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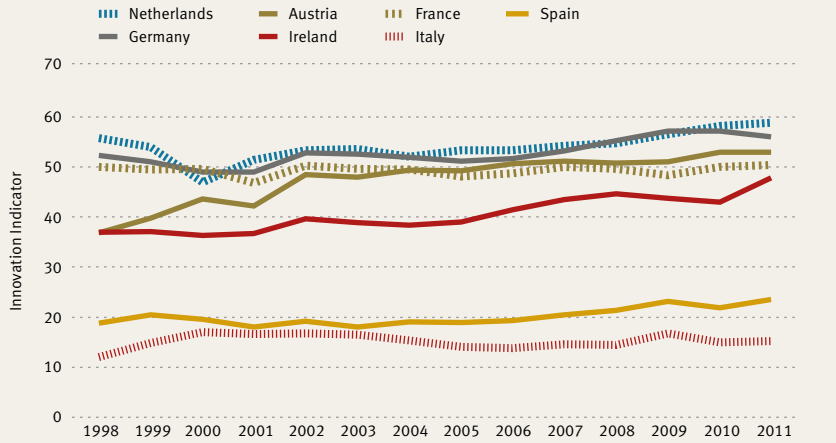
Innovation as a Way Out of the Debt Crisis

Europe's innovative performance is playing a key role in overcoming the so-called euro-crisis. The 2012 Innovation Indicator shows that the nations facing major financing problems today are those that have fallen behind in the competition to innovate.

The Innovation Indicator for Selected European Nations



Source: Innovation Indicator, BDI, Deutsche Telekom Stiftung

The Euro crisis has left Europe holding its breath. Southern European governments are contending with rapidly rising bond interest rates, and, by extension, problems with refinancing public debt. Harsh austerity programmes and low rates of economic growth have led to increased unemployment and losses of income in these countries. At the same time, the nations of Northern Europe have recovered rapidly from the 2008 and 2009 economic crisis. How can we explain these striking differences in growth?

Besides certain country-specific factors such as the bursting of the Spanish real estate bubble, it is primarily structural imbalances that are responsible for the euro-crisis. These include large differences in current account balances – namely, large surpluses in the North and large deficits in the South. The introduction of the euro initially led to the convergence of interest rates in Europe. When combined with relatively high inflation in Spain, Ireland, Portugal, and Greece, this produced extremely low real (i.e. net of inflation) interest rates. Credit expansion in Southern Europe was rapid, large capital flows occurred from North to South.

Strong Innovation Systems

Another reason for divergent account balances in European nations is the difference in their innovative performance. The 2012 Innovation Indicator shows that the European nations with large current account surpluses in recent years are the same ones with strong innovation systems (see graph). This is the case for Germany as well as for the Netherlands, Belgium, and Finland. Austria has continuously improved its innovative performance, and by the mid-2000s it surpassed France, which has been unable to improve its ranking since the introduction of the euro.

Large Performance Gap Separating Northern Europe from the South

Spain and Italy are clearly lagging behind other European nations in their innovative performance. While Italian innovative performance has been treading water throughout the past decade, Spain has been able to improve its position slightly. The large gap separating these countries from the Eurozone's lead group has remained unchanged, however. This is because top-performing countries have not experienced a standstill in their efforts to innovate. Greece and Portugal are not included in the Innovation Indicator, but their innovative performance approximately matches that of Spain and Italy.

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Large current account deficits mean that a nation is consuming more goods than it produces. In the short term, such surplus consumption can be financed through capital inflows, which is to say, through increased debt. Over the long term, however, this imbalance creates a financing problem, and in many European countries, this problem is now acute. This dilemma could be resolved if it was possible to address the root causes of divergence in economic growth within the Eurozone. However, this would require fostering greater convergence between individual nations in terms of innovative performance and productivity. It is clear that dismantling disparities can only take place by improving the economic performance of the Southern European nations, and that a precondition for accomplishing this is improved innovative performance.

The Innovation Indicator

The Innovation Indicator is developed on behalf of the Deutsche Telekom Foundation and the Federation of German Industry (Bundesverband der Deutschen Industrie e.V.). The Innovation Indicator is a joint project of the Fraunhofer Institute for Systems and Innovation Research (ISI), the Centre for European Economic Research (ZEW), and the Maastricht Economic and Social Research Institute on Innovation and Technology of the University of Maastricht (MERIT). The Innovation Indicator shows the respective strengths and weaknesses of 28 national economies in comparison to relevant competitors. Overall, the Innovation Indicator is based upon 38 separate indicators, including education and public financing.

You can find additional information at: www.innovationsindikator.de

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The Personal Attributes of Finance Ministers Affect the Development of Public Debt

What role do the personal characteristics of a finance minister play in the growth of public debt? One finding from a recent ZEW study is that political experience does make a difference.

While most government ministers pay primary attention to the budgets of their own departments, the finance minister has responsibility of making sure that the national budget as a whole stands on firm ground. The ZEW Discussion Paper No. 12-068 investigates the impact exerted by a finance minister's personal traits on debt trends. By taking into account the role played by the personal characteristics of political leaders, the study thus contributes to the existing literature about determinants in the development of public debt.

Knowing the Rules of the Game

The study takes a number of personal characteristics into account, including the finance minister's educational background and political orientation (i.e. ideology). For example, the study gathered data on educational attainment and party affiliation. In addition, the study examined professional and political experience. Professional experience captures experience in the realm of fiscal policy. It was considered as increasing the longer a finance minister has held office. Yet a finance minister also accumulates political experience in dealing with the media and other politicians, as well as in mastering the rules of the political game, regardless of the specific department in which he or she serves. The number of years that a finance minister previously worked as a minister in other departments was thus taken as an indicator of political experience.

Extensive Database

The study is based on a custom database that contains information about the above personality characteristics for finance ministers from 15 European countries. The data were derived from official government and finance ministry websites from each country and cover the period from 1980 to 2010.

Econometric calculations show that it is the finance minister's professional and political experience that turn out to be of greatest significance. The change of the debt-to-GDP ratio is inversely related to the time the finance minister has served in office. A decline in the change is thus associated with a less experienced finance minister, and vice versa. The same is true for political experience: the greater the experience the finance minister has collected in previous cabinet positions, the lower the budget deficit (or, alternatively, the higher the budget surplus). However, it must be pointed out that the direction of the effect exerted by professional experience on the growth of government debt cannot be determined incontrovertibly. Nevertheless, a number of arguments support the plausibility of a causal inference of political experience on the change of public debt.

By contrast, the ZEW-study shows that the characteristics of ideology and education have no significant impact on the development of public debt. With respect to the institutional responsibilities assigned to a finance minister, it can thus be stated that politically experienced and influential finance ministers will be in a more advantageous position to apply restraint to the excessive spending wishes of other departmental ministers. A finance minister who was a national cabinet member before becoming minister of finance has a comparative advantage over a politically inexperienced finance minister, which he or she can leverage in his or her new office in order to achieve budgetary targets.

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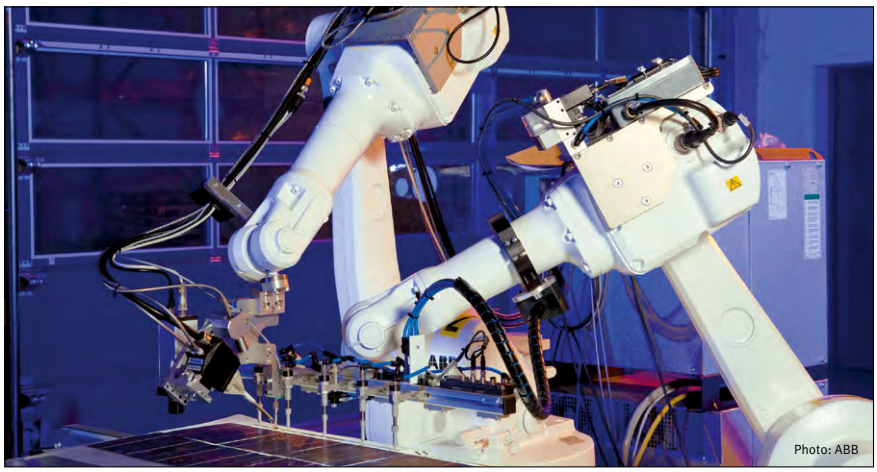
RESEARCH FINDINGS

Low Corporate Taxes Promote Investment

A new ZEW study clearly shows that corporate taxes are an important driver of the investment behaviour of firms. The study quantifies the negative effect of tax increases, considers the impact of loss carryovers, and finally, takes a special look at holding companies.

Corporate taxes affect the investment behaviour of the firm. Higher taxes brake investment, and lower taxes promote it. This applies not only to foreign direct investment, but other types of investment decisions. By now, this finding has been persuasively demonstrated by a broad series of academic studies. However, it has not enjoyed broad consensus in the public discussion about tax policy so far. Yet in concentrating on other determinants of investment, the public discussion often loses sight of the key importance of taxation.



An increase in the corporate tax rate in Germany results in significantly lower investments in tangible assets – for example, in real estate, machinery, or industrial robots.

Companies' Profit and Loss History Under Evaluation

The main goal of ZEW Discussion Paper No. 12-040 was to empirically calculate the effect of taxes on investment behaviour. The Bundesbank's MiDi direct investment micro-database was used for the study. The database tracks direct investment on the part of German parent companies in other countries and on the part of foreign parent companies in Germany. For the time period under consideration (1996 through 2008) both inbound investment to Germany and outbound investment away from Germany were evaluated. Consideration was given to the heterogeneity of firms with respect to profit and loss histories, and the study also examined the tax incentives for setting up holding companies. The findings for all of Germany were compared to those for a specific and especially export-oriented German state, Baden-Württemberg, as a way of obtaining an indication of the general validity of the findings.

Investment in Tangible Assets

A general descriptive analysis of the data reveals a striking increase in international investment activities between 1996 to 2008. The increases witnessed at firms in Baden-Württemberg largely parallel those in Germany as a whole. Since comparative calculations require a minimum level of variation or numbers from different comparison groups, it was only possible to demonstrate the effects of tax rates on investment in the outbound direction, and not for the inbound direction. The study shows that a ten percentage point increase in the corporate tax rate has the effect of reducing investment in tangible assets by 5.32 per cent. Similarly, a ten per cent reduction in the corporate tax rate has the effect of increasing investment by around five per cent. The results take into account that investment may be affected by a number of different factors. Thus, the following factors served as control variables: Differences in GDP were used as an index for differences in growth; investment holdings during the previous period were considered to reflect that firms growing rapidly in one period may invest heavily during the next period; per capita GDP served as an index for general welfare and for a nation's labour costs; binary annual variables served to capture additional shocks and cyclical effects; and, finally, the OECD risk index was used to consider how risky investment in a particular country is during a particular year.

Tax-Optimized Investment Structure of Holding Companies

Additional calculations showed that firms with losses to carry forward are less tax sensitive in their investment decisions. About half of the negative tax effect is offset. In these companies, therefore, a corporate tax rate that is ten percentage points higher leads to a decrease in investment of only 2.54 per cent.

Another area of analysis concerned holding companies. Holding companies are frequently set up by multinational corporations in tax attractive locations in order to structure their investments in a tax-optimized way. The analysis shows that a ten percentage point decrease in corporate tax rates increases the proportion of holdings in all kinds of subsidiary companies by around 0.55 per cent. Furthermore, lowering the withholding tax by ten percentage points leads to 0.8 per cent increase in holdings relative to all types of subsidiary companies.

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RESEARCH FINDINGS

KfW/ZEW Start-up Panel – Strategy is Decisive

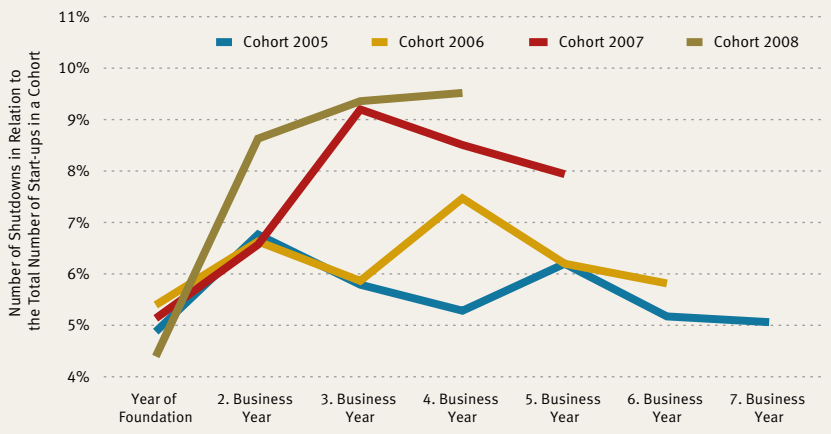
The first years in the life of a company are critical for its future development. Indeed, from the moment a company is founded, a number of strategic decisions must be made. Strategic mistakes can have the consequence of forcing a new company to leave the market prematurely.

The strategic decisions that new companies have to make at various stages of their early development are the focus of this year's report from the KfW/ZEW Start-up Panel. The Start-up Panel is a database developed by the KfW Banking Group, ZEW, and the credit-reporting agency Creditreform that tracks start-up companies for the first several years of their existence. Each year, the panel surveys around 6,000 newly founded and young companies in Germany. The latest survey wave for the KfW/ZEW Start-up Panel was conducted between April and July 2012, and, for the first time, it included a sufficient number of observations to allow for an analysis of changes within individual firms over time.

The 2012 Start-up Panel concentrates on examining strategic decisions in the areas of human resources and financial management. At the time a company is first founded, it must make decisions about its starting size. Starting size is determined based upon the number of founders as well as the number of employees hired by the new firm. The average number of founders per company for start-up cohorts from 2005 to 2011 varied only slightly between 1.3 and 1.4 full-time equivalent positions. By contrast, the number of full-time equivalents for salaried employees varied somewhat more widely between 0.9 and 1.4. The 2011 start-up cohort created a total of 416,000 full-time equivalent jobs in the previous year. In the years just after a firm is founded, HR decisions must be made with respect to hiring new employees and eliminating or replacing positions left vacant by departing ones. An analysis of the gathered data shows that employee turnover plays a major role even at new companies. Replacing employees who have left entails costs – for example, because of lost employee know-how, and because of the need to search for new employees and train them. These costs can reach levels substantial enough to threaten the survival of a new company.

Financing decisions during the first year of a company's existence have long term effects. New companies that make use of funds raised through outside or debt financing during one business year are significantly likelier to use the same type of financing in the following year. However, fewer than five per cent of new companies rely on outside or debt financing in each of the first five years of their business operations. Conversely, only five per cent of companies get through their initial years in business without recourse to outside financing. And only 30 per cent completely avoid any debt financing during their first five years in business.

Yearly Shutdown Rates According to the Age of the Company Until the End of 2011



Shutdown rate: The ratio of firms that close their doors in one year relative to all start-ups in a given cohort. Source: Mannheim Enterprise Panel

Impact of Economic Crisis Noticeable

Of course, some new companies are compelled to leave the market after a short time because of poor business decisions, or they choose to leave the market voluntarily. After five business years, about 40 per cent of the start-ups from a particular business year have disappeared from the market. In this regard, the 2009 economic and financial crisis had divergent impacts on start-up cohorts from different years. The older a new company was, the smaller the increase in shutdowns. Thus, the crisis had a much greater impact on the probability of shut down for newer start-ups than for older ones (see figure).

For further information please visit: www.gruendungspanel.de

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ZEW DISCUSSION PAPERS

No 13-004, Dirk Czarnitzki, Christian Rammer, Andrew Toole: University Spin-offs and the Performance Premium.

No 13-003, Bodo Aretz: Gender Differences in German Wage Mobility.

No 13-002, Fabian Kosse, Friedhelm Pfeiffer: Quasi-hyperbolic Time Preferences and Their Intergenerational Transmission.

No 13-001, Benjamin Johannes Lutz, Uta Pigorsch, Waldemar Rotfuß: Nonlinearity in Cap-and-Trade Systems: The EUA Price and its Fundamentals.

POLITICO-ECONOMIC ANALYSIS

Q&A: Are we achieving a turnaround in energy policy?

German Energy Transition: Praise for Renewable Energy – Criticism About Security of Supply

In mid-December, the Expert Commission for the "Energy of the Future" monitoring process issued its first position statement regarding the federal government's annual status report on German energy transition policy. Prof. Dr. Andreas Löschel, chairman of the expert commission and a research department head at ZEW, explains its findings.

What are the results of your evaluation of the monitoring report?

We welcome the federal government's monitoring process, including the adoption of an indicator system and the release of the first monitoring report. They do a good job of presenting key aspects of the effort to transform Germany's energy economy, including goal attainment in the area of renewable energy and the reduction of greenhouse gas emissions. What we find lacking, however, is the report's assessment of specific changes and of the energy transformation as a whole. For this reason, we provide a scientific perspective on the report along with suggestions for improving the monitoring process. To present changes more succinctly, for example, we believe it would make sense to use a smaller number of lead indicators that distil a broader set of measures. Making these lead indicators as aggregated as possible would help to reduce complexity and generate policy recommendations. The current monitoring report includes nearly 50 indicators, which are hard to interpret without an appropriate classification system.

The expert commission proposes that one first classify the objectives of renewable energy policy. What could such a classification look like?

We see the effort to transform the energy economy as characterized by two overriding goals: (1) the reduction in greenhouse gas emissions, and (2) the phase-out of nuclear energy. It is important not to be distracted from over-riding goals. Germany has chosen a specific pathway for achieving its aims. This pathway will be accompanied by additional flexible goals, e.g. in the areas of energy efficiency and the use of renewable energies. The triangle of energy policy goals, economic affordability, environmental sustainability, and security of the energy supply, should be the key yardstick by which to judge the success of this flexible goals. If they appear to be critical from an economic, environmental or social view, the flexible goals have to be adjusted.

How does the Expert Commission assess the development of renewable energy and energy efficiency during 2011, the year covered by the report?

So far, the development of renewable energy has been proceeding smoothly in all areas. Thus, growth in renewables has been rapid in the electricity sector, even though it has been associated with corresponding cost increases, especially for energy from photovoltaic installations and offshore wind farms. In the future, there will be a need for greater systems integration and an active effort to react to developments in transmission networks and, over the long term, in the area of energy storage systems as well. In the areas of transportation and heating, growth has been significantly less vigorous, and, as a result, developments need to be thoroughly re-evaluated. In the area of energy efficiency, we see three areas for improvement: the attainment of reductions in electricity consumption, developments in the area of household heating, and in the transportation sector. Seen as a whole, the issue is less about seeking new interventions and instruments, and more about configuring existing interventions more intelligently to achieve the goals.

The effects of renewable energy policy have already become tangible – in the debate about supply bottlenecks in the winter of 2011/12 and about extending intervention options for the Federal Network Agency for instance. How would you assess security of supply?

The expert commission has taken a rather critical view of the situation with respect to security of supply. Thus, although we can acknowledge that there are ongoing positive steps in raising power plant capacity scheduled through

The German federal government intends to regularly examine the status of its broad policy effort to transform the country's energy economy. To this end, it has implemented the "Energy of the Future" monitoring process. A commission of energy experts has been assigned the task of providing a critique to accompany the federal government's annual status report. The chairman of the expert commission is Prof. Dr. Andreas Löschel, head of the research department of "Environmental and Resource Economics, Environmental Management" at ZEW. Other members of the expert commission are Prof. Dr. Georg Erdmann of TU Berlin, Prof. Dr. Frithjof Staiß of the Center for Solar Energy & Hydrogen Research in Baden-Württemberg (ZSW), and Dr. Hans-Joachim Ziesing, president of the Energy Balance Working Group. The full position statement on the federal government's first monitoring report for the 2011 reporting year is available in German language at: www.zew.de/publikation6847

POLITICO-ECONOMIC ANALYSIS

2015, we must keep an eye on power output after that point. Especially in Southern Germany, we need to anticipate future supply bottlenecks. Interruptible loads, storage devices, and the expansion of networks could work to offset these problems. With regard to the accelerated expansion of transmission networks, delays have occurred that make a reliable assessment more difficult. Efforts regarding network development plans should be seen as a welcome sign in this area. However, the supply infrastructure for natural gas should also be kept in mind, as similar problems arose in the gas supply last winter in Southern Germany.

Prof. Dr. Andreas Löschel directs the research department of "Environmental and Resource Economics, Environmental Management" at ZEW. In addition, he is Professor of Economics at the University of Heidelberg. Furthermore, Löschel is serving as lead author for the fifth Assessment Report (2010 to 2014) of the Intergovernmental Panel on Climate Change (IPCC). He is also chairman of the expert commission that regularly assesses the status of Germany's energy transformation on behalf of the German federal government.


Photo: ZEW

What burdens to the end user will result from Germany's energy transition?

In the area of economic affordability, the focus is on providing energy efficiently. Such efficiency cannot be seen in Germany's energy system today, and it is also missing from many of the measures envisaged for the future. Specific burdens placed on the supply of energy can be analyzed from an aggregate picture of expenditures. Single components may distract us from the overall process of the energy transformation. Thus, our calculations using final end-user expenditures for electricity show that the overall burden of energy transition currently amounts to 2.5 per cent of nominal GDP – about the same level of burden witnessed in 1991. However, the expenditures have been doubled in recent years in nominal terms and are anticipated to increase further in the future.

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An Economic Analysis of the European Union's Climate Policy Roadmap to 2050

What are the economic effects of the EU's "Roadmap for moving to a low-carbon economy in 2050"? The following analysis sheds light on various aspects of the ambitious climate protection strategy.

This analysis focuses on the effects of the EU's Climate Policy Roadmap to 2050 on aggregate welfare, on the rate of emissions increase in foreign nations without CO_2 emissions goals ("carbon leakage"), on CO_2 prices, and on international trade at the macro level. It focuses as well on the effects on production, investment, CO_2 emissions, and competitiveness at the sectoral level.


Photo: ZEW

The EU presented specific goals for climate protection in its Roadmap for moving to a low-carbon economy.

The Climate Roadmap was issued by the EU Commission in 2011. It targets a more than 80 per cent reduction in greenhouse emissions by 2050 relative to the baseline year of 1990. In addition, the share of renewables in electricity generation shall be increased to 50 per cent or higher by 2050. To estimate the economic consequences of implementing the EU's Climate Protection Strategy, we use the PACE ("Policy Analysis Based on Computable Equilibrium") model that was developed at ZEW and has been successfully applied for research and policy advice many times before.

The PACE general equilibrium model makes it possible to undertake a consistent and comprehensive quantitative assessment of the economic effects of energy, technology, and climate policy interventions. The model's time horizon was extended to 2050 for this analysis. We consider EU climate policy currently

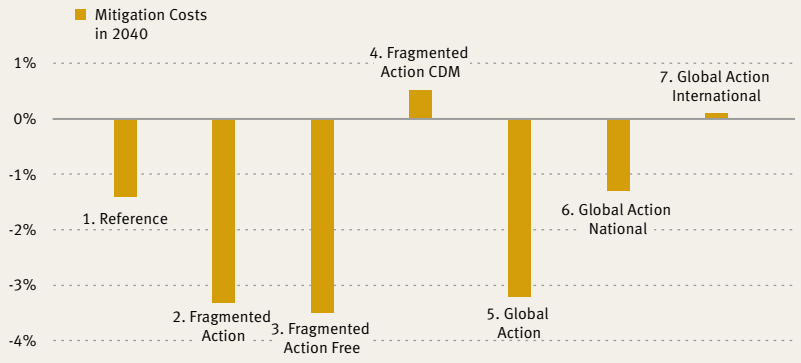
in force, with CO_2 emissions goals through 2020, and the Copenhagen pledges as the benchmark scenario. The reference scenario includes existing and decided EU climate and energy policies including emission permit trading among the sectors that are part of the European emissions trading system. In the various simulations, we compare different policy scenarios for implementing the EU climate protection goals (see figure).

The simulation of the scenario that assumes fragmentary climate policy (Fragmented Action with binding emissions targets only in force in the EU) yields the following results: Through 2020, the costs of the decarbonization strategy for the nations of the EU-27 come to less than 0.3 per cent of total consumer spending in the EU, and through 2035, less than two per cent compared with the reference scenario. Afterward, these costs could climb to three per cent, and by 2050, they might rise further unless some new ground-breaking technology (such as carbon capture and storage or large-scale solar technology) comes into widespread use. The emissions reductions in the EU would lead to an increase in CO_2 emissions in countries without emissions targets equivalent to about 20 per cent of the emissions savings in the EU. This will primarily be the result of oil price declines triggered by EU climate policy (with decreasing use of fossil fuels, and increasing use of renewables). Thus, savings in Europe will lead to increased demand and consumption of oil elsewhere. Moreover, production impacts in the EU due to trade in emissions certificates will vary widely by sector, with changes ranging from losses of 15 per cent to gains of one per cent in 2040.

Positive Effect of More Flexible Mechanisms

At the macro level, simulations conducted for other policy scenarios reveal that widespread future application of the Clean Development Mechanism (CDM) would have a definitely positive impact on the EU. The CDM sets flexible mechanisms that allow firms to undertake and be credited for emissions reductions in developing countries. In addition, the simulations show that the additional costs resulting from the EU's climate strategy could actually be fully offset by the CDM. However, this flexible mechanism would not solve the climate problem, since emissions reductions would simply be shifted on the globe wherever they could be achieved at lower cost.

Costs of the Climate Protection Strategy in 2040 According to Different Scenarios



Costs (relative changes in total consumption) for EU-27 in 2040 caused by different climate protection scenarios. 1. The "benchmark scenario" includes the EU's current climate policy measures and would result in increased costs when compared to "business as usual". All the other scenarios (2 through 7) employ a decarbonization strategy with a target of reducing CO_2 reduction by about 60% in 2040 and cause costs compared to Scenario 1. In Scenarios 2 through 4, only the EU pursues a strict emissions goal. Scenario 3 allows, in addition, for continued free allocation of emissions rights to certain industries. Scenario 4 allows for generous future credits for emissions reductions abroad. Scenarios 5 through 7 assume strict global emissions reductions. Scenario 6 assumes, in addition, the equalization of CO_2 prices across all EU sectors. Scenario 7 anticipates, in addition, international emissions trading. Source:ZEW

By contrast, extending the cost-free allocation of emissions rights to the advantage of certain energy-intensive EU producers beyond 2027 would result in slight increases in macroeconomic costs. The implementation of climate policy on a global scale would improve trading conditions for the EU, but in the absence of international emissions trading, the cost reduction for the EU would be small. Only the expansion of emissions trading to all economic sectors and the introduction of international emissions trading in the framework of a global climate policy would lead to significant decreases in costs. Around 2050, the international CO_2 price would rise as a result of ambitious worldwide climate goals, so the EU would no longer be able to circumvent all additional costs for climate protection through the additional purchase of cheaper emission certificates.

At the sectoral level, all sectors of the EU would profit from the CDM or a similar mechanism. The free allocation of emissions rights beyond 2027 would benefit most sectors in the EU emissions trading system. Global climate policy without international emissions trading would have differential effects whereas the equalization of CO_2 prices across all sectors and countries would benefit most EU sectors. Changes in investment, emissions, and competitiveness resulting from the EU climate protection strategy would be distributed even more differentially among different EU sectors than changes in production. Hence, successful implementation of the EU's Climate Policy Roadmap 2050 requires adroit collective attention to technological options (energy efficiency and decarbonization), policy design, and sectoral characteristics. Policy design – that is, the manner with which a particular climate goal is pursued – will play a critical role in achieving real cost savings at both the EU and sectoral levels.

Since the sectoral effects prove to be quite variable in our analysis, it would make sense to think further about the sectoral impacts of climate policy. Global climate protection measures are necessary in order to achieve ambitious climate protection goals. Flexible mechanisms such as CDM could lead to cost reductions for countries that are quite small and that are not official participants in global climate policy.

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FIRST-HAND INFORMATION ON THE CURRENT ECONOMIC POLICY

A Stable Architecture for Europe and Germany

In November and December 2012, as part of the lecture series "First-Hand Information on the Current Economic Policy", ZEW President Prof. Dr. Dr. h.c. mult. Wolfgang Franz presented the 2012/13 Annual Report of the German Council of Economic Experts.

Wolfgang Franz, who is also Chairman of the Council of Economic Experts, lectured at the representative offices of the state of Baden-Württemberg in Berlin and Brussels, at the Baden-Württembergische Bank in Stuttgart, and at ZEW's headquarter in Mannheim. He presented the most important findings from the Council's report. In addition to affirming the importance of strengthening the framework for sound public finances in the eurozone, Franz emphasized that Germany must resolve a series of economic policy problems. The need for domestic policy action has tended to recede into the background because of the euro crisis, Franz noted. For this reason, the Council of Economic Experts chose to title this year's annual report "Stable Architecture for Europe – Need for Action in Germany".

Wolfgang Franz, ZEW's President and Chairman of the German Council of Economic Experts, presented the most important results of the Council's 2012/13 Annual Report.

In the Council's view, the current effort to transform Germany's energy economy must be structured effectively and efficiently. To this end, the Council envisions a key role for green electricity certificates that officially certify production from renewables. The Council also envisions a less technology-specific programme of government subsidies. Beyond this, the Council sees the need for reforms to the health-care and tax systems, and argues for greater competition in Germany's health-care sector.

Lowest Unemployment Rate Since Reunification

Currently, the unemployment rate in the EU is around eleven per cent, but in Germany, it is just over five per cent. Franz indicated that even though Germany may still be far from full employment, this represents the lowest unemployment rate since Germany's reunification. By contrast, Greece and Spain have unemployment rates of about 24 per cent. He regards the high rate of youth unemployment in these countries, which has reached levels above 50 per cent, as being especially problematic. Franz also discussed the issue of distributive justice in the German labour market. He said the annual report showed that while income inequality was rising previously, it had more recently come to a standstill. In this connection, he particularly focussed on the question of wage inequality in the low-wage sector. At first glance, Franz stated, it would appear that workers with low qualification levels in the low-wage sector are losing out. However, Franz pointed out that this perspective is too one-sided. It is only due to years of labour market reforms that these individuals have been able to return to the labour market at all, even if their lower levels of productivity continue to be paid at a lower rate. He indicated that the introduction of minimum wage laws or lower wage limits could actually result in higher unemployment, especially among lower qualified workers. Therefore, the Council continues to oppose the introduction of legally mandated minimum wages. The reforms in the German labour market that have already been introduced both in the labour market and in old age security, such as the Hartz IV reforms and the retirement age of 67, should not be rescinded, Franz said. He emphasized that economic experts still consider a retirement age of 67 as sensible.

Major Differences Within the Eurozone

With regard to economic growth, the Council of Experts anticipates an average real growth rate of 0.4 per cent in the EU for 2013. However, Franz indicated that this forecast fails to reflect the major differences between individual nations within the EU. Thus, he said, Greece finds itself in the middle of a depression while Germany is doing relatively well. For Germany, the economic experts forecast a real growth rate of 0.8 per cent in 2013. The Council of Experts assumes that Germany, unlike other Euro nations, will be able to avoid sliding into a recession.

Franz also sketched out a possible regulatory framework for the monetary union. He made it clear that the eurozone was not facing a single crisis, but rather three separate crises at once: a crisis of sovereign debt, a banking crisis, and a macroeconomic crisis. In his opinion, these three crises are interrelated and

have negative reciprocal effects. For this reason, to be successful, a solution must address all three flash points at once.

Maastricht 2.0: a Three-Part Model

To address the crisis the Council of Economic Experts has proposed a three-part model entitled Maastricht 2.0. As Franz sees it, Maastricht 2.0 would leave fiscal and economic policy largely in the realm of national sovereignty. Reforms would be exclusively focused on the current fiscal rules and frameworks for the financial system. Maastricht 2.0 would rely on national accountability and the disciplinary function of the markets, albeit expanded by an insolvency procedure for member states. This procedure would be made credible through a crisis mechanism and through accompanying reforms to the financial system.

In addition, the Council of Experts favours the stepwise introduction of a banking union in Europe. Franz regards the unlimited purchase of government bonds by the ECB as an emergency solution that should by no means be turned into a permanent mechanism. As an alternative, he proposes the creation of a European supervisory authority for the banking sector. However, Franz believes that banks that do not meet the requirements for a banking union would need to be reformed or, if necessary, liquidated by their respective national governments with help from a European Agency for Restructuring. Franz emphasized that this entire process would take considerable time and could not possibly be implemented overnight.

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Dissertations at ZEW in 2012

The qualification of its staff is very important to ZEW. This can also be seen from various dissertations completed at ZEW last year. We would like to thank all supervisors, especially the first advisors.

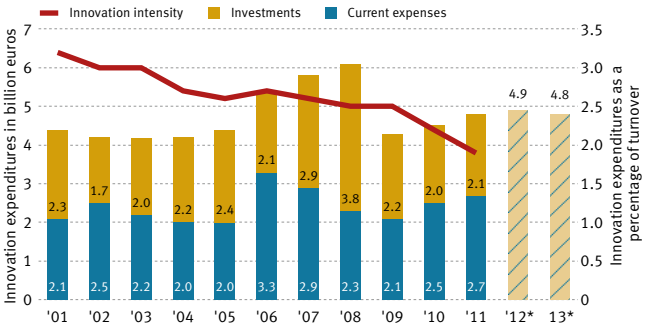
Sarah Borgloh, „Charitable Giving, Taxes and Fundraising", Prof. Dr. Berthold U. Wigger, University of Karlsruhe .
Christian Dick, "Essays on Expectations in Financial Markets", Prof. Dr. Lukas Menkhoff, Leibniz Universität Hannover.
Daniel Dreßler, "Five Empirical Essays on Taxation", Prof. Dr. Christoph Spengel, University of Mannheim.
Philipp Eisenhauer, "Essays in the Econometrics of Policy Evaluation", Prof. Dr. Dr. h.c. mult. Wolfgang Franz, University of Mannheim.
Benjamin Engelstätter, „Enterprise Software and Video Games: An Empirical Analysis", Prof. Dr. Pierre Mohnen, University of Maastricht.
Jost Henrich Heckemeyer, „Die Wirkungen der Besteuerung auf unternehmerisches Verhalten – Mikrosimulation und Meta-Analysen", Prof. Dr. Lars Feld, University of Heidelberg.
Peter Heindl, "Environmental Regulation by Prices and Quantities: Transaction Costs, Institutions and Industrial Organization", Prof. Dr. Wolfgang Buchholz, University of Regensburg.
Julia Horstschräer, „Empirische Studien zur Elementar- und Hochschulbildung", Prof. Dr. Patrick Puhani, University of Hannover.
Gunnar Lang, "Macro Attractiveness and Micro Decisions in the Mutual Fund Industry – An Empirical Analysis.", Prof. Dr. Henry Schäfer, University of Stuttgart.
Verena Niepel, "Essays on Skills, School Choice and Their Long-Term Consequences", Prof. Dr. Markus Frölich, University of Mannheim.
Michael Schymura, "Norms and the Development of New Knowledge as Determinants of Climate Policy – Theoretical Considerations and Empirical Evidence", Prof. Dr. Wolfgang Buchholz, University of Regensburg.
Andreas Sachs, „Unbedingte und bedingte institutionelle Effekte auf Arbeitslosigkeit: Ein bayesianischer Model Averaging Ansatz", Prof. Dr. Werner Smolny, University of Ulm.
Vigen Nikogosian, Competition and Regulation in the Energy Markets, Prof. Dr. Jürgen Weigand, Wissenschaftliche WHU – Otto Beisheim School of Management.
Benedikt Zinn, „Tax Accounting in Germany", Prof. Dr. Christoph Spengel, University of Mannheim.

EU Commissioner for Energy Günther Oettinger Visits ZEW

In January 2013 the European Commissioner for Energy, Günther Oettinger, visited the Centre for European Economic Research (ZEW) in Mannheim. In a round table, he discussed the future design of German and European energy policy with personalities from the areas of business and politics from the Rhine-Neckar metropolitan region and with ZEW researchers. EU Commissioner Oettinger also took the opportunity to say goodbye to Prof. Dr. Dr. h.c. mult. Wolfgang Franz, who will retire from his position as ZEW President at the end of February 2013.
The main focus of the discussion was on the challenges Europe will face in the next years in the areas of energy and climate protection. The discussion covered ways to realise an efficient and flexible European domestic energy market to guarantee an affordable and secure energy supply of households and companies, as well as the current state of the energy transition in Germany. Information on ZEW's climate and energy related research was provided by the head of ZEW's research department "Environmental and Resource Economics", Prof. Dr. Andreas Löschel.

FACTS AND FIGURES

Innovation Expenditure in the German Metal Industry Remains Below its Pre-crisis Level



* Forecast figures from spring/ summer 2012 Source: ZEW, Mannheim Innovation Panel

Innovation expenditure in the German metal industry still remains below its high levels reached in 2006 to 2008. Back then, the companies in the metal industry provided each year between 5.5 and 6.1 billion euros for the development and introduction of new products and processes. Due to the worldwide economic crisis innovation budgets declined to 4.2 billion euros in 2009. Since then innovation expenditures have grown only slightly and are likely to remain below the 5 billion euro-mark in 2012. So far, there is no increase planned for 2013.

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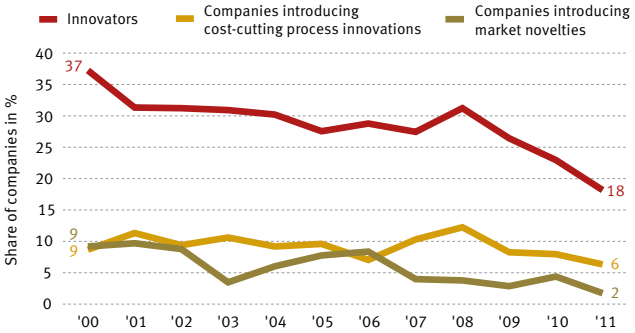
Fewer Innovators in the German Transport Industry



Source: ZEW, Mannheim Innovation Panel

The share of companies in the German transport industry (including postal services and travel agencies) that introduced new products and processes has declined further in 2011. Only 18 per cent of the companies in the transport industry had been innovators in 2011. Their share amounted to more than 30 per cent in 2008. Below those who are innovators, only a few companies have introduced market novelties, e.g. services that had not existed before. The share of companies bringing cost-cutting process innovations to the market diminished as well in 2011.

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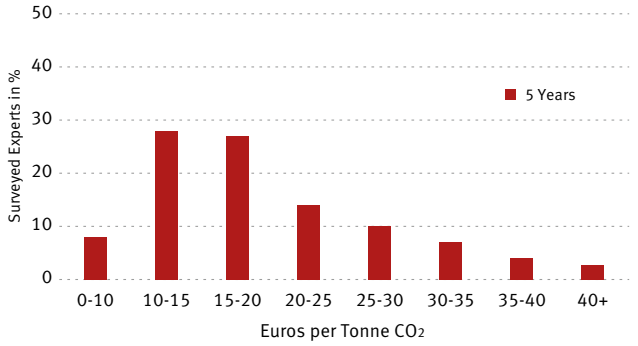
Emission Prices of 10 to 20 Euros per Tonne CO_2 Anticipated



Source: ZEW

Some eight per cent of the experts surveyed for the ZEW Energy Market Barometer expect a medium-term (five year-time horizon) price of less than ten euros per tonne CO_2 on the European emission markets. The majority is predicting prices of between 10 to 20 euros per tonne CO_2. Prices between 20 to 30 euros are expected by 24 per cent of the questioned analysts. Seven per cent anticipate that over the medium-term, the price of a tonne CO_2 will range from 30 to 35 euros. The ZEW Energy Market Barometer is a biannual survey of some 200 energy experts.

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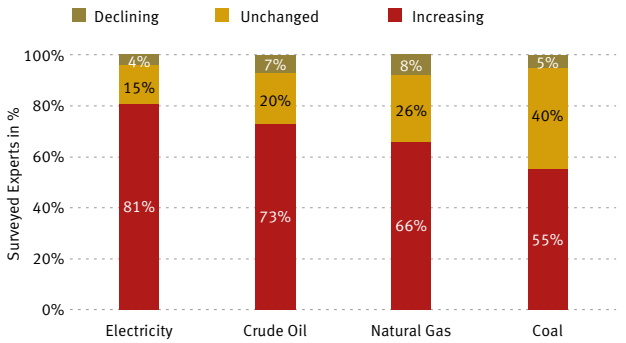
Rising Energy Prices over the Medium Term Expected



Source: ZEW

According to the experts surveyed for the ZEW Energy Market Barometer, wholesale energy prices will increase on a broad front over the medium term, e.g. over the next five years. 81 per cent of the experts indicated that electricity prices will rise. With regard to crude oil and natural gas about 73 per cent and 66 per cent respectively expect price hikes. 55 per cent of the questioned experts believe that coal prices will augment during the next five years. The ZEW Energy Market Barometer is a biannual survey of some 200 energy market experts.

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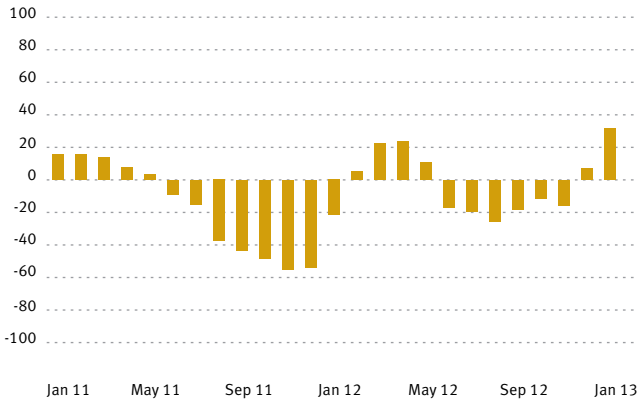
FACTS AND FIGURES

ZEW Financial Market Test January 2013



Balance of positive and negative assessments concerning economic development in Germany.
Source: ZEW

Germany: Increasing Optimism

The ZEW Indicator of Economic Sentiment for Germany has increased by 24.6 points in January. The indicator now stands at a level of 31.5 points, thereby reaching its highest level since May 2010. The indicator's further increase shows that according to the financial market experts the economic perspectives for Germany have brightened up on a six months time horizon. It might have contributed to experts' optimism that the markets' uncertainty concerning the future of the eurozone has diminished for the time being. The financial market experts seem to expect that the positive sentiment on the financial markets may soon result in companies realizing investments that had been postponed earlier on. The assessment of the current economic situation has remained almost unchanged in January.

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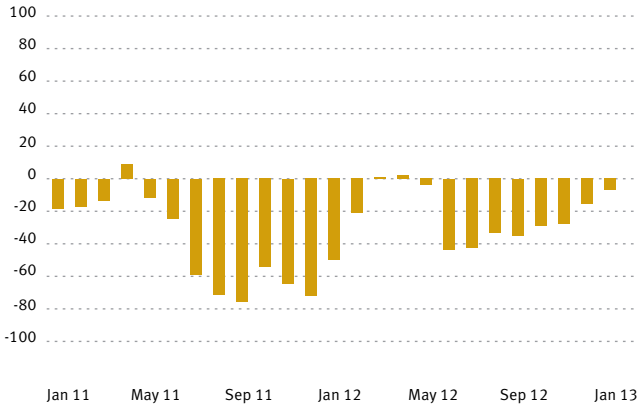

Balance of positive and negative assessments concerning economic development in Switzerland.
Source: ZEW, Credit Suisse

Switzerland: Economic Outlook Improves

Economic expectations for Switzerland have improved by 8.6 points in January, raising the ZEW-CS Indicator to a level of minus 6.9 points. The ZEW-CS Indicator is calculated monthly by the Centre for European Economic Research (ZEW), Mannheim in cooperation with Credit Suisse (CS), Zurich. The indicator reflects the expectations of the surveyed financial market experts regarding the economic development in Switzerland on a six-months time horizon. In January the indicator improved for the fourth consecutive month. Its new level has been exceeded for the last time in May 2012 (May 2012: minus 4.0 points). At that time the indicator was close to its last year's peak. Economic expectations also clearly overshoot previous year's January value of minus 50.1 points.

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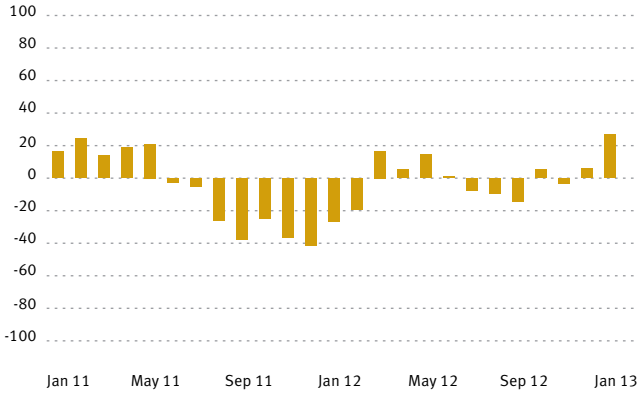

Balance of positive and negative assessments concerning economic development in the CEE region.
Source: ZEW

CEE Region: Growing Optimism

Economic expectations for Central and Eastern Europe including Turkey (CEE) have highly increased by 20.9 points in January. The ZEW-Erste Group Bank Economic Sentiment Indicator for the CEE region now stands at a level of 27.0 points. The assessment of the current economic situation for the CEE region has improved slightly in January. The respective indicator has increased by 5.7 points to a value of 5.7 points. The economic sentiment indicator for the CEE region and further financial market data have been surveyed monthly by ZEW, Mannheim, with the support of Erste Group Bank, Vienna, since 2007. The CEE region consists of the following countries: Bulgaria, Croatia, the Czech Rebulic, Hungary, Poland, Romania, Serbia, Slovakia, Slovenia, and since October 2010 Turkey.

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OPINION

Europe

My final column written as ZEW's President before resiging from office has to do with Europe. Not only to pay tribute to the "E" in ZEW, but primarily because I am worried about Europe. We should not let things continue as they are at present. Indeed, we must counter the prevailing sense of disappointment about institutional arrangements, both at the EU and national level. At the same time, we must resist succumbing to exaggerated hopes, let alone fantasies.

The prevailing sense of disgruntlement only has the appearance of incompatibility with the recent awarding of the Nobel Peace Prize to the EU. The acceptance speeches by the leading representatives of the EU, Barroso and van Rompuy, mainly acknowledged the achievements of the EU's founding fathers and the architects of unification – that is, of the "first generation", if you will. But does this mean, like in Buddenbrooks, that we are now on the threshold of the third generation? And that this generation is going to let the magnificent work of the past fall to pieces? We cannot simply ignore this danger. When one thinks about the EU Commission these days, the first thing that frequently comes to mind is bureaucracy and legislative haggling. This impression is founded on the Commission's passion for minute over-regulation as well as the endless speculation in the media and by politicians as to who were the winners and losers of important meetings. Naturally, it is legitimate to promote the interests of one's own country, but not at any price and surely not in keeping with Margaret Thatcher's motto, "I want my money back". Politicians who act in this way have no right to complain about Europe fatigue!

An additional factor contributing to EU-discontent is widespread and reciprocal suspicion of being bamboozled by other governments, a concern amply demonstrated by debates over the monetary union. Indeed, the agreements underlying the union have frequently been broken and the Stability and Growth Pact was decisively weakened in 2003 – yet at the doing of Germany and France, it should be noted. Yet we have learned lessons from these bad experiences and have agreed to a series of rules backed by sanctions. For all the justifiable scepticism about their viability – anyone who proceeds from the assumption that we are simply dealing with a bunch of scoundrel states that work on the principle of breaking treaties cannot possibly afford to engage himself with an EU, or a Monetary Union, or a NATO.

At the opposite extreme from EU-disgruntlement are visions that are remote from reality, such as reveries about the United States of Europe. While I have nothing against "I have a dream" (in the spirit of Martin Luther King), I am not so sure how parliaments in Berlin, Paris, and Rome would respond if a European Minister of Finance issued instructions to them. No more am I persuaded that the United States of Europe would ultimately be a particularly desirable goal. Large economic zones have had to face economic growth cycles just as small ones have. And was it despite or because of its compartmentalization that Europe experienced a period of such extraordinary economic expansion after the Second World War?

One principle that needs to be quite generally applied is this: one must locate accountability and supervision at the same level. With respect to fiscal policy, this means preserving national budgetary autonomy, but with stricter adherence to the regulatory system agreed to at the European level – for example, with respect to limits on sovereign debt. With respect to stabilizing the private banking system, the situation is somewhat different. Here, we need European banking oversight and a European agency for restructuring and liquidating banks. Thus, it is not a question of regulating all issues either at the European or the national level; rather, the regulating body should be determined by specific issue at hand. On the whole, we are making progress in developing a sustainable regulatory framework, all the criticism about the details notwithstanding. This leaves me, despite all the worries, to conclude on a hopeful note.

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