

## ■ HIGHLIGHTS

### *World Bank commissions study to CeRP*

**OPTIMAL ASSET ALLOCATION FOR DEFINED CONTRIBUTION MANDATORY PENSION FUNDS** by Fabio Bagliano, Carolina Fugazza, Antonio Mele

The World Bank has recently commissioned CeRP a study on benchmark portfolios for pension funds.

The research is part of a joint WB-OECD project, which aims at undertaking a comparative analysis of investment performance of privately managed pension funds across several OECD, Latin American and Central and Eastern European countries. CeRP is in charge of designing a benchmark asset allocation model specifically addressed to evaluate the performance of privately managed pension funds. The basic theoretical set-up consists of a calibrated partial equilibrium model of optimal life-cycle consumption and portfolio choice with uncertain labor income. As the adopted methodology is life-cycle based, it should take into account peculiar aspects of the working and retired life, such as the contributors' age (human capital) and other financial wealth (including other future pension, such as first pillar), life expectancy etc. The results of the study will be presented at a World Bank conference in Latin America. A second phase of the project - which will start in July 2008 - will include the development of software for calculating optimal portfolios and provide country applications.

### *CeRP annual conference under preparation*

**"FINANCIAL SECURITY IN RETIREMENT"** September 18-19, 2008

The next annual conference will focus on financial security in retirement. The event is also part of a series of meetings organized within the Forward Look programme "Ageing, Health and Pensions in Europe", funded by the European Science Foundation and carried out by a network of European institutions, led by Netspar, including CeRP.

A call for papers has been issued to solicit papers on issues related to retirement risks (longevity, health and financial risks), income security of the elderly, the role of financial education. Two invited lectures by distinguished scholar in the field are foreseen.

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## ■ RESEARCH OUTPUT

**ADEQUACY OF PENSION SYSTEMS IN EUROPE: AN ANALYSIS BASED ON COMPREHENSIVE REPLACEMENT RATES** by Margherita Borella and Elsa Fornero

This study has been performed within the project "Adequacy of Old Age Income Maintenance in the EU" (AIM), funded by the European Commission.

It aims at evaluating the capacity of pensions in different European countries to deliver adequate old age income maintenance under the condition of overall sustainability of public finance. To this purpose CeRP has developed an indicator, called *Comprehensive Replacement Ratio* (CORE), based on the comparison of the living standards after retirement with the living standards when active.

The authors computed, for a set of countries representative of the different European welfare and pension systems, both an actual version of CORE, based on ECHP data, and a version projected into the future, by using a semi aggregate simulation model (CeRPSAM).

The analysis of actual COREs does not highlight strong differences in the replacement rates of European countries, despite the difference in welfare models; cross-country differences do exist, instead, in the composition of retirement income.

Projected COREs, elaborated for different economic scenarios and taking into account the evolution of theoretical replacement rates, show that in some countries replacement rates are declining, meaning that these countries will have difficulties in guaranteeing the adequacy of future pensions.

[HTTP://CERP.UNITO.IT/RESEARCH/ADEQUACY\\_OF\\_OLD\\_AGE](http://cerp.unito.it/research/adequacy_of_old_age)

## news in brief

### Visiting fellow: Claudio Campanale

Claudio Campanale, assistant professor at the University of Alicante, spent a research period at CeRP between March and April. Claudio is carrying out a study on "Ambiguity learning and life-cycle portfolio choice".



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### CeRP project awarded of Sandell grant

Giovanni Mastrobuoni's research proposal "The Role of Information for Retirement Behavior: Evidence Based on the Stepwise Introduction of the Social Security Statement" has been selected for funding through the Steven H. Sandell Grant Program sponsored by the Center for Retirement Research at Boston College.

### RAI programme on pensions shot at CeRP



The RAI scientific programme "Superquark" is realizing a TV report on Italian pensions in collaboration with CeRP. The report includes an interview to Elsa Fornero as well as some shooting at Collegio Carlo Alberto.

[HTTP://CERP.UNITO.IT/NEWS](http://cerp.unito.it/news)

## ■ WORK IN PROGRESS

### THE EFFECT OF HOUSE PRICES ON HOUSEHOLD SAVING: THE CASE OF ITALY by Riccardo Calcagno, Elsa Fornero, Maria Cristina Rossi

The aim of this paper is to assess the effect of a change in value of real estate assets on optimal consumption and savings behavior for Italian households, as a function of the age and the composition of the households.

The theoretical model predicts the marginal propensity of consumption on real estate wealth to be higher the higher the age of the household and its net equity in real estate at the beginning of its life. The authors then test such predictions on SHIW data, which are representative of the universe of Italian dwellings owned or rented by the households. Preliminary results suggest that saving for old households is negatively and significantly related to the household capital gains in housing.

### PERMANENT VS. TRANSITORY HOUSING WEALTH SHOCKS by Fabio Bagliano and Claudio Morana

The quantitative relevance of fluctuations in household wealth in determining consumption spending and savings is a long-standing empirical issue.

The study focuses on the decomposition of house price fluctuations into permanent and transitory components, in order to estimate their potentially different impact on consumption expenditure and saving in different European countries.

To this aim, the authors exploit recent advances in time-series econometrics and build country-specific empirical models of the dynamic interactions among measures of consumption expenditure, income and real house prices. The research strategy is based on a small-scale multivariate model including from the outset consumption, income, house prices and possibly other control variables (e.g. stock prices), estimated for each country under study. This model captures the joint dynamics of house prices and the macroeconomic variables of interest, and may lead to an accurate identification of shocks with a different degree of persistence and a complete characterization of their dynamic effects on consumption and savings.

### THE ROLE OF INFORMATION FOR RETIREMENT BEHAVIOR: EVIDENCE BASED ON THE STEPWISE INTRODUCTION OF THE SOCIAL SECURITY STATEMENT by Giovanni Mastrobuoni

Many older workers know little about their retirement benefits and retirement incentives and do not plan ahead, casting doubts on economists' assumptions regarding full information and the perfect rationality of retirement and saving behavior. Ignorance, however, might be perfectly rational if obtaining information is more costly than what it is worth. The stepwise introduction of the Social Security Statement, a letter sent to inform workers about the amount of their future retirement benefits, generates exogenous variation in the cost of getting informed that can be exploited to

improve our understanding of how access to information changes knowledge of Social Security benefits.

The research proposal is to model information acquisition and retirement and, in the future, model saving behavior exploiting the information on expectations available in the Health and Retirement survey together with the stepwise introduction of the Social Security Statements. Changes in workers' responsiveness to retirement and saving incentives upon introducing the Social Security Statements represent the proposed test for rational and forward-looking behavior.

## Focus

### PENSIONS IN THE ITALIAN ELECTORAL CAMPAIGN

Public pensions entered the Italian electoral debate in the last weeks as Democratic Party leader Walter Veltroni proposed specific measures aimed at raising pension benefits, to match the rise in the cost of living: 1) increasing tax advantages for low income retirees over 65 years; 2) indexing future pension benefits to a sustainability index calculated as the ratio between the wage bill and total pension expenditure.

The estimated yearly cost for raising current pension benefits is about 2.5 billions euro, an increase that should result from reducing fiscal pressure on pensioners' incomes. The coverage for this measure is yet to be specified (resources will possibly come from a reorganization of public estate or from strengthening the fight against tax evasion).

The rationale for this measures is to help many low income elderly, whose pensions have been losing purchasing power over the last years. The cost for this increase, however, is not covered by the contribution paid by these pensioners, but by active workers: it is important that this proposal, meant to restore the elderly's purchasing power, is not perceived as a "gift" from a benevolent political class, but rather as a necessary *una tantum* adjustment, paid through general taxation. To this purpose, it is essential that the proposed actions are consistent with the contribution-based method - implying a separation between the insurance and the assistance role of social security and a correlation between payroll taxes and benefits. In this system, pensions are the result of an efficient and transparent formula. Therefore, too many new redistributive adjustments from active to inactive cohorts risk undermining the credibility of the method.

Moreover, changing the indexation of pension benefits implies adjusting the contribution-based formula, assuming that pensions linked to earnings can be higher than pensions calculated through the current formula. *Per se*, the proposed change does not put a threat to the contribution-based method, and it is consistent with its formula. However, the risk is that advocating corrections for a method that has not been totally implemented yet could weaken the commitment to recognizing it as founding element of the pension system.

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### ADEQUACY AND DISTRIBUTIVE PROPERTIES OF PENSIONS SYSTEMS: THE CASE OF ITALY by Flavia Coda Moscarola

This paper analyses the adequacy features and the distributive impact of pension systems in the transition from a defined benefit to a notional defined contribution formula and from pay-as-you-go to partial funding. It focuses on the reforms that took place in Italy between 1992 and 2007. The analysis is performed updating and upgrading CeRPSIM, CeRP's dynamic micro-simulation model by cohorts. The simulations show that the reform process sharply reduces the gross average replacement rates (RR) granted by the first pillar. Under the new regime, the pre-reform average RR level is attainable at cost of renouncing the severance payment flows (TFR) and investing it in the second pillar. While the pre-reform system was highly redistributive in many dimensions, not just earnings, the introduction of the NDC rule drastically lowers redistributive features, further reducing the (already low) global impact of the pension system on the degree of concentration of lifetime income.

### INFORMATION ASYMMETRIES AND FOREIGN EQUITY PORTFOLIOS: INVESTOR'S SOPHISTICATION MATTERS by Maela Giofré

Households and no profit institutions, typically non professional investors, display a much higher degree of home bias with respect to financial investors; this suggests that they might be more severely affected by information asymmetry issues.

The author tests this conjecture considering the determinants of foreign equity portfolios of financial investors versus households and no profit institutions in four European investing countries - France, Italy, Spain and Sweden. She finds, indeed, that households' portfolios are more strongly influenced by information asymmetry captured by country-level factors, having less easy access to information on foreign firm-specific characteristics than institutional investors.

Proximity variables and transparency of the destination stock market have a stronger impact and, even more interestingly, common-listing in the Euronext platform plays a crucial role only for less sophisticated investors. Foreign firms publicly listing in a common exchange are subject to standardized regulations and homogenizations of accounting rules with the effect of reducing information asymmetry. This effect is, rationally, particularly pronounced for less sophisticated investors who are more heavily affected by the informational issue and, consequently, are likely to benefit more from its alleviation.

### TIME AND RISK DIVERSIFICATION IN REAL ESTATE INVESTMENTS: ASSESSING THE EX POST ECONOMIC VALUE by Carolina Fugazza, Massimo Guidolin, Giovanna Nicodano

This paper evaluates ex post welfare gains from time diversification of risk when E-REITs belong to the investment opportunity set. The authors find that diversification into real estate vehicles increases both the Sharpe ratio and the certainty equivalent of wealth for all investment horizons and for both Classical and Ba-

yesian (who account for parameter uncertainty) investors. For instance, the annualized percentage increase in initial wealth that should be awarded to a Bayesian investor in order to compensate her for excluding REITs from her asset menu ranges from 1.39 to 2.59 percent of wealth. However the out-of-sample average Sharpe ratio and realized expected utility of a long-horizon portfolio is often lower than that of a one-period portfolio, which casts doubts on the economic value of time diversification (predictability) over the long-run.

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## ■ EVENTS

### FORTHCOMING SEMINARS

"The effects of housing and financial wealth on personal consumption: aggregate evidence for Italian households" by Antonio Bassanetti and Francesco Zollino (Bank of Italy); April 22, h 13:00

Workshop in Capital Markets: Thomas Gehrig (University of Freiburg), title tba, May 13, h 13:30

Workshop in Capital Markets: David Bates (University of Iowa) "Estimation and Filtration of Time-Changed Lévy Processes" June 3, h 13:30

"Sticky Consumption Growth" by Christopher Carroll (Johns Hopkins University); June 4 (jointly organized by CeRP and Collegio Carlo Alberto)

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### CeRP STUDIES PRESENTED AT INTERNATIONAL CONFERENCES

Massimo Guidolin delivered presentations at the Erasmus University, Econometric Institute and at the Oxford University, Man Institute (March 2008)

Elsa Fornero delivered an invited lecture at the World Bank conference: *Regulatory and Supervisory Issues in Private Pensions and Life Insurance*, Washington, 3 April 2008

Riccardo Calcagno and Mariacristina Rossi have been selected to present their papers at the 12th *Conference on Macroeconomic Analysis and International Finance*, University of Crete, 29-31 May 2008

## ■ RECENT PUBLICATIONS

C. Fugazza, G. Nicodano and M. Guidolin, "Diversifying in Public Real Estate: the Ex-Post Performance", *Journal of Asset Management*, 8(6), 2008, 361-373

M. Guidolin, S. Hyde, "Equity Portfolio Diversification under Time-Varying Predictability and Comovements: Evidence from Ireland, the US, and the UK", forthcoming, *Journal of Multinational Financial Management*

### LATEST CeRP WORKING PAPERS

N. 72/08: *Planning and Financial Literacy: How Do Women Fare?* by A. Lusardi and O. Mitchell, available at:

[HTTP://CERP.UNITO.IT/PUBLICATIONS](http://CERP.UNITO.IT/PUBLICATIONS)