



Research Findings

How to Incentivize Creativity?

Research Findings

Intangible Assets – Boost to Productivity

Opinion

Designing a Better Market

European Banks Under Stress – Crisis Scenario Reveals Huge Capital Shortfalls

The financial crisis of 2007 and 2008 has led to a massive upheaval in international capital markets. Nearly one decade later it seems that the problems resulting from it are still ongoing. According to two studies conducted by ZEW in collaboration with the New York University Stern School of Business and the University of Lausanne, and based on the stress tests carried out in Europe and the USA in 2014 and 2016, the size of capital shortfalls of banks across EU countries is estimated in the billions in the event of a new systemic financial crisis.

Banks and credit institutions across Europe lack sufficient capital to offset the losses expected in the case of another financial crisis. Those banks in need of recapitalisation are not only from peripheral countries of the eurozone such as Italy and Spain, but also from EU core countries such as Germany and

France. The magnitude of losses, however, depends on the severity of the stress scenarios.

The researchers based their comparison on two benchmark methodologies; the approach taken by the European Banking Authority (EBA) in stress tests conducted in 2014, and the methodology applied by the US Federal Reserve (Fed) in the stress test conducted in the US banking sector in 2016.

About 70 Per Cent of the Banking Sector Covered

The latest EBA stress test consists of 51 European banks, which comprise about 70 per cent of the banking sector, and of which 34 are publicly listed. The banks in this sample represent about EUR 27 trillion in total assets. The total market capitalisation of the 34 publicly listed banks is EUR 693 billion, the av-

average market equity/assets ratio is 4.4 per cent. On the basis of these figures, the researcher teams from ZEW, Stern School and the University of Lausanne compared the market data as of November 2014 – after the European Central Bank's (ECB) stress test and shortly before the start of the Banking Union – to market data up until June 2016. In the end, the size of capital shortfalls of banks across EU countries was estimated in case of a systemic financial crisis.

Building on assumptions made in the EBA and Fed stress tests, researchers extended comparison by a market-based approach, which assumed a global stock market decline of 40 per cent over six months.

Capital Shortfalls in a Crisis Scenario Increased from EUR 655 Billion to EUR 882 Billion

On average, the capital shortfalls in a crisis scenario have increased by 35 per cent, from EUR 655 billion to EUR 882 billion, since October 2014. The banks with the largest percentage increase in systemic risk are from Spain, with an increase in capital shortfalls of 110 per cent, followed by Ireland (89.2 per cent), the UK (73.9 per cent) and Sweden (71.2 per cent).

Italian banks' shortfall increased by 29.2 per cent, while that of German banks rose by about 8 per cent. The banks with the largest declines in market capitalisation are from Germany (49.4 per cent), Italy (47 per cent) and Spain (41.7 per cent).

Under the conditions of the stress scenario assumed in the EBA stress test, the capital shortfalls of all 51 banks total EUR 5.6 billion. The stress scenario assumed in the Fed stress test resulted in total capital shortfalls of EUR 123 billion for all 51

banks. According to the Fed stress test, the banks with the largest capital shortfalls are the Deutsche Bank (EUR 19 billion), and the French banks, Société Générale (EUR 13 billion) and BNP Paribas (EUR 10 billion).

Capital Shortfalls of EUR 675 Billion Revealed – French and German Banks Involved

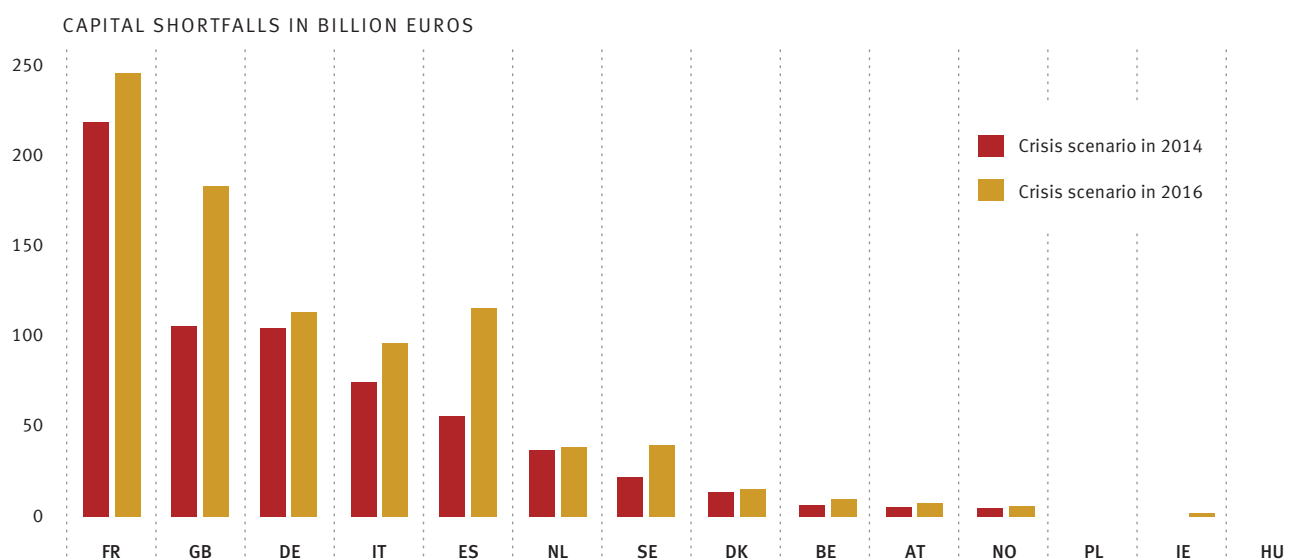
Following the market-based approach, which assumed a global stock market decline of 40 per cent over six months, the studies authors revealed capital shortfalls of EUR 675 billion for the 34 listed banks, while the Fed stress test demonstrated shortfalls of EUR 92 billion. The banks with the largest capital shortfalls were the French banks, Crédit Agricole (EUR 79 billion) and BNP Paribas (EUR 75 billion), as well as Germany's Deutsche Bank (EUR 60 billion).

According to the researchers, the results suggest that the European financial sector requires a comprehensive recapitalisation across almost all countries, including Germany. The USA have drawn their own conclusions and implemented comprehensive measures for the recapitalisation of the American banking sector as early as in 2008. A lack of political will means that this has still not happened in Europe.

The complete studies are available for download at: www.sascha-steffen.de/uploads/5/9/9/3/5993642/shortfalls_v28july2016_final.pdf, www.sascha-steffen.de/uploads/5/9/9/3/5993642/benchmarking_august2016.pdf

Prof. Dr. Sascha Steffen, steffen@zew.de
Prof. Viral V. Acharya, PhD, vacharya@stern.nyu.edu
Diane Pierret, PhD, diane.pierret@unil.ch

CAPITAL SHORTFALLS OF EUROPEAN BANKS (COUNTRY LEVEL) IN A CRISIS SCENARIO* BETWEEN NOVEMBER 2014 AND JUNE 2016



**assuming a stock market decline of 40 per cent over six months (market-based approach)

Source: ZEW



Digitisation in the Electricity Industry Proceeds at Too Slow a Pace

The digital revolution is gradually encroaching on all economic sectors, including the electricity industry. The “Act on the Digitisation of the Energy Transition” shows just how high this development ranks on the German political agenda. The digitisation process in the German and French electricity industry is, however, still too slow-paced. This is one of the key findings of the ZEW Energy Market Barometer, a survey among approximately 200 energy market experts conducted biannually by ZEW.

In the current ZEW Energy Market Barometer, ZEW and the Grenoble École de Management (GEM) surveyed experts with special regard to the progress of digitisation in the German and French electricity industry. Within the framework of the GEM Energy Market Barometer, the GEM surveyed approximately 80 French energy market experts.

Digitisation in the Electricity Sector Still in its Infancy

According to the findings, experts from both countries consider the pace of the digitisation to be too slow. In total, 40 per cent of the German energy market experts claimed that the speed of digitisation in Germany is adequate. 41 per cent of the respondents consider the pace at which digitisation proceeds to be too slow, and six per cent stated that the progress of digitisation is much too slow. The results of the French survey were

even more clear-cut: The absolute majority of the participants from France stated that the digitisation is proceeding at too slow a pace. Merely 33 per cent of the French survey participants consider the speed of digitisation to be adequate.

When asked about the German electricity industry, a relative majority of the German experts perceive the level of digitisation in Germany to be average in comparison to other West European countries. Nevertheless, experts consider the speed of the progress to be too slow.

The ZEW Energy Market Barometer

The ZEW Energy Market Barometer is a biannual survey conducted amongst some 200 experts from academia and the private sector (including energy supply, trading, and service providers). Participants are surveyed in regard to their expectations concerning short- (six-month horizon) and medium-term (five-year horizon) developments in national and international energy markets and prices. A summary of the full results from the latest survey (survey period: May 2016, approximately 180 responses) is published in the German edition of the ZEWnews.

It is available for download (German language only) at:

<http://www.zew.de/fileadmin/FTP/zn/schwerpunkte/energiemarkt/Energiemarkt0816.pdf>

Philipp Massier, massier@zew.de

IN THIS ISSUE

| | |
|--|---|
| European Banks Under Stress – Crisis Scenario Reveals Huge Capital Shortfalls | 1 |
| Digitisation in the Electricity Industry Proceeds at Too Slow a Pace | 3 |
| State Aid for Companies in Financial Straits Realised Desired Results | 4 |
| How to Incentivize Creativity – Results from a Large-scale Laboratory Experiment | 5 |
| Intangible Assets Provide Market Boost to Company Productivity | 6 |

| | |
|---|----|
| Potential for Energy Savings by Households Depends Largely on Income | 7 |
| Q&A: What Impact Does Deregulation Have on the Interurban Bus Sector? | 8 |
| ZEW Lunch Debate: Brexit Reveals Tensions in Europe. | 9 |
| Inside ZEW | 10 |
| Dates, Facts and Figures | 11 |
| Opinion | 12 |

State Aid for Companies in Financial Straits Realised Desired Results

In a study commissioned by the European Commission, ZEW economists examined whether state aid for restructuring is an effective tool for helping companies in financial straits. The study's authors found that state aid significantly improves a company's chances of survival and contributes considerably to its complete financial recovery.

State aid for restructuring – for example, in the form of government loans – is generally regarded as an effective means for saving companies from a market exit when they encounter financial difficulties, thus preserving jobs and company expertise.

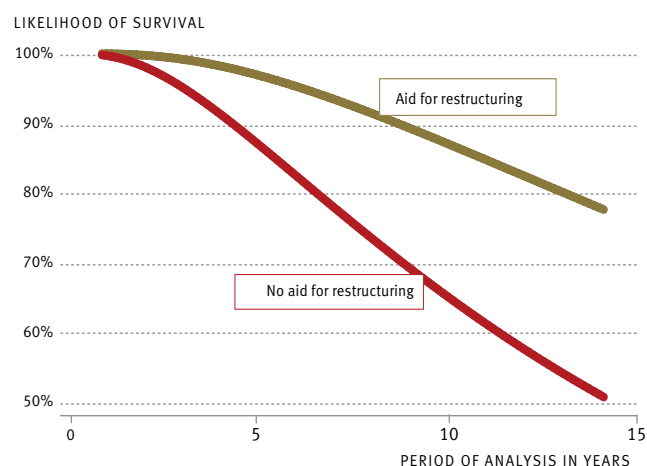
But state aid carries certain risks. Multiple studies have found instances of politically motivated wasteful spending and market distortion. To curtail negative effects like these, the European Commission must carefully review each application before granting approval. An essential precondition for a go-ahead from the European Commission is that the company in question would in all likelihood not survive without state aid and is very likely to be salvageable.

In view of these risks, the study examined whether state aid significantly improves a company's chances for survival and contributes to its financial recovery. The authors first identified all companies in the EU that received state aid for restructuring

covery. They examined all companies in the EU that received state aid for restructuring between 2003 and 2012.

The authors found that state aid for restructuring significantly increased a company's chances of survival. The aid-receiving companies had an estimated lifespan of 19 to 29 years depending on how "survival" was defined (bankruptcy or market exit). The estimated lifespan for the nearest neighbours, which did not receive aid, was 11 to 14 years, only half as high. In other words, the state restructuring measures increased company lifespan between 8 and 15 years.

ESTIMATED LIKELIHOOD OF SURVIVAL FOR COMPANIES THAT RECEIVED STATE AID AND FOR THOSE THAT DID NOT



Source: ZEW



The EU Commission decides whether a company receives state aid for restructuring.

between 2003 and 2012. They then matched each company that received state aid for restructuring with a similar company that had not received aid. This company, known as a "nearest neighbour", was in the same industrial sector, had approximately the same size, and found itself in a comparable financial situation.

Next, the study's authors looked at how companies that received state aid performed over time relative to their respective nearest neighbours. Specifically, they assessed the companies' likelihood of survival and likelihood of complete financial recovery.

Similar results were found for the likelihood of a company's complete financial recovery, though here it became clear that the effects of restructuring measures did not present themselves immediately. 45 to 47 per cent of the companies that received state aid (and only 26 to 31 per cent of those that did not) were on healthy footing 6 years after the restructuring measures were introduced. Three years after the restructuring statistically significant differences in the likelihood of company's financial recovery were not yet discernible.

Overall, the study found that state aid significantly improved a company's chances of survival and contributed considerably to its complete financial recovery. But since the effects of the aid are not immediately apparent, the success of restructuring programmes should be judged over a long-term period.

The study is available for download at:

www.zew.de/publikation8384

Dr. Sven Heim, heim@zew.de
Prof. Dr. Kai Hüschelrath, hueschelrath@zew.de



How to Incentivize Creativity – Results from a Large-scale Laboratory Experiment

Intangible Assets Provide Market Boost to Company Productivity

There's been much complaining in recent years about falling investment levels in Europe. But according to a new study by ZEW, investment activity has merely shifted emphasis, with more resources being placed in intangible assets than in physical capital. At the same time, intangible investment has become a major driver of firm productivity.

From 1995 to 2015 the EU-15 investment rate – the ratio of gross capital formation to GDP – dropped 1.8 percentage points to 19.4 percent. In Germany, the decline was even greater – 3.3 percentage points. As a result, German economists and politicians began to speak of weak investment, which they feared would undermine productivity and economic competitiveness.

A recent ZEW study suggests that the conventional understanding of investment, which focuses on capital expenditure on physical assets such as machinery, vehicles, and buildings, does only partially take into account investment in intangible capital. Today, this type of capital, which includes research and development (R&D), software, training, marketing, and organisational capital, plays a crucial role in company productivity and competitiveness. More than ever, it is not just the factors of production that contribute to productivity, but also unique selling points such as quality, brand, and customer-tailored solutions. These types of assets allow companies to fetch higher prices, generating greater profits. Product differentiation is especially important in globalised markets, where industrial nations like Germany must compete with countries that not only have enormous wage-cost advantages but also have access to advanced production technologies.

Another factor driving investment activity in intangibles is the structural transition to a knowledge economy. An expanding portion of private-sector production consists of services based primarily on the use of human capital instead of physical assets.

Dynamic Levels of Intangible Investment

The study is based on data from the Mannheim Innovation Panel (MIP), which has gathered information about the innovation behaviour of German firms annually since 1993. The MIP is part of a Europe-wide effort to measure innovation under the auspices of Eurostat – the Community Innovation Surveys. The MIP collects data about investments in seven areas of intangibles: R&D, software and databases, intellectual property rights (IPRs), design, training, marketing, and organisational capital.

The study found investments in intangibles to be considerably more dynamic than those in physical capital. For instance, between 2006 and 2014, investments in intangibles increased by 30 per cent, while investments in tangible assets fell by 9 per cent. In 2014, the German private-sector economy saw 181.2

billion euros of investment in intangibles, significantly higher than 138.5 billion invested in physical capital. By far, the largest areas for intangibles were R&D and marketing, which brought in 34 and 30 per cent of total investment, respectively. Software received 11 per cent; design and organisational capital, 9 per cent each; training, 5 per cent; and copyrights, 4 per cent.

R&D is the dominant area of investment in only a few sectors – the electrical industry, mechanical engineering, vehicles, and technical services. In the other areas, even in the research-intensive chemical and pharmaceutical industries, marketing has become more important. This is especially true in consumer goods, financial services, and corporate services. Design plays a subordinate role in all sectors, while training and organisational capital are particularly important in consulting (legal, economic, corporate, promotional). IPRs are important exclusively in the information and communication sectors, namely in publishing and broadcasting.

Production Rises Most Noticeable in Marketing

In the second part of the ZEW study, researchers identified the productivity effects of intangibles using a microeconomic panel analysis from MIP data. Based on the analysis, they estimate that almost all the intangible investments under study increase company productivity. Between 2006 and 2014, the average rate of return on investments across all the sectors was 3.4 per cent for software, 3.6 per cent for training, 4.3 per cent for R&D, and 5.8 per cent for marketing. The positive effects are stronger in the services sector than in the industrial sector. Interestingly, investments in marketing contribute more than R&D to productivity growth both in manufacturing and services. The only intangible areas that do not influence productivity are design and IPRs. Though the study's authors did not find organisational capital to increase productivity independently, this may be due to the difficulty of accurate measurement in this area.

Given these results, concern about declining investment in German firms must be put into perspective. Investments in intangible assets contribute appreciably to company productivity and competitiveness and they make up the larger part of investment in the private sector. Discussions of capital investment and how to improve it should focus on intangible assets, and economic policy should take into account the particular financing they require. Their highly firm-specific character makes them ill-suited for securing external capital, restricting their options when it comes to financing loans.

Download the study (in German language only) at:

<http://www.zew.de/PU78004>

Dr. Christian Rammer, rammer@zew.de
Prof. Dr. Bettina Peters, peters@zew.de

Potential for Energy Savings by Households Depends Largely on Income

Energy reduction is one of the central objectives of Germany's transition to a clean energy economy. By 2050, Germany's Energiewende aims to cut energy consumption to half of 2008 levels. But when it comes to energy reduction in private homes, the potential for savings varies greatly according to income level and household size. This has important ramifications for Energiewende policy – a fact that has received too little attention in the public discussion.

Over the past decade, prices for household electricity have risen sharply, with the cost of a kilowatt hour climbing from €0.20 in 2007 to €0.30 in 2015. Some have sought to justify this increase as an incentive to conserve energy. But a recent ZEW study shows that the potential for savings is very different depending on household type. In particular, it found that households with low disposable incomes can save much less energy than wealthier ones.

The study evaluated data for more than 200,000 households in Germany from 1993 to 2008. It found that heat and electricity are necessities: demand for them is relatively high regardless of household income. Household size in turn has a much stronger impact on energy needs. For instance, two adults living together use only about 1.5 times as much energy as an adult living alone. In other words: the more people living in a household, the lower the per capita demand for energy.

Rising Energy Prices Disproportionately Affect Poor Households

Together, these aspects of energy consumption lead to notable differences in how households respond to rising energy prices. In a single-person household with a disposable income in the bottom 25 per cent, a 1-per cent increase in electricity prices leads to a 0.18-per cent reduction of demand. By contrast, a well-off single-person household with a disposable income in the top 25 per cent will see a drop of 0.57 per cent in consump-

tion – three times as high – when faced with the same price increase. Similar patterns can be observed for heat demand. Accordingly, rising electricity prices impact households with low disposable incomes more than other additional expenses do because the potential for energy savings is low. Households with high disposable incomes have more room for savings, and thus can better offset price hikes. Ultimately, then, increases in energy prices hit poorer households harder than the well-off. Economists call this a “regressive effect”. As simulations have shown, rising energy prices exacerbate economic inequality.

These findings cast doubt on the appropriateness of current energy policy in Germany. One aspect that should be given special scrutiny is subsidies for green electricity, which have done much to drive up energy costs in recent years, disproportionately affecting poorer households. Whenever policy can directly affect cost structure, outcomes of this sort should be avoided.

Progressive Taxes Are a Better Way to Finance Climate Protection

This is not to make a case against the Energiewende. But the study's findings urge us to reconsider the specific form climate policy should take. First and foremost, climate policy must be designed as cost efficiently as possible, giving more climate protection for every euro invested. In past years, steps have been made in the right direction, but further reforms are necessary. In particular, the financing mechanism must be adjusted in certain areas. Electricity prices are a practical way to incentivise saving energy, but they should not rise excessively. Climate protection is a task for society as a whole, which is why more of it must be funded by progressive taxes. This has the benefit of making the costs of climate protection more transparent while helping avoid an unfair distribution of its burdens.

The study is available for download at:

www.zew.de/publikation8446

Dr. Peter Heindl, heindl@zew.de



Q&A: What Impact Does Deregulation Have on the Interurban Bus Sector?

EU Policy Will Make More Integration Possible in the Interurban Bus Sector

Since the German interurban bus sector underwent extensive deregulations in 2013, licensed bus companies have been able to offer regularly scheduled services on routes of over 50 kilometres. The ZEW Economist Kai Hüschelrath has singled out the sector as a perfect example for the success of European deregulation and despite the spate of recent mergers sees no reason to be overly concerned about decreasing competition.

How do you see developments in the three-and-a-half years after Germany's Passenger Transport Act was amended?

As expected, deregulation brought many new players to the market. Some of these newcomers have a regional focus; others have been intent on building out a Germany-wide network. Some have been very successful; others have been forced out of the market fairly quickly. All this growth and start-up activity, coupled with a large demand for interurban travel, is likely to lead to there being as many passengers in 2016 as had been originally projected for 2030. These impressive figures underline the dynamics enjoyed by the market since deregulation.



Photo: © istockphoto.com/jrkphoto

Interurban bus carriers work on expanding their international connections within the next years.

Who benefits most from the deregulation of the interurban bus sector?

On the demand side, customers with limited budgets such as students and senior citizens have certainly appreciated low-cost interurban bus options. Deregulation has improved the mobility of these groups. On the supply side, cities have an interest in being part of a long-distance bus network. In a ZEW study we showed that the likelihood of being added to an interurban bus service network depends not only on the size of a city's population but also on factors such as average income, the shares of younger and older residents, and the density of automobiles.

Some recent mergers in the interurban bus sector have attracted much attention. How should they be seen from a competitive standpoint?

The advantages that mergers bring can be in customers' interest. The most important advantage is surely a larger network. But horizontal mergers also decrease competition, which can ultimately lead to price increases. In another ZEW study we discovered that the average price for a particular interurban bus route was particularly low (in November 2014), when MeinFernbus and FlixBus were in direct competition on that particular route. After the two companies merged last year, price increases on these routes appear likely. But I do not expect serious problems from recent mergers. Much of the demand is likely to respond very sensibly to price increases, while there are still close substitutes such as car-sharing. Moreover, for the time being at least it is still fairly easy to enter the interurban bus market, making substantial long-term price increases unlikely.

What about the liberalisation of the interurban bus sector elsewhere in Europe?

The EU Commission has been trying to liberalise interurban bus sectors at the national level for years now. Nevertheless, we are still quite a way from reaching this goal. For instance, while the sector was deregulated in the UK and in Sweden decades ago, the necessary legislative steps in France were not taken until August of 2015. The coming years also promise to be interesting as experienced interurban bus carriers work on expanding their international connections. Thanks to current regulations on the European domestic market, this is not only easy to implement; it is also possible to create an integrated European interurban bus sector in the medium term.



Photo: ZEW

Prof. Dr. Kai Hüschelrath

Since January 2012, Prof. Dr. Kai Hüschelrath has been head of ZEW's Research Group "Competition and Regulation" and coordinator of the Leibniz ScienceCampus "Mannheim Centre for Competition and Innovation" (MaCCI). In October 2013, he joined the University of Mannheim as Professor of Economics, Competition Policy. Professor Hüschelrath's research mainly concentrates on the entire field of industrial organisation with a particular focus on competitive strategy and competition policy.

hueschelrath@zew.de

Brexit Reveals Tensions in Europe

The decision of the British voters to leave the European Union has sparked concerns across the continent. How should and can the process of European integration continue? And what will Germany and France, the two leading economies in Europe besides the UK, do? These are key issues regarding the future of the EU addressed at the ZEW Lunch Debate on September 28, 2016 at the Representation of the State of Baden-Württemberg in Brussels.

In his opening speech “Brexit: A Fractured Europe?”, ZEW President Achim Wambach pointed out that decision-making competencies regarding important EU questions need to be shifted back to the national parliaments. In order to remain capable of effective policy action, EU Member States must shoulder their responsibilities – particularly in view of the Brexit vote, which revealed significant tensions within the European Union.

During the debate, Friedrich Heinemann, head of the ZEW Research Department “Corporate Taxation and Public Finance”, and Pierre Boyer, junior professor for theoretical financial economics at the École Polytechnique, Paris, explained where these tensions are rooted. In collaboration with the University of Mannheim, ZEW and the École Polytechnique conducted a survey among French and German members of parliament (MPs) in order to explore possible approaches for tackling economic policy issues as well as the allocation of EU competencies in a post-Brexit EU. “We know a lot about the voters’ opinions on EU policy. What we don’t know is what the politicians think on these matters”, says Friedrich Heinemann, explaining the survey approach. All in all, the survey revealed that French MPs are in general more open towards shifting competencies to Brussels, while their German counterparts are more reluctant to granting competencies to the EU.

Europe Relies on Solidarity Among its Member States

At the panel discussion, Friedrich Heinemann and Pierre Boyer were joined by Sylvie Goulard, member of the European Parliament (MEP) in the Group of the Alliance of Liberals and Democrats for Europe (ALDE) and member of the Committee on Economic and Monetary Affairs, and Peter Simon, MEP in the Group of the Progressive Alliance of Socialists and Democrats and vice chairman of the Committee on Economic and Monetary Affairs. ZEW President Achim Wambach moderated the debate, which was attended by about 140 high-level representatives of the EU Parliament and the EU Commission, as well as numerous renowned guests from businesses and associations.

For Sylvie Goulard, the findings of the survey among French and German MPs did not come as a surprise: “Franco-German relations are traditionally characterised by different views on political questions.” A positive result of the survey is, however, that the MPs from both countries agreed on two major security issues of our time: migration and defence policy. “Now, we must not waste time”, emphasised Goulard, “we have already lost

valuable time since the Brexit vote.” Due to the decision of the British voters to leave the EU, Europe relies more than ever on solidarity among the Member States. Otherwise, the prospects for the European Union are rather sombre.

During the debate, Peter Simon pointed towards the self-centred views of many European countries. According to Simon, the findings of the study reflect the selfish attitude adopted by many Member States. “The core problem is that Member States deem the EU a great concept as long as they benefit directly from its membership, and as long as they don’t need to cede any competencies.” Over the past decade, the national opinion regarding the EU was mainly formed in view of short-term economic



Debating the future of the European Union (from right to left): Member of the EU Parliament Sylvie Goulard, ZEW Researcher Friedrich Heinemann, Member of the EU Parliament Peter Simon, Pierre Boyer from the École Polytechnique, and ZEW President Achim Wambach.

benefits, while many Europeans have lost focus of the long-term benefits of the European Union. “What we need is a strategy for the fundamental development of the European Union”, says Simon, “we need more Europe.” To this end, Europe needs decision-making procedures leading to balanced outcomes for all Member States involved.

Pierre Boyer also addressed the issue, “Some MPs argue that granting competencies to the EU goes hand in hand with losing control over national politics.” On answering to “quo vadis Europe?”, the French economist explained: “Political decisions and mechanisms spreading the burden of possible risks may contribute to a more successful integration.”

During the discussion, the panellists were asked what a practical approach to risk sharing in the eurozone could look like. What will happen to the European Energy Union? What are the prospects for a common tax policy for all Member States? And, finally, do the political views of the parties in the EU Parliament and various national parliaments correspond to currently pressing social and economic constraints? These questions certainly emphasised the need for an intensive exchange of ideas regarding the future of the EU, beyond the scope of a ZEW Lunch Debate.

Felix Kretz, kretz@zew.de

ZEW Plays Dominant Role at the VfS-Annual Conference 2016



The association's Chairwoman Monika Schnitzer welcomes the participants of the VfS-Annual Conference 2016.

Having contributed a total of 18 presentations, ZEW played an important role at the Annual Conference of the Verein für Socialpolitik (VfS), held at the University of Augsburg, where the Mann-

heim institute also hosted an information stand. From 4 to 7 September 2016, about 800 researchers exchanged ideas on the core topic "Demographic Change" at the economic association's international conference.

The presentation of recent research findings earned ZEW a key role in the VfS Annual Conference: The researchers discussed, among other things, whether offshoring to Eastern Europe and China affects European labour markets, whether user feedback in social media increases a company's innovative capability, as well as the influence of municipal politics on municipal business taxes. In addition to the presentations, ZEW also hosted an own information stand at the congress, which offered VfS participants the opportunity to catch up on research, publications, events, and career possibilities at ZEW.

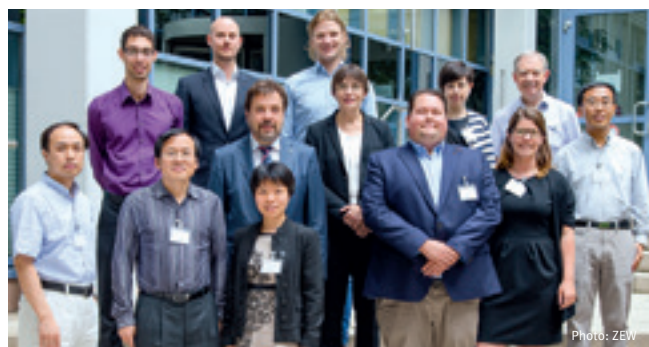
ZEW Strongly Represented at EEA-ESEM 2016

Numerous scientists from ZEW presented their research results at the 31th Annual Congress of the European Economic Association (EEA) in Geneva, which was held in August 2016. In addition to the presentations, ZEW also participated as EEA-ESEM 2016 exhibitor, hosting an information stand at the congress. The 69th Annual European Meeting of the Econometric Society (ESEM) ran in parallel with the Annual Congress of the EEA. Within the framework of the EEA, ZEW researchers as well as ZEW research associates provided seven presentations on their recent research findings. ZEW researchers discussed how trade liberalisation affects the integration of men and women in Mexico into the formal labour market, in what way job creation schemes prove successful in turbulent times, and what rules for public procurement help prevent nepotism and corruption.

The list of more than 1,300 participants attending the 2016 EEA-ESEM included leading international researchers. Besides the Italian economist and EEA President Fabrizio Zilibotti, PhD, his French colleague, Professor Philippe Aghion, PhD, from the College de France and London School of Economics, and Professor Richard Baldwin, PhD, from the Graduate Institute of International and Development Studies, attended the event.

The EEA currently has more than 3,200 members and publishes the renowned Journal of the European Economic Association (JEEA) six times per year. The annual congress regularly provides a platform for discussion and the exchange of ideas in the field of economics. The congress was hosted by the Geneva School of Economics and Management and the Graduate Institute of International and Development Studies of Geneva.

ZEW and Tsinghua University Hosted Workshop on Innovation and Entrepreneurship



The participants of the Tsinghua-ZEW Workshop "From Europe to China – Exploring New Frontiers in Economics of Innovation and Entrepreneurship".

ZEW and the Research Center for Technological Innovation (RCTI) of Tsinghua University, Beijing, jointly organised the first workshop entitled "From Europe to China – Exploring New Fron-

tiers in Economics of Innovation and Entrepreneurship" on June 30 and July 1, 2016, at ZEW in Mannheim. Within the framework of the 2-day workshop, ZEW and RCTI researchers presented their latest findings concerning, among other things, the quality of patents in cross-country comparison and women's entrepreneurship. The workshop aimed to strengthen the research cooperation between Germany and China in the fields of economics of innovation and entrepreneurship.

Pierre Mohnen (UNU-MERIT and Maastricht University) gave the first keynote speech on "R&D, innovation and survival in Chinese manufacturing firms". After having been appointed as a research fellow of the RCTI, Philipp Boeing, as well as his colleagues from ZEW's Research Department "Economics of Innovation and Industrial Dynamics" and scholars from Tsinghua University, presented novel research on global patenting and diverse challenges for entrepreneurship. The next workshop is scheduled to take place at Tsinghua University in 2017.



Annual Conference of the Leibniz ScienceCampus MaCCI

The Mannheim Centre for Competition and Innovation (MaCCI), a joint initiative of ZEW and the University of Mannheim, is pleased to announce its 2017 Annual Conference. The aim of the conference is to provide a platform for exchange and discussion on topics in competition- and innovation-related research between academic researchers and practitioners in public authorities, legal counsel, and economic consultancies.

The conference will primarily consist of parallel sessions in which original research papers from all fields of competition law and economics may be presented. The parallel sessions will also include papers on business strategy related to competition, on the intersection between competition and innovation, and on regulated industries.

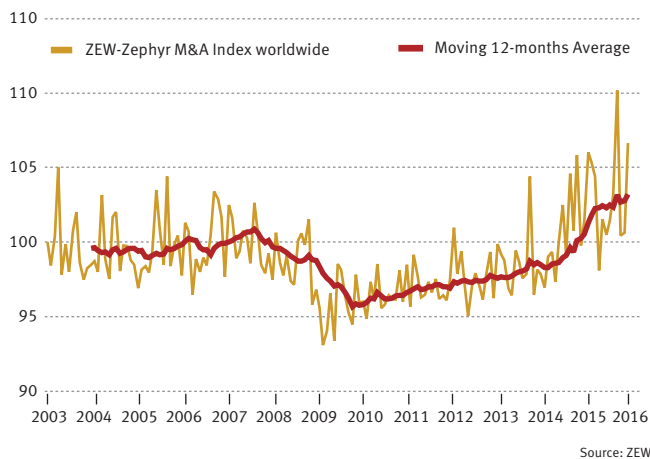
All papers should be submitted to the organising committee via macciannual2017@zew.de no later than December 21, 2016. For further information please visit: www.zew.de/macciannual2017

2017 ZEW Public Finance Conference: Public Finance and Development

ZEW is pleased to announce the 2017 ZEW Public Finance Conference. Papers in all fields of public finance are welcome. The particular focus of the 2017 annual conference will be on public finance and development, including (but not restricted to) research on economic development and the structure of public spending and taxation, optimal taxation facing administrative constraints, behavioural responses to taxation in developing countries, political institutions and fiscal capacity, tax non-compliance and under-investment in public goods, income inequality and public policies, migration, remittances, demographic change and public finances, development aid, EU development spending, taxation and inequality.

Please submit all papers via our conference management website (<https://easychair.org/conferences/?conf=2017zewpf>) by February 15, 2017. For further information please visit: www.zew.de/publicfinance2017

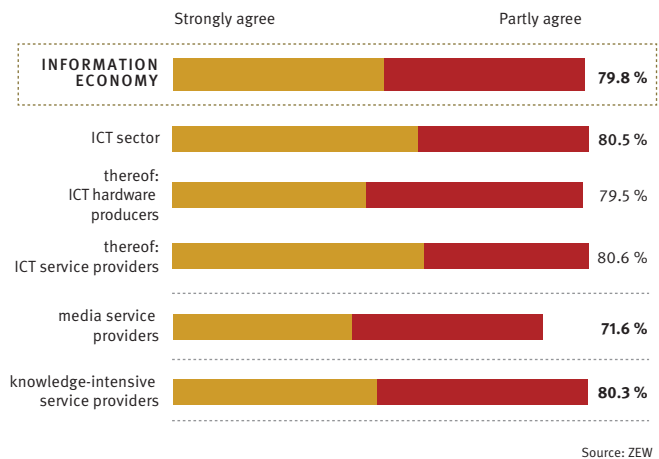
Global Mergers and Acquisitions – Mega Deals Have Become Commonplace



Whilst the number of mergers and acquisitions fell in the first six months of 2016, the volume of individual transactions continued to increase. In May 2016, the overall volume of all transactions (a total of 525) amounted to EUR 194 billion. Unlike small and medium-sized enterprises, many large businesses have completed considerable restructuring processes in the past few years and are now once again ready to focus on inorganic growth in the factor market to increase their returns. Furthermore, large businesses were easily able to acquire equivalent capital for their acquisitions from international financial markets. The sectors concerned by mega deals included the oil and gas industry, the semi-conductor industry and the cable network market.

Niklas Dürr, duerr@zew.de

Information Economy in Germany – Mobile Working Is Gaining Importance



Mobile working allows for a more flexible work environment. Almost 80 percent of firms in the German information economy (ICT sector, media and knowledge-intensive service providers) expect mobile working to become increasingly important in the coming two years. With a vast majority of about 80 per cent, respectively, firms in the sub-sectors of the ICT sector as well as knowledge-intensive service providers predict that mobile working will continue to gain importance. In particular ICT service providers are convinced of the rise of mobile working, with more than 80 per cent sharing this opinion. With a share of merely 72 per cent, media service providers are less convinced about the importance of mobile work in the future.

Dr. Jörg Ohnemus, ohnemus@zew.de



Designing a Better Market

In 2012 Edvard Munch's "The Scream" was auctioned by Sotheby's for a record price of nearly 120 million dollars. The painting was sold using the English auction format, meaning the auction started with a low minimum bid and ended when no one was willing to bid more. This auction format

raises interesting questions, however: Was the buyer of "The Scream" potentially willing to pay more? More specifically: Could the painting have been sold for an even higher price given a different set of auction rules? "Market design" is a new subfield of economics that seeks to answer questions such as these.

The objective of market design consists not only in analysing individual markets, but also in actively designing them. To this end, researchers in that field avail themselves of economic techniques such as game theory and behavioural economics. Yet as real markets are highly complex, market design is inherently interdisciplinary in nature, and has crossover to other fields, such as psychology and computer science.

As a subfield, market design has a great deal of practical potential. Clearly, the state takes a direct hand in shaping market conditions in a wide variety of domains, whether this involves the allocation of cellular frequencies, the contracting of public works, the running of emissions trading, or the promotion of renewable energy. Yet market design is also useful as an analytic tool in areas that are not traditionally considered markets, because no money changes hands. Examples include the assignment of students to schools or the allocation of donor organs. Market design can help to optimise transactions in such "matching markets". Thanks to progress in market design, for example, one donor kidney can now save several lives, instead of just one: this occurs when a donor kidney is a missing link in a chain of incompatible donor-spender pairs.

Market design involves a change of perspective in the field of economics, as details and frictions in real markets are no longer ignored. On the contrary, market design realises that it is essential to understand the idiosyncrasies of a real market in order to create rules that are optimally attuned to it.

The benefits of market design research can be illustrated by returning to the auction mentioned at the outset. As a thought experiment, let us imagine that the buyer had been willing to pay 160 million dollars. Furthermore, imagine that the auctioneer had not started with a low price, but rather with a high price that was gradually reduced. In this type of auction, the first bidder to accept the current price wins the auction. Known as a Dutch auction, this auction format is used for selling various commodities, such as flowers. Would the bidder, who was willing to pay 160 million dollars, have waited until the price fell to 120 million dollars? Or, for fear of losing, would he have bid earlier, perhaps at 150 million dollars? In this way, we see the risk aversion of the bidder is one key factor.

We should expand our use of market design as a tool for determining the optimal design of real markets in Germany. Many markets that depend on an exchange of money could benefit from the adoption of market-design instruments. Public procurement or government bond auctions are just two possible examples. Enormous potential is also available in "matching markets". The complaints raised by students each year in Germany after they are assigned a place in university as well as the desperate efforts of parents to find a spot in preschool are both connected to allocation problems that could be considerably alleviated through improved market design.

This article is an English translation of a piece that appeared in more lengthy form in the 5 September 2016 issue of the newspaper Frankfurter Allgemeine Zeitung.

ZEW

Zentrum für Europäische
Wirtschaftsforschung GmbH

Centre for European
Economic Research

ZEWnews English edition – published bimonthly

Publisher: Mannheim Centre for European Economic Research (ZEW),
L 7, 1 · 68161 Mannheim · P.O.Box 10 34 43, 68034 Mannheim · Germany · Internet: www.zew.de, www.zew.eu
President: Prof. Achim Wambach, Ph.D. · **Business and Administration Director:** Thomas Kohl

Editors: Kathrin Böhmer · Phone +49 621 1235-128 · Telefax +49 621 1235-255 · E-mail boehmer@zew.de
Gunter Grittmann (V.i.S.d.P.) · Phone +49 621 1235-132 · Telefax +49 621 1235-255 · E-mail grittmann@zew.de
Sarah Tiedemann · Phone +49 621 1235-135 · Telefax +49 621 1235-255 · E-mail tiedemann@zew.de

Full or partial reprint: please indicate source and forward a copy

© Zentrum für Europäische Wirtschaftsforschung GmbH (ZEW), Mannheim, 2016 · Member of the Leibniz Association