substantially more than houses in other areas, primarily due to this perceived higher demand. An understanding of reasons behind varying levels of buyer demand has always been difficult to fully encapsulate in housing studies, even though clear links have been observed between housing affordability and the type of inhabitant that would live in a particular area. This study confirms that traditional economic indicators can not always observe the degree of purchaser and vendor willingness in the residential property market, as per the International Valuation Standards Committee definition of market value, and substantial consideration must also be given to characteristics of individual buyers and sellers within the marketplace. No longer can the focus be narrowly focussed just on endogenous factors such as interest rates and inflation levels. Accordingly, this research draws the disciplines of demography and housing research closer together and looks to social indicators for an insight into the level of house prices. To establish this link, a two-stage process is adopted where social area analysis initially identifies the characteristics of suburbs within an urban area. This information is then used to examine variations in suburb values, resulting in a clearer understanding of the relationship between demographic variables and house prices. This research analysed changes in the value of established residential house prices in Melbourne, Australia as well as the relationship with social structure. The added dimension of time highlighted change, with data drawn from 1996 and 2001. The results confirmed the existence of strong linkages between social constructs and established house prices. Whilst acknowledging that the overall level of house values is influenced by external economic and political factors, differences between suburb values can be explained by demographic variables. The results confirm that increased emphasis must be placed upon demography when seeking to understand variations in residential property values between urban areas.

Windfarms, Powerlines and Phone Towers: The Changing Face of Stigma
Richard Reed, University of Melbourne and Sally Sims, Oxford Brookes University
Session D7

Previous research has identified varying degrees of stigma attached to high voltage overhead transmission lines (HVOTLs) depending upon characteristics such as visibility, size, location and the potential impact on house value. In addition to HVOTLs there are other common types of infrastructure, namely mobile phone towers and windfarms, that are also large highly visible structures and can exhibit similar characteristics. These similarities include varying levels of visibility from properties in the immediate vicinity, a high general profile in society and varying perceptions from surrounding residents about possible side effects. This research broadens the framework originally developed to study HVOTLs to encompass mobile phone towers and windfarms. It undertakes a literature review of research in this area and proposes a research methodology for identifying and quantifying the varying levels of stigma attached to these three forms of infrastructure. The final results will enable the resulting effect on property values to be better understood, and assist developers to fully understand their effect on devaluing land prices.

Exploring Office Investment Decision-Making in France, Germany and the UK
Claire Roberts, University of Sheffield and John Henneberry, University of Sheffield
Session D6

Studies on UK and US property investment markets have historically been portrayed the decision-making process as an exercise in rational analysis. This notion is fundamentally flawed because the concepts of a perfect market and of perfect information used in modelling decision making in the rational literature are theoretical and are not applicable to a real world context. The process of investment decision-making is not a clinical, methodical exercise but a process undertaken by imperfect players in imperfect markets, using imperfect information. This paper explores the decision making processes of investors working in different contexts and the heuristics that they adopt to deal with their complex operational environments. Heuristics are used by many different actors to help them make a wide range of decisions (Eiser and White, 2004). In property, research on heuristics has previously been limited to the field of valuation (Diaz, 1990; Diaz, 2002, Gallimore *et al.,* 2000; Diaz *et al,* 2004,). The paper extends this work into the investment sector. The findings of in-depth case studies of investment decision-making relating to office property across three European countries, France, Germany and the UK, are presented. They indicate that the decision-making processes of institutional investors deviate significantly from the normative models suggested in the literature (Eilon, 1969; Tyebjee and

Bruno, 1984; Pyhrr *et al.,* 1989; Hargitay and Yu, 1993). Although the specifics of these decision-making processes were found to vary with national setting, the outcome and the resulting influence do not. Investors were found routinely to make use of market sentiment (subjective and social factors) to aid their decision-making in the light of imperfect information in the market. The potential implications of these findings are wide-ranging. Investors and the context in which they are working are subject to a two way feedback process. Markets influence the actions of the actors who operate within them but also, in turn, reflect the behaviour of those actors in subsequent patterns of investment. Investors in each national context reveal a distinct preference for office property in core markets. Consequently, institutions may have had a distorting effect on the property markets in which they are operating; inhibiting the growth of weaker property markets and marginalising peripheral regions. Such markets are largely ignored in geographical diversification decisions and, potentially, this may have inhibited their economic growth, physical development and subsequent ability to compete with other, more favoured markets. Increased understanding of investors' decision-making processes and the influences upon them leads to a better appreciation of the issues faced by peripheral markets.

The Melbourne Office Property Cycle 1970-2005
Jon Robinson, University of Melbourne
Session J5

The office property cycles in Melbourne are identified and associated with the fundamentals of office supply and demand. Despite encouraging signs in the early and mid-1980s (low vacancies and rapid rental growth), there were significant warnings prior to the major 1980s/90s property cycle (absence of demand, low effective rental values). The result has been a substantial oversupply of office space and a catastrophic fall in rental values. Encouraging signs of recovery in the mid- to late-1990s led to another expansionary cycle the effects of which (vacancies and falling rental values) are only just becoming obvious. The rental values required for financial viability are compared with effective market rental values to illustrate the shape of the cycles. It is demonstrated that short periods of viability lead to unsustainable expansions in the market that in turn lead to long periods of contraction and recession.

Non Performing Loans in Germany – A Transaction Cost Based Analysis
Nico B. Rottke, European Business School and Julia Gentgen, European Business School
Session A8

This paper will provide economic and structural reasons for the upcoming of non and sub performing real estate loans in Germany and will compare the German market to the U.S.- and other relevant NPL-markets. As German banks are currently facing the new regulations of Basel II as well as strong global competition, non and sub performing loans have risen to a subject of high interest. Therefore, this paper asks the question of the optimal management of distressed loans and reformulates it into the problem of the vertical boundaries of companies. Transaction cost economics are used in order to analyse under which circumstances

- "make" (own work out department of a bank)
- "buy" (external servicer) or
- "sell" (e.g. opportunity funds)

options are dominant strategies for German banks in order to solve the NPL-problem.

A Transaction-based Hotel Property Price Index for the UK
Sherif Roubi, Glasgow Caledonian University and Stephen Brown, RICS
Session E6

The purpose of this paper is to develop a transaction-based hotel property (real estate) price index for the UK (HPPI). Transaction-based indices overcome reliability problems of appraisal-based indices because actual transaction values are used as opposed to subjective appraised values. Additionally, unlike appraisal-based methods, this indexing method accounts for the heterogeneity of hotel properties thus allowing "like-with-like" comparisons (i.e. they are constant quality indices). Information on 500 hotel transactions in the UK that took place in the period between 1996 and 2004 is obtained from the UK Hotel Property Transactions Database (HPTD). The database is developed and maintained at the Caledonian Business School. HPTD data were collected from multiple sources, including public sources, and interviews with different consultancies, valuation and brokerage firms. This initial data has been augmented with data mining of other databases (e.g. tourist boards, individual property and hotel association registers and websites, specialised hotel databases, and governmental sources), content analysis of different sources and surveys with property owners. Property data include information about property names, sale prices, time of sale, location, buyers and sellers and their agents, and physical characteristics of the property. The data will permit a hedonic regression analysis to produce an overall value index for the UK. Analysis will be pool-based, only one multiple regression is estimated for the entire properties, and year dummies will be introduced in the model which will be utilised to develop the index. Explanatory variables used in the regression will include number of rooms at time of sale, property age in years, meeting and banquet facilities, ownership form of sellers, affiliation with major lodging chain, market-segment, regional dummies, golf, tennis, number of pools, food & beverage outlets, location, economic data, time of sale, etc. Results are interpreted and cross-validated using evidence and different views from the literature. Potential of HPPI in enhancing investment decision is discussed. Finally, a future research agenda is proposed.

Real Estate Value: Creation and Destruction?

Stephen Roulac, Roulac Group, Alastair Adair, University of Ulster, Suzanne Allen, University of Ulster, Jim Berry, University of Ulster and Stanley McGreal, University of Ulster
Session C4

This paper presents the initial results of a major research project concerning real estate value. A central consideration is the analysis of those factors that impact upon value, in particular how value is created in real estate development ventures and investment deals. The converse of how real estate value may be destroyed forms a key component of the analysis. It is argued that a better understanding of these processes would allow more informed and successful decisions to be made in structuring investments and evaluating performance. The information underpinning this study is based on a survey of real estate professionals aimed at increasing knowledge on how value is created and destroyed. The study, which is being conducted at a global level, initially compares findings and perceptions from the UK market with those for the US using a common survey tool. Conclusions focus upon factors influencing real estate value, consequences arising from changes in value and implications for policy mechanisms notably in an urban regeneration context.

An Investigation into the Valuation of Domestic Property in Close Proximity to Former Mine Workings

Amritpal Sagoo, University of Central England and Martin Livette, University of Central England
Session C6

The valuation of property in close proximity to mine shafts has become increasingly difficult with the introduction of the 20 metre rule by the Law Society in 1991 and with mortgage lenders being more aware of the risks involved in property lending. Chartered surveyors use the Red

Book as a basis for valuation, but this provides guidance on procedural matters rather than firm guidance on valuing properties, including those affected by mine shafts. Mortgage lenders and insurance providers have developed a framework for dealing with such property. Nonetheless, recent adverse publicity in the media has led to a reduction in the demand for affected dwellings. This paper, therefore, comments on current methods used to value domestic property close to former mine workings. Data were collected by postal questionnaire from a random sample of surveyors in the Black Country area of the West Midlands region of the UK. The research explores interpretation of existing guidelines and compares and contrasts the methods of valuation used. The findings demonstrate a correlation between between the value of a property and distance from a mineshaft, and that a better framework of guidance can be identified. The paper makes particular recommendations for further study of the valuation problems caused by mining activity.

The Value of Historical Properties – Can the Semiotic Signs Load the Sustainability?
Kaarel Sahk, Estonian Agricultural University and Peeter Torop, Tartu University
Session E7

During the ownership reforms in Estonia as in all the Baltic States a lot of historical properties as the basic objects of restitution were returned to the former owners. The appraisal of the value of historical properties is very important in the context of the clarification of their value for owners and for the all society as well. In addition to globalization and the started integration with EU, the understanding of the values of the historical properties should be harmonized with their common understanding in Europe. (Basically on the level of standards, Euro codes, etc.) Estonia as the other transitional countries is facing the similar problems like: i) the legal environment changes, ii) the ownership reforms are not jet finished, iii) the absence of enough experience on the field of appraisal of historical properties iv) the different views in common understanding to the value of property and their sustainability and iv) the lack of the high credit professionals who are well educated in the both considered areas: in the buildings heritage questions and in the real estate appraisal as well - the sustainable approach. This all pick up point of the paradigm that includes the research of the market accept of the expenses that were done for heritage and renovation works of the properties and an answer to the question: Should they as a different semiotic signs and marks load the aspect of the sustainability and if they should, how the society is understanding and valuing these approach.

Natural Vacancy Rates in Global Office Markets
Ben Sanderson, Prudential Property Investment Managers, Kieran Farrelly, Prudential Property Investment Managers and Corin Thoday, Jones Lang LaSalle
Session D3

The perspective of property investors and advisors is increasingly global and the importance of accurate forecasts in assisting in decision making is well known. . This is especially the case in office markets which are arguably the most developed sector for global investors. This paper seeks to contribute to knowledge of the dynamics of global office markets with an assessment of the interaction of rental growth and vacancy rates across a sample of the worlds leading office markets. Estimates are made of the natural or non accelerating rental growth vacancy rate level at an individual city level and collectively for the three regions assessed (Europe, Asia Pacific and North America). An estimate is also made of the global natural vacancy rate. The results suggest that estimates of natural vacancy rates vary significantly across the world but these estimates can be helpful to those seeking to understand the dynamics of global office markets. The paper concludes by testing possible explanations for these differences in natural vacancy rates around the world such as lease lengths, market transparency and data measurement issues.

Is 'Fair Value' Fair To All?

Sarah Sayce, Kingston University and Owen Connellan, Kingston University
Session A6

From 2005, publicly traded companies, established in the EU and EEA Member States, must publish consolidated financial statements in conformity with International Financial Reporting Standards (IFRS) as adopted by the European Commission. These new accounting requirements impose significant changes in the valuation reporting of investment and owner-occupied properties as identified in IAS16, IAS17 and IAS40. However particular contentious issues still remain in the interpretation of the valuation standards as now operative within the concepts of Fair Value (FV), Market Value (MV), Existing Use Value (EUV), and Depreciated Replacement (DRC). This paper will analyse current valuation advice emanating from the IVSC and RICS on these issues, dealing with both investment and owner-occupied properties, and identify any uncertainties that may remain to be resolved, particularly as to the possible reflection of existing use in the latter properties. In the case of specialised and other no-market properties, this examination will also take in the implications of the latest advice and research on the application of the DRC method. The authors of this paper have written extensively on the problems of valuing owner occupied properties for financial statements and the proposed convergence of international accounting and valuation standards (1997a, 1997b, 1998a, 1998b, 2000a, 2000b, 2001a, 2001b, 2002a, 2002b, 2003). Accordingly this paper will proceed from its latest analysis of extant comment and guidance from the professional institutions and, drawing on further consultation with advising valuers and property owners including work that they are currently carrying out on behalf of an RICS Working Group, the authors will derive conclusions as to the practicality and usefulness of the IFRS valuation requirements particularly within the context of owner-occupied properties in the UK.

C-SCAIPE: Developing Real Estate Education to Deal with 21st Century Challenges

Sarah Sayce, Kingston University, Louise Ellison, Kingston University and Amanda Lewis, Kingston University
Session F7

Achieving sustainable economic development is critical to the future of society and this has recently been recognised by the UN who has announced their Decade of Education for Sustainable Development. The need for Universities to address the issue has been pointed out firmly by the Sustainable Development Commission who recommend that sustainability be "embedded in higher and further education, and appropriate interdisciplinary studies and research are promoted" (SDC,2004). However, within the UK, Universities in particular have been slow to take up the challenge of producing graduates capable of meeting the needs of a sustainable society (Martin and Jucker, 2004). This is also recognised by the funding body, HEFCE who in response have made the embedding of sustainability within educational practice their Objective 1 (HEFCE, 2002). The need to rise to this new agenda and provide professional advisors who are both engaged and knowledgeable is nowhere more evident than in the built environment community. In particular, real estate professionals have a key role as their advice affects the stakeholders of all our commercial and residential building stock; if they are not well informed then a conflict between the needs for economic sustainability and social and environmental well-being will continue. Whilst the sustainability agenda has to date focused on the construction (i.e supply) side of the industry respond (Sustainable Construction Task Force, 2000)., we have recognised the need to integrate this with the emergent demand side drivers. In recognition of this holistic approach Kingston University's School of Surveying has been awarded HEFCE funding to set up a Centre for Sustainable Communities Achieved through Integrated Professional Education (C-SACIPE). This paper will report on the ways in which C-SCAIPE is being developed specifically to address this challenge across the University and in relation to professional practice. In particular this will focus on the effectiveness of building on and rewarding the strong professional education and sustainability research background of the faculty by enabling them to develop project based learning directly with industry partners and by generating an inclusive approach to learning that fosters an understanding of the role of other professions both within and beyond the built environment field.

Financial Incentives for Sustainable Property – A 10 Year Perspective

Sarah Sayce, Kingston University, Louise Ellison, Kingston University and Philip Parnell, Drivers Jonas Chartered Surveyors
Session I3

The last decade has seen a substantial shift in attitudes to sustainability across the economy as a whole. Sustainability has risen rapidly up the corporate agenda and emerged as an issue the property industry is being encouraged to address through an increasingly complex range of financial incentives and penalties. This paper examines the property markets changing response to the issue of sustainability over this important period. Changes in the way the property industry has perceived sustainability as an issue and the incentives set before it to encourage greater sustainability are explored. The paper is based on a series of three studies carried out in 1995, 2000 and 2005 that investigated both the extent to which sustainability was expected to impact on commercial property rental and capital values and the financial incentives industry operators considered to be the most effective. Conclusions are drawn which relate to the longitudinal change in the industry's understanding and perceptions of sustainability as an issue. Recommendations are made for effective policy development and industry response.

Valuation of Real Estate Companies: A Critical Assessment of Different Corporate Valuation Methods

Wolfgang Schaefers, University of Regensburg
Session F4

Research on real estate asset valuation is largely reflected in the literature, whereas valuation of real estate companies is widely ignored. Taking into account the actual amount of investments of opportunity funds in European real estate portfolios and companies and the wide discussions on real estate investment trusts (REITs), the determination of the "fair and true value" is of upmost importance for all – listed and non-listed – real estate companies. In this respect the valuation of real estate companies reflects the integration of real estate and capital markets. The paper analyses in detail the most important methods to evaluate real estate companies: the multiple-method, the net asset value approach (NAV) and the discounted cash-flow-method (DCF), where all the methods are explained theoretically and discussed critically. In the first part of the paper, the different possibilities in evaluating real estate companies with the multiple method will be set out, focussing in detail on the recommendations and approaches of the DVFA/SG (the leading German association of financial analysts) and the NAREIT (the leading US-association on REITs). Evaluating real estate companies with the NAV-method implies a separate appraisal of the different assets and liabilities of the real estate company, where the precise value strongly depends on the information published or possible different value concepts. Finally the DCF-approach will be presented in detail, focussing on the strengths and weaknesses of different DCF-methods with respect to the real estate sector. Especially the weighted average cost of capital-concept (WACC) will be discussed. A detailed focus lays in the critical assumptions of the Discounted Cash Flow Method, especially on the detailed information needed, the required discounting rates and the possible value of hidden assets.

Internalisation of Real Estate Education

Karl-Werner Schulte, European Business School, Gisela Schulte-Daxbok, European Business School and Christoph Holzmann, European Business School
Session J6

Internalisation is gaining importance in the real estate sector. Real estate education therefore needs to convey the knowledge required for property investments in a global context. This can be achieved through the internalisation of the real estate curriculum and through co-operations in the field of real estate education between universities of different countries. This paper is an attempt to describe the reasons for an internalisation of real estate education and tries to uncover the status quo and the latest developments in the internalisation of real estate education. Based on literature reviews, the scanning of websites and an empirical survey, the motives, goals, concepts and structures of international curricula, educational approaches and study programmes are examined. Furthermore, by showing various options to enhance the internalisation of real estate education the paper aims to make a meaningful contribution to the field.

Monetization of Corporate Real Estate

Karl-Werner Schulte, European Business School and Sonja Gier, European Business School
Session A2

The monetization of corporate real estate is gaining importance. This applies to both owner-occupied real estate and surplus assets, as real estate frequently diminishes rather than adds to the shareholder value of non-property companies. However, despite the numerous announcements of large portfolio transactions only few large scale transactions have been closed in the last few years. The lack of successful monetization transactions can be attributed to two basic reasons., One is the lack of a strategic approach to the disposal of corporate real estate. The other is the structure of corporate real estate assets, of which many are not suitable for investment purposes without prior enhancement. In this paper, the authors try to examine the current potential for the monetization of corporate real estate of major German listed companies. For this purpose we conducted a survey of the 100 most relevant German listed non-property companies to identify the ratio between assets, that are suitable for investment by third parties and those that are too specialized. On this basis we analysed the balance sheets of the respective companies to assess the total amount of investible corporate real estate. The results are presented in the paper, also taking into account that book values might not reflect current market values.

Opportunistic Investment in Germany – An Agency Theory Based Analysis

Karl-Werner Schulte, European Business School and Nico B. Rottke, European Business School
Session D1

The role of opportunity funds in the German real estate investment market has increased considerably in recent years. To keep abreast of this development, the following paper proposes an investment model for opportunity funds. The model analyses opportunity funds as intermediaries between capital that is looking for investment and the investment possibility itself. The model should create incentive compatibility beneath original investors (insurance companies, pension funds etc), opportunity funds and possible operating partners who are specialists of local markets by integration of agency theoretical aspects. A double delegation relationship can be observed: First, the opportunity fund acts as agent in relation to the original investor or principal. Second, the opportunity fund as investor is the principal and the operating partner is the agent who has a distinct advantage of information. The different types of asymmetric information which come into play in these relationships are depicted afterwards. It is described how they affect the relation of the transaction partners, and consequently which threats result from an investment with real estate private equity in Germany. These threats are then countered with

solution approaches which are incorporated as management and financial elements into an investment model, in order to maintain incentive compatibility beneath the transaction partners.

The Use of CFD Models Integrated in Environment Systems. An Application to Real Estate Developments.

Alfredo Serret, Eurovaloraciones and Jesús Trello, Universidad Autónoma de Madrid
Session A6

This paper is about the necessity to use Cash Flow Discounting (CFD) models integrated in Environment Systems for the appraisal of property over a specific period of time. The first part of the study develops, in a short, but rigorous manner, the concepts which recommend dropping the restrictions of estaticity of the dynamic variables which affect the future income flow of the assets to be valued, the quantification of errors which result, and the new methodology on which the new focus on CFD integrated in Environment Systems (ES) is based. The last part of the paper looks at a practical application using the CFD+ES model, developed by EUROVAL®, to calculated the value and return adjusted for risk of housing developments that are for sale.

Financial Models and Real Estate

Arnaud Simon, Universite Paris IX Dauphine
Session H1

For some years, real estate and finance have become more and more interlinked. The application of the powerful tools developed in finance for this field of knowledge seems promising; mortgage valuation method developed by Kau, Keenan, Muller, Epperson (1992) being a major example of this. This article has applied arbitrage theory with two state variables (a rate and a house process) for pricing a mortgage considered as a contingent claim made of a loan, a prepayment option and a default option. Some well-known arguments lead to a valuation's PDE (partial differential equation) solved numerically. The concepts used in finance are built on market reality and assumptions made in stochastic calculus relying on the possibility of actual operations; for example the hedging or the concrete exploitations of arbitrage opportunities when they appear. These hypotheses are not purely formal or only useful for solving a mathematical problem; they are leaning on the distinctive characteristics of the studied object. The purpose of this article is to re-examine the use of financial models in the light of specific features of real estate in order to see if the requirements of theory are entirely satisfied with this particular asset. This paper is organized as follows. After a literature review of the optional models for mortgages, the demonstration leading to the fundamental valuation's PDE is recalled, trying to be as explicit as possible whenever a market assumption is necessary. Then the theoretic requirements are discussed, confronting them to the actual situation of the real estates. Does the riskless portfolio exist when dealing with buildings? Does arbitrage activity exist and which assets could be chosen for realising an arbitrage portfolio? Numerous difficulties appear making a blind application of this PDE model rather doubtful. In order to better understand the size of a potential mispricing, one of the difficulties relating to the valuation of contingent claims depending on a real estate is studied. To this end a simplified reverse mortgage is presented and the impact of the appraisal accuracy (concerning the house associated to this contract) is studied for the put option embedded in the mortgage. Usually, estimation can be considered correct if it stays within -10% and 10% of the real price. This accuracy is very reasonable when valuing such a complicated asset as a house; but unfortunately this good appraisal quality is going to produce a bad financial quality for the put's pricing. Results show that errors can be very important, up to 100 %; the leverage effect of an option acting as a noise amplifier.

The Relationship between National Economy and Real Estate: Cases of Transition and Market Economy Countries

Nikolai Siniak, Belarusian State Technological University and Sergio Copiello, University of Padova
Session J4

The orientation to market economy in Belarus and other countries of transition economy more than ten years ago influenced also the developments in the field of real estate. Since real estate is an important industry in national economy countries of transition and market economy, there exists close relationship between them. Real estate influences the national economy continued and national economy influences real estate in many sides, such as development level, speed, scale and cycle fluctuation, amplitude, frequency etc. This paper makes quantitative and qualitative analysis about the relationship between development national economy and real estate in Belarus, Italy, Russia and Ukraine on example mostly on housing markets. The concrete step is as the follows. 1. The development of real estate and national economy shows cyclical fluctuation. 2. Analysis about basic factors developing their cyclical fluctuation. 3. Analysis about tendencies and particularities of developing real estate markets of transition and market economies. 4. Regression analysis about real estate and GDP and total Regional product growth, a regression analysis is made between their relationship, and a linear regression equation of one unknown for reference is calculated.

Mass Valuation in Transition and Market Economy Countries

Nikolai Siniak, Belarusian State Technological University, Sergey Shavrov, National Cadastral Agency, Olga Berezovskaya, National Cadastral Agency, Rusijanov Leonid, Institute of Real Estate and Valuation, Maurizio d'Amato, The University Polytechnic of Bari and Sergio Copiello, University of Padova
Session I5

The real estate market is rather new sphere of activity in Belarus. In spite of that there is interesting experience in urban land mass valuation field in Belarus. A comparison have been developed among different mass appraisal methodologies in an undeveloped property market. Recentely, a cadastral register was created in Belarus in 2004. This office should value land and buildings located in more than 208 cities and 24000 rural towns. It was also done mass appraisal of housing market of Minsk. In order to carry on this was used database included thousands objects and different methods and techniques (multiple regression analysis, rough set theory, neural network methods). The final results show how the choice of a mass appraisal methodology may be influenced by the "efficiency" of a property market (d'Amato,2005).

The Future of Real Estate in Ireland

Lorcan Sirr, Dublin Institute of Technology
Session H5

Despite the signs that the world around it is changing rapidly, real estate in Ireland has evolved little: the practices used, and property developed and traded, have ebbed and flowed, but essentially remained the same for many years. But as events and practices further afield have an increasing capacity to influence activities in Irish real estate, it becomes more important that those involved in real estate both understand and prepare for these imminent changes. The future will not simply be an extrapolation of the past. Change in the world in consistent, but the speed of change is not, and the key to survival is preparation for new challenges, markets and practices. This paper looks at the future of real estate in Ireland grouped, for convenience, under the headings of: governance; environment; society; demography; economics; and technology. It

will describe forthcoming changes in real estate practice, markets and people, and comment on the need to understand and prepare for these new challenges.

The Dutch Office Sector: Office Market Recovery from Point of View of a Changing Long Run Perspective

J.P. Soeter, Delft University of Technology
Session C3

The Dutch office suppliers suffer from falling prices, lower market absorption, growing competitive supply and high vacancy of first and second hand office buildings. In the late nineties new office construction was booming. This was favoured by economic growth, employment growth, low capital costs, sellers market conditions and speculative development. Since 2000 the huge supply lost its rational economic base and this was strengthened by 9-11-2001. In the mean time there were a lot of projects in the pipeline. These were not stopped as long as investors expected that yields would not rise, rents would not fall and vacancy would not rise. Since 2001 we observe lower market absorption, growing supply and more vacancy. Nowadays we are still waiting for a substantial market recovery. Dominant aspects in the short run are; slow recovery of economic growth after an economic shrinkage in 2003, absence of growth of office employment in combination with jobless growth, oversupply in former years, cost reduction and more employees on the same square meters. In the long run we have to analyse for changes in the number, age and skills of office workers in combination with demographic, technological and economical changes of office work, office organisation and global distribution of knowledge, production and employment. In this research the office market analysis and its forecasting is based on the long term trend in the Dutch stock of offices and the yearly investments.

Real Estate Investment, From Statistics to Forecasting

J.P. Soeter, Delft University of Technology
Session E8

Forecasting of real estate development is difficult because there is, amongst others, a lack of information about the existing and future stock. This is in particular the case with the non-residential stock of buildings. For The Netherlands less or more complete economic statistics like the National Accounts and construction statistics are dating back to the fifties. On the other hand most transaction linked statistics of real estate agencies and the registration and analysis of these statistics in publications like, in the Netherlands, VastGoedMarkt and PropertyNL are available. Information about the physical, functional and economic aspects of the total stock of non-residential buildings and the expansion, renewal and withdrawal of it is nevertheless poor and incomplete. In this paper we combine within a macro-economic framework investment, construction and transaction statistics with the National Accounts and other statistics. By analysing capital formation from yearly investment to total stock we achieve better insight in the expansion and renewal of the stock of buildings and a starting position for better forecasting. For a better understanding of the need for modernisation and relocation of the stock of buildings we have to analyse the current stock and its capability for adapting to changing functions. Future real estate investment heavily depends on replacement and further investment for renewal, while investment for expansion of the stock is stabilising on a lower level than we know from the late nineties.

The Introduction of REITs – What Happened in Germany

Ramon Sotelo, Bauhaus-Universität Weimar, Stephan Bone-Winkel, European Business School and Martin Becker, European Business School
Session A1

After the introduction of REITs in France and together with the beginning of the discussion in the U.K. on the topic, the German Ministry of Finance asked in May 2004 the Centre for European Economic Research (ZEW) together with the **ebs** Real Estate Centre of the European Business School to elaborate a report on the need and the possible regulatory framework of a German REIT. All three authors of this paper formed part of the task force which has been consulted. This paper concentrates on the analysis of the role a German REIT could play within the German property investment vehicles market, elaborates the possible market potential, formulates the necessary needs for a German REIT concerning corporate governance and tax-structure, discusses the problems of tax transparency within the tax-regime of the European Union, and gives an overview on the evolution of the introduction of REITs in Germany.

Public Private Partnerships in Germany
Tobias Streckel, Nuertingen University and Sebastian Merkle, Nuertingen University
Session C7

Public-Private Partnerships can be categorized based on the extent of public and private sector involvement and the degree of risk allocation between the two. All partnerships have a unique risk/reward allocation. Efficient urban development systems are based on intensive cooperation between the public and private sector. One important condition of partnership is the highly developed real estate market. So it is an important topic for the future research and development project to investigate who are the present actors in real estate business, what are their motivations and practices. The major focus of our presentation will be on:
· Property and real estate management legislation and practices
· Urban planning and administrative capacity
· Public and private sectors' financing mechanisms

Modelling Housing Market Fundamentals: Empirical Evidence of Extreme Market Conditions
Simon Stevenson, Cass Business School, City University & University College Dublin
Session H5

This paper re-examines the price behaviour of the residential property market in Ireland and specifically assess the extent to which a speculative bubble developed during the boom in the market since the mid-nineties. The paper uses a number of alternative methodological approaches in the estimation of fundamental value in the market. The majority of the approaches illustrate that a substantial premium developed during the late nineties, reaching a peak in 1999 and 2000. While this speculative premium did decrease in 2001, the majority of the models used signify that a substantial premium over fundamental values is still present in the market. The paper also highlights modelling concerns in some of the methodological approaches that have been commonly applied to the Irish market.

Assessing the Time-Varying Interest Rate Sensitivity of Real Estate Securities
Simon Stevenson, Cass Business School, City University & University College Dublin, Pat Wilson, University of Technology, Sydney and Ralf Zurbruegg, University of Adelaide
Session J1

This study aims to examine the relationship between interest rate movements and the price reaction of UK property stocks. While previous exists concerning the sensitivity of indirect real estate vehicles to interest rates, this study extends this literature by examining the time-varying sensitivity of property companies. Unlike REITs, which are limited in the level of leverage they can utilize, property companies are generally highly geared stocks, making the impact of interest rates highly important to the firms. Not only should interest rate movements have an impact due to their impact on the real economy and the direct real estate markets, but there will also be a direct impact upon the stocks due to their highly geared nature. A large number of studies have examined interest rate sensitivity in a real estate context, with a large number having examined REITs (e.g. Chen et al., 1997, Chen & Tzang, 1988, Liang & Webb, 1995, Ling & Naranjo, 1997, McCue & Kling, 1994, Mueller & Pauley, 1995, Swanson et al, 2002). This study extends this literature and particularly those recent studies to have examined time-varying aspects of real estate securities (Devaney, 2001). The paper also utilizes the broader literature that has analyzed the interest rate sensitivity of stocks generally. In particular, there is a large collection of papers to have examined the issue in specific relation to bank stocks (Choi et al, 1992, Elyasiani & Mansur, 1998 and Flannery et al., 1997). The data used in this study comprises of data over the period 1993 through 2003. The FTSE Property sector index is used to represent UK property stocks. The overnight Sterling LIBOR is used as a proxy for market rates. The paper examines the time-varying sensitivity of property stocks using a GARCH based framework. For comparative purposes, and in particular to allow comparisons with the studies of bank stock reaction, we also examine the reaction of property company stock prices to discount rate announcements. Bank of England base rate changes are used in this context to examine the immediate reaction to central bank rates.

An Analysis of Residential Auction Sale Prices and Quoted Guide Prices

Simon Stevenson, Cass Business School, City University & University College Dublin and James Young, Property Research International

Session H5

This paper examines price behaviour at residential auctions. Using a dataset for Greater Dublin we analyse the price movement and the accuracy of quoted guide prices. A comparison is also made with private treaty sales, developing the analysis contained in Stevenson & Young (2004). The results indicate that a substantial premium over guide prices is evident in auction sales. This is marked contrast to the findings reported with respect to private treaty sales.

Outsourcing in Public and Corporate Real Estate Management in Switzerland

Christian Stoy, ETH Swiss Federal Institute of Technology and Hans-Rudolf Schalcher, ETH Swiss Federal Institute of Technology

Session A2

This paper addresses the question as to what extent the outsourcing degrees of property management influence the operating costs of owner-operated real estate. For this purpose, the outsourcing degrees of technical, infrastructural and commercial property management of over 100 Swiss office buildings were reviewed. In terms of costs, the administrative costs as well as the costs of utilities, waste disposal, cleaning, upkeep and maintenance were included. As the analysis of the data revealed, commercial property management primarily impacts on the administrative costs. The office buildings of the four project partners that were examined incurred higher costs when commercial property management was outsourced. Similarly, the costs of utilities and waste disposal are higher for real estate with outsourced infrastructural property management. An inverse relationship was identified in respect of the cleaning costs, where the costs are lower when outsourcing infrastructural property management. The impact of technical property management becomes apparent with regard to the maintenance costs, which are lower for real estate with outsourced technical property management. On balance, the situation appears to be rather heterogeneous, as outsourcing results in higher costs for some cost groups and in lower costs for others. The reasons offered for these differences go far beyond the actual functions being outsourced. For instance, the project partners involved believe that it is, in particular, low

service levels and reduced maintenance strategies that go hand in hand with high degrees of outsourcing. Therefore, the interviews with real estate owners, and also the data collected, give rise to the assumption that outsourcing is a measure for the implementation of cost reduction strategies. However, this assumption requires verification by way of further exploration.

Indirect Investment in Real Estate: Funds, Listed Companies and REITs

Jose Luis Suarez, IESE Business School
Session A1

Nowadays in Europe, two different indirect instruments exist in order to invest in real estate; on one hand real estate investment funds and in the other listed real estate companies. With these instruments the investor not only takes position in the real estate market but also obtain different risk/return structures which may vary depending upon the instrument you use. Recently, in some European countries, real estate companies have modified their financial structure and tax position adopting the legal form of REIT (Real Estate Investment Trust) originated in USA, which change their relative position to real estate funds. In this document we will make a comparison between real estate funds and quoted real estate companies, as well as an analysis of the appearance of the REITS in Europe and its impact in the real estate industry.

Modes of Housing Provision in Malaysia

Noralfishah Sulaiman, University of Salford and David Baldry, University of Salford
Session E5

Housing provision involves a physical process of creating and transferring a dwelling to its occupiers, its subsequent use and physical reproduction and, at the same time, a social process dominated by the economic interest involved. Since the colonial administration until the Eight Malaysia Plan 2001-2005 assorted modes of housing provision in Malaysia have emerged due to the changing of housing policies. However, comprehensive housing policies implemented by Malaysian government for over 50 years were focusing more on the formal or conventional housing provision. This paper will review the modes of housing provision in Malaysia since the colonial administration until the Eighth Malaysia Plan. It will emphasize the formal modes of housing provision in Malaysia provided by public and private sector developers. Roles and achievements of public and private sector developers during this period will also be described further. These housing policies have been reviewed to sketch out modes of housing provision in Malaysia during this particular period. Due to the compatibility of housing provision with various situations and wider societal processes, this paper proposes a strategy for the provision of formal modes of housing provision in Malaysia.

Can Low Cost Housing in Malaysia be Considered as Affordable Housing ?

Noralfishah Sulaiman, University of Salford and David Baldry, University of Salford
Session G5

Formal housing in Malaysia introduced and implemented a concept of Low Cost Housing (LCH) during the Fourth Malaysia Plan (1981-1985). During this period, overall goals of housing policy were to ensure that all Malaysians had access to adequate housing. To meet this objective, emphasis was given to increase the supply of Low Cost Housing (LCH) in urban areas especially to the lower income groups. LCH is the lowest cost housing provision in Malaysia developed specifically for lower income group and may be delivered through public or private sector developers. Government has tabled a "*People's Budget*" to provide affordable housing for low-income groups and believed that LCH can be considered as 'affordable housing' based on the price, subsidized by government, achieving minimum

standard of quality and allocated only to low income people with several eligibilities through the *'Open Registration System'* by Ministry of Housing and Local Government (MHLG). Social housing in the United Kingdom (UK) is considered as affordable housing, provided and managed by local authorities-commonly called council housing-as well as by housing associations and other organisations regulated by UK government. This paper will try to define affordable housing in the Malaysia context, identify the differentiation between this context and social housing context in the UK and also seek to understand the nature of providing social housing as affordable housing in the UK.

Housing Organisations in Australia and the Netherlands: A Comparative Analysis

Connie Susilawati, Queensland University of Technology and Lynne Armitage, University of Melbourne

Session H2

Dutch housing associations are private organisations with a public responsibility which are managed effectively to fulfil the social objectives of providing affordable rental housing (Ouwehand and van Daalen, 2002). In the Australian system, community housing organisations are categorised as not-for-profit organisation and are mostly characterised by small organisations with very limited resources. This study aims to identify the strengths and weaknesses of the Australian and the Dutch housing association models. A series of interviews with representatives of community housing organisations in Brisbane, Australia, will be compared with the results of similar interviews with representatives of social housing associations in the Netherlands. In addition to differences in management structure, the second principal variation is that of government financial involvement; in the Dutch system, a social housing guarantee is provided by the state government, which reduces the risk of borrowing and, hence, the interest rate accordingly. Furthermore, the encouragement of mixed-housing types in the Netherlands avoids an undesirable concentration of low cost housing in one locality as well as allowing residents to have more housing options and continue to live in the same neighbourhood throughout their life. Adapting the highly subsidised Dutch housing model to fit the Australian context is an opportunity considered in this paper.

Dynamics of the Spanish Housing Market

Paloma Taltavull, University of Alicante

Session F3

This paper examines the long and short term of housing price behaviour in Spanish market at aggregated level. It uses the fundamentals to explain housing prices cycles in terms of the long term determinants during last decades, explaining the different pattern between the seventies and nineties' process of housing prices' increase. Using a methodology of Error Correction Model, the paper finds evidence of the existence of movements on residential prices tending to its long term equilibrium level and how the relevant deviation from it occurs after each structural change. Last cycle, 1994-2004, is the consequence of the integration process to EMU and also of the extreme dynamism of the mortgage market.

The Role of European Retiree Migration on the Valencia Community Housing Markets

Paloma Taltavull, University of Alicante, Karen Gibler, Georgia State University, Jose Manuel Casado, University of Alicante, Vicente Rodriguez, Consejo Superior de Investigaciones Científicas and Mari Angeles Casado, University of West England

Session A5

The paper evaluates the role of retiree migration on housing markets in Orihuela, Alicante, Spain. It checks the flow of migrants from 50 to 65 demanding housing and evaluates the effects on housing construction and prices coming from this phenomena. Analysis is focused on Valencia Community because the retiree migration is a new trend affecting just to some of Spanish areas where Alicante Province is one of the most important receivers. We use multivariate techniques to estimate a model including demographic pattern which differentiates between retirees and others migrations. Results suggest that retirees migration is encouraging other type of migration to the same destination areas.

Valuation System for Retail Properties in Spain
Paloma Taltavull, University of Alicante and Stanley McGreal, University of Ulster
Session B7

This paper present an initial analysis about the valuation system usually applied in Spain for retail properties. We explain the methodology for valuations which is regulated when it is done for mortgages purposes. We analyse a data-base including close than 900 observation of valuations of five different Spanish cities including Madrid, Barcelona, Valencia, Murcia and Alicante belonging to the same number of transactions, from 1998 to 2003. We can explain how the company use to value and also our estimation about the importance of the properties' features on the final value.

The Ethics in the Spanish Real Estate Market
Paloma Taltavull, University of Alicante , Agustín Raga, University of Alicante and Rosa Dueñas, University of Alicante
Session G2

The paper evaluates the role of ethics in Spanish Real Estate Professional Bodies as a guide for real estate managers and brokers. Changes and desregulation on market rules have increased the divorce between professional behaviour and ethics rules. Economics reasons exist explaining how the unethical decisions could distort the market. Some initial economic considerations are presented in the paper to evaluate, from the economic point of view, the role of ethics in the Spanish real estate market. The paper looks for the existence of the ethics rules on real estate professionals developing a questionaire asking for the current reactions of our professionals facing the situations regulated by the traditional ethic code.

Risk Premiums in Cap Rates of Investment Property
Pol R. Tansens, MeesPierson & Universiteit Nyenrode, M. Van Wouwe, University Antwerpen and Tom Berkhout, University Nyenrode
Session G3

Our research wants to establish links and patterns over time between the constituent components of the cap rates, and between real interest and risk premium in particular. We developed a statistical model to predict and explain the risk premium asked for by investors buying properties throughout Europe, with the aim to having reliable risk premium forecasts in the years ahead. The research reveals that both an univariate and a multiple linear regression model appear to be significant (satisfactory) models, predicting the risk premium from one explanatory variable (the real interest rate) or from two explanatory variables (the nominal interest rate and inflation). Moreover, dummy variables were introduced to deepen the results and to highlight the sensitivity of the risk premium to the kind of properties asked for (offices or retail), and to the various geographical regions properties are located (Holland, Belgium, Frankfurt, London). A main conclusion is that the risk premium seems to be used by investors to 'adjust' the initial yields at which they buy or sell properties. The risk premium appears to have a corrective effect, keeping the cap rates at a rather stable level. This is in contrast to the more common proposition that the risk premium would be a compensation for the increased level of risk of real property. Furthermore, risk premium may highly vary over time: from 0 to over 600 basis points, well below or above the "assumed" 200 basis points.

Repeat Sales and Urban Price Indices: A New Approach
Bernard Thion, Université Paris IX Dauphine, Tatiana Chameeva, Bordeaux Business School and Fabrice Riva, Université Paris IX Dauphine
Session E1

In the framework of the standard repeat-sales model to estimate house price indices, we present a new methodology based on the application of a final compound return (FCR) that is constrained to prevent revisions of past values of the index. The proposed technique, being straightforward, has a strong advantage of a gradual construction of a price estimator year after year. The results obtained for the database sample for Bordeaux region in France demonstrate the validity of the FCR method and are coherent with the estimators calculated by means of well-known techniques within the repeat sales approach.

Analysis of Real Estate Education Concepts of German Universities
Matthias Thomas, University of Applied Sciences, Hansjörg Bach, University of Applied Sciences, and Ramon Sotelo, Bauhaus Universität Weimar
Session J6

This paper examines the general characteristics of real estate programs offered at German universities. The analysis is based on an extensive questionnaire, which was sent out to all German universities offering a degree course with a real estate major or a dedicated real estate course. The results of this study are thought to shed light on differing concepts of real estate education in Germany and will try show similarities and dissimilarities of the real estate program regarding the university status of the course provider (University, University of Applied Sciences, University of Cooperative Education), course funding (public/private), integration between theory and practice as well as characteristics of the current students as well as alumni.

European Industrial Futures
Bob Thompson, RETRI Group
Session E8

The main driver of the industrial real estate markets over the next decade will be change in almost everything. Infrastructure changes will alter the relative desirability of locations and facilitate distribution; high labour costs will see a redistribution of production; policy may add to the cost of construction or the operational structure of demand; changes in technology will alter the way buildings are used and where they are best located. All these have a direct impact upon demand for the industrial property product set. This paper examines European industrial markets over a ten year horizon identifying these changes and setting out the opportunities that accrue and threats that may emerge for industrial investors over the period.

Initial Wealth Positioning and the Timing of Homeownership in Japan
Piyush Tiwari, University of Aberdeen, Edwin Deutsch, University of Technology and Yoko Moriizumi, Kanagawa University
Session B6

Initial downpayment for home ownership could prove to be a binding constraint for households aspiring to be homeowners. Households in Japan require 30 to 45% of the house value as downpayment. This not only affects their decision on the timing of homeownership but also has significant influence on the type of house they would eventually buy. Higher initial wealth positioning can ease the choice and timing of homeownership. Households often inherit wealth in the form of cash either to buy house or land or to construct a house from their parents. Proceeds from the sale of already possessed real estate also helps in building downpayment for household's desired house. Using survival analysis, the paper estimates the roles that the intergenerational wealth transfer and possession of real estate has played in the timing of homeownership in Japan. The data used in this paper is from the Ministry of Infrastructure, Land and Transportation survey on household home finance conducted during 1988 to 1995. By comparing the timing of homeownership for households who do not have the privilege of either inheritance or possession of real estate with those households who have had either of these forms of wealth, the paper estimates by how many years the homeownership is advanced for the privileged households.

Evaluation of Property Taxation System in Urban India
Piyush Tiwari, University of Aberdeen and Anil Kashyap, University of Ulster
Session I6

Urban India has around 3000 urban local bodies (ULBs). The Seventy Fourth Constitutional Amendment Act (1992) has bestowed political power, administrative authority and functional autonomy on local bodies. The functional domain of ULBs now covers planning, regulation and development aspects. With autonomy, ULBs are required to provide for the services irrespective of their individual administrative or financial capabilities. To perform a vast array of functions (obligatory or discretionary), ULBs require adequate financial resources. Their revenues fall under four categories: (i) tax revenue; (ii) non-tax revenue; (iii) grants-in-aid; and (iv) loans. Property tax is the single largest source of revenue for local bodies in states where there is no provision for Octroi (a tax levied on entry of goods into a local area for consumption or sale, which accounts for 60 to 80 percent of total revenue for local bodies in states where in it levied). However, due to scathing criticism many states have abolished Octroi. For almost all ULBs the property tax has or would become the single largest component of their total revenue. Property tax is levied on building and lands and its basis of taxation is either the annual rental value or market rent or market value in case of land. Local bodies have the power to impose, suspend, reduce or abolish the tax or partly/wholly exempt any person or class of persons of any such tax on any property or description of property. Local bodies have begun to review their property taxation system in order to improve their finances and widen the property based tax base to take on added responsibilities. Some State Government and municipalities in Delhi, Patna, Chennai, Ahmedabad and Hyderabad have modified their method of assessment or property tax significantly. The main objective of the paper is to review the existing or proposed property taxation system for select municipalities in India to evaluate their strengths and anomalies and to contrast and compare the system of property taxation in India with a land value taxation system which has been discussed or implemented elsewhere in the world.

The Changing Dynamic of the Industrial Property Market in Edinburgh
Edward Trevillion, GVA Grimley
Session E8

The production sector in Edinburgh is in decline and has been for a number of years. Changes occurring in the sector are leading to different property requirements in terms of location, nature and volume. The changing dynamic includes a reduction in traditional manufacturing employment and the development of new technology/knowledge based industries as well as different competition pressures and organisational and logistic factors. This has had an inevitable impact on the use of industrial property in the city, which has seen a decline in recent years in the stock of what has traditionally been understood as industrial property. The paper tracks this decline and for the first time quantifies the extent of the decline across the city. The paper also examines changing land use patterns in the city and undertakes a detailed employment analysis in order to understand the changing industrial dynamic. This includes an analysis of modern technology based and *atelier* type uses that are more suited to business (non-office) or light industrial property rather than the sheds and workshops traditionally associated with industrial use.

Institutional Investments in Real Estate: Insights from Germany

Michael Truebestein, University of Regensburg
Session F1

The paper analyses the characteristics of institutional investments in the German real estate market and refers to the study of "Institutional Investors in Real Estate" presented by Prof. Dr. Wolfgang Schaefers at the 1st World Congress of the International Real Estate Society in Anchorage (July 2001). In addition, the study identifies and evaluates current aspects and future trends in institutional investments in real estate – taking into account the specific institutional governance structure in Germany. More specifically, the paper will analyse general insights into the investment behaviour and investment criteria of German and international institutional investors in real estate as well as the volume of real estate investments. Thereafter, the study focuses on the behaviour of German institutional investors and their tendency to convert direct real estate assets into indirect real estate investments. This possible conversion is evaluated in regards to new investment forms such as mortgage/asset backed securities, real estate private equity/opportunity funds and fund of funds products as well as the likely introduction of real estate investment trusts (REITs) in Germany, but also in regard to the actual crises at the open-ended real estate fund market in Germany. In particular, the study focuses on the investment objectives in the different real estate markets as well as on the risk objectives and preferred vehicles and strategies for future investments in real estate. Finally the study will determine the importance of different valuation methods for real estate assets and conclude with a general outlook of future strategies and tendencies in institutional investments in real estate.

An Assessment of Property Performance Forecasts: Survey versus Econometric

Sotiris Tsolacos, Jones Lang LaSalle, London
Session F6

Property performance forecasts in the UK are based both on econometric and qualitative methodologies and are produced by in house teams of firms and consultancies. These forecasts are for client use and hence they are not broadly circulated. In the last seven years the Investment Property Forum (IPF), a leading property industry body in the UK, has published point and range forecasts of rents, capital values and total returns for UK property for one and two year horizons. This is a survey of independent forecasts in the industry. The contributors to this survey range from property advisors and consultancies to fund managers and equity brokers. This initiative brings the property industry in line with similar surveys of economic and financial series forecasts (HM-Treasury and Consensus Economics surveys). The IPF forecast survey results are communicated to IPF's wide membership and the survey certainly represents a barometer of the market. Evaluating the accuracy of these forecasts is critical if they are to be used in decision making. The quality of forecasts (either consensus or from an individual source and either econometric or otherwise) has been the subject of extensive research in economics. Among other issues, questions of interest in this literature relate to how efficient the forecasts are in the sense of fully incorporating the information available at the time, the size and bias of forecast errors, how the forecast horizon and accuracy interact and whether consensus forecasts perform better than any individual forecast. Statistical measures of forecast performance beyond the usual measures (such as mean absolute errors, root mean squared errors, regression tests of forecast efficiency and bias and the Theil statistics) continue to develop in the forecast accuracy literature providing the basis for assessing property performance forecasts. The aim of this paper is two fold. First, it assesses the IPF consensus forecasts using established methodologies and criteria. Second, the IPF forecasts are compared to those obtained from econometric models and more naïve techniques. The econometric forecasts are out of sample using data available to the analyst at the time of the forecast. In particular tests are carried out to examine whether one forecast dominates another in terms of information content and whether any benefits can be obtained from the combination of the survey and econometric forecasts. Based on recent developments in forecast evaluation, the analysis is furthered to address two additional issues: (i) whether revisions to the forecasts are predictable and (ii) pooling information over forecast horizons rather than analyse the forecasts separately for each horizon. The second point is pertinent to this study given the small number of observations.

Multi- or Single Tenant Preferences on the Dutch Office Market? The Case AZL

Robbert- Jan van Baal, AZL and Jos Janssen, AZL
Session E3

In this paper we will discuss the differences between multi- and single tenant preferences on the Dutch office market. The aim of this paper is to offer practical tools for developers and investors. We will focus on risk/ return profiles from the perspective of Dutch investors. With a case study on the Dutch office fund of AZL (73 assets and 230 tenants) and the ROZ/IPD benchmark enough data is available to make good portfolio analyses. Attention also will be made on the demand preferences. These preferences will be confronted with the fund portfolio. The results will be presented. The paper will conclude with remarks on a strategic, tactical and operational level.

Dutch Direct Real Estate Investments in Private Portfolios

Gertjan van der Geer, MeesPierson and Tom Berkhout ,University Nyenrode
Session I4

Direct real estate plays an important role in our daily lives. The place of direct real estate in the portfolio of a private investor is often limited however. The paper attempts to answer the question of how large the allocation to direct real estate should be to attain an optimal risk/return portfolio. Data used for direct real estate are data of the Dutch real estate market as measured by the ROZ/IPD. Markowitz' portfolio optimization technique is used to calculate the optimal portfolios. Geltner's unsmoothing technique is applied to counter possible smoothing of direct real estate data. Historical and expected returns were used to calculate efficient frontiers and direct real estate allocations. Results of the study show that, even when unsmoothing is taken into account, the allocation to direct real estate under scenarios based on historical and expected real return is substantial for most risk/return profiles. Contrary to most private portfolio allocations to real estate, the allocation to real estate is largest in above average risk/return profiles.

The Development Process Re-defined: An Examination of Changing Attitudes in the Approach to Development in the Netherlands and the UK with Particular Emphasis on the Residential Sector.

Frank van Genne, Hanzehogeschool Groningen and Nick Nunnington, Sheffield Hallam University
Session G6

Traditionally the development industry, especially in the residential sector, has had a mechanistic approach, with insufficient engagement with the end users of its products. This paper seeks to re-define the development process and examines, in particular the changing contexts of residential development in both the UK and the Netherlands. It critically reviews a number of concepts and models which puts customers and appropriate research of their needs at the heart of the process. It examines the North American "highest & best use" approach and the PROCESS© stakeholder model before examining how a systematic approach, underpinned by thorough research can achieve higher end user satisfaction, increased viability and risk reduction. Following a review of the traditional approach, the authors compare and contrast perspectives from both the UK and The Netherlands and combine professional and academic observations and analysis of the changes affecting the development industry. In The Netherlands after more than half a century of a government dominated sellers-market there is growing recognition that quality is in fact something driven and defined by the customer. In the more mature UK residential market, customers have become highly sophisticated and their expectations driven higher by "*aspirational*" marketing and the shift from an emphasis on property ownership to "*lifestyle facilitation*". These changes demand a different attitude from the parties involved, especially residential real estate developers. This paper critically evaluates recent changes at AM Wonen, the largest independent Dutch developer, and its transition from design management to knowledge management and design research. In 2002 AM employed design management consultants with experience in the domestic appliances and car industry to analyse its business processes. A two-year project led to an explicit development strategy, recognising all stakeholders and a re-definition of the development process.

This paper reviews this unique approach, evaluates it against other contemporary international models and thereby aims to re-define the development process. Finally the paper presents an outline of the further research that the "Expert Centre" at the Hanzehogeschool Groningen will undertake in order to be able to build a dynamic model for residential development in which there is a real-time connection between the user requirements, physical characteristics and financial analysis of development projects.

An Analysis of the Performance of Irish Property-Based and Equity-Based Unit-Linked Funds over the Past Decade Using the Techniques of Risk-Adjusted Performance Analysis and Safety-First Selection Criteria

Stephen Walsh, Dublin Institute of Technology
Session B8

The objective of the study is to compare the ranking of funds based on returns achieved, with alternative rankings based on both risk-adjusted performance measures and on safety-first selection criteria. This will allow an assessment of the value of such measures and whether they offer any additional information to the investor. In addition it will contrast the applicability of this type of analysis to property-based and equity-based funds. Each fund would be ranked on each of the risk-adjusted measures and on each of the safety-first measures. A correlation analysis would be undertaken on the rankings of the funds across the different measures. The results would be tested for their robustness to changing the key parameters by appropriate sensitivity analysis of the results

Econometric Modelling of Brownfield Redevelopment

Bruce R. Weber, University of Ulster

Session F2

An estimate of the market value of a large brownfield, thought to be economically ready for redevelopment, is complicated by a lack of comparables. This problem is magnified when use of the property has been found responsible for an environmental risk, typically from contamination of drinking water by its previous occupants. Contrary to the verbiage of professional standards in the US, no "recognized methods and techniques" were found for valuing groundwater-contaminated acreage with, for the most part, functionally-obsolete improvements. A comparable sale cannot predict how long it will take to remediate this property to the satisfaction of local health officials or the feasibility of its redevelopment. Capitalization rates in the local market are not a reliable indicator of income growth rates for estimating reversionary value. They were shown to have often been wrong in predicting income changes in many U.S. markets. A theoretical model was developed for stigma in the 1990s, but it was not implemented as a mathematical model. RICS guidance was found to most useful in creating a model for valuing such property in a scientific framework, in accordance with the desires of the US Supreme Court. An integration of econometric, statistical and developmental analyses are suggested as a method for best quantifying the value of such brownfields while accounting for the loss in value attributable to stigma from contamination.

Integrative Process-Oriented Real Estate Marketing

Matthias Wiffler, European Business School

Session C4

Real estate marketing is still focused on McCarthy's 4-P or marketing-mix approach. In today's volatile markets the 4-P approach will no longer lead to satisfying results. It neglects an inherent strategic approach, lacks a process-oriented view and is rather focussed on the product than the customer and the customer's needs. Therefore, the author presents an integrative process oriented real estate marketing approach. Firstly, this approach is aligned with the property's position in its lifecycle. It distinguishes between property marketing (1) before and during the development process, (2) the phase while the building is rented – at this stage in the property lifecycle the marketing focus shifts from product to services and relationship marketing – and (3) the situation when the building suffers from functional obsolescence and is no longer lettable. Due to the fact that the stakeholders and target groups, all with diverse demands and claims, differ enormously in each phase of the property lifecycle this distinction is essential. Secondly, the approach provides a four stage marketing management process, which is applied in each phase of the property lifecycle. The process consists of a preparation, an initiation, a closing and a realisation phase. This strategic approach provides marketing managers with a plan of procedures to market real estate in each phase of the property lifecycle. Thus, it overcomes the shortcomings and the strategic lack of the marketing-mix approach.

Fiscal Incentives and Urban Regeneration.

Brendan Williams, University College Dublin

Session A7

This paper examines the evolving role of fiscal incentives in urban regeneration initiatives in central Dublin over the period 1986 to present. With a rapidly changing economic development context policies have evolved from blanket subsidisation of development in designated areas towards a more selective approach. The rationale for policy shifts will be examined over three time periods,1986 to 1994,1994 to 1998 and 1998 to present. Drawing upon research over the period the changing policy objectives and issues arising in each period will be identified. This will be supplemented by the results of ongoing surveys of policy making and development interests on the operation and effectiveness of the schemes. Quantitative analysis of the costs and benefits of a selected number of property developments will be included and results compared with evaluations of similar schemes internationally. For the purposes of this paper particular attention will be paid to the direct and indirect impact of such incentives on the feasibility of development projects and real estate values including rental and site values. The paper will also address the effects of the termination of regeneration incentive programmes on urban regeneration areas and the general property market in central Dublin. Such findings will be compared with the results of related research internationally.

The Development of the Functional Urban Region of Dublin and its Influence on Regional Land Markets.

Brendan Williams, University College Dublin
Session A7

This paper investigates the land transformation process and growth pattern emerging in the functional Greater Dublin Area (GDA).The process is considered in the light of conventional theoretical frameworks for forms of development experienced by rapidly expanding urban areas. Aspects of neo-classical theories and models of urban land markets are considered and the growth pattern of the GDA is examined as a contribution to such debates. Particular attention is paid to the experience of the urban fringe area and planning and development perspectives on current development trends and their implications. The emergence of discontinuous patterns of development and rapidly expanding functional urban areas has been the subject of recent studies including work by the author. It is recognised that such patterns have far reaching implications in the wider environmental and economic policy context. Particular emphasis has been placed in the GDA context on the issue of development land, housing market s and landowners actions in such markets. This paper will include planning and property market perspectives on these issues. This will allow for consideration of current and proposed patterns of development and their influence on urban form. The research will include a contrast between stated policy aims, analysis of actual development data and conclusions on likely future trends. These conclusions will lead to findings on problems, opportunities and future directions in planning and development in the functional urban region.

Volatility Transmission in the Real Estate Spot and Forward Markets

S.K. Wong, University of Hong Kong, K.W. Chau, University of Hong Kong and C.Y Yiu, Hong Kong Polytechnic University
Session D6

How shocks in one market influence the return and volatility of other markets has been an important question for portfolio managers. In the finance literature, many studies found evidence of volatility spillovers across international markets as well as between spot and futures markets. Although real estate is often regarded as a good vehicle for diversification, the dynamics of its volatility transmission have been largely ignored, except for a recent paper on REITs. This paper aims to examine volatility spillovers between the spot and forward (pre-sale) index returns of the Hong Kong real estate market by a bivariate GARCH model. Transaction-based indices were used so that our volatility modelling is free from any smoothing problem. Our results show that volatility was mainly transmitted from the spot market to the forward market, while slight feedback effects were also found. This is inconsistent with most stock markets' results where forward-to-spot transmission was dominant. These divergent results might be explained by traders' types and market structures in the real estate market.

An Investigation of Regulatory Changes and Real Estate Credit in Episodes of Financial Instability

Cherie Wu, University of Hong Kong and Frederik Pretorius, University of Hong Kong
Session A8

The deregulation and internationalization of domestic banking industries in many countries since the 1970s led to significant episodes of financial instability in many domestic banking systems, including Sweden, Australia, the USA, and most recently, the Asian Financial Crisis of 1997-1998. These episodes have stimulated many researchers and policymakers alike to search for reasons for such episodes. One of the main issues pointed out by many is the problem of asset quality on banks' balance sheets. This paper goes one step further to examine the reason why banks take on excessive risks and the role of real estate plays in such behavior. Information asymmetry is seen as one important explanation for banks' over-reliance on real estate as collateral for many loans. As will be shown in the case studies, change in banks' lending behavior is often triggered by a series of deregulation or regulatory changes of financial systems that brings about intensified competition. This often leads to aggressive asset growth and often is accompanied by deteriorating credit criteria. By looking at the case studies of Sweden, Japan, Australia and Thailand, this paper explores the relationship between deregulation of financial intermediaries and the subsequent behavior exhibited by banks in these markets. In particular, we are interested in how banks' behavior lead to an expansion of credit to real estate as an asset class, and how these collective decisions destabilize banking systems will also be discussed.

Urban Spatial Restructuring and Housing Development in Shanghai, 1990-2002

Wu Xiang, National University of Singapore
Session A5

This paper seeks to explore the spatial dynamics of housing development in Shanghai, China, in the context of rapid urban restructuring. Questions addressed include whether theories on the internal spatial structure of and processes about cities, which were derived from studies largely on American experiences, can explain the situation in Shanghai, and how indigenous factors, such as history, geography and institutional setup, contribute to the spatial dynamics. Data were collected from local newspapers and published as well as unpublished reports from various agencies. Field reconnaissance surveys were conducted in order to verify and complete the database. Descriptive statistics and some parametric and non-parametric analysis tools were used in data analysis. GIS was used interactively in data organization, analysis and results visualization. A complex polycentric organization in the period 1990-2002 was found to distinguish Shanghai's spatial structure not only from its previous monocentric configuration, but also from any polycentric pattern ever found in other countries. National development strategy has been believed to have key impact on the formation of such a substantive restructuring process. Moreover, location factors, as an important representation of historical, political and socioeconomic shaping forces, have exciting explanation power for the variation of urban development. Findings of this study contribute to the literature by adding on to the discussions on urban spatial pattern of a major city in transitional China. This study also helps policy makers and private businesses in development/planning decision-making.

Modeling Rent Performance of Shopping Centers in a Cluster

Yajun Xie, National University of Singapore and Loo-Lee Sim, National University of Singapore

This paper aims to model rent performance of shopping centers in a cluster with the use of hedonic regression models. The current literature about shopping center rent or sales performance focuses on stand-alone shopping centers. To date, no research has examined the determinants of rent performance of shopping centers in a cluster context, in which the clustering effects may play important roles in explaining rent performance. Synthesizing clustering effects and elements of the traditional and contemporary theory for shopping center

researches, an empirical framework is formulated for exploring the rent performance of shopping centers in a shopping cluster. Three groups of variables are employed in the hedonic shopping center rent models: shopping center's characteristics, shopping center owner's management expertise, and clustering and competitive factors such as relative size, relative location, and mix of the cluster. The methodology of this study differs substantially from that of previous studies on shopping center performance. This study focuses on a cluster of shopping centers at the micro-level. The unit of analysis is the shopping center in a shopping district rather than retail units agglomerating in a single shopping center. With more than thirty-three clustering shopping centers, Orchard Road/Scotts Road in Singapore is a good case for this study. Data for shopping centers along Orchard Road/Scotts Road span the years 1995-2005.

Two Modes of Housing Market Behaviour

Yuri Yegorov, Institute for Advanced Studies and Oscar Mascarilla-i-Miro, University of Barcelona
Session G5

Cross-country analysis of the dynamics of housing price indices shows the dominance of two patterns. Thus, we can talk about two modes of market state: stability and positive trend. A particular country, like Spain, may have a changing sequence of different modes, lasting for 5-10 years. In other countries one of these modes can be dominant (stable prices in Austria, small trend in Netherlands). The pricing of real estate is a complex process. It differs from standard microeconomic model by the following aspects: a) housing is a durable good, so that it has both investment and consumption properties, b) its price depends on future value of flow of housing services, that depends on uncertain path of different factors including interest rate, c) it is heterogeneous good, where we have close substitutability between different types of housing and housing in different locations, d) it is imperfect investment good, due to lower liquidity and higher transaction cost in comparison with financial assets. There exists no unique framework of analysis in theoretical economics, which can be applied here: microeconomics is static, urban economics focuses on spatial patterns and not on dynamics. Static models can give only partial explanations. Data on construction and population growth allow for prediction of the shift in demand and supply curves, but this typically does not explain all price change. Not only changing wealth and preferences should be considered, but also different price expectations for different groups of agents. Economic growth contributes to Balassa-Samuelson effect, and since housing is the main fraction of non-tradable goods, housing price inflation can exceed CPI growth. Thus, the behaviour of different types of agents – owners, renters and investors – should be taken into account. While in the markets with stable housing prices there are no investors, they are present in markets with growing price trend. Positive trend can be caused either by wrong expectations (bubble) or transition phenomena, related to growth or institutional changes in mortgage markets, but it is never sustainable in the long run. Thus, the periods of price growth typically last for several years, and then prices either drop or stabilize. Real estate markets can be influenced by unpredictable events, like natural hazards. In some cases (when events occur frequently or when there exist efficient insurance markets) market indices are not affected significantly, since risk is already incorporated in market price. More difficult cases include rare events, like catastrophic tsunami. In a similar manner, human created catastrophes (Chernobyl, 11th of September) should also influence local land rent, and the value of real estate. In the case of high risk strategic investors are not likely to be there, but price can still be unstable due to changing perception of risk.

An Exploration of the Supply Side and Demand of Large Scale Trading Areas in the Metropolis of Tainan

Kuang-Yih Yeh, National Cheng Kung University, Hao-Ching Hsia, National Cheng Kung University and Yu-Ling Hsu, Chang Jung Christian University

Session B7

Downtown decay has been in focus in Europe, America and Japan, but in Taiwan it is still at the elementary stage in relation to policy development. Therefore, the analysis of real competitive difference between downtown trading areas and suburban trading areas is inadequate. In order to clarify the real competitive situation, this study firstly will survey the location and management characteristics of large scale trading areas in the metropolis of Tainan. Secondly, we will investigate one thousand households in order to discuss consumption preferences. Different characteristics of consumption behavior will be studied with respect to gender, age, educational background, and salary. Additionally, Factor Analysis and Cluster Analysis will be used to assess the importance to users of different aspects of the shopping experience, and thereby to measure the competition between downtown trading areas and suburban trading areas. This study will show the competitive situation of large scale trading areas in the metropolis of Tainan, and land use and business sprawl issues will be discussed.

Housing Policies in Turkey and Lithuania

Feyzullah Yetgin, Emlak Real Estate Investment Company & Kadir Has University and Natalija Lepkova, Vilnius Gediminas Technical University

Session G5

Housing sector is very important sector in the world. The greater importance of the housing sector broadly defined, to include, financing, upgrading, repairs, management, valuation, taxation, population. The article contains the comparison of housing policies in Turkey and Lithuania. The housing strategies–their differences and common points in Turkey and Lithuania are presented in the article. The housing strategic principles and preferences in the countries under investigation have been analysed. Some economic aspects are underlined. The policies of social housing in investigated countries are presented. The housing problems are presented in both analyzed countries. Special attention paid to sustainable housing and social cohesion in housing.

Market Oriented Planning: A Behavioural Analysis

James Young, Property Research International

Session G4

In exploring the problems associated with planning systems in Europe and elsewhere, there has been a distinct movement toward 'market oriented' planning or alternative market based planning regimes. The problems associated with various types of planning regimes are clear: the more bureaucratic and cumbersome the system, the more likely it is that supply constraints will appear in areas such as affordable housing and industrial development, just to name a few. To date, however, most contemporary analyses have focused on how to bring the private sector 'on board' or how to ensure that the system works fairly in the public interest. Given that the overall purpose of planning is to manage a 'common' resource, land, an analysis of public goods games research, including social dilemmas, are reviewed within this context. As negative externalities are a fundamental part of any analysis of planning structures, allocation efficiency, fairness, and the emergence of regulatory mechanisms will also be discussed in relation to broad market oriented planning regimes outlined by Lind (2002). Also, a discussion on the expectations of participants in the planning system (developers, property owners, and public bodies) will be conducted using the framework developed.

A Theoretical Analysis of Tobin Taxes and Real Estate Price Bubbles

James Young, Property Research International, Dublin

Session C5

In containing asset price bubbles, it is argued that raising transaction taxes to a point to where the number of transactions in those markets is reduced will dampen prices. Real Estate markets are fundamentally different from other asset markets in that relatively high transaction taxes are already present. Empirical research on real estate transaction taxes suggests that regardless of the level of taxation, the price response to an tax increase is temporary and that real estate demand is based more upon the demand for property and the functional utility of the asset rather than the investment returns present at a given point in time. Further, the functional utility of residential property and the relatively long holding period of property holdings suggest that taxes would have to be raised to a prohibitive level in order to reduce demand. Unlike other asset markets, the reduction in transactions resulting from prohibitively high levels of taxation would lead to a reduction of supply in certain markets leading to increased prices rather than a dampening in prices, especially where high demand is present. The delay in the supply response in real estate markets could exacerbate this price increase problem, especially in the face of high demand. The theoretical model developed suggests that there should be an optimal level of transaction taxes in real estate markets and that the usefulness of holding taxes in creating market efficiency should be examined in relation to flattening out real estate asset price bubbles.

Externalities and Housing Price in Spain: 1994-2003

Coro Chasco Yrigoyen, Autonoma University of Madrid and Pedro Morón Bécquer, Autonoma University of Madrid
Session G5

Economic accessibility of housing is becoming a real problem in Spain due to the so-called "real-state boom". The increase of price affects the Spanish economy especially since 1998. That is why the research in housing prices is increasing in this country. In this paper, we analyze in depth housing price dynamics in the Spanish provinces to test for the existence of convergence or divergence processes, as well as the presence of spatial externalities or spillovers. We use some exploratory spatial data analysis tools and spatial econometrics to control for spatial autocorrelation and spatial heterogeneity in the error terms of the regression. We demonstrate that there was a divergence trend in housing price growth during the last decade between Spanish provinces. We also state that housing price growth in a province is affected by housing price growth in its corresponding neighboring provinces, not only physically contiguous but also those belonging to the same region. Specifically, the own region impact over housing price growth is higher that the pure geographic contiguity. This fact has important conclusions in terms of housing policy, as it demonstrate the power of regional policies on housing price growth, even more that the effect of neighboring provinces of other regions.

The Institutional Environment of the Polish Real Estate Market – New Sources of Information

Magdalena Zaleczna, University of Lodz
Session J4

The institutional environment of the market has been transformed and modified as a concequence of political, economic and social stimuli. The adoption of planned economy rules in Poland induced the lack of the true real estate market. The precedence of the state over citizens' rights begot weak private ownership protection. The real estate was regarded mostly as a commodity essential for human life and not as an investment asset. The introduction of democratic principles and economic transition strengthened private ownership protection and gave a new meaning to real estate. However, it was necessary to establish new and effective institutional instruments for making the most of the real estate economic potential, it is ongoing process. One of the main problems was the lack of reliable information and data on the basic legal level (the land administration system did not work properly) and on the market level (there was scarcity of data about prices, rents and vacancy). The aim of the paper is to profile current reforms and new instruments which have been introduced in the area of institutional-informational environment of Polish real estate market and their consequences for conducting research. As a pattern for potential ongoing changes a comparison with the British real estate market institutional environment is provided.

Socialist Land Use Rights and Sustainable Land Development

Jieming Zhu, National University of Singapore and Loo-Lee Sim, National University of Singapore

Session G1

In 1975, the Vietnam War ended with reunification of the North and South. After years of stagnation in economic growth, the Vietnam government announced a new policy "Doi Moi" in 1986, intending to move towards a market-oriented economy while maintaining socialism. In the middle of 1980s, Vietnam's economy was still predominantly agricultural. The 1980 Constitution stipulates that the land is owned by the people and the state functions as an entrusted administrator over national assets. Rights to use land are assigned to organizations and individuals, and the land use rights can be transferred, mortgaged and leased. With the land use rights, individuals and private developers start to exploit the opportunities created by the "Doi Moi". Majority of the new housing in the marketplace nowadays is developed by the private individuals. On the one hand, the bottom-up initiatives alleviate the pressure caused by housing shortages. On the other hand, it is questionable whether this market-driven housing development without effective planning controls is sustainable, in view of Vietnam being one of land scarcest countries in the world.

Property Rights in Place-Remaking: Community, State and Market in the Redevelopment of Singapore's Chinatown

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Studies have shown that the land market is heavily structured by institutions. Real estate individuals and organizations behave and perform within a framework defined by institutions, which are regarded as a matrix of formal and informal rules of the game in a society (North, 1990). In a market economy, activities in the land market by autonomous firms and individuals are coordinated through prices, but functioning of the land market depends on a whole set of institutional conditions. However, the subject of land transactions is not the land *per se*, but essentially the interest in rights over the land. The structure of property rights therefore influence the performance of land markets. Placing limits on the action of individuals and governments, assignment of property rights is thus crucial for the achievement of efficiency (Paul, Miller & Paul, 1994). A supportive system of property rights is imperative for development efficiency and growth of the real estate market. From the perspective of institutional analysis, this paper evaluates the place-remaking process of Chinatown in Singapore. It is found that redevelopment of Chinatown since the 1960s has been substantively structured by the property rights system over land and buildings. As property rights are defined by the state in the forms of statutory land use planning, compulsory land acquisition, rent control, land leasing and conservation of historical buildings, the free market of land redevelopment is reined in heavily by the government. The local community used to play a significant role in the shaping of Chinatown before 1960. Since the 1960s, the role of the community has been fading out from the scene, and the redevelopment of Chinatown is the result of interaction between the state and the market, mediated by the property rights regime.

The Residues from Statistical Models in Valuation and Management of Real Estate

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These residues were defined after creating the geostatistical model for the group of chosen real estates in the city of Olsztyn (northern-eastern Poland). The following procedure was used:

- Initial verification of the attributes and the selection of factors,
- Defining the structure of the mathematical model,
- Defining the interaction of parts of the model,
- Elimination of inadequate incidents,
- The final form of statistical model.

The objects of the analysis were the prices of land real estates (not developed) in 1997-2003.
The amount of 821 land real estate properties were studied and 25 attributes were created. Good measures of model adaptation were achieved ($R^2 > 0,60$). In the result of detailed proceeding, the individual features of the analysed model were defined and the map of residues from the regression for Olsztyn was created. The models built on the residues can be used in the mass real estate assessment, in urban real estate management and in the process of developing areas between the urban and rural areas (fringe zones). The algorithms proposed in the paper have universal character and can be successfully used in large and middle-size cities.