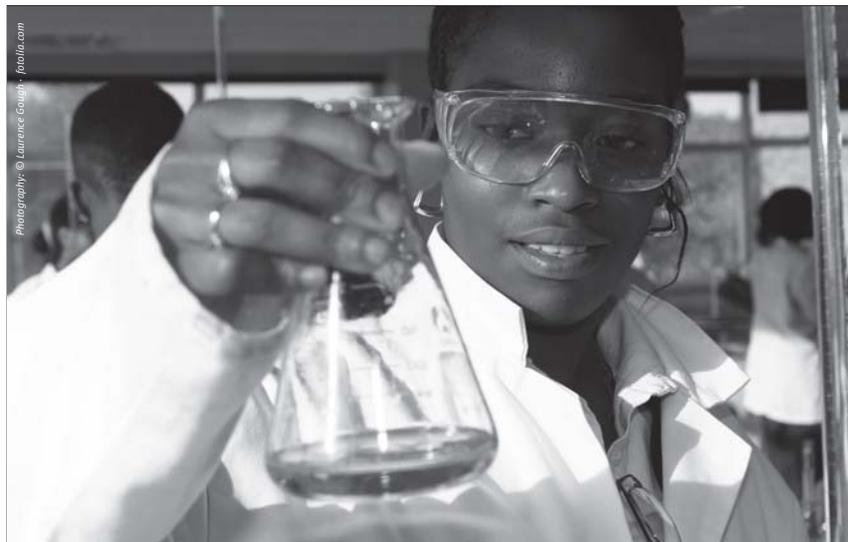


with M&A Report

# International Mobility of Researchers Is Profitable for Home and Host Countries

*When researchers work for a period abroad, does this encourage a loss of technological know-how to foreign countries? Or does it instead result in a net knowledge gain for the researcher's home country? Such questions are the subject of lively debate among policy makers and the public. A recent study undertaken by the Centre for European Economic Research (ZEW) investigates the role played by the international mobility of scientists in the reciprocal transfer of science and business technology between researchers' countries of origin and host nations.*



The ZEW study (Discussion Paper No. 08-082) is based on a broad survey of scientific researchers at 113 German universities and 231 non-university research institutes. All of those surveyed were active in research fields in which the dissemination of technical knowledge – R&D findings for instance – is possible. Respondents were involved in fields such as environmental and agrarian science, chemistry, medicine and engineering, among others.

The study first evaluated how often and for how long the surveyed scien-

tists had conducted research abroad. Three main groups were identified. The first group included individuals who had frequently conducted research abroad for shorter time periods (that is one month to one year). The next group consisted of individuals who had undertaken few research trips abroad, but for longer time periods of at least 12 months or more. The third group was made up of individuals who had hardly performed any research abroad. This third group only comprised some eleven per cent of the scientists inter-

viewed, whereas the remaining survey participants were divided more or less equally among the first two groups.

## Long Stays Promote the Flow of Knowledge to the Host Country

The study then explored the factors that had led the interviewed German scientists to be involved in technology transfer to Germany or to another nation. The findings show that frequent, brief stays abroad more frequently result in technology transfer to Germany. In contrast, less frequent but longer-term stays abroad are more likely to be associated with technology transfer from Germany to host nations. This is primarily because visiting scientists are more deeply embedded in the research process abroad during longer visits, and their hosts are better able to take advantage of their knowledge. During shorter visits, this is not the case.

### IN THIS ISSUE

|  |   |
|--|---|
| International Mobility of Researchers Is Profitable for Home and Host Countries .. | 1 |
| Reverse Mortgages Will Gain in Significance for German Homeowners ...              | 2 |
| Ex ante Regulation Increases Competition in Grid-bound Markets .....               | 3 |
| The Influence of Oil Prices on the German Labour Market Is Underestimated .....    | 4 |
| Recession Affects Germany's Small and Medium-sized Enterprises .....               | 5 |
| Tax Incentives Drive Charitable Giving .....                                       | 6 |
| ZEW Conference .....   | 6 |
| ZEW Financial Market Data .....  | 7 |
| Inside ZEW, Publications .....   | 8 |

## RESEARCH FINDINGS

According to the study's findings, there is no basis in fact for the fear that international mobility inevitably leads to a net loss of knowledge from the researcher's home country. Some 60 percent of the scientists who indicated that knowledge had been transferred over the course of their stay abroad also said they had brought back significant new knowledge to Germany from

their host countries. Technology transfer between the country of origin and host country predominantly operates as a reciprocal process.

From a German perspective, the results suggest that positive effects of collaboration with enterprises and associated technology transfer can most likely be anticipated from frequent but at the same time brief research stays

abroad by German scientists. Conversely, it may be useful to encourage foreign scientists to spend longer periods of time performing research in Germany so that they can be better integrated into German research settings. This would as well improve opportunities for collaborative research with companies.

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## Reverse Mortgages Will Gain in Significance for German Homeowners

*There is a considerable potential for growth in the market for reverse mortgages in Germany because of the enormous real estate wealth held by older individuals. This is the conclusion of a survey of 170 financial market experts conducted by the Centre for European Economic Research in Mannheim (ZEW) in its monthly German Financial Market Survey, undertaken in collaboration with the mortgage provider ImmoKasse GmbH.*



Reverse mortgages enable owner-occupiers of private dwellings to purchase a mortgage and pay it back with the value of their property. This allows older homeowners with a low income to significantly supplement their monthly income or pension. During the term of the mortgage contract, the borrower retains ownership of the property and continues to live in the home. In contrast to a standard mortgage, with reverse mortgage products the interest and amortisation costs are deferred until the end of the contract. The costs of the mortgage are only paid following the death of the borrower, at which time they are settled against the value

of the property, or earlier, if the owner moves into a retirement home or sells the property. No additional collateralisation or security from other property or assets are provided. According to the opinion of the experts surveyed by the ZEW, the most significant hindrance to more widespread use of this new financial product in Germany is that consumers are scarcely aware or informed about its existence or function.

### About Four Million Homeowners

With more than four million homeowners in Germany who are 60 years of age or older, there is a large potential pool of customers for reverse mortgage products. The market is just beginning to take shape in Germany, however. Within Europe, there is already a well-established market for reverse mortgages in the UK, and rising demand is currently being witnessed in Spain, Sweden, Finland, France and – most recently – in Germany. Reverse mortgage products are especially attractive for individuals who have low income

levels, but are homeowners. Real estate represents 80 percent of the assets of Germans 65 years of age and older.

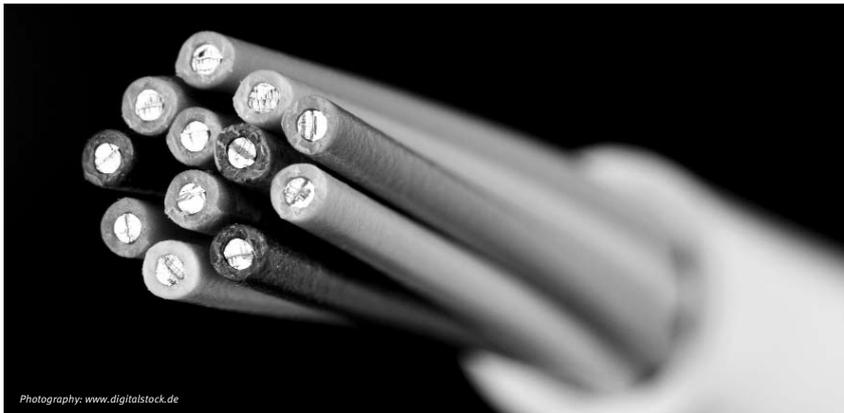
According to the experts, the great obstacle to the acceptance of reverse mortgage products is a lack of understanding among the public as to their function. Domestic consumers have no experience with this new product. An additional obstacle cited by the experts is that German property owners often wish to pass their property along to their heirs without encumbrances or debts. In the case of a reverse mortgage, the heirs have a choice: they may keep the property and pay off the mortgage as a conventional mortgage annuity loan, or they may sell the property themselves. Alternatively, they may choose to turn the property over to the bank so it may dispose of it. Under no circumstances are the heirs liable for payment of the excessive indebtedness of the estate. On the side of lenders, the risk of extreme client longevity is a significant factor, and one that has held back financial service providers from offering reverse mortgage products until now. The experts, however, do not feel that estimates concerning long-term price trends in the real estate market are a significant obstacle for the successful introduction of reverse mortgage products.

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## RESEARCH FINDINGS

# Ex ante Regulation Increases Competition in Grid-bound Markets

*Energy and telecommunications service providers operate by means of broad distribution networks. Due to the fact that it only makes sense to construct such electrical, gas and communication networks once, a small number of companies operate network infrastructure. However, to ensure that providers beyond a few network owners are able to offer their goods and services, regulatory authorities see to it that existing operators offer the use of their networks to others for a user fee. An ongoing research project at the Centre for European Economic Research (ZEW) investigates which regulation strategy – ex ante or ex post – is best suited to ensure increased competition in grid-bound markets.*



Photography: www.digitalstock.de

Competition in grid-bound markets can only occur if new providers have an inducement to enter the market. To ensure this takes place, the user fees paid to the network owners must be as low as possible. At the same time however, these fees must be sufficiently high so that the network owners continue to have an incentive to maintain and expand the network. This aspect is not covered by the present analysis which is based on a static model in which we take the existence of the network as given. The access charge for a service grid is efficient when both criteria are met. Regulation must have as its goal the establishment of efficient access charges.

Essentially, there are two possible kinds of regulation: ex ante regulation and ex post regulation. In ex ante regulation, regulatory authorities establish conditions under which a provider may gain access to the network prior to its

possible entry into the market. An example of such ex ante regulation exists in the telecommunications sector for member states of the European Union. By contrast, with ex post regulation, the regulatory authorities first enter the picture when the network owner and the service provider are unable to arrive at an agreement regarding access charges. This method is practiced in Switzerland for the regulation of the telecommunications sector. As a rule, the parties come to an agreement, thus making regulatory intervention unnecessary.

## Danger of High Access Charges

Using a theoretical model, the study (Discussion Paper No. 08-009) shows that with the ex post regulation strategy – that is intervention when the two parties cannot come to an agreement – there is a danger of excessively high

access charges. For network owners and service providers both have an incentive to agree upon inefficiently high access charges, if market entry by additional providers is confined. Both the network owner and the independent provider may profit from this situation, as an excessive access charge may credibly ensure that no significant price competition for services will be introduced, thereby establishing a higher price point. This incentive structure may to some extent explain the generally higher price point for telecommunications services in Switzerland, as well as the fact that regulatory authorities are seldom called upon to set access fees on the basis of costs. If access charges are agreed upon that exceed actual costs, the results are higher final prices for consumers – with social costs as a consequence, according to the model setting.

An ex ante regulatory process, which establishes cost-based access fees in advance, is therefore better suited to guarantee efficient network use charges and thereby promote more competition. Under this regulatory model, service providers demand lower access charges out of self-interest, so that the regulator must continuously review current charges. This is not true in the case of ex post regulation. Here only the end-users or consumer associations (whose knowledge of the market is much more limited) have an incentive to demand a reduction in access charges. In this way, the study validates the practice of ex ante regulation employed in the European Union compared to the ex post regime in Switzerland. This study considers access fee regulation on a given network but not its operator's incentive to invest therein and to innovate in network technologies.

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## RESEARCH FINDINGS

# The Influence of Oil Prices on the German Labour Market Is Underestimated

*Oil is a central production factor of the world economy. "Black gold" powers machines and automobiles, and is the base material for a wide range of products, including cosmetics, clothing and mobile telephones. A rise in oil prices directly and indirectly increases the cost of industrial production. Thus, the price of oil is a factor that significantly influences the business cycle of national economies, and, in turn, the employment rate. A study by the ZEW investigates the degree of influence exerted by oil prices on employment in Germany. In addition, the study explores whether increasing energy efficiency has mitigated oil-price effects on employment.*



Photography: www.fotolia.de

The last several years have been marked by powerful price fluctuations in commodities markets. At the beginning of 2000, the price of a barrel of West Texas Intermediate stood under 30 US dollars. In January 2008, for the first time, the price of oil rose to over 100 US dollars per barrel. Ultimately, it reached a peak of 145 US dollars in the middle of 2008. Although the price of oil fell dramatically at the end of last year, all long-term energy scenarios are based on the premise that the era of cheap oil is over. Thus, it is important to understand correlations between oil prices, business cycle and labour market. In order to account for different oil price phases, the ZEW study (Discussion Paper No. 08-136) surveys a comparatively long time frame (1973-2008). A particular focus is placed on the period between 1990 and 2008 in order to explore the thesis that the relationship between oil prices and macroeconomic

values fundamentally changed in the 1980s. The nature of oil price fluctuations was examined while taking into account the asymmetric effects of such fluctuations in addition to the impacts of oil price shocks. In the calculations for these time periods, monthly data were included regarding industrial production, the unemployment rate and the rate of price increases in Germany along with changes in oil prices.

## Energy Efficiency Is Overestimated

The study confirms that rising oil prices in all cases lead to a fall in employment in Germany. A one-time rise in oil prices (of one standard deviation) leads over time to a one per cent rise in the unemployment rate. Asymmetrical increases in the oil price and price shocks make the relationship between oil prices and employment rate particularly clear. While rising oil prices exert

negative pressures on employment, falling oil prices do little to reduce the unemployment rate. Above all, it is the magnitude of the change in oil prices that has an impact on employment in Germany. The study also demonstrates that considerable improvements in energy efficiency between 1990 and 2008 have not led to any weakening in the negative correlation between rising oil prices and increasing unemployment in Germany. Despite many measures to utilise energy – and, ultimately, oil – in a more economical and efficient manner in the industrial sector, the labour market remains tightly bound to oil price trends. This is surprising, because rising energy efficiency would be expected to diminish the correlation between oil prices and employment. With less oil required to produce the same quantity of goods, its significance as an input should theoretically decrease.

## Risks for the Labour Market

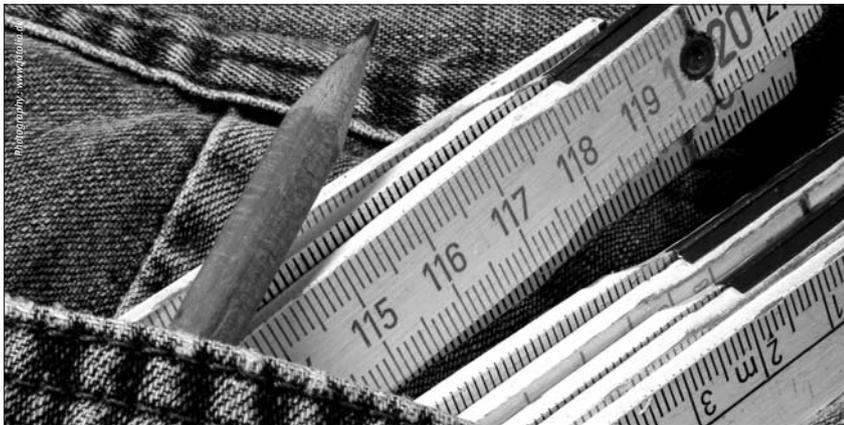
Oil prices, however, are not the sole factor influencing the employment situation. The considerable inflexibility of the German labour market has in the past significantly contributed to the entrenchment of long-term unemployment. The Hartz reforms have indeed helped to increase labour market flexibility. Presumably, this has also resulted in an underestimation of the persistent but latent negative effects of higher oil prices. These effects, which threaten to re-emerge in their former strength with a renewed oil price spike, carry long-term risks for the German labour market. Here economic policy is faced with the challenge of working towards a more definitive decoupling of oil prices and the employment rate.

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## RESEARCH FINDINGS

# Recession Affects Germany's Small and Medium-sized Enterprises

*In the face of the global economic downturn, the business climate for small and medium-sized enterprises (SMEs) in Germany seriously deteriorated over the course of 2008. Yet large corporations with international operations have fared worse in the crisis thus far. These are the findings of the new MittelstandsMonitor 2009 ("SME Monitor 2009"), a report issued annually by the KfW Banking Group together with Creditreform International, the IfM in Bonn, RWI in Essen and ZEW in Mannheim. The MittelstandsMonitor investigates economic activity and structural issues in relation to small to medium-sized enterprises.*



The MittelstandsMonitor 2009 ("SME Monitor 2009") shows that the business expectations of small and medium-sized enterprises fell to historic lows at the end of 2008. Measured against this drop, declines in SME employment plans and investment readiness were relatively modest. Many firms appear to be intent on preventing their production facilities from becoming obsolete and on retaining hard-to-find skilled labour during the crisis, in order to be better equipped for the recovery.

## More Start-ups from Unemployment Expected

Since 2005 the number of new business start-ups in Germany has been on the decline. Preliminary estimates suggest that in 2008, once again, there was a decrease in the start-up rate for new businesses (i.e. number of new businesses per 10,000 persons able to work). The continuing downward trend

of past years must be seen as closely associated with the very good economic climate that lasted up to mid-2008. The strong economy over this period led to a rising number of people in paid employment and a decline in the jobless rate, which in turn lowered the readiness to establish new businesses.

The financial and economic crisis is expected to impact start-up activities in 2009. In particular, the rate at which new businesses are established by the unemployed will likely rise.

## Microfinance Will Gain in Importance

The vast majority of business founders who acquire outside financing are in need of funds in the microfinance range. According to EU's definition, this means commercial financing up to 25,000 euros. In 2007 approximately 200,000 founders of new businesses took on outside financing in the micro-

finance range. This comprises a total of approximately one billion euros. Against the backdrop of increased start-up activity stemming from unemployment, the economic downturn could further enhance the significance of microfinance.

## Older SMEs Engage in Less Research

The older an SME, the less likely it is to conduct its own R&D. As firms age, they increasingly fall back on their experience instead of relying on the systematic development and exploitation of new research findings. As a result, innovative activities are principally focused on the gradualist improvement of existing products rather than the introduction of radically new products or inventions.

About 20 percent of all patent applications in Germany are filed by small and medium-sized enterprises. This percentage – which is low in relation to the share of turnover and employment that falls to SMEs – is attributable in part to the small portion of SMEs who actively engage in research. An additional reason is that SMEs tend more often than larger firms to maintain secrecy over new discoveries rather than seek patent protection for them. However, an analysis of patent activity in the textile and nanotechnology fields shows that SMEs are complementing the activities of large enterprises and thereby make an important contribution to innovation. The central message for policy makers is that SMEs who operate in traditional manufacturing branches – not just those in high-tech fields – play a significant role in the development of new, future-oriented technologies and market sectors.

The MittelstandsMonitor 2009 (in German) can be accessed online at: [www.mittelstandsmonitor.de](http://www.mittelstandsmonitor.de).

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## RESEARCH FINDINGS

# Tax Incentives Drive Charitable Giving

While the charitable spending behaviour of private individuals in the United States has already been well studied, little is known about the mechanisms that underlie charitable spending in Germany. A new study conducted by the Centre for European Economic Research refutes the hypothesis that mechanisms fundamentally different from that in the United States are at work in welfare states such as Germany, in which the allocation of funding for the public good is substantially financed through taxes and less through private initiative.

The ZEW study is based on a sample of 2,743 income tax returns from the years 2001 to 2003. From these income tax returns, information was gathered regarding tax-deductible contributions as

well as socio-demographic data such as the age, gender, marital status and religious affiliation of each taxpayer. The database provided information about income and enabled the calculation of a so-called “donation cost”. This is calculated according to the deductibility of contributions to charitable organisations by the determination of the payable income tax as  $1-m$ , where  $m$  is the marginal income tax rate.

## Similar Incentive Mechanisms in Germany and the United States

The calculations by the Centre for European Economic Research show that contributions by private individuals in Germany react under-proportionately to changes in income. On average,

in the income tax returns examined in the study, a one percent increase in income led to an increase in donations of only 0.74 percent. The reaction of donors to changes in the “donation cost” – that is, to changes in the income tax rate – turns out to be significantly higher. If the individual donation cost fell by one percent, donations increased by an average of 1.38 to 1.54 percent. These results parallel those obtained in methodologically similar studies undertaken in the United States. Thus, the mechanisms underlying charitable spending by private individuals appear to be similar in both countries and seem to be independent of institutional factors or cultural traditions associated with the welfare state.

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## ZEW CONFERENCE

# Workshop on Expectation Data

On 4 May 2009, The ZEW research department “International Financial Markets and Financial Management” conducted a workshop to discuss new research findings based on data from the ZEW Financial Market Test for Germany. This was the first conference in which users of the Financial Market Test had an opportunity to discuss the potential expansion and modification of the survey.

The ZEW’s Financial Market Test surveys each month some 350 financial experts. They are asked whether economic conditions in Germany will improve, deteriorate or remain unchanged over the next six months. Furthermore, they assess economic developments in the euro zone, the US and Japan, macroeconomic indicators such as inflation and interest rates, as well as stock market trends and exchange

rates. The data series of the ZEW survey start in 1991. They form the statistical basis for numerous research projects.

## Forecast Accuracy Put to the Test

At the workshop, Ingmar Nolte (University of Warwick) presented the findings of a joint study undertaken with Winfried Pohlmeier (University of Konstanz). Their ongoing project investigates how good and bad forecasters differ and whether these findings could be used to improve the quality of economic prognoses. In another presentation, Christian Dick (ZEW) discussed the correlation between expectations for inflation, economic growth and actual inflation. Lukas Menkhoff (University of Hannover) presented the results of his research on ZEW currency exchange expectations regarding the re-

lation of the euro to the US dollar. Oliver Gloede (University of Hannover) presented a new study together with Lukas Menkhoff about “overconfidence” regarding expectations for the exchange rate between the euro and the US dollar. It was shown that bad forecasters show less “overconfidence” than good ones. Thomas Lux (University of Kiel and Institute for World Economy) presented estimates from a model originating in physics, which he is using to explore herding behaviour in the ZEW Indicator of Economic Sentiment.

In the second part of the workshop, possible expansions and modifications of the ZEW survey were discussed. Next year, another workshop for users of data from the ZEW Financial Market Test is planned.

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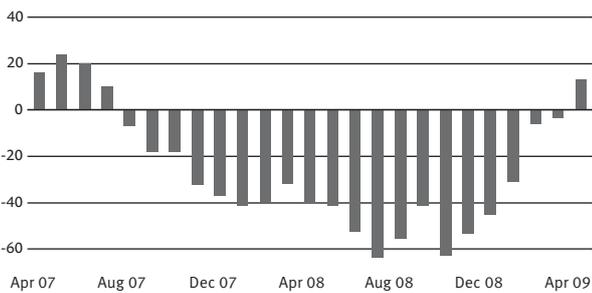
ZEW FINANCIAL MARKET DATA

## ZEW Financial Market Surveys April 2009

The ZEW conducts three monthly surveys questioning financial market experts for their expectations within six months time for essential financial market data in several European countries and the Eurozone. The questions regard the current business situation, the business outlook, interest rates, stock markets, exchange rates, and inflation. Additionally, a "special question" on an interesting economic topic is asked. Up to 350 financial market experts are questioned in the Financial Market Survey for Germany. About 70 analysts participate

in the Financial Market Survey for Switzerland that is conducted in cooperation with the Swiss bank Credit Suisse. About 80 analysts contribute to the Financial Market Test for the Central and Eastern European Region (CEE) and Austria, carried out in cooperation with Erste Group Bank der Österreichischen Sparkassen. The CEE Region consists of Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, Serbia, Slovakia and Slovenia. The survey collects economic data for each of these countries, but also looks at the CEE Region as a whole.

The complete results of the surveys are published every month in Financial Market Reports. The "ZEW Finanzmarkt-report" ([www.zew.de/FMR](http://www.zew.de/FMR)) contains the survey's outcome for Germany. The survey results for Switzerland are published in the Financial Market Report Switzerland ([www.zew.de/FMR\\_CH](http://www.zew.de/FMR_CH)). The survey results for the CEE Region and Austria are published in the Financial Market Report CEE ([www.zew.de/FMR\\_CEE](http://www.zew.de/FMR_CEE)). Below, some selected outcomes of the April 2009 surveys are featured briefly.

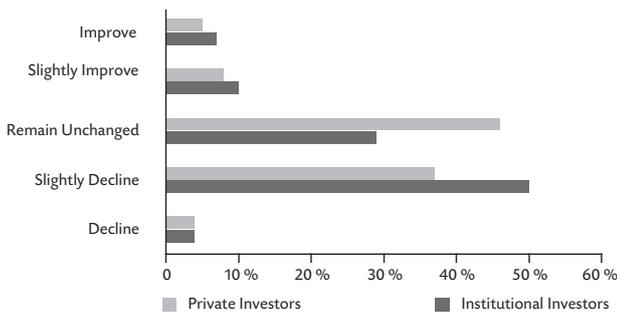


Balance of positive and negative assessment of the expected economic development in six months' time. Quelle: ZEW

### Germany: Economic Expectations

The ZEW Indicator of Economic Sentiment for Germany continued to improve in April 2009. The indicator rose by 16.5 points and now stands at 13.0 points. For the first time since July 2007, the indicator realises a positive value, albeit it is still below its historical average of 26.1 points. The indicator is positively affected by the government stimulus packages, which are increasingly effective. Furthermore, low inflation rates support private consumption. According to the financial market experts, the economic outlook for the United States has improved, too.

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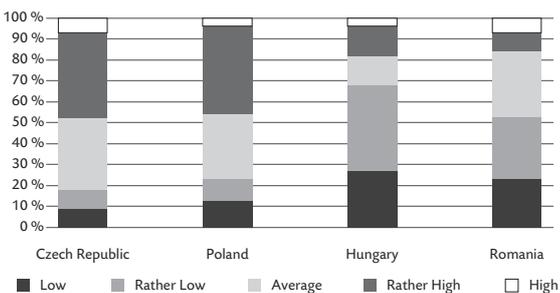


Trend in the disposition of loan activity for real estate investments. Source: ZEW

### Switzerland: Real Estate Markets

The experts predicted the trend in loan activity for real estate investments for the next three years in Switzerland. 45.3 percent of the surveyed analysts expect no changes in the disposition toward lending activity for private investors. 35.7 percent foresee a trend toward worsening sentiment regarding lending activity for private investors. The responses regarding institutional investors paint a gloomier picture. 50 percent expect that the disposition toward lending activity will deteriorate, while 28.6 percent expect no change in the situation.

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Assessment of the medium-term economic recovery prospects in selected CEE-countries. Source: ZEW

### CEE Region: Recovery Prospects of CEE Countries

The experts' view on the recovery prospects for the Czech Republic, Hungary, Poland and Romania among others was surveyed. The Czech Republic and Poland feature the brightest business outlook for the coming six months. 48 percent and 46 percent of the experts describe the recovery prospects of these economies as "high" or "rather high". The experts are more doubtful about Hungarian and Romanian economies. A majority of 68 percent and 53 percent respectively consider the chances for a business revival in both countries to be below average.

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## INSIDE ZEW

## ■ ZEW's Annual Report

The Centre for European Economic Research (ZEW), Mannheim, increased its returns in the business year 2008 to 15.48 million euros. It therefore notably exceeded the previous year's result (14.72 million euros). Particularly the ZEW's success in competitions for research-funds and third-party funds contributed to the increased returns. Moreover, the ZEW increased the number of its employees again in 2008, after having already largely increased the number in 2007. At the end of 2008, 165 employees worked at the ZEW; 116 of them were scientific staff. In 2008, nine ZEW researchers successfully completed their dissertation and one ZEW researcher completed her habilitation.

The ZEW's Annual Report (in German) can be downloaded from: [www.zew.de/jahresbericht](http://www.zew.de/jahresbericht)

## ■ ZEW Conference: Recent Developments in Macroeconomics

On July 7th and 8th 2009 the Centre for European Economic Research and the University of Mannheim are jointly organizing a conference on "Recent Developments in Macroeconomics". The conference aims at stimulating the discussion between international researchers conducting related empirical and theoretical analysis. Furthermore, the conference will especially focus on time series econometrics, business cycles, growth, labour markets, fiscal policy and monetary policy.

For further information visit [www.zew.de/macroconference2009](http://www.zew.de/macroconference2009)

## PUBLICATIONS

## ■ ZEW Economic Studies

Sebastian Hauptmeier, Friedrich Heinemann, Qingwei Wang, Andreas Schrimpf, Hans-Michael Trautwein, Marcus Kappler, Margit Kraus

### Projecting Potential Output

In spite of the widespread use of the concept of potential output in economic theory and empirical applications as well as in economic policy debates, the historical background and the assumptions inherent to this concept are rarely made transparent, let alone critically questioned. Against this background this book sets out to determine the extent to which the concept of potential output rests on clearly defined theoretical foundations and how far prevailing empirical quantification methods really provide reliable insights into potential output growth of an economy. In addition, the authors examine alternative methods for a forward-looking assessment of potential output growth.

*ZEW Economic Studies, Volume 42, Physica Verlag Heidelberg/New York, 2009, ISBN: 978-3-7908-2176-5*

## ■ ZEW Discussion Papers

No 09-017, Jörg Zimmermann, Christoph Grimpe, Wolfgang Sofka: Young, Open and International: The Impact of Search Strategies on the Internationalization of New Ventures.

No 09-016, Wolfgang Sofka, Christoph Grimpe: Specialized Search and Innovation Performance – Evidence Across Europe.

No 09-015, Atilim Seymen, Marcus Kappler: The Role of Structural Common

and Country-Specific Shocks in the Business Cycle Dynamics of the G7 Countries.

No 09-014, Alisher Aldashev: Occupational and Locational Substitution: Measuring the Effect of Occupational and Regional Mobility.

No 09-013, Bettina Brohmann, Stefanie Heinzle, Klaus Rennings, Joachim Schleich, Rolf Wüstenhagen: What's Driving Sustainable Energy Consump-

tion? A Survey of the Empirical Literature.

No 09-012, Anja Heinze: Earnings of Men and Women in Firms with a Female Dominated Workforce – What Drives the Impact of Sex Segregation on Wages?

No 09-011, Tim Hoffmann, Sebastian Voigt: What Drives the Efficiency of Hard Coal Fuelled Electricity Generation? An Empirical Assessment.



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I M P R I N T

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