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Bank Stress Test – Europe's Banks Lack Capital to Endure Crisis

Whether the capital held by the eurozone's leading financial institutions is insufficient to endure a serious financial crisis remains questionable, despite the findings of the European Central Bank's (ECB) stress test. This is the key finding of a new study by the Centre for European Economic Research (ZEW) on the stability of the European banking sector. Many of the largest banks are the least crisis-resistant in terms of net assets.

In the run-up to assuming direct supervision of credit institutions at the end of 2014, the ECB subjected Europe's largest banks to a comprehensive stress test. The stress test included a detailed risk assessment and a review of asset quality. Twenty-five European banks failed the assessment. A much-discussed issue is the extent to which banks had already taken action to address excessively low equity capital levels.

The ZEW study compared selected banks' balance sheets from 2012 and 2013 to determine whether they had reason to be concerned about a review of asset quality. The study concluded that a financial market crisis would lead to enormous capital shortfalls.

One finding of the study is that from 2012 to 2013, eurozone banks were able to enhance their equity ratios. Bank equity positions improved especially in Germany, Greece, Spain, and Italy. Despite this improvement at the end of 2013, however, several banks have remained undercapitalised.

In terms of total equity capital, the overall stability of the banking system did not improve over the same period. Far from seeing an increase, major banks have in fact reduced their capital by almost four per cent on average over the past year. Despite this, institutions were able to improve their capital ratios by simply allowing their balance sheets to slump by an average of ten per cent, thus falling faster than their capital. According to ZEW economists, however, it would be preferable if banks were to build up their capital in absolute terms, rather than reduce it.

Whilst European banks seemed on first glance to be successfully living up to the European Central Bank's official auditing standards, closer analysis reveals that, just as before, capital resources in the banking sector are inadequate.

Even a Moderate Slump in the Financial Markets Could Threaten Stability

Slumps in the financial markets are the greatest threat to the stability of the European banking system. Even a relatively moderate drop of about ten per cent would lead to a 154-billion-euro equity gap, according to the estimates from one potential scenario in ZEW's study that assumed a capital adequacy ratio (CAR) of eight per cent, as the European Central Bank demands of Europe's largest banks. Even at 5.5 per cent, the equity gap would still reach 58 billion euros, of which 14.4 billion euros would be attributable to German banks and 33 billion to French banks.

According to existing studies, a better instrument than the CAR for assessing banks' fragility is the European Banking Authority's leverage ratio, i.e. a bank's equity in relation to its total assets. In the case of a ten per cent market slump, with a leverage ratio of three per cent, the equity gap in Germany would be highest at 66 billion euros. Using the leverage ratio rather than the CAR also results in significantly larger equity gaps in other scenarios, which is a cause for concern amongst economists.

In real-time conditions, it is probable that a crisis in the financial markets could result in equity gaps far larger than those anticipated by the ZEW study. In spite of this critical assessment, existing data shows that the European banking system's capital levels are at least moving in the right direction, although they still have a long way to go.

The complete study (ZEW Discussion Paper 14-074) is available for download at: *www.zew.de/en/publications/7579*

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Germany and France Have Divergent Energy Policy Priorities

In both Germany and Europe, energy policy occupies a prominent position on the political agenda. Against this backdrop, ZEW economists investigated the priorities that are set in energy policy as part of the bi-annual survey for its Energy Market Barometer. Inspired by this survey, the French business school Grenoble École de Management (GEM) queried domestic energy market experts on the same issue. The results of both surveys show that energy policy is perceived in a different light east and west of the Rhine.

Topics like the phasing-out of nuclear power and expansion of renewables are frequently the subject of public discussion in both countries. According to 60 per cent of the 200 experts surveyed by ZEW researchers, the most important goal of German energy policy should be security of supply. Some 70 per cent are convinced that security of supply should remain the most important topic over the next five years. However, only 47 per cent of the participants believe that German energy policy has

Germany as well as France do not set the right focus in energy policy. This is the result of a survey of energy market experts on both sides of the Rhine.

accorded the issue the political attention it deserves – a quite considerable discrepancy.

German energy experts state that security of supply is an underrated issue in energy policy debates. The affordability of energy for businesses and households in Germany, by contrast, is overemphasized in the political debate, the surveyed energy experts believe. Nevertheless, the affordability of energy for households has increased notably in importance: some 30 per cent of the participating experts consider the topic to be a significant energy policy issue – a ten-percentage-point increase compared to last year's survey.

Energy Efficiency Is not Given Appropriate Attention

An additional finding of the current survey is that energy efficiency is not given appropriate attention in policy debates. More than half of the surveyed experts considered energy efficiency to be a major policy goal. But only 30 per cent of experts expressed the opinion that energy efficiency already receives due consideration in German energy policy. The gap between actual and deserved attention is similarly large with respect to the cost-efficient provision of energy as well as greenhouse gas emissions. The experts who believe these issues are ascribed insufficient importance are less numerous, however, than in the areas of energy efficiency and security of supply.

Interestingly, the experts surveyed by GEM see French energy policy as far less focused on the affordability of energy for businesses (28 per cent of those surveyed) than the German experts believe is the case for German energy policy. Yet at the same time, this issue should not be accorded much significance in the future, according to 14 per cent of the French experts surveyed. By contrast, the affordability of energy for households appears to play a larger role in French energy policy (according to 48 per cent of experts). Nevertheless, only 21 per cent of the surveyed experts believe this issue is currently pressing. The French experts, like their German counterparts, ascribe high importance to the issue of energy efficiency. About half of those surveyed believe the issue is and will remain over the next five years a key issue in energy policy. However, French energy policy devotes too little attention to cost efficiency and the decentralization of the energy system, the surveyed experts stated.

The results of the French survey are available at:
http://en.grenoble-em.com/energy-market-barometer-report

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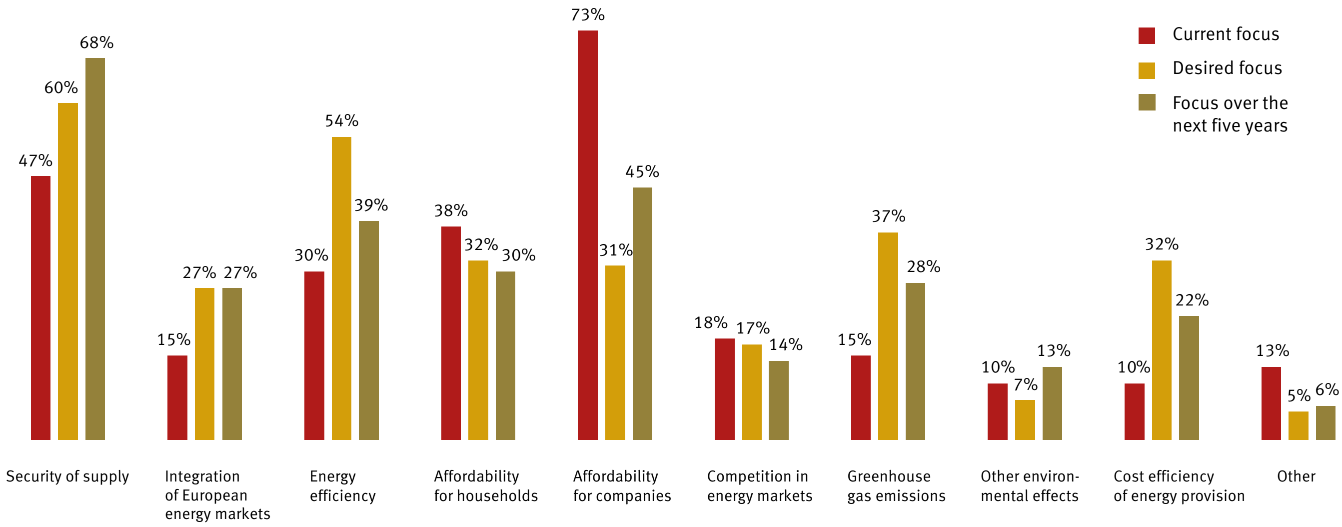


Source: ZEW

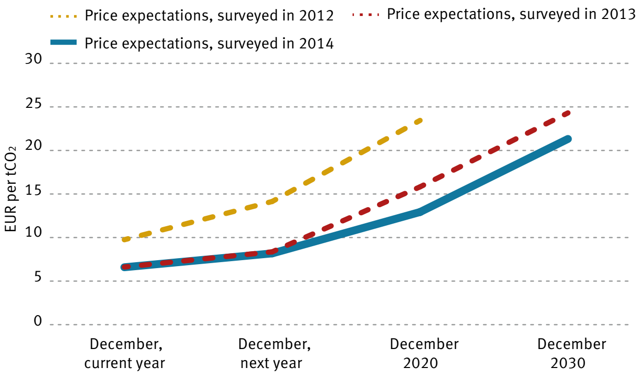
IN THIS ISSUE

Declining Price Expectations for European Union Emission Allowances

No sustainable recovery is in sight in the European carbon market. The companies surveyed this year as part of the KfW/ZEW CO_2 Barometer have once again revised their price expectations for European Union Emission Allowances (EUAs) downward. In order to create incentives for CO_2 abatement measures, the price per tonne of CO_2 (tCO_2) needs to be six times higher than its current value. Certificate prices have never been so far from achieving their goal of creating incentives for abatement.

While the price for emissions allowances hovered around 13 euros per tCO_2 in 2011, in 2012 it was under ten euros, and fell to five euros last year. With the further worsening of market conditions, companies have once again lowered their price expectations for EUAs.

FIGURE 1: DEVELOPMENT OF PRICE EXPECTATIONS FOR EMISSION ALLOWANCES ON THE SPOT MARKET (ADJUSTED FOR INFLATION)



Source: KfW/ZEW CO_2 Barometer 2014 – Carbon Edition

The surveyed companies forecasted in 2013 that the price per tCO_2 would be 8.36 euros in December 2014, but in this year's survey they expect a price of 6.59 euros for the end of December. Over the mid and long term, the surveyed companies expect prices to rise once again, yet here, price expectations have declined as well (see Fig. 1). In the current survey the companies forecast prices of 12.93 euros per tCO_2 in 2020, and 21.32 euros per tCO_2 in 2030.

Emissions Price Level too Low to Create Incentives

The current and expected prices are too low to create incentives for CO_2 abatement measures. In the past, the emissions price level was already too low to motivate many companies to undertake abatement measures. Reduced CO_2 emissions were witnessed instead within the scope of general efficiency improvement efforts. The surveyed companies indicated that in order to create incentives for CO_2 abatement measures, certificate prices need to rise to approximately 30 euros per tCO_2 – a price level much higher than that forecast for the coming decades.

Limited Certificate Trading Activity

In the 2014 survey, 70 per cent of the companies said that they had bought or sold emissions allowances at least once since February 2013. In comparison to last year, the number of companies actively participating in trading is thus four percentage points higher (see Fig. 2). However, most companies have adopted a strategy of restraint, making only a few trades each year. Fifty-six per cent of the companies stated that they purchased certificates for future needs – that is, to profit from current low certificate prices when prices rise once again. Due to the volume of allowances they have in reserve, some companies see no future need to participate actively in the market. Accordingly, only 61 per cent of the survey participants stated they would engage in trading next year. This corresponds to a 13 per cent drop in the number of market participants.

Since 2009 KfW and ZEW have been cooperating to produce the KfW/ZEW CO_2 Barometer, an annual survey of companies regulated under the European Union Emissions Trading System (EU ETS). Of the 800 companies that are contacted, an average of 140 provide responses concerning their current activities and future strategies. The results are published in the "KfW/ZEW CO_2 Barometer – Carbon Edition."

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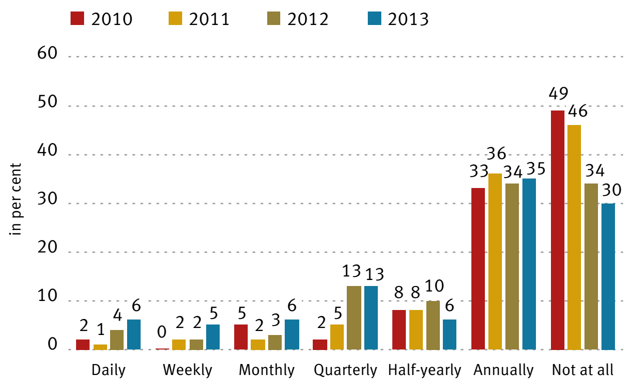
FIGURE 2: FREQUENCY OF TRADING ACTIVITIES ON THE EUROPEAN CARBON MARKET



Source: KfW/ZEW CO_2 Barometer 2014 – Carbon Edition

Q&A: Is Germany on the Cusp of the next Industrial Revolution?

"The Implementation of Industry 4.0 Will Remain Limited to Individual Cases for Now"

When industrial production melds seamlessly with modern information and communication technologies (ICT), a new economic era called "Industry 4.0" will arise, some experts predict. To explore the potential of Industry 4.0, the German federal government has launched funding initiatives worth 200 million euros. Is this money well spent? ZEW's Irene Bertschek examines the opportunities and challenges associated with Industry 4.0.

The catchword Industry 4.0 is on everyone's lips. Will it really amount to a fourth industrial revolution?

In Industry 4.0, the entire value creation chain is digital and smart. By having every single physical element, be it a machine or a component, send and receive information, inanimate objects will be able to communicate with each other directly. Fittingly, it's sometimes referred to as the "Internet of Things" or "Internet of Services". As the name suggests, the Internet plays an essential role, linking the things, production processes, and services together. The result is greater flexibility and customisation in the creation of products and services; it certainly deserves to be called revolutionary.

What is the role of ICT in this context?

ICT are key for Industry 4.0. Everything is driven by them, using all they have to offer: from the Internet to software, embedded systems, RFID tags, cloud services, big data analytics tools and much more. Even the customers may be included in the production process via social media. In the end, it's a question of creating a perfect synthesis of industrial production and ICT.

Handling big data – quantities of data beyond the capabilities of conventional methods of data processing – is fundamental to Industry 4.0. What are the main issues in this regard?

First of all, it's the sheer volume of emerging data that have to be continuously analysed, as far as possible in real-time, and then, having to take the right decisions based on the results. In this context, safety is one of the main prerequisites for a smooth, efficient workflow. Materials should only be ordered for re-supply when they are really needed or can be appropriately stored; if a component's signals are wrongly interpreted, it could lead to expensive or even dangerous pile-ups, faults, or defects.

When can we expect to see large-scale implementation of Industry 4.0?

Trends in ICT are always fast-moving. However, our research shows that large-scale adoption of new technological developments doesn't happen overnight. In particular small and medium-sized companies tend to be hesitant in embracing new applications, not least due to concerns about data security. Therefore, the complete implementation of Industry 4.0 in the sense of fully-automated, independently networked production will remain limited to a few individual cases for now. Besides, fully digitising and networking production just won't make sense for every company.

What are the social and economic challenges associated with Industry 4.0?

When a company chooses to implement Industry 4.0 solutions, the biggest challenge is to do so as quickly and smoothly as possible in order to boost efficiency and productivity. As far as providers of Industry 4.0 solutions are concerned, pre-existing manufacturing know-how should be used in combination with information and communication technologies to achieve competitive advantages in international markets. The biggest overall challenge, however, is the potential effect on the workforce. Automation and networked processes can mean that machines take over tasks previously done by people. That doesn't necessarily imply widespread job losses: the task structure of employees will adapt. Rather than manufacturing or processing, jobs in the future will lean towards analytical, creative, and operational tasks. The real challenge will be to make sure that appropriate education and training is made available throughout the process of change.

Professor Irene Bertschek

is the head of the "Information and Communication Technologies" Research Department at the Centre for European Economic Research and professor of applied empirical economics at the University of Mannheim. Her empirical and predominantly microeconometric research concerns the economic impacts of digitalisation. She studies how the implementation of ICT affects innovation, productivity, and the organisational structure of companies.

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A European Unemployment Insurance could have been implemented with a relatively small annual budget. Spain would be one of the largest net recipients.

Stabilising and Transfer Effects: European Unemployment Insurance Faces Dilemma

More substantial fiscal integration in Europe by way of a common unemployment insurance scheme for eurozone member states? This question is currently a subject of intense discussion. Would an automatic stabiliser like this necessarily turn Europe into a transfer union? A current study by ZEW on the stability and transfer effects in the euro area shows that a European Unemployment Insurance (EUI) would have cushioned the impact of the recent crisis in the most embattled countries of the euro area. Germany would have been a net contributor in the period between 2000 and 2013 despite the rather weak economic situation at the turn of the millennium. In future crises, however, burden-sharing might take a different turn.

Does the euro area need an unemployment insurance that completely or partially replaces the national systems? Opinions on that matter are divided in the spheres of politics and academia. Proponents stress that a joint EUI would stabilise total demand in the participating countries in times of crisis. Objectors argue that a European insurance system alone, i.e. without implementing further integration measures such as eurobonds, would already transform the eurozone into a transfer union.

ZEW Study Explores the General Effects of an EUI

For a current study, ZEW researchers examined how different models of a European unemployment insurance would have affected households in the 18 countries of the euro area between 2000 and 2013. The ZEW analysis takes a different approach than most of the existing studies that address an unemployment insurance scheme for the eurozone: without taking up the cudgels for one particular model, ZEW researchers used a basic variant to explore the general effects of an EUI. The ZEW study is the first micro-data simulation to address this topic.

The researchers found evidence that an unemployment insurance scheme for the euro area that pays a rate of 50 per cent of the recipient's last income level for the duration of twelve months could have been implemented with a relatively small annual budget. Over the period from 2000 to 2013, the benefits paid "by Europe" would have amounted to about 49 billion euros per year. In the simulation, the budget of the scheme was financed by the eurozone members with a standard contribution rate of 1.57 per cent of income per employee.

Cross-Country Redistribution Is Limited

Five out of 18 euro area countries considered in the study would have been net contributors or net recipients in every year of the simulation period. The largest net contributors would be Austria, Germany and the Netherlands with average annual net contributions of 0.2–0.42 per cent of gross domestic product (GDP). Spain and Latvia would be the largest net recipients with average annual net benefits of 0.53 and 0.33 per cent of GDP. Cross-country redistribution effects are limited, however, if benefits are strictly directed towards member states where the labour market situation is worsening. In such a scenario, not a single eurozone member state would have been a permanent net contributor. All in all, an EUI like the scheme simulated in the ZEW study would have stabilised household incomes, in particular at the beginning of the financial and economic crisis.

The study (ZEW Discussion Paper 14-095) is available for download at www.zew.de/en/publications/7655

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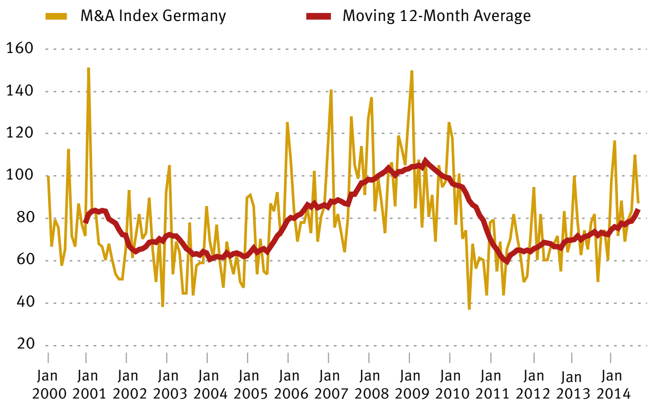
M&A REPORT

Mergers and Acquisitions in Germany: M&A Activity Is Picking up Pace Again

An upward trend in mergers and acquisitions (M&A) with German participation has recently begun to take shape. In the meantime, this trend has become consolidated: M&A activities have notably picked up pace. In August 2013, the ZEW-ZEPHYR M&A Index was at a rather low level of 50 points. Within just one year, until August 2014, the index increased by about 75 per cent to the current total of 87.5 points. Even though several of the previous months were characterised by a large number of mergers and acquisitions, these outliers were barely reflected in the twelve-month moving average of the ZEW-ZEPHYR M&A Index. That has changed now.

ZEW-ZEPHYR M&A INDEX GERMANY



Source: Zephyr Database, Bureau van Dijk, ZEW Calculation

M&A Activity Is Growing in Numbers and Volume

The twelve-month average of the index is growing continuously. In August 2014, the value climbed to 84 points, which corresponds to a year-on-year increase of 17 per cent. Compared with August 2012, the increase amounts to a considerable gain of 26 per cent. It is the highest value of the twelve-month average since August 2010 (85 points).

In addition to the growth of M&A activity in numbers, the average transaction volume per M&A deal is rising as well. The average transaction volume over the past twelve months was 361 million USD per deal. This value was last exceeded in February 2010 with an average transaction volume of 386 million USD per deal.

New Wave of Mergers in the Offing

The upward trend in M&A business as well as the recent increase in M&A intensity might indicate an accelerating merger wave. This hypothesis is supported by the exceptionally large number of rumours and announcements in the M&A market in the past few months.

In Germany, the last merger wave was observed between mid-2005 and mid-2011. It peaked in 2008 and then increasingly flagged due to the outbreak of the financial crisis. In April 2011, M&A activities bottomed out.

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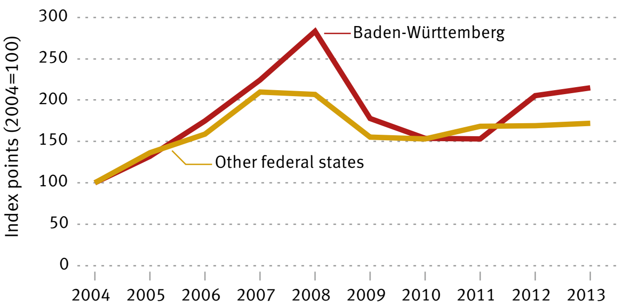
The **ZEW-ZEPHYR M&A Index** measures the number of M&A transactions completed in Germany each month. It considers only mergers and acquisitions by and with German companies. It does not differentiate between the country of origin of the buyer or partner. This means that both domestic as well as international buyer companies are considered, provided the target companies are active in Germany.
The M&A Report is a biyearly publication issued by the Centre for European Economic Research (ZEW) and Bureau van Dijk (BvD). It uses the Zephyr database to report on current topics and developments in global mergers and acquisitions. The Zephyr database, which is updated daily, contains detailed information on over one million M&A, IPO, and private equity transactions across the world.

Baden-Württemberg Is Booming

In the past ten years M&A activities in Baden-Württemberg have grown to a greater extent than in the other German federal states. Compared to the base year 2004 (100 index points), the number of mergers and acquisitions involving companies from south-west Germany was 115 per cent higher in 2013. The other federal states saw an increase of only 72 per cent in the same period of time.

M&A ACTIVITIES IN BADEN-WÜRTTEMBERG AND OTHER FEDERAL STATES



Source: Zephyr database, Bureau van Dijk, ZEW Calculation

However, M&A activity in Baden-Württemberg is subject to stronger fluctuation than in the rest of Germany. From 2004 to 2008, Baden-Württemberg's economy experienced a true M&A boom. The number of mergers and acquisitions increased by 183 per cent until 2008, while the growth of M&A activities in the remaining federal states rose by only 107 per cent. During the recent economic crisis, however, the number of transactions in Baden-Württemberg collapsed, declining even more drastically than in other parts of Germany. From the peak level of 283 index points in 2008, the number of transactions fell to 153 index points in 2011, reaching the lowest value since 2005. In the other federal states, where the index decreased by only 39 points, the effects of the crisis were less than half as devastating. The index value for Baden-Württemberg dropped below the level of the remaining federal states for the first time in 2011.

At the moment, the trend seems to be changing again: In the period between 2011 and 2013, M&A activities climbed to a level of 215 index points again.

Baden-Württemberg-based companies have a preference to engage in cross-border M&A activities: Almost half of their M&A activities are acquisitions of companies from outside Baden-Württemberg. Buyers and target companies are based in Baden-Württemberg in ten per cent of transactions.

The automotive and engineering industries have contributed to this positive development significantly. These sectors were hit hard by the crisis in 2008, but since 2010 the number of sales has increased by 80 per cent, from 15 to 27 per year. Due to the crisis many companies were undervalued and suffered from liquidity shortages, which created ideal conditions for acquisitions by investors. Nevertheless, ownership changes in companies can also entail advantages for the economy, because they prevent closures and generate cost savings. If the recovery is to continue, M&A activities in Baden-Württemberg are expected to increase over the medium term as well.

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Breweries Swallow Fewer Competitors

Despite extensive public screening of football events and numerous "summers' fairytales" since the 2006 World Cup, sales figures in the German beer industry, by far the largest and most important sales market in Europe, have been dropping over the past years. Moreover, at the beginning of this year, breweries grabbed the headlines as the Federal Cartel Office imposed penalties on renowned producers such as Bitburger, Krombacher, Veltins and Warsteiner. Anheuser-Busch InBev, the largest brewery group in the world, regarding sales volumes, was also involved in the cartel, which operated from 2006 to 2008. The multinational company, however, escaped punishment by acting as a principle witness under a leniency programme. Yet all companies will have to face actions for damages.

The April 2014 M&A Report shows a cross-sector trend: A cartel collapse is usually followed by increased merger activity. However, this trend does not apply to the brewing industry. The number of M&A deals concluded by buyers and target com-

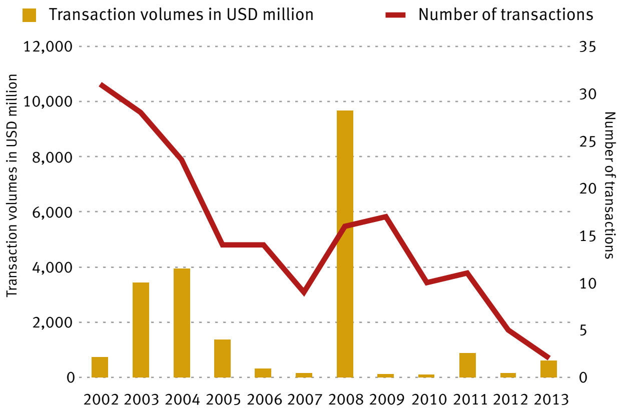
panies located in the EU flagged between the years 2002 and 2013. Acquisitions of minority interests were not taken into account.

The high transaction volume in 2008 stems from the takeover of the British brewery Scottish & Newcastle by Danish and Dutch beer giants Carlsberg and Heineken. The German market did not contribute substantially to the high 2008 figures. In addition, the report indicates a downward trend in the overall transaction volume.

While the number of European M&A activities is decreasing, many additional purchases are carried out in non-European countries, e.g. by global market leader Anheuser-Busch InBev. However, the signs are that the European downward trend might soon bottom out.

In September, Heineken, the world's number three in the brewing business, confirmed a takeover bid by English brewery SABMiller, the second largest brewery worldwide. Before that, there had been rumours about a takeover of SABMiller by Anheuser-Busch InBev. SABMiller's offer to Heineken was seen as an attempt to protect the company against a possible takeover through growth. The Dutch company, still owned by the family of the founder, Alfred Heineken, rejected the offer. Against the

MERGERS AND ACQUISITIONS OF COMPANIES IN THE BREWING INDUSTRY WITHIN THE EU-28 (2002-2013)



Source: Zephyr database, Bureau van Dijk, ZEW calculation

backdrop of the highly concentrated US beer market, the North American competition authorities will carefully look into the case, should one of the mergers be put forward.

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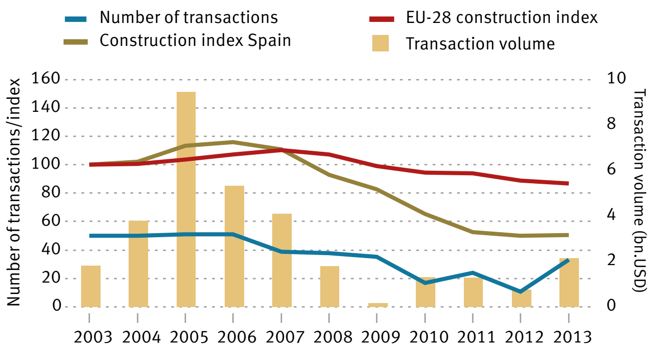
Construction Lull and Euro Crisis Leave Cracks in the Cement Industry

In the early 2000s the construction industry in Europe was booming, particularly in Spain. The bursting of the housing bubble and the subsequent crisis in the eurozone from 2007 onward hit the Spanish building industry hard. Although the construction industry stabilised in most European countries, the consequences for M&A activity in the EU's cement industry were serious. Between 2004 and 2007, the volume of transactions (including takeovers, mergers, joint ventures and minority investments) was on average 5.7 billion euros. 2005 took the record

M&A ACTIVITY IN THE CEMENT INDUSTRY WITHIN THE EU-28



Source: Zephyr database, Bureau van Dijk, ZEW calculation

with a transaction volume of 9.5 billion euros. However, this figure then sunk continuously, reaching a record low of 150 million euros in 2009. Up to 2012 the one-billion-euro threshold was barely exceeded. The downward trend in M&A activity since 2005 was mirrored by a significant reduction in the number of transactions; 2012 was the nadir of the whole period, with eleven transactions in total.

Strategic Behaviour in the Cement Industry

Highly strategic activity can be seen in the cement and construction industry over the whole period of study. Whilst in the boom years, transactions were mainly internal European matters, non-European firms intensified their M&A activity when the crisis hit. M&As with European firms aim above all to harness synergy effects, whereas non-European transactions are aimed at diversifying and developing new markets.

At present a recovery seems to be emerging. The number of transactions trebled to 33 in 2013 from the previous year, the highest value in the past five years. For the first time since the crisis began in 2007, the transaction volume in 2013 at 2.1 billion euros is higher than that of the base year, 2003.

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PE Performance Determination Depends on the Data and Calculation Method Used

The performance of the private equity (PE) industry has long been the focus of controversial economic and political debates. Depending on the data used and the methodology applied, the calculated performance can move in a wide range of values. Analysing the historical performance of private equity funds in a global view remains a serious challenge for both researchers and investors. The methods applied to investigate the stock market cannot be used for private equity investments due to the lack of active and transparent markets for the private equity asset class. Furthermore, fund managers are not obliged to disclose the performance or the cash flows of their funds. Data from specialised data providers is often available only in aggregated or anonymous form, making verification and comparison difficult.

Institutional Investors as a Source for Cash Flow Data

Some researchers take the approach of collecting cash flow data from one or more institutional investors (Limited Partners) directly. It is argued that such data is reliable because Limited Partners use it as a basis for their own investments. Studies that adopt this approach tend to conclude that investments in the private equity asset class significantly outperform investments in the public equity benchmarks, which are usually represented by a stock market index. Ljungqvist and Richardson (2003) show an excess return from private equity funds between five and eight percentage points per annum in comparison to the S&P 500 index between 1981 and 2001. Robinson and Sensoy (2011) find that on average, private equity funds have outperformed the S&P 500 on a net of fee basis by about 18 per cent over the lifetime of the fund for the years 1984 to 2010.

Commercial Databases more Appropriate for Research

Lerner, Schoar and Wong (2007), however, report significant differences in skills and performance between Limited Partners. This finding makes it difficult to generalise the results from studies using data from Limited Partners.

Commercial databases are more appropriate for research, as they avoid such biases on potentially inaccurate data from single Limited Partners. The study by Kaplan and Schoar (2005), which was met with great response in the research community and also in the areas of politics and industry, finds slightly lower net returns for US private equity funds for the years 1980 to 2001 than those of the S&P 500 index. However, the gross of returns exceed those of the benchmark.

Based on an updated and extended sample of the dataset from Kaplan and Schoar (2005), Phalippou and Gottschalg (2009) show significantly lower returns across the whole private equity asset class from 1980 to 2003 in comparison to other studies. They use an alternative approach to treat final residual values reported by mature funds for non-exited investments. Using a database specifically tailored to funds' cash flows, Higson and Stucke (2013) show that US private equity funds with vintage years from 1980 to 2008 have outperformed the S&P 500 index by over 500 basis points per annum.

More Attention Should Be Paid to Risks

In their current study, Harris, Jenkinson and Kaplan (2014) calculate average fund returns exceeding those of public markets for most vintage years since 1984. The public market equivalent shows private equity funds outperforming the S&P 500 by an average of 20 to 27 percent over the fund's lifetime and more than three per cent per year. Private equity funds similarly outperform other benchmarks like the Nasdaq and Russell (2000).

All authors agree over one point, however: although most studies calculate higher returns of PE funds compared to investments in public markets, researchers should take greater account of the higher risks resulting from investments in PE.

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Most studies calculate higher returns of private equity funds, but researchers should take greater account of the associated risks.

Credit Scores Encourage Credit Extension

Professional credit scoring systems that allow the credit-worthiness of borrowers to be assessed prior to a credit approval have a positive effect on the economy. With the availability of information about the credit-worthiness of potential borrowers, more credit is extended. At the same time, default rates decline.

Credit scores play an important role in decisions to extend credit. In the absence of credit scores and the information they contain, the credit system would be considerably less efficient. This is the key finding of a survey of international studies conducted by economists at ZEW.

In a separate investigation, legal experts at the University of Oldenburg evaluated Germany's legal framework for credit scoring, and concluded that it effectively balances the interests of businesses and consumers. The investigations conducted by ZEW and the University of Oldenburg are part of a broader study titled "A Focus on Credit Scoring: An International Comparison of Regulatory Frameworks and its Economic Importance."

The term "credit scoring" refers to statistical methods for forecasting the likelihood that a debt will be repaid. The study determined that credit scores enable credit to be extended to individuals who would otherwise be denied a credit as they belong to a risk group. Furthermore, the existence of a credit score appears to improve the repayment behaviour of borrowers.

Information about potential borrowers and the assessment of this information to generate a credit score can considerably improve forecasts about default risk. The accuracy of this forecast increases when more information about potential borrowers is available.

Start-ups Particularly Dependent on Forecasts

Small companies and start-ups in a variety of sectors – from telecommunications to online retail – are particularly dependent on forecasts concerning the credit-worthiness of customers. In Germany, the customer's credit score often functions as a criterion for determining whether certain payment methods will be offered, e.g. direct debit or payment following receipt of invoice.

In the countries that were investigated (Germany, US, UK, France, and Australia) the average good debt percentage – i.e. the share of bank lending not in default – was over 95 per cent in 2011. Germany was in second place with 97 per cent, just behind Australia with 98.1 per cent. The US ranked third at 96.1 per cent, followed by the UK at 96 per cent. The good debt percentage in France was 95.7 per cent.

The study is available for download (in German) at: *www.zew.de/en/publications/7550*

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When your Apartment Ruins your Health

Deficient and deprived living conditions are health-damaging and can cause chronic illnesses. A recent ZEW study shows that poor living conditions have stronger short-term effects on health than education or income.

A home is a place to retreat and should provide a feeling of protection and security. Unfortunately, many apartments and houses do not meet these criteria. Quite to the contrary, they are a threat to their occupants' health. Some apartments lack sufficient heating and running hot water, or dampness and mould spread in the rooms. The ZEW study examined the effects of poor living conditions on the occupants' health.

Using empirical data on housing and health in the EU, ZEW researchers found that on a four-year horizon, living conditions have a stronger impact on health than income increases or the achievement of a higher level of education. Moreover, living conditions have a statistically significant influence on the perception of one's individual health.

The poorer the quality of the apartment, the worse people assess their own health. This subjective assessment depends on further factors and varies over time, but the living situation constitutes one of the major determinants. A lack of space can lead to chronic respiratory diseases or cause gastric cancer at a later point in life. Dampness and mould are considered to be the cause of respiratory diseases such as asthma, and to trigger nausea, headaches, and mental problems. If there is not enough room available for the occupants, the probability of infection will grow. The risk of falling ill becomes even greater whenever there are several deficiencies that affect health at the same time.

Previous studies that used observational data did not clearly show whether deprived living conditions have a causal health impact, or if they are the result of other circumstances that are health-damaging, too. The ZEW study improves the empirical estimation strategy and points out that living conditions indeed have a causal effect on health, irrespective of other factors such as education and income.

The study is based on data from the EU-SILC (EU Survey on Income and Living Conditions), the largest European survey on income, health, education and living conditions. The ZEW researchers focused on the period from 2005–2008 to eliminate any influence of the economic crisis on their results.

The study (ZEW Discussion Paper 14-079) is available for download at: www.zew.de/en/publications/7602

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The panel discussion featured (left to right) Max Uebe (DG for Employment, Social Affairs and Inclusion), Holger Bonin (ZEW), Jude Kirton-Darling (MEP), and Gerhard Dambach (Robert Bosch S.p.A).

ZEW Lunch Debate in Brussels on Youth Unemployment in Europe

How to best fight youth unemployment in Europe? Speakers and panellists from the spheres of research, politics, and business addressed this topic at the fifth ZEW Lunch Debate in Brussels. The event took place at the Representation of the State of Baden-Württemberg to the European Union in November 2014.

Holger Bonin, head of research department at ZEW, and Dr. Olaf Hahn, Senior Vice President of the Robert Bosch Foundation, welcomed some 70 attendants, including representatives from the European Parliament, the European Commission, NGOs, and associations. In his opening speech, Olaf Hahn emphasized that the Robert Bosch Foundation has been promoting European unity for decades. Against the backdrop of the alarming rise of youth unemployment and the devastating social and political consequences, Hahn said, they wanted to make "a small but useful contribution" to tackle this issue. The foundation therefore commissioned ZEW to conduct an in-depth analysis. The results were published in the study "Youth Unemployment in Europe – Appraisal and Policy Options".

In his presentation, labour market expert Holger Bonin pointed to the fact that youth unemployment is not a purely cyclical phenomenon. Being a structural and multifaceted issue, the youth unemployment challenge will not disappear automatically in times of economic recovery, according to Bonin. While youth unemployment is a pressing problem in Europe, it is in no way a new one. In many EU Member States the current rate is on the year-2000 level. Tackling youth unemployment, Bonin added, calls for multi-level action, involving education and economic policy, labour market institutions, and employers and unions.

Panellists with Thomas Kohl, ZEW's Director of Business and Administration (left) and Olaf Hahn, Senior Vice President of the Robert Bosch Foundation (right)

Panel Discussion on Strategies and Instruments

The subsequent panel discussion featured Dr. Max Uebe, head of the "Sectorial Employment Challenges, Youth Employment and Entrepreneurship" unit at the Directorate-General for Employment, Social Affairs and Inclusion; Jude Kirton-Darling, Member of the European Parliament for North East England; and Dr. Gerhard Dambach, Managing Director of Robert Bosch S.p.A. in Italy. Max Uebe emphasized the key role of the Youth Guarantee, the "flagship" in the EU Commission's strategy against youth unemployment. The Youth Guarantee, Uebe said, is "much more than an active labour market policy. It is a structural reform of apprenticeship schemes and educational systems that involves partnerships between all stakeholders." Jude Kirton-Darling, whose electoral district in North East England is particularly affected by youth unemployment, argued for policies that stimulate growth: "It is not possible to tackle youth unemployment unless we address our macroeconomic policies. As long as we are pursuing austerity policies, we are probably intensifying the problem," she said. Gerhard Dambach addressed the labour market and macroeconomic situation in Italy: "We cannot wait for politics," Dambach said. "We need well-trained people, but we do not have a dual vocational system in Italy." To tackle this structural problem, the Robert Bosch company is implementing a training programme for young employees in Italy similar to the German vocational system.

In the following discussion, the audience contributed more aspects on the topic. What is the role of private placement agencies? Are lower entry wages or reduced job protection for newly hired staff a means to provide young people access to the labour market? Given the huge impact of youth unemployment on the European societies, these questions will certainly remain on the agenda of experts and policy-makers in the EU.

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2014 Beijing Humboldt Forum – ZEW Researchers Address China's Climate Policy

The Centre for European Economic Research, the Beijing University of International Business and Economics (UIBE), and the Alexander von Humboldt Foundation organised this year's Beijing Humboldt Forum in the Chinese capital on September 19–21, 2014. The forum took place under the heading "Cultural Heritage and Green Economy – Technological Innovation, Industrial Growth & Green Mobility". ZEW researchers organised a session at the event, in which they presented their findings on Chinese climate policy and intensity of resource consumption. About 120 participants from the spheres of science and politics attended the event, which featured a variety of presentations and lectures on China's potential for sustainable and environmentally-friendly growth. Key topics of the presentations included the role of technological innovation, green mobility, China's path to a market economy as well as cultural aspects affecting the cooperation between China and the western world.

In an environment of interdisciplinary and international networking, speakers from different disciplines presented their perspectives and considered a variety of approaches to meeting current challenges. Professor Xiaohu Feng of UIBE, whose research interests include innovations that reduce CO_2 emissions, visited ZEW in the summer of 2014 to strengthen cooperation between the two institutions.

Professor Xiaohu Feng (UIBE) opens the 2014 Beijing Humboldt Forum

Strong Participation of ZEW Researchers at the Nobel Laureate Meeting in Lindau

In the summer of 2014, 18 Nobel Laureates in economics and about 460 upcoming researchers from the same field met in Lindau at the Lake Constance. At this year's meeting, which took place for the fifth time, ZEW was strongly represented with six participating researchers. For three days, Zwetelina Iliewa, Zareh Asatryan, Dr. Jan Hogrefe, Fabienne Rasel, Paul Hünermund and Maximilian Blömer had the opportunity to exchange ideas with the greatest names in their fields. In the plenary sessions and talks, the Nobel Laureates gave presentations about their scientific work or discussed related topics. The Lindau Meeting primarily serves as a platform to establish networks and exchange economic expertise between researchers across borders. This year's Nobel Laureate Meeting featured participants from 86 countries.

Sixth ReCapNet Conference at ZEW

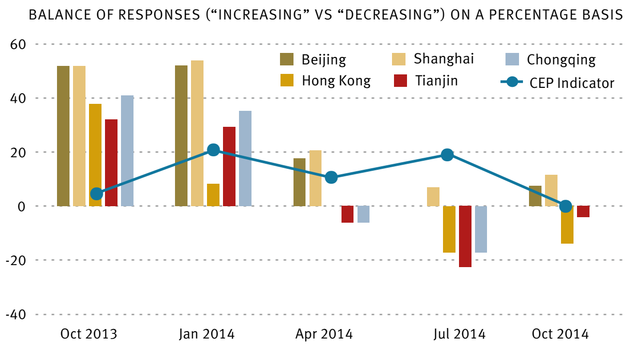
China's housing boom, certification of green buildings, and the implications of increasing financial integration on national real estate cycles were some of the topics that 30 international scholars discussed at the sixth annual conference of the Leibniz research network "Real Estate Markets and Capital Markets" (ReCapNet). The conference took place at ZEW in Mannheim on October 23–24, 2014. In eleven lectures on the two conference days, the participants presented and discussed hypotheses and research results concerning novel types of linkages between international real estate and capital markets, as well as their economic policy implications.

This year's ReCapNet Conference was the first to feature a session exclusively devoted to Asian real estate markets. Yourong Wang from Beijing Central University of Finance and Economics gave a lecture on the effectiveness of government interventions into real estate markets. Seow Eng Ong from the National University of Singapore showed how the returns of Singapore real estate investment trusts (REITs) developed after asset enhancement initiatives were announced. Both presentations clearly highlighted the growing importance of Asian real estate and capital markets for research as well as real estate business.

The 2015 ReCapNet Conference will be hosted by ZEW in October 2015. The call for papers will be issued in December of 2014.


Yourong Wang from Beijing Central University of Finance and Economics at the 2014 ReCapNet Conference

China's Housing Market Starts to Cool Down



Source: Fudan University (Shanghai)/ZEW

The experts surveyed within the framework of the ZEW Fudan China Economic Panel (CEP) expect a price drop for residential properties in some of China's important megacities over the next twelve months. While expectations were positive for "tier-1 cities" like Beijing, Shanghai, and Hong Kong at the beginning of this year, a reverse tendency has emerged within the course of the past few months. The CEP Indicator for China's overall economy has also been decreasing recently.

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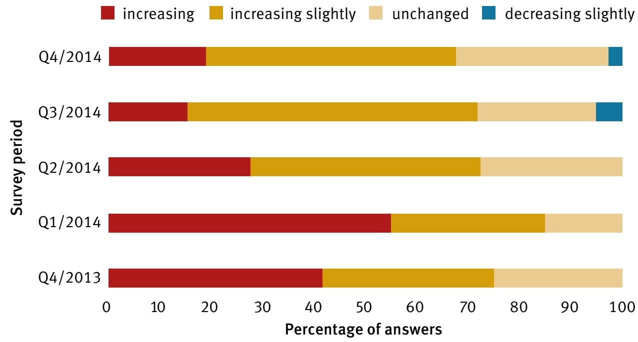
Chinese Direct Investment in Germany Set for Growth



Source: Pricewaterhouse Coopers (PwC)/ZEW

China's increasing influence on the international division of labour is, in addition to the trade with goods and services, especially reflected in foreign direct investment. Many Chinese companies have already acquired or hold a share in foreign businesses. The findings of the ZEW PwC Indicator of Economic Sentiment China suggest that the number of shareholdings and acquisitions will continue to rise. The surveyed managers also expect an overall expansion of Chinese foreign investment.

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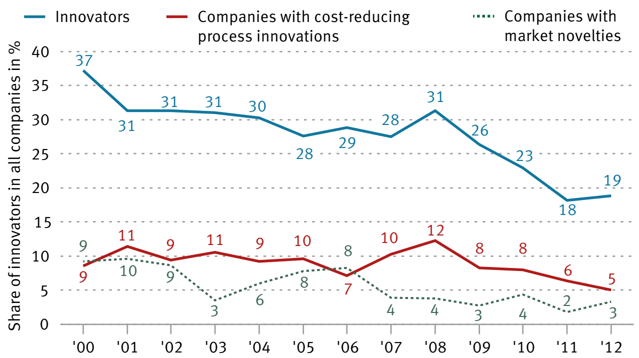
Innovation Activities Remain Low in the Transport Sector



Source: ZEW, Mannheim Innovation Panel

Companies in the German transport sector (transport of goods and passengers, transport services, postal services) continue to be reluctant in the implementation of new services and processes. In 2012, 19 per cent of the companies were innovators. The share of innovators is thus only slightly above the all-time low of 2011 (18 per cent). In 2012, the share of companies that implemented process innovations reached only five per cent. The share of companies that introduced new products (market novelties) remained on the very low value of three per cent in 2012.

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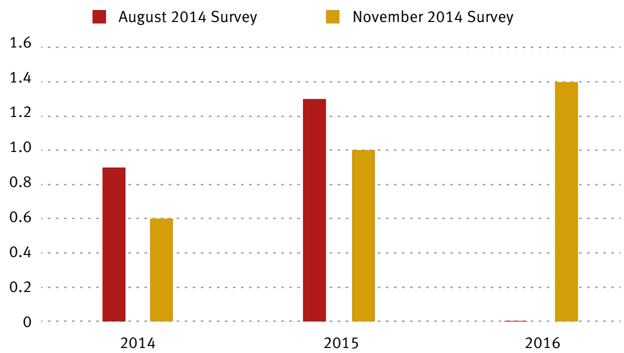
Long-Term Inflation Prospects Are Below the Target Rate



Median of inflation forecasts for the eurozone (HICP)

Source: ZEW

On a quarterly basis, ZEW researchers survey financial market experts regarding their expectations about the inflation development in the euro area. In the current survey for November 2014, like in the previous quarters, they have again made downward revisions to their inflation expectations. For 2015 an inflation rate of one per cent is expected, while for 2016 the financial market experts expect an inflation rate of 1.4 per cent. The inflation prospects are thus well below the European Central Bank's inflation target rate of below, but close to, two per cent.

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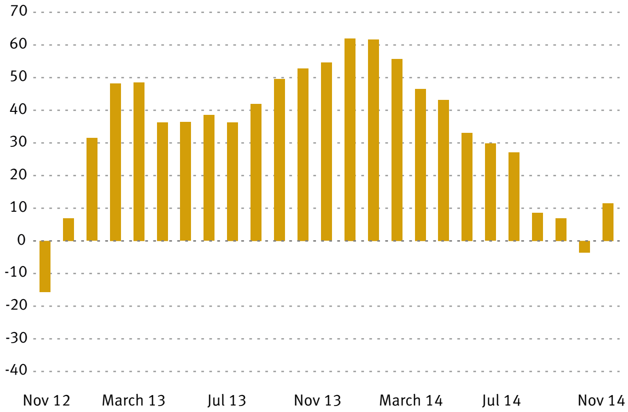
ZEW Financial Market Test November 2014



Balance of positive and negative assessments concerning economic development on a six-month horizon in Germany
Source: ZEW

Germany: First Increase in 2014

The ZEW Indicator of Economic Sentiment for Germany gains 15.1 points in November 2014. Now standing at 11.5 points, the index has returned to positive territory. This is the first increase in 2014. The recent growth figures for the euro area suggest that the economy is stabilising, which contributed to the indicator's increase. However, the economic environment remains fragile, not least due to ongoing geopolitical tensions. The assessment of the current economic situation in Germany has increased by 0.1 points, the index now stands at 3.3 points. ZEW's Indicator of Economic Sentiment for the Eurozone has increased by 6.9 points in November to a reading of 11.0 points. The indicator for the current economic situation in the euro area has decreased by 2.9 points to a value of minus 59.7 points.

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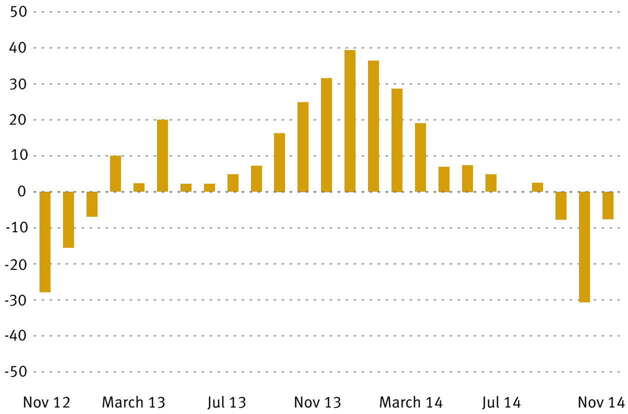

Balance of positive and negative assessments concerning economic development on a six-month horizon in Switzerland
Source: ZEW, Credit Suisse

Switzerland: Rebound in Economic Sentiment

The November survey shows a strong rebound in analysts' sentiment, with an increase of the ZEW-CS Indicator from minus 30.7 points in October to minus 7.6 points in November 2014. The indicator reflects the expectations of the surveyed financial market experts regarding the economic development in Switzerland on a six-month time horizon. It is calculated monthly by ZEW in co-operation with Credit Suisse (CS), Zurich. The indicator's rise in November is likely associated to moderately improved economic data from Germany: The increase in the Purchasing Manager Index for Germany mitigates concerns that the Swiss economy might be affected by an economic slowdown in Germany. It is furthermore possible that analysts' sentiment generally improved due to the rebound in global stock prices since mid-October.

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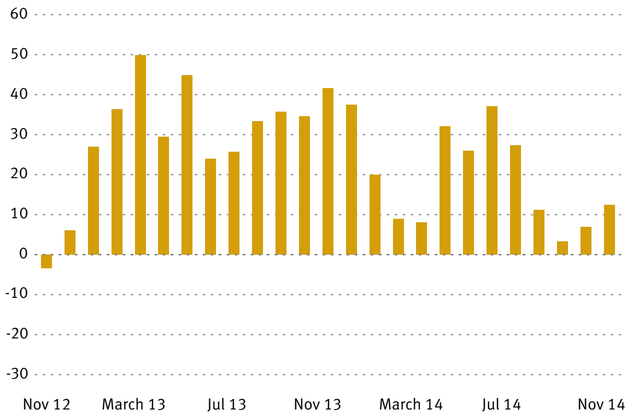

Balance of positive and negative assessments concerning economic development on a six-month horizon in the CEE region
Source: ZEW

CEE Region: Economic Expectations Improve

In November 2014 economic expectations for Central and Eastern Europe including Turkey (CEE region) improve. In the current survey the ZEW-Erste Group Bank Economic Sentiment Indicator for the CEE region has gained 5.5 points and reaches a level of 12.5 points. Among the individual countries, the largest improvement is observed for the Slovakia indicator, which has increased by 24.1 points this month. In November 2014 the experts' assessment of the current economic situation for the CEE region decreases by 22.3 points to a level of minus 12.6 points. The ZEW-Erste Group Bank Economic Sentiment Indicator for Central and Eastern Europe reflects the financial market experts' expectations for the CEE region on a six-month time horizon and has been surveyed monthly since 2007.

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Luxembourg's Tax Tricks and Tax Competition in Europe

Public debate concerning Luxembourg and its tax tricks has focused first and foremost on the individual responsibility of Jean-Claude Juncker. This was perhaps to be expected. Yet there is a danger that the personalisation of the debate will divert attention from the true issue at hand: namely, what tax rules should apply in Europe to ensure fair and efficient taxation?

Luxembourg has granted individual companies preferential tax treatment for certain types of revenues, such as foreign brand and patent royalties. While this was not publicly known until recently, it creates three problems. First, the revenues that receive preferential treatment are taxed at very low rates or sometimes not at all. This means that other taxpayers are unfairly disadvantaged. Second, the tax breaks cause other countries to lose tax revenues, even though nothing has changed in real terms, as there is no geographic shift in jobs, production facilities, or sales to Luxembourg. Third, the tax breaks distort competition. Many small and medium-sized companies are too small to take advantage of opportunities in international tax planning. Furthermore, there definitely are multinational companies that do not engage in aggressive tax planning – and they are disadvantaged for it. One could make the counterargument that the tax tricks used in Luxembourg and other countries do not break any laws. Yet not everything that is legal is also desirable.

What should policy-makers do? Fundamental critics of tax competition have taken the latest revelations concerning Luxembourg as an opportunity to make calls for unified tax rules in Europe, in order to end tax competition. However, unified rules would throw the baby out with the bath water. First of all, the job of creating unified rules would be much more difficult than one might initially suppose. Unified tax rates would not be sufficient. Tax bases would also have to be standardised. In Germany, for example, the Gewerbesteuer, a form of local tax on business, would have to be abolished. That alone might not be a significant loss. Yet the reforms would also have to extend to personal income taxes. Particularly in Germany, many companies are unincorporated, and they would have to abide by the rules enacted at the European level. Second, unified tax rules would take away an important tool used by nations that are disadvantaged due to their geographical position or other reasons. Formerly the poor house of Europe, Ireland was able to become a dynamic, advanced economy – current problems notwithstanding – thanks to the magnetic effect of low tax rates. Third, tax competition helps to prevent excessively high tax rates from being enacted that could endanger jobs and economic growth. Fourth, unified tax rules would considerably restrict the autonomy of national economic policy. Currently, a debate is taking place in Germany about introducing accelerated depreciation rates to encourage private investment. This would be impossible if harmonised tax rules were in place at the European level.

Thus, instead of trying to abolish tax competition, we should seek to adopt rules that enable fair competition. A key guideline should be the prohibition of double taxation and of the non-taxation of profits. Countries that have low tax rates should offer the same rates to all companies, and not just to select ones. In addition, EU countries should work to better coordinate their double-taxation treaties with non-European states. When individual EU Member States allow interest payments or royalties to flow untaxed to tax havens outside of Europe, this makes undesired tax avoidance easier in all of Europe.

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