

ref.

Research and Consulting Activities

Ricerche per l'economia e la finanza srl
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REF (*Ricerche per l'economia e la finanza*) is an independent research centre. Its activities include tailor-made research and consulting services, independent observatories, training and support for decision-making in the fields of economics, finance and human resources. Its clients include private companies, institutions and governmental bodies.

Research and consultancy activities stems from 25 years of experience acquired in IRS and transferred in REF following the spin-off from IRS.

REF operates in Italy, Europe and in several emerging markets, through a staff and a network of experts and consultants with consolidated international experience.

REF operates in a wide range of fields:

- macroeconomic analysis and forecasting
- fiscal policies and local public sector finance
- prices and sales
- energy markets
- water services
- wages and collective bargaining
- International cooperation and technical assistance

REF products and publications are available on the website: www.ref-online.it

RESEARCH AND CONSULTING

We provide private companies, institutions and public bodies with medium-term scenarios, research and forecasting tools for individual sectors, evaluations of economic policy impacts and micro-econometric analysis. Our assessment of the positioning and strategies of our clients is based on consolidated experience in research and consulting in many fields of economic analysis.

REF economists work jointly with major universities and our research activity is consequently based on the most advanced analytical tools.

□ **Basic Research**

The aim of our research is to interpret and predict current transformations in the economic and financial environment, focusing on global, regional and sectoral aspects. We have been building our data banks for macro and micro variables and constructing interpretative models and original indicators for around 30 years now.

□ **Real time support**

Researchers and consultants at REF are constantly available to clients who require up-to-date information or wish to discuss changes in the economic and regulatory environment as they occur.

□ **Consultancy**

We employ original methods and carefully targeted analysis to meet the knowledge requirements of our clients. Sector models are employed to track the positioning of individual companies on a series of reference variables and to forecast changes for different possible scenarios. Analysis and design of human resources development are conducted to advise the management of production units and companies in the public and private sector where the skills of economists, engineers and lawyers are all brought to bear.

THE OBSERVATORIES

REF runs permanent observatories which monitor change as it occurs and provide members with an independent forum for discussion with policy makers.

Participants in observatories receive the following services: newsletters, consultancy on the interpretation and impact of economic and sector policy measures, access to selected information (data banks, chart-books, legislation international comparisons).

TRAINING

Seminars are regularly organised for members of observatories and other clients who are interested. Activities in seminars include the presentation, evaluation and discussion of research reports, policy options, scenarios and forecasts.

Training often forms part of research and advisory programmes implemented in companies and management schools. Young graduates entering the research market are offered work experience and training is provided for company staff. Training is performed by inserting trainees in research projects and on the staff of continuous economic survey programmes.

REF organises Macroscopio - Leggere la Congiuntura, a series of full immersion seminars designed to teach economic operators how to select relevant information for analysing macro economic problems so that they can deal more easily with market changes and customer demands.

PERIODICAL PUBLICATIONS

□ **Congiuntura ref.**

This service monitors the Italian and international economy. It consists of four forecasts published quarterly and twenty-two fortnightly bulletins. The fortnightly bulletins provide an interpretation of short-term trends based on indicators constructed to predict future developments as well as on an independent analysis of official figures by REF researchers.

□ **Tendenze dei prezzi**

A quarterly periodical containing forecasts and analyses of price and wage trends, it is produced for Indis-Unioncamere.

□ **Tobacco Observatory**

A newsletter published three times a year that monitors the tobacco products market in Italy with a specific focus on pricing policies and all fiscal aspects. A plurality of interests come to bear on the issue of taxation on tobacco: those of the industry, distributors' associations, the ministries of economics and health, the antitrust authority and consumers. The Tobacco Observatory analyses trends for the economic factors that underlie those interests.

□ **Newsletter of the Osservatorio Energia**

A monthly periodical that analyses the energy sector in Italy and Europe. Topics dealt with include: legislation to open up energy markets; changes in corporate structure of major energy companies and the problems of creating a regulated market; tariff trends and price levels on European power exchanges. It provides forecasts of Ct and Qe (regulated wholesale prices of electricity and natural gas).

□ **Previsivo of the Osservatorio Energia**

Published three times a year, it contains medium-term scenarios of the Italian electricity market based on Elfo++, REF's new dispatching simulation software model. Analysis focuses on changes in demand and supply, forecasts of competitive wholesale prices (national and zonal) and the possible effects of different strategic behaviours, in the light of the structural and legislative conditions.

OTHER PUBLICATIONS AND RESEARCH REPORTS

- **2nd Report on the demand for electricity – Survey on the cost of electricity paid for by companies in the city and province of Milan – 2008** (*Available In Italian only: 2° Rapporto sulla domanda di energia elettrica - Indagine sul costo della fornitura di energia elettrica pagato dalle imprese sulla piazza di Milano e Provincia – anno 2008*)

The second annual edition provides a more precise view of electricity consumption in the Milan area. It focuses on three important industrial sectors in the Lombard metropolitan area: chemicals, papermaking and mechanical manufacturing which with over 16 thousand enterprises account for almost 50% of the firms and 55% of workers in manufacturing industries in the province. Particular attention was paid to medium and small sized enterprises. The report describes similarities and differences in the following: consumer patterns, the motivations underlying the decision whether to opt for the free market or not; the selection of a supplier (a wholesaler, a seller, a consortium); the degree of satisfaction with the service; the life of existing contracts (annual, two year or longer); the contractual nature of the price (fixed/updated, by hourly bands or not, etc.). Finally, an attempt was made to investigate how operating decisions affected the purchase price of electricity.

- **Green Energy 2008 – REF report and outlook on the Italian green certificate market**

The first REF report on the green certificate market analyses the current state of the system. It highlights critical factors and assesses future prospects for short term demand, supply and prices in the light of regulatory intervention.

- **Local economies and finance – 2008 Report** (*Available In Italian only: Economia e finanza locale – Rapporto 2008*)

The 2008 report prepared by IFEL and REF provides an update on the state of health of Italian municipalities. It highlights the main financial aspects of administrations over the last five years. The update on local finance is accompanied by a discussion of the main changes in the legislation affecting municipalities in which economic and financial simulations of scenarios are furnished on the basis of legislative decisions. The analysis presented in the report focuses on both the delicate question of best governance practices for municipalities and also on the problem of estimating standard requirements. An attempt is made to estimate the funding requirement for nursery school expenditure.

- **Infrastructure networks: the state of the art and instruments available** (*Available In Italian only: Reti infrastrutturali e territorio: stato dell'arte e strumenti attivabili*)

This research report prepared by REF for Intesa Sanpaolo analyses finance for infrastructures and the role of local administrations in promoting investments in public works. The report was presented in Rome on 21st October 2008 at the convention "Strategies for growth, fiscal federalism and infrastructures". It photographs existing infrastructures in the country and quantifies the gap between Italy and the rest of Europe, with an analysis of the critical factors that have created it and a discussion of possible ways of eliminating it. Solutions included the valuation of local property assets and the reorganisation of local public-private relationships by standardising contract agreements. The report concludes with an initial assessment of the implications of fiscal federal devolution for the capacity to make public investments.

Publications

- **Report on the labour market** (*Available In Italian only: Rapporto sul mercato del lavoro*)

The report was drawn up by Cnel assisted by REF. It reviews the factors affecting changes in the labour market both in relation to the situation at present and with a focus on structural issues. The principal phenomena and trends concerning the structure of employment and unemployment are investigated, along with recent developments in labour policies. Editions: 2007, 2008.

- **Consumption and distribution – structure, trends, forecasts** (*Available In Italian only: Consumi e distribuzione – Assetti, dinamiche, previsioni*)

Prepared jointly with the research department of Ancc-Coop, the report analyses current householder consumption. It was performed at both macroeconomic level and also from a more “micro” viewpoint. It investigates modifications in household consumer patterns and the underlying causes of the changes observed. The first report was published in 2007 and is now in the second 2008 edition. The latest edition examines the main long term trends which will determine consumption in Italy in 2020.

- **Report on retail sales** (*Available In Italian only: Rapporto sulle vendite al dettaglio*)

This report, prepared jointly with Centro Studi Unioncamere, addresses four issues: the general climate for household consumption; the effects on turnover for retailers; the reactions in terms of new retailer start-ups and others closing down; changes in the balance of competition between retailers with different distribution structures. Editions 2005, 2006, 2007, 2008.

- **Local economies and finance – 2007 Report** (*Available In Italian only: Economia e Finanza locale – Rapporto 2007*)

This report, prepared by Ifel – Anci in co-operation with REF, is designed to furnish as detailed a picture as possible of action taken by municipalities, with a comparison of the decisions made and the outcomes in terms of local development. The analysis focuses on the cause and effect relationships between individual policies and their objectives, assessed in terms of development and equity achieved.

- **Balance in local finance: autonomy and rules** (*Available In Italian only: Gli equilibri delle finanze locali fra autonomie e regole*)

This research report prepared by REF for Intesa Sanpaolo was presented at the convention, “Sustainable development, local autonomy and rules. A framework of certainties to support growth”, held in Rome on 24th October 2007. The report analyses the new structure of public finance, highlighting the existing tensions between the growing autonomy of local administrations and the inevitable need to establish rules and mechanisms for co-ordination between different levels of government. The relationship between autonomy and co-ordination is assessed not only in relation to regulations, but also with regard to administrative practices and operational aspects. The report therefore examines the issue of how control rules are implemented in practice and it underlines the pressures on the functioning of administrations when long periods are generated when local authorities have no liquidity, which are compounded by extraordinary procedures to temporary freeze administrative action.

- **1st Report on the demand for electricity – Survey on the cost of electricity paid for by companies in the city and province of Milan** (*Available In Italian only: 1° Rapporto sulla domanda di energia elettrica – Indagine sul costo della fornitura di energia elettrica pagato dalle imprese sulla piazza di Milano e Provincia*)

The report was prepared by REF for INDIS-Unioncamere and the Milan Chamber of Commerce and published in June 2007. It photographs electricity consumption by SMEs in the city and province of Milan and quantifies savings made available by the transition to the free market. The survey analyses different aspects of the supply of electricity to firms: the characteristics of tariff

systems and the differences between the captive market (now the “protected” market) and the free market; variables which affect how electricity supply costs are paid for; the role of tax in the cost of electricity supplies paid for by firms, etc.

□ **Energy report** (*Available In Italian only: Rapporto energia*)

This report reviews the developments in the electricity and gas industries through the analysis of regulatory changes and the structure of the Italian and European markets. Medium-term market scenarios are also drawn up. Editions: 2002, 2003, 2005 and 2007.

□ **A network of services to support development: the role of local administrations** (*Available In Italian only: Una rete di servizi a sostegno dello sviluppo: il ruolo delle Amministrazioni locali*)

This report was published by Banca Intesa in October 2006. It examines the relationship, mainly at local level, between the role of public intervention and growth trends and the economic prosperity of local communities. The analysis looks at critical factors in the Italian economy and outlines the strong and weak points of public sector intervention in Italy on the basis of the current supply of services to citizens and enterprises and the current budget structures of local government authorities. The report also makes comparisons with other international experiences and examines the connection between international competitiveness and decisions to decentralise economies.

□ **The consumer goods industry in Italy** (*Available In Italian only: L'industria dei beni di consumo in Italia*)

The challenges of global competition and the prospects for growth. IBC, *Associazione Industrie Beni di Consumo* (Association of consumer goods manufacturers), September 2006. A report which analyses the production of consumer goods in Italy. Examination of the various sectors involved. The relative importance of sales markets and exposure to foreign competition.

□ **Water and sewerage services in Italy** (*Available In Italian only: Il servizio idrico in Italia. Rapporti 2003, 2004 e 2005*)

The report, prepared by REF for INDIS-Unioncamere, analyses the state of water and sewerage services both from a structural and operational viewpoint, with focuses on service quality indicators and on the cost structure of the industry. The 2003 report was published under the title “Water and sewerage sector tariffs”.

□ **Stock market report** (*Available In Italian only: Rapporto sul mercato azionario*)

Trends and the volatility of stock indexes, individual investors and managed funds, financing of companies on capital markets, corporate governance, developments in the organisation and regulation of securities markets. Annual reports, 1988-2005.

□ **Water services in the Emilia-Romagna Region Benchmarking reports for 2004 and 2005** (*Available In Italian only: Il servizio idrico nella Regione Emilia Romagna. Rapporti di benchmarking 2004 e 2005*)

INDIS, Unioncamere Regionale and Regione Emilia-Romagna, 2004 and 2005. The reports provide a benchmark analysis of the main structural and managerial indicators for local water companies operating in Emilia-Romagna region.

□ **Temporary agency work and training** (*Available In Italian only: Lavoro interinale e formazione*)

The report, presented in a conference held in Milan on April 14th, 2005, gives the main results of a survey on temporary work carried out under the initiative of Italian Ministry of Labour and Social Policies by a consortium including Irs, REF, Studio Aps, Enaip Lombardia, Ial Piemonte.

The study discusses several issues: the actual use of temporary help agencies by companies, the motivations of workers and companies, workers' perspectives and attitudes, organisational design and strategies following the approval of labour market reform, and the role of employers' associations, trade unions and institutions. A detailed picture is drawn of the current situation with an international comparison, which assesses training needs and the possible role played by public policies.

- **The reorganisation of the gas sector, the situation in 2004 – The distribution companies and the sales companies** (*Available In Italian only: La riorganizzazione del settore del gas al 2004 – Le aziende di distribuzione e le aziende di vendita*)

The study – carried out by REF Osservatorio Energia in co-operation with Anigas – analyses the gas sector in 2004, following the reorganisation brought about by the liberalisation introduced by the "Decreto Letta". The population of distributors is reviewed and their market strategies are examined in the report along with legislation for the sector and its consistency with European competition goals.

- **The smuggling of tobacco products: an economic and institutional analysis** (*Available In Italian only: Il contrabbando dei tabacchi lavorati: un'analisi economica e istituzionale*)

The report studies tobacco smuggling from an economic and institutional perspective. It reviews recent international experiences and countermeasures. Economic linkages between legal sales, consumption, income and prices are analysed in the Italian context. November 2004

- **Milan, a European capital?** (*Available In Italian only: Milano capitale europea?*)

A photograph of the structure of the economy in Lombardy and the Province of Milan: a review of the economic indicators and the sources. Report, prepared for the *Camera del Lavoro Metropolitana* (Metropolitan Chamber of Labour – a major labour union) of Milan, October 2003

- **Chambers of Commerce wages and employment structure – An analysis of 1998-2000 annual accounts** (*Available In Italian only: Retribuzioni e struttura occupazionale delle Camere di Commercio - Un'analisi dei conti annuali 1998-2000*)

A benchmark analysis of annual Chamber of Commerce accounts in terms of wage policies, career developments, employment structures and selection criteria.

- **ref. Forum on Corporate Disclosure – Guide to the disclosure of information to the market**

This guide contains a series of principles on disclosure designed to improve the quality of information provided by listed companies. The principles were drawn up on the basis of a general consensus that arose among those who took part in the Forum which drew on their practical experience and combined the existing legal obligations and regulations with international best practices.

- **Reports on wages and labour costs** (*Available In Italian only: Rapporti sulle retribuzioni e il costo del lavoro*)

This was published in 2000 as part of the series *Documenti Cnel*. The report provides analytical support for an examination and interpretation of important issues concerning the Italian labour market - incomes policies, wage differentials and collective bargaining - in the context of the European monetary union.

Publications

- **Survey of wages and labour costs in local public utilities companies**
(Available In Italian only: *Indagine sulle retribuzioni e il costo del lavoro nelle aziende dei servizi pubblici locali*)

Cispel report on wages and labour costs in local public utilities published for three years (for the years 1997, 1998 and 1999).

QUADERNI REF.

A series of working papers that present the results of basic research and preliminary studies.

Nr. 50 - Il ruolo delle regioni nelle politiche per le fonti rinnovabili nel settore elettrico (Tommaso Franci) - March 2009

Nr. 49 - Incentive Regulation and Investment Decisions of European Energy Utilities (C. Cambini, A. di Renzo, L. Rondi) - March 2009

Nr. 48 - Le esportazioni di energia elettrica: analisi dei recenti fenomeni di export verso l'estero ed elaborazioni di scenari previsionali per l'anno 2009 (V. Canazza, R. Bianchini, A. Groppi, M. Cirillo, A. Motz) - January 2009. The study was performed with assistance from Assoelettrica

Nr. 47 - Le criticità del mercato elettrico attuale e gli effetti delle congestioni di rete - Analisi dei risultati del mercato, riflessioni, spunti per proposte migliorative (V. Canazza) - June 2008

Nr. 46 - Politiche regionali e fonti rinnovabili (T. Franci) - March 2008

Nr. 45 - La tassazione delle scommesse: verso un'imposta sul margine lordo - Dossier (G. Barbera, D. Berardi) - September 2007

Nr. 44 - L'elasticità della domanda di tabacchi lavorati: un'applicazione al caso italiano (D. Berardi, C. Vignocchi) - July 2007

Nr. 43 - Analisi delle strutture di costo dell'industria idrica italiana - Le economie di scala, di densità e di scopo (N. Barabaschi) - June 2007

Nr. 42 - Le operazioni di M&A sui mercati energetici in Europa: fatti e prospettive (M. Cirillo, A. Di Renzo) - May 2007

Nr. 41 - Conflitti ambientali e infrastrutture energetiche: il caso dei terminali GNL in Italia (T. Franci) - May 2007

Nr. 40 - Progetti di investimento in centrali elettriche (A. Groppi) - May 2007

Nr. 39 - Il mercato del gas naturale in Italia tra liberalizzazione e regolazione (C. Checchi, A. Di Renzo, S. Traini) - April 2007

Nr. 38 - Stato e prospettive del settore del GNL (A. Bigano, A. Di Renzo) - April 2007

Nr. 37 - Tendenze del settore dell'energia elettrica in Europa (M. Cirillo, F. De Novellis, A. Di Renzo) - February 2007

Nr. 36 - Tendenze del settore dell'energia elettrica in Italia (F. De Novellis, A. Di Renzo) - February 2007

Nr. 35 - Stato di avanzamento dei progetti di investimento nel settore energia (a cura di P. Garrone, P. Saraceno) - February 2007

Nr. 34 - Incentivi agli investimenti in una nuova capacità di trasmissione: obiettivi, politiche e strumenti (a cura di A. Lorenzoni, P. Saraceno) - February 2007

Nr. 33 - Il "prezzo" per le famiglie della liberalizzazione elettrica (C. Checchi, A. Di Renzo) - February 2007

Nr. 32 - Il settore del gas naturale in Italia: il costo delle rigidità (C. Checchi, A. Di Renzo, S. Traini) - January 2007

Nr. 31 - The perspectives of development of Italian pension funds and the effects on the Italian and EMU area financial markets - A simulation model to 2050 (V. Ferraris, A. Marano, M. Mariani), January 2007

Nr. 30 - The underfunding of the US corporations defined-benefit pension plans (V. Ferraris, A. Marano, M. Mariani), January 2007

Publications

- Nr. 29 - Politiche regionali e infrastrutture energetiche (T. Franci), December 2006
- Nr. 28 - La normativa delle autorizzazioni per i progetti dei terminali di rigassificazione (A. Bigano, T. Franci, A. Groppi), December 2006
- Nr. 27 - La normativa delle autorizzazioni per i progetti delle centrali elettriche (A. Bigano, T. Franci, A. Groppi), December 2006
- Nr. 26 - Lo stoccaggio del gas naturale in Italia: regolazione, mercato e criticità (A. Di Renzo, S. Traini), December 2006
- Nr. 25 - Zonal pricing in the Italian Electricity Spot Market (F. Boffa, V. Pingali) – September 2006
- Nr. 24 – An empirically based model of the supply schedule in day-ahead electricity markets (S. Sapio), May 2006
- Nr. 23 - L'impatto dell'Emission Trading sul sistema elettrico italiano (S. Frontini, M. Leonardi), April 2006
- Nr. 22 – La concorrenza nei settori energetici: Elettricità e Gas, March 2006
- Nr. 21 - Deregulated Wholesale Electricity Prices in Italy (B. Bosco, L. Parisio, M. Pelagatti), March 2006
- Nr. 20 - Controriforme attive e resistenza passiva nei servizi pubblici locali. Possibili e pericolosi innesti della disciplina generale sulla disciplina settoriale del gas (L. Ammannati), July 2005
- Nr. 19 - Industrial relations and macroeconomic performance (C. Dell'Aringa), July 2005
- Nr. 18 - Sviluppo della concorrenza e politiche di liberalizzazione delle pubbliche utilità: il caso del gas, July 2004
- Nr.17 - The effects of pension funds' development on the financial markets in Italy, Germany and France (A. Marano), November 2003
- Nr.16 - Transmission rights allocation in the electricity industry (G. Squicciarini), September 2003
- Nr.15 - A Large Scale Unit Commitment Algorithm for Systems with Radially Connected Areas (L. Pappalardo e G. Pasini), June 2003
- Nr.14 - M&As nel settore elettrico in Europa: 1998-2002 (M. Pacillo), May 2003
- Nr.13 - Gli ordinamenti professionali a fasce larghe o "broad - banding"; l'esperienza in Gran Bretagna e in Italia (G. Della Rocca), April 2003
- Nr.12 - Market power and the power market: multiunit bidding and (in)efficiency of the italian electricity auctions, (B. Bosco, L. Parisio), March 2003
- Nr.11 - Reducing fiscal pressure under the stability pact, (F. De Novellis, S. Parlato), February 2003
- Nr.10 - I meccanismi di flessibilità nel mercato del gas: il trading in rete e i servizi di stoccaggio, (F. Sala, G. Squicciarini), June 2002
- Nr.9 - I modelli per la gestione delle congestioni in un mercato elettrico competitivo, (F. Guzzi), July 2002
- Nr.8 - La dismissione degli immobili pubblici: la lezione del passato e le novità della legge n.410, 23 novembre 2001, (S. Parlato, G. Vaciago), May 2002
- Nr.7 - Empirical analysis of electricity spot prices in European deregulated markets, (F. Bellini), March 2002
- Nr.6 - Market Power and the Power Market: Multiunit Bidding and (In) Efficiency of the Italian Electricity Market, (B. Bosco, L. Parisio), October 2001

Publications

Nr.5 - Technological bias and revenue shares: the Italian evidence, (C. Dell'Aringa, A.M. Franzosi, C. Vignocchi), October 2001

Nr.4 - Sistemi finanziari e finanziamento delle imprese innovative: profili teorici ed evidenze empiriche dall'Europa, (G. Petrella), May 2001

Nr.3 - Obiettivi e risultati della finanza pubblica italiana nel periodo 1995-2000, (L. Bernardi, S.Parlato), January 2001

Nr.2 - Un modello teorico di funzionamento per la borsa dell'energia, (L. Parisio), December 2000

Nr.1 - Un'interpretazione della borsa elettrica all'interno della teoria delle aste, (L. Napolano), December 2000

MACROECONOMIC ANALYSIS AND FORECASTING

REF analysts and experts have produced forecasts and studies of the Italian and European economies since 1977 and their forecasts are published in the periodical *Congiuntura ref.*. They are used by analysts, firms and government institutions as a point of reference and the REF team is regularly consulted by central government and Cnel for assessments of the Italian business cycle and economic policies.

REF participates on the panel of independent institutes that furnish the Italian Treasury with “consensus” forecasts each quarter, while it is one of the four Italian members of the Aiece (Association des Institutes Européen de Conjoncture Economique). It is also a member of EUREN (EUROpean Economic Network), a network of European economic institutes whose objective is to improve the analysis of the European economy through exchange of expertise and co-operation on research..

Products and specialist expertise:

- **Congiuntura ref.**

This service monitors the Italian and international economy. It consists of four forecasts published quarterly and twenty two fortnightly bulletins. The fortnightly bulletins provide an interpretation of short term trends based on indicators designed to forecast major variables and on an independent analysis of official figures by REF researchers.

- **Tempo Reale**

Inflation forecasts and estimates of Italian industrial production for the current month.

- **Telephone consulting**

Members of the REF research team can be consulted on the telephone by subscribers to Tempo Reale for interpretation and analysis of the main macroeconomic variables.

- **Macroscopio - Leggere la congiuntura**

A series of full immersion seminars designed to teach economic operators how to select relevant information for the analysis of macro economic problems so that they can deal more easily with market changes and customer demands.

- **Custom reports**

Analysis of the Italian and international economic situation with a focus on specific aspects of the macroeconomic situation, specially tailored to meet the needs of the individual client.

- **Forecasts and indicators**

Scenario simulations based on the hypotheses of clients, compared with base scenario forecasts and presented in formats requested by clients. The construction of indicators makes it possible to monitor macro and microeconomic variables of interest to clients and to predict short term trends.

- **Discussion seminars**

Seminars on issues affecting the Italian and international economic situation are held regularly at major companies and national institutions.

- **Local studies**

These focus on the specificities of the local environment in which companies operate. Analyses at local level of the main macroeconomic variables, macroeconomic indicators, wage differentials and inflation and of regional trends in consumption and sales.

A wide range of expertise

- **The impact of macroeconomic variables on corporate balance sheets**

Sensitivity analyses of how changes in interest rates and exchange rates affect the profits and operations of companies. Analyses of ways to hedge against risks.

- **Special studies**

Special studies and reports are regularly produced for clients on request to analyse specific aspects of the economic environment or to generate forecast scenarios for all the main macroeconomic variables.

FISCAL POLICIES AND LOCAL PUBLIC SECTOR FINANCE

Research and advisory activity in the field of public sector finance concentrates on factors which affect the composition of the main items of budgets and also on the impact that economic policies have on local communities, households, enterprises and economic growth.

The strong points of REF's research in the public sector finance field: monitoring public finances at local and national level; forecasts for the main items of budgets; calculating the effects of changes to budgets by administrations and the effects of fiscal and institutional reforms.

Experts at REF have furnished the Italian Parliament and the CNEL (National Council for the Economy and Labour – institutional body which advises parliament and government) with opinions and analyses for many years. Assistance is provided in the construction of public finance scenarios used to make forecasts of business cycles for the Italian economy. REF has acquired considerable specialist experience in this field in assessing pension policies, the impact of taxation on available household income and on company profits.

Over the last ten years REF researchers have developed skills in analysing trends in local public finance and it is now a leading expert in calculating the effects of fiscal federalism. The local finance team has constructed data banks and monitoring models for analysing the sustainability of local public debt, the effect of fiscal pressure on the decision-making of decentralised local governments, the effectiveness of the Internal Stability Pact and the consequences of decentralisation for local economic development.

REF has produced research studies and provided advisory services on these subjects to private sector operators and trade associations, both for national and international public sector institutions and its work is supported by a group of experts with longstanding experience in the sector.

Products and specialist expertise:

Annual Reports on Federalism:

These reports address both the legislation involved and the underlying economic and financial aspects of the move to federalism and they examine the phenomenon in Italy in the context of changes that have been and are being made in the rest of Europe.

Research concentrates on identifying the quantitative constraints on the implementation of fiscal federalism and empirical reports have been produced on international experiences. Policy prescriptions have been generated on some issues concerning the governance of decentralised government entities.

The issues addressed: the optimum design for internal stability pacts; the choice of VAT as a regional tax; the analysis of instruments for the control of members of local administrations for which reference was made to the Swiss case; the study of decision-making processes in a federal system with overlapping responsibilities; the mechanisms which determine public sector wages at a decentralised level; the risks and opportunities of managing welfare benefits at decentralised level.

Annual reports on decentralisation and local development

The reports are based on quantitative analysis of spending and resources at decentralised level with trends assessed using micro budget data. The studies examine how individual items of expenditure are treated in different local administrations according to the size of the administration, its location, the state of health of its finances and the socio-economic characteristics of the area. Monographs are produced on health services, public utility services and care services and on the role of decentralised administrations in co-ordinating and developing public sector investment projects in the country as a whole.

A wide range of expertise

Newsletter on local finances

REF produces two monthly news bulletins which comment on issues of current importance for local public finance, with particular emphasis on analysing the impact of national policies on local finances, on monitoring the principal budget indicators and trends for the cost and stock of local public debt.

Forecast scenarios and customised advisory services

These include: analyses and forecasts of the effects of fiscal policy on the structure of public administration budgets; assessment of the impact on operators; monitoring of decentralised public finance policies; quantification of the effects of fiscal federal on local budgets with a specialist focus on specific aspects in response to the demands of operators.

Assessments of the effects of economic policies on corporate balance sheets; changes in tax burdens and the impact on the self-financing capacities of enterprises and their profitability.

Ranking of decentralised entities – Construction of solvency indicators for monitoring macro and micro variables to give a rating of the debt sustainability for decentralised public administrations.

Discussion seminars

Seminars on the issues of national and local public finance are given regularly in major companies and national institutions.

PRICES AND SALES

The use of highly disaggregated data on prices and sales allows us not only to provide support in pinpointing the positioning of individual operators and in investigating the context in which they operate, but also to improve our interpretation of complex macroeconomic phenomena. The integration of these to activities is one of the distinguishing features of our approach, while our economic analysis is further strengthened by our use of special in-house designed software tools.

Products and specialist expertise:

● Price analyses by sector, geographical area and method of distribution

Two areas of expertise come into play here: i) study of how costs have a knock on effect along supply chains down to consumer prices (analysis of transmission mechanisms), ii) an in-depth knowledge of how official price indexes are affected by actual prices.

We have constructed numerical indices from various price archives. Examples include the following:

- a raw materials purchase price index, based on chamber of commerce price surveys, produced in co-operation with the Milan Chamber of Commerce;
- a method of adjusting fruit and vegetable prices for seasonal fluctuations;
- a sector matrix analysis, currently under experimentation by the City of Milan as part of price observatory activities.

We have also developed indicators and predictors for trends in labour and raw material costs.

A careful study of petroleum derivative markets has enabled us to provide forecasts of international quotations, producer and consumer prices for heating and Diesel oils and fuel oils.

Our use of appropriate econometric tools also enables us to offer forecasts for a wide range of different goods and services. The main results of this activity are published in the quarterly periodical *Tendenze dei Prezzi* produced on behalf of INDIS-Unioncamere.

● The use of local information as input for a Price Observatory

Prices have received growing attention since the changeover to the euro, driven by the perception that **prices are rising** faster than the official figures recorded in the statistics. The need has therefore arisen for greater information to give a better understanding of the nature of the phenomena as input to economic policies. In REF's opinion, based on long experience, **monitoring and moral suasion** are by far the best instruments to use to exert pressure to contain growth in prices.

REF is currently offering its services to support the proposed "Local price observatories". These consist of performing the necessary analysis required to provide information of use to consumers and those involved in economic and commercial policy-making. It is work which **does not require** further data acquisition activity.

The observatory could in fact function by making use of information already acquired. The most important source of data, although not the only one, is already available at the municipal statistics office of provincial capitals. The analysis must be performed on the basis of an analytical breakdown of the "**markets which form**" prices. This also opens up the way to the analysis of **supply chains**, a line of research recently developed by REF in some sectors currently in the limelight.

These proposed services are already produced regularly at national level by the INDIS-Unioncamere "Prices and Markets" with REF fulfilling the role of Technical Secretariat. This activity provides a fundamental **point of reference** for comparing the results of local analysis with the national average which is already available.

A wide range of expertise

Work performed includes support for the Chamber of Commerce of Monza and Brianza in monitoring prices on goods and services in the municipality (price surveys for mass consumer goods and services). The establishment of a local observatory is a not standardised operation. The most important components were the identification of an effective and robust methodology and the presence of a recognised and independent name to certify the operation. Although it was not a full across the board price survey, it included those goods which are important in terms of consumer perceptions, which are typically low unit value goods which are purchased frequently.

● Electricity: methods of surveying wholesale prices

A method was devised for the Chamber of Commerce of Milan for the measurement of electricity prices practiced by generators, wholesalers and sellers to medium and small sized enterprises in the city and province of Milan. Typical consumer profiles were identified which were representative of SMEs in Milan divided by: consumer class, supply voltage and other characteristics of contracts (e.g. the presence of a single or multi-hour price and the regulation of electricity withdrawals). The prices surveyed are for both fixed price and index linked price contracts. The survey is quarterly and the prices surveyed are published in the Mercuriale of the Chamber of Commerce of Milan.

● Tobacco products: tax legislation and revenues, trends on the Italian market, case studies

A plurality of interests come to bear on the issue of taxation on tobacco: those of the industry, distributors' associations, the ministries of economics and health, the antitrust authority and consumers. REF publishes a quarterly newsletter, the Tobacco Observatory, to monitor the economic factors underlying those interests.

● Business location models

Specific models to support decision making for business and urban planning have been drawn up jointly by engineers and economists.

The performances of individual sales outlets are compared to the type of supply and demand for given geographical areas by estimating the factors that govern purchasing attitudes.

We perform economic impact studies for the opening of new businesses and study the simulation scenarios for optimum geographical location as well as assisting local government in planning business development without upsetting urban and regional equilibriums.

We used this expertise to jointly develop a model to support planning decisions with the *Scuola Superiore del Commercio, del Turismo e dei Servizi*. We also work with the school to offer training courses on the subject.

● Commercial sales: distribution channels and regional and provincial specificities

Our company possesses significant know-how in the analysis of commercial distribution and prices by sector. We have provided a service of retail sales analysis by geographical area on behalf of Unioncamere (chambers of commerce) for many years.

This well established line of activity consists of exploring total trends for the foodstuffs market on the basis of data acquired from market sources and with the assistance of econometrics techniques. Analysis is by value and volumes in the four geographical areas of the country (North West, North East, Centre, South and Islands), with a split by size for the mass retailers. The analysis assesses the sales performance of major mass retailers in nineteen regions and identifies the lines along which sales and consumption are moving. Regional and macro area trends are discussed in the two monthly publication Vendite Flash.

Analysis is also performed with a regional focus. Studies of trends for mass retail sales constitute a very useful source of information on structural changes in progress in the retail

A wide range of expertise

industry. This degree of detail is particularly useful to the Regional Observatories for commerce in achieving their institutional objectives.

The experience we have acquired over the years enables us to provide very valid support in constructing, organising and interpreting the statistics and indicators at the provincial level required to identify sales trends for mass retail distribution (hypermarkets and supermarkets). The statistics are acquired on the current network, which means they are based on the turnover of all sales outlets. The coverage of the survey is broadened every six months to include turnover generated by new retail outlets.

REF has assisted the Emilia-Romagna Observatory on prices and tariffs since 2004 and performs two monthly monitoring activity for it.

ENERGY MARKETS

REF studies the liberalisation and regulation of the energy market with a particular focus on institutional aspects and changes in the industry's structure. Opportunities for firms in the sector, for consumers and for the economy in general are studied using original analytical tools.

REF performs studies and research upon request, both on regulatory issues and short- to medium-term price forecasts and developments in the prices and structure of the electricity and gas sectors. The development of renewable energy sources and environmental policies constitute an essential factor for constructing scenario forecasts.

Products and specialist expertise

● Osservatorio Energia

REF set up an Energy Observatory in 1999 funded by producers, consumers and distributors of energy products as well as merchant banks. The following services are available to subscribers:

- ❑ **Newsletter Osservatorio Energia:** a monthly periodical that analyses the energy sector in Italy and Europe. Topics dealt with include: legislation to open up energy markets, changes in corporate structure of major energy companies and the problems of creating a regulated market, tariff trends and price levels in European power exchanges. It also provides forecasts of Ct and Qe (regulated wholesale prices of electricity and natural gas).
- ❑ **Previsivo Osservatorio Energia:** four monthly publication on medium-term scenarios of the Italian electricity market, on the basis of simulations performed using Elfo++, the new dispatching model of REF. The analysis regards: changes in demand and supply, forecasts of competitive wholesale prices (national and zonal), possible effects of strategic behaviour, given the structural and legislative conditions
- ❑ **Rapporto Energia:** publication that reviews the developments in the electricity and gas industries through the analysis of regulation and the structure of the Italian and European energy markets. Medium-term market scenarios are also generated.
- ❑ **Rapporto Energia Verde,** reviews the developments of the renewable electricity sector in Italy and provides readers with short term scenarios for the green certificate market.
- ❑ **Data base,** REF databases are constantly updated and available free-of-charge
 - **EI-da:** main indicators for the trends on European electricity spot markets.
 - **Gas-da:** main indicators for the trends on transactions on European hubs and on gas exchanges.
 - **M&A:** mergers and acquisitions in the electricity and gas sectors.
- ❑ **Gas distributors:** access, under special terms, to the list and main indicators of the Italian gas distributors.
- ❑ **Gas suppliers:** access, under special terms,, to the list and main indicators on the Italian gas suppliers.
- ❑ **Discussion seminars:** on changes in legislation and regulations.
- ❑ **Research papers:** they discuss both theoretical and applied topics relevant for the new Italian energy market

● Regulatory analysis

REF takes part in public debate through the Osservatorio Energia and explores client-specific solutions with regard to the legislation in force or in the pipeline, assessing its impact on sectors and firms.

A wide range of expertise

● Market structure analyses

REF tracks all the developments in the structure of the electricity and gas markets. The main results of this activity are reported in *Rapporto Energia*. REF has established and updates a database including information on ownership, geographical location and technical and economic performance of electricity generation plants and import infrastructures for natural gas. REF performs a quarterly analysis of the corporate balance sheets and results of the main European players in the electricity and gas sectors.

● Elfo++, REF's new dispatching model

Elfo++ is REF's new model for day-ahead market simulation and electricity price forecasting. Elfo++ has the following features:

- time horizon is variable from short term to medium and long term (one week, one month, one year, several years);
- the Italian electric system, modelled as default, can be extended to include European countries;
- competitors bidding strategies are explicitly modelled;
- the interface, based on an Access DB, is equipped with very advanced functionalities;
- the robust algorithms are reliable and execution is very fast;
- the post-processing of simulation output to improve results.

REF provides its clients with a reliable tool which easily, efficiently and fully meet their requirements. Elfo++ is used by REF experts to generate forecast scenarios for the electricity market.

● Structure of the electricity spot market

The Osservatorio Energia has developed a set of models for the analysis and evaluation of the performance and efficiency of electricity spot markets.

Theoretical papers on the subject by REF researchers and consultants are currently available on the REF web site. REF is a participant in public debate on the design of the gas market.

● Forecasts of wholesale electricity prices

Elfo++, REF's optimum dispatching model, simulates trends on electricity markets under conditions of perfect competition or in the presence of competitor bidding strategies. REF integrates the results obtained using market simulations with wholesale price forecasting models which take into account the strategic behaviour related to structural factors (concentration of supply, local monopolies) and rules governing market power.

● Support to investors

REF price forecasts for electricity, green certificates, market structure, fuels and gas are used to evaluate the attractiveness of investments in the Italian electricity sector (power plants, merchant lines, transmission networks), in the gas sector (storage and LNG re-gasification infrastructures, and import pipelines) and in new technologies (off-shore wind, carbon capture and storage). REF scenarios for developments in gas supply and demand, market structure and regulation are used to assess the advantages of investments in the electricity and gas sectors under both regulated and competitive conditions. The assessment is performed using discounted cash flow methods.

● Analyses and forecasts of electricity and gas demand

Electricity and gas demand is studied in the short, medium and long term. REF has conducted and is conducting surveys on demand on the free market both in the electricity and gas sector on behalf of some of its clients. It has identified criteria to classify different types of users on the basis of a number of characteristic parameters: the profile, variability and predictability of the demand, the type of response to business cycle developments, etc.

A wide range of expertise

● Analysis of oil and gas markets, fuel price forecasts

Fuel price forecasts up to 12 months ahead are prepared using econometric models. These anticipate changes in parameters set by the regulator and through gas release prices.

● Italian thermoelectric plant average production cost: ITEC™

ITEC™ is an index of the average cost of thermoelectric production constructed by REF and Morgan Stanley using Platts data updated monthly on the basis of changes in fuel prices. ITEC™ is useful as a benchmark for long-term contracts. ITEC™ ensures reliability, transparency, simplicity, faithful cost reflectivity and independence. It is an index which uses underlying commodities that are very liquid on international markets, thereby guaranteeing contained hedging costs. The ITEC™ index is updated at the end of each month and historical values of the index are published in the financial daily, *Il Sole 24 Ore* together with daily updated first and second line forward values. The forward value of the index for the following month is also updated and published weekly in *Quotidiano Energia*.

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● Green energy, energy efficiency and emission trading

REF monitors legislation on renewable energy sources with particular attention to developments on the market for green certificates. It uses a special model to simulate long term green certificate prices under different hypotheses relating to developments in renewable sources and to regulatory contexts.

Issues related to the creation of markets for emissions and energy efficiency certificates are analysed along with Italian compliance with international agreements. Analyses are also conducted on developments on emissions trading markets at international level, on possible options for the second period and on what happens after 2012. Proposals for Italian legislation and changes to it are tracked constantly and the impacts are assessed in terms of the achievement of objectives and the consequences for the energy sector. Studies on the economic and environmental impact of fossil fuels are performed for individual clients.

● Training for clients' staff

REF provides courses and lectures for companies and their staff, structured according to the needs and requests of each client, on the following topics:

- understanding the liberalisation processes in the energy sectors: from economic theory to policy implications;
- markets for electricity and gas, the functioning of electricity spot markets and markets based on bilateral negotiations, dispatching management and congestion issues, markets for derivative products;
- regulation in the age of liberalization: the role of the regulatory and antitrust authorities, regulation methods, price caps and tariffs.
- methods for modelling and forecasting electricity demand.

● Company strategies

REF follows and interprets the strategies of the main players on European and Italian energy markets by constantly updating its M&A and gas distributors database and by analysing corporate financial statements.

WATER SERVICES

REF studies the liberalisation and regulation of the management of water and sewerage services in Italy with a particular focus on institutional aspects and changes in the structure of the industry. It uses its own original tools of analysis to investigate the characteristics of firms operating in the sector, the quality of the service and water and sewerage companies more generally.

We have monitored the water and sewerage industry since 2000 jointly with INDIS-Unioncamere and as part of the *Acquachiara* – clear water – project in terms of operating equilibriums, investments and adjustment to tariffs set by CIPE (interministerial committee for economic programming) resolutions.

REF has participated since 2003 as a member of the convention agreement stipulated between the Region of Emilia-Romagna, the regional union of the Chambers of Commerce and INDIS to promote the development and exchange of information on the question of water and sewerage companies.

In that same year REF participated as a member of the CIPE-NARS (consultative nucleus for the implementation of guidelines for the regulation of public utilities services) working group providing support with statistics and economics in the studies on which the 2003-2004 tariffs were based. We also did complex work on the simulation of the effects of the new guidelines for regulating tariffs on behalf of CIPE-NARS.

REF is currently concentrating on the cost structures of the integrated water service and its characteristics (economies of scale and scope and efficiency) and aspects connected with regulating the quality of service delivered to end users.

REF is currently a participant, with the role of technical secretariat, in the activities of the inter-institutional working group for the analysis of accounting systems for reporting and regulating the costs of the Emilia-Romagna Region integrated water service.

Products and specialist expertise

● Activity to monitor the water and sewerage industry

This activity has enabled us to construct an overall picture of how the water and sewerage industry operates in Italy from an institutional, structural and economic-operational viewpoint. The issues currently addressed involve analysis of the industry cost structures and their characteristics (economies of scale and scope and efficiency). Products and services include the following:

- **Database** – given the need to set up a system to acquire information on service providers, a complete database was created designed both to organise the information in possession of the chambers of commerce and to implement specific micro-economic analysis of the characteristics of the water and sewerage companies.
- **Annual Report** – This constitutes the natural conclusion to each year of study, The following subjects are addressed with greater attention given to the important issues of the moment:
 - the latest news on **regulation**: impact and application;
 - the Italian scenario for water and sewerage companies from the viewpoint of the characteristics of the user base and the **plants** managed;
 - the Italian scenario of plants from an **economic-operating** viewpoint;
 - fundamental aspects of the **quality of service**;
 - structural characteristics of the industry.
- Support for **regulatory activity** – with its long years of experience and the wealth of information available to it REF works with the bodies responsible for regulating the market.

A wide range of expertise

- **Transition regime** - REF provided support to the work of the CIPE-NARS working group for studying the effects of the *New guidelines for tariff regulation of water and sewerage services in the transition phase*, with a study designed to describe the Italian scenario over the three-year period 1998-2001. It also did work to simulate the effects of the 2003-2004 tariff intervention.

Normalised method – The reform of national legislation governing water utilities, which started with the Galli Law in 1994, opened up the way for a new line of study concerning the impact of liberalisation on the industry and the implementation of the new tariff rules, known as the *Normalised Method*. Two major subject areas were examined to support regulation activity started by the Emilia-Romagna Region. This work then led to the definition of methods to determine a cost efficiency factor and to estimate the WACC for the integrated water service. The cost structure for the industry is analysed using established methods found in the literature, which are partly the same as those applied in practice by OFWAT.

● Benchmarking analyses

REF started a line of research designed to construct a benchmarking analysis of the Italian water and sewerage industry. To achieve this single companies, while remaining completely anonymous, are analysed within a homogeneous group of companies and they are only considered in relation to the overall Italian context at a later stage.

- **Database** – this can be partitioned on the basis of the different characteristics of the companies and the user base supplied. The analyses conducted to-date have used the dimensions of the user base or the geographical characteristics of the area (regions or macro-areas) as discriminators.
- **Annual Reports:**
 - for a number of years the report on the Italian industry presented a comparative analysis of different groups of homogeneous companies;
 - the report on the operations of water and sewerage companies in the Region of Emilia-Romagna is based on a comparison between the operation of the regional and the national service.

● Quality of the service

The quality of the service delivered to users is a fundamental factor for both regulation and the provision of the service itself. Activity to monitor service quality commenced recently. This collection of information contains the main features of the customer charters of a sample of companies. It was therefore possible to correlate operational factors with the capacity to provide a high standard of quality and therefore to simulate a mechanism for rewarding quality to be used in tariff regulation.

● Consulting activity

REF provides consulting services to businesses:

- **Compilation of forms** - assisted by external consultants REF supports small to medium size operators in interpreting and implementing government tariff increases.
- **Customer charters** - REF provides a service for drafting and renewing customer charters for operators.

Personnel training - REF performs refresher and training activity on regulatory issues, the compilation of the relative forms and how to draft customer charters.

WAGES AND COLLECTIVE BARGAINING

REF has been researching and consulting on labour market issues for many years now. This balance between research and consultancy is a specific feature of our approach.

We have performed research on mechanisms that determine wage and employment levels and on industrial relations agreements formulated under the 1993 income policy framework and subsequent amendments to it. Clients who have commissioned recent research include: Cnel, Unioncamere, Isfol and Cesos.

In our work we have provided consultancy to firms, central and local government administrations and employers associations on collective bargaining at sectoral and local level. It has also regarded personnel planning, design of occupational profiles and the analysis of job roles in firms and public administrations.

Products and specialist services:

● Wages, competitiveness, employment prospects

Labour costs, wage and productivity trends in Italy and abroad. Monitoring of collective bargaining in the major sectors. Wage trends by sector, firm size and geographical location. Medium-term employment prospects by sector and region. Analysis of the main trends in technological development. Terms of trade and factors of competition.

● Bargaining, industrial relations and training in negotiation

Consultancy on the actual application of national labour contracts. Assistance in reaching supplementary industrial relations agreements. Simulations of future wage costs. Optimal occupational composition, career profiles, labour force stocks and flows. Quantitative and qualitative monitoring systems. Training and assistance in negotiating local labour contracts. Design of organisational charts, job profiles and incentive schemes.

● Benchmarking

Benchmarking analysis for chambers of commerce, municipalities, local offices of central government on: wage policies, career developments, employment composition, selection criteria, roles of various parties, etc.

INTERNATIONAL COOPERATION AND TECHNICAL ASSISTANCE

REF has acquired vast experience over the years in the management and implementation of co-operation and technical assistance projects and it has established a solid network of international experts which allows it to respond effectively to a broad range of demands with great expertise.

The macroeconomic, actuarial, demographic and tax skills of REF researchers were employed on behalf of the World Bank to analyse the medium term performance of the Albanian pensions system and to draw up possible scenarios for its reform. Advice on organisational aspects was also provided in an institution building project for the Palestinian pension system.

REF has also acquired great experience in this area through the European Union Tacis programme of technical assistance in which it was responsible for the "Armenia Economic Trends" project and for the publication of the same name. Later it provided technical assistance on statistics for the central banks and national statistics offices of various countries in Eastern Europe and Central Asia.

REF has provided assistance in a wide variety of fields (statistics on direct foreign investment, business registers, structural and short term statistics, energy regulation) and directly managed the EU statistics programmes 8, 9 and 10.

REF experience covers a large number of countries: Albania, Moldova, the Slovak Republic, Romania, Hungary, Ukraine, Armenia, Azerbaijan, Georgia, Kazakhstan, Turkmenistan, Uzbekistan.

Products and specialist expertise:

● Technical assistance on statistics

Support and assistance for data collection, treatment, analysis and dissemination. Sampling theory and assistance for sample surveys. Assessment and analysis of data availability, quality and compliance with EU and international standards. Advice on policies for improving data quality. Organization of training activities and study visits.

● Technical assistance in the energy field

Analysis of the structure and regulation of energy markets.

● Country analyses

Reconstruction and interpretation of the trends for the most significant variables that describe the economic dimension of a country. Interpretation of the social and political context. Study and creation of indicators. Analysis of the general economic situation with a focus on structural factors.

● Evaluation of economic policies

Analysis of the effects of monetary, fiscal and exchange rate policies on the economy as a whole and on individual sectors. Assessment of policy options.

● Evaluation of structural reforms and welfare policies

Analyses of the main reforms in the field of social protection policies starting from an assessment of economic sustainability and equity issues regarding those affected by the reform.

SENIOR ECONOMISTS

● Carlo Dell'Aringa (Chairperson)

He obtained his degree in Political Sciences at the Catholic University of Milan and a D. Phil. in Economics at Linacre College in Oxford. He is professor of Political Economy at the Catholic University of Milan where he directs the Centre of Economic Research on Labour and Industry (Creli). He was a member of Eale (European Association of Labour Economics); he is a member of the steering committee of Iira (International Industrial Relations Association) and chairs Aisri (Italian Association for the Study of Industrial Relations). He was President of Aran (State Agency for Collective Bargaining in the Public Sector) (from 1985 to 2000) and of Isfol (National Institute for research on labour policies and vocational training with supports the Italian Ministry of Labour) (from 2000 to 2004).

● Pia Saraceno (Managing Director)

She obtained her degree in Economics at the Bocconi University and specialised in development economics at Cambridge in the U.K. She joined IRS in 1976 after a period working for Montedison and became a director in 1980 and president between 1998 and 2000. She set up and directed the IRS forecasting unit, the Energy Observatory and organised activity in the field of research and technical assistance for transition economies. She has participated in academic life giving courses at a number of different universities. In 2003, she became a member of the scientific committee of the Aiee – Associazione Italiana Economisti dell'Energia (Association of Italian Energy Economists).

● Donato Berardi (Partner)

He obtained his degree in Economics at the Bocconi University of Milan and works at REF on energy prices and inflation. The areas of research in which he specialises are the analysis of distribution systems and the determinants of inflation and microeconomic analysis of markets and price policies with a particular focus on the price cycle for water services, energy and tobacco products. He is the director of the Tobacco Observatory, a technical publication for analyses and developments on the tobacco products market. He has been an advisor on inflation to the institutional committee of the Indis-Unioncamere Prices and Markets Observatory since 1998 and he has been responsible for editing *Tendenze dei prezzi* (price trends), an Indis-Unioncamere quarterly publication of analyses and forecasts since 2000. He is a technical advisor on the working group *Nucleo di Attuazione e Regolazione dei Servizi di Pubblica Utilità* (unit for the implementation and regulation of public utilities services).

● Canazza Virginia

She obtained her degree in Electrical Engineering at University of Pavia in 2000. After a short period as software designer for Groupe Schneider Electric, from 2001 to 2007 she worked at CESI Spa (Centro Elettrotecnico Sperimentale Italiano) as researcher and advisor in the field of Electricity Trading. In REF, since June 2007, she works as senior economist, conducting consultant activities on sectors of electricity, gas and renewable. She coordinates the development of models for analysis and simulation of the energetic markets and participates to the activities of the Energy Observatory.

● Claudia Checchi (Partner)

She obtained her PhD in Economics and Management at the Sant'Anna School of Advanced Studies in Pisa. She is currently conducting research into the question of market power and computational modelling of agents' behaviour on electricity markets. At REF she has been working for the Energy Observatory since 2001 on electricity markets with a particular focus on market liberalisation and market power.

● Fedele De Novellis (Partner)

He obtained his degree in Economics and Social sciences at the Bocconi University in 1991 and specialised in research into the general macroeconomics of the major industrialised countries, the analysis of economic policies and financial markets. He has written papers on inflation in Italy, on trends and determinants of labour costs and profit margins and on changes in the competitive positioning of the major industrialised countries. He is head of macroeconomic analysis and forecasting at REF.

● Mimma Giangrande (Partner)

She obtained her degree in Political Science at the Catholic University of Milan. She has worked at the IRS since 1973 and worked on the analysis of industrial structure in the machinery manufacturing, textile and chemical fibre industries until the end of the 1970's. She has worked on macroeconomic analysis since 1980 focusing on real variables at national and local level. She is head of customer relations and internal organisation at REF

● Mario Mariani (Partner)

He obtained his first degree in Economics and Commerce at the Catholic University of Milan and a master's degree in Economics from the London School of Economics. He has worked for the IRS since 1978 acquiring experience in various fields including macroeconomic analysis, the dynamics and organisation of financial markets and the development of transition economies. He has been responsible for day-to-day running of the "Stock markets and financial markets" group and has co-ordinated projects in the area of research and technical assistance for transition economies.

● Giangiacomo Nardozi (Partner)

He obtained his degree at the Bocconi University of Milan and continued his studies at the London School of Economics. He has taught at the Bocconi University, the University of Trieste and at the "Cesare Alfieri" faculty of the University of Florence. Currently professor of Economics in the faculty of engineering at the Polytechnic of Milan, he has written numerous essays and books on financial systems, on central banking and on stock markets and has performed research and provided consulting services to the EEC, the Italian Chamber of Deputies, the Treasury, the Bank of Italy, the Consob (Italian securities regulator), the Italian Anti-Trust Authority, the "L.Einaudi" organisation, the Agnelli Foundation and Assogestioni (Association of investment fund managers). He is now the academic director for stock exchange and financial market projects at REF, a position held at IRS from 1986 until 2000 at IRS of which he was chairperson from 1992 to 1994. He is currently deputy chairman of Banca Imi and also a leader writer for Il Sole 24 Ore.

● Giacomo Vaciago (Partner)

He obtained his degree in Economics and Commerce at the Catholic University of Milan and specialised at Oxford in the U.K. where he has returned several times as a visiting fellow. He has written mostly on monetary economics and more recently on economic policy and government activity. From 1994 to 1998 he was Mayor of Piacenza where he was born. He has chaired a Ministry of Finance Commission for the sale of public property and he has worked at the cabinet office on the reform of public utilities. He is currently working on research in the energy sector and on public utilities. He is Professor of Economics at the Catholic University of Milan and has been a leader-writer for Il Sole 24 Ore since 1983.

● Cesare Vignocchi (Partner)

He obtained his first degree in Economics at the University of Modena and a master's degree in Economics at University College London. He specialises in: econometric analysis of pricing mechanisms, models for monitoring wage dynamics, the construction of index numbers, wages and efficiency in public utilities. He has been the technical head of the Indis-Unioncamere observatory on prices and markets since it was set up. He has been working with Aran since 1996 focusing on factors determining wages in the public sector, with specific applications for autonomous territories in Italy. He has published various essays and presented papers at Eale conferences.

RESEARCHERS

● Nicoletta Barabaschi

She studied in the faculty of Management Engineering at the Polytechnic of Milan, specialising in Financial Markets. She works on decision-making support models at REF with applications ranging from strategic analyses to regulation. At present she has made an in-depth study of management and structural aspects of public utility services with a specific focus on integrated water services. Areas of interest include the analysis of distribution systems, the microeconomic analysis of markets, tariff policies and statistical sampling theory.

● Giovanna Barbera

She has a degree in Economics and Commerce from the Faculty of Economics of the Bicocca University of Milan and was awarded a Masters Degree in Finance and Risk Management from the same university in 2004. She is an analyst of the international economic situation at REF and is one of the editors of the periodical *Congiuntura ref.*. She also performs research into the determinants of inflation and is one of the editors of the Unioncamere quarterly publication of forecasts and analyses, *Tendenze dei prezzi* (price trends).

● Marina Barbini

She graduated in Economics, specialising in business, labour and innovation at the Catholic University of Milan. She has worked at REF since April 2008 in macroeconomic analysis and forecasting area with a particular focus on issues concerning the labour market and immigration.

● Roberto Bianchini

He graduated in Finance at the Bocconi University in 2004 and he specialized in financial economics at University of Louvain (Belgium). At REF he works on commodities and energy markets with focus on financial aspects.

He also works at the Bocconi University as a teaching assistant on the courses *Corporate Finance* and *Advanced Corporate Finance* and performs research there on corporate finance.

● Mario Cirillo

Mario Cirillo graduated in business management in March 2002 at “d’Annunzio” University, Pescara, Italy and was awarded a Masters Degree in Environmental Economics and Management in December 2005 from the Bocconi University of Milan. He had previously worked as a research officer for the Environment and Energy group at SPRU, University of Sussex, UK. He currently works for REF’s Energy Observatory on the regulation of electricity and gas sectors and on the functioning of environmental markets.

● Valentina Ferraris

She obtained her degree in Economics and Social Sciences at the Bocconi University in 2000. She is currently working on macroeconomics and forecasts of the Italian economy at REF. She has written reports and papers on industrial sectors, foreign trade, the labour market and pension systems.

● Angelamaria Groppi

Graduated in Nuclear Engineering at Politecnico of Milano, in 2008 she obtained her PhD with honours in Management and Economics at the same University with a thesis entitled “Investments in the power generation sector: an empirical analysis of siting policies”. At REF she has been working for the Energy Observatory and deals with consultancy and research activities in the electricity market.

- **Alessandra Motz**

She graduated in 2005 in economics at the Scuola Superiore Sant'Anna, Pisa, and obtained her master degree in 2008 in economics and management of public administrations and international institutions at the Bocconi University. She currently works for the Energy Observatory at REF on the regulation of the natural gas market.

- **Francesca Signori**

She graduated in economics and management of public administration and international institutions at the Bocconi University in 2007, where she attended courses on public policy. She works on market prices at REF, with a special focus on the services market.

- **Sara Signorini**

She graduated in Economics at the University of Pavia in 2005 and worked as a research analyst at the European Central Bank in the Statistics and Fiscal Policy Divisions. She works on public finance related subjects at REF, with a special focus on local finances.

- **Samir Traini**

He obtained a degree in Economics from the Giorgio Fuà Faculty of Economics at the University Polytechnic of the Marches, specialising in financial institutions and markets and a master's degree (2004) in economics and international finance from the Catholic University of Milan. He is currently working on the analysis of electricity and natural gas markets at REF.

OFFICE STAFF

- **Lucia Caiazzo** - Administration

- **Dalia Imperatori** - Editing, layout, graphics, IT systems and communications

- **Angela Berto** - Library and documentation

REF ECONOMISTS HAVE WORKED WITH:

A2A
Abi
Abn Amro
Acaop
Acea
AceaElectrabel
AceaElectrabel Produzione
Acquedotti Vi.cli.Sa.
Acquirente Unico
Actuarial
Adiconsum
Adriatic Lng
Aedes
Aem Milano
Afv Sim
Agenzia delle Entrate
Agsm Verona
Aiaf
Aice
Aiget
Aimag
Akros Finanziaria
Alitalia
Alpenergie
Ambrosetti Ssi
Amps Parma
Ania
Anie
Anigas
API Raffineria di Ancona
Aran
Asja Market
ASM Brescia
ASML Az. Ser. Mutisettoriale Lombarda
Assbank
Assoelettrica
Assogestioni
Assonime
Assoreti
Assosim
Atel
Autorità Garante della Concorrenza e del Mercato
Autorità per l'Energia Elettrica e il Gas
Autostrade
Banca Commerciale Italiana
Banca di Roma
Banca Intesa
Banca Nazionale del Lavoro
Banca Popolare dell'Alto Adige
Banca Popolare di Milano
Banca Popolare di Novara
Banco Ambrosiano Veneto
Banco di Desio
Banco di Sardegna
Bank of America
Beauty Business Holding
Betfair Ltd
Between
BKW Italia
Blue Meta
Bnp Pasfin Sim
Borsa Italiana
Borsa merci telematica italiana
British American Tobacco Italia
British American Tobacco Representation Brussels
Caboto
Camera dei Deputati
CCIAA Milano
CCIAA Monza Brianza
Capitalgest
Cassa di Risparmio delle Province Lombarde
Centro Energia Gas
Centromarca
Centrosim
Cesd
Cimo Sim
Citibank
CKW Ag
Cnel
Cnr
Cofiri
Cofiri Sim
Commissione europea
Confesercenti
Confindustria
Confservizi Cispel
Confservizi Lombardia
Coop Italia
Crediop
Credit Suisse First Boston
CVA
CVA Trading

Our clients



Dalmine Energie
EDF Energia Italia
Edipower
Edison
Editoriale Largo Consumo
Efibanca
EGL Italia
Electra Italia
Electrabel
EnBW Italia
Endesa Italia
Enea
Enel
Enel Trade
Energetic Source
Eni
EniPower
Enia Energia
Enron
Entergy Power Services Italia
E.ON Energy Project GmbH
E.ON Italia
E.ON Italia Produzione
E.ON Produzione
Eptasim
Erg
Erg Power & Gas
Ersel Sim
Esperia
Euler Hermes SIAC
Euromobiliare
Eurostat
Federutility
Ferrero
Fiat
Finbieticola
Formez
Fortis Bank
Gaz de France
Giubergia Ubs Warburg
GME
Gruppo Iride
Hera Trading
Ice
Icon-Institut
IDC Southern Europe
Ifel
Il Sole 24 Ore
ImiSigecoSim
Indis
ING Sviluppo
Innowatio
Inres
Intermonte Securities Sim
International Power
Intersim
Intesa Asset Management
Intesa Sanpaolo
Investindustrial Holding
IPI
Iride Energia
Iride Mercato
IP Maestrato Holdings
Isfol
Istituto Bancario S.Paolo di Torino
Istituto Guglielmo Tagliacarne
Istituto Mobiliare Italiano
Italcementi
Italgas
Italgen
Italia Zuccheri
Italtrading
Kimberly – Clark
Mediocredito Centrale
Meliorbanca
Mercados Energy markets group
Ministero del Lavoro e delle Politiche Sociali
Ministero dell'Economia e delle Finanze
Morgan Stanley
Mpe
Multiutility
New Service
Pirelli
Politecnico di Milano
Proaqua
Provincia di Caserta
Provincia di La Spezia
Ras
Regione Emilia Romagna
Rezia Energia Italia
Riello Industries
Scuola Superiore del Commercio, del Turismo e dei Servizi
Sempra Trading
Senato della Repubblica

Our clients

Sfera
Shell
Sipi
Snia Fibre
Sofipa
Sogeiva
Sondel
Sopaf
Sorgenia
Spa Ricerche
Statkraft Energi
Stogit
Techint Engineering
Telecom Italia
Tenaris Dalmine
Terna – Rete Elettrica Nazionale
Tirreno Power

Apr 2009

Tiwag
Unicredit Banca Mobiliare
Unicredito Italiano
Unioncamere
Unioncamere Emilia Romagna
Unioncamere Toscana
Unione Petrolifera
Università Bocconi
Università Cattolica
Università di Bologna
Università di Pavia
Università di Piacenza
Università Milano Bicocca
WKN Windkraft Nord Ag
World bank
World Energy