



**GREEN EUROPEAN
FOUNDATION**

A large, circular image showing several Euro banknotes (200, 100, 50, and 10 Euro) arranged to form a flower-like shape against a background of a blue sky with clouds and a green field. The banknotes are layered and curved, creating a sense of depth and movement.

Money for Change: The financial sector in the green economic transformation

Analyses and policy recommendations

Green New Deal Series volume 12

Money for Change: The financial sector in the green economic transformation

Analyses and policy recommendations

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Part I: Introduction



Foreword

Ralf Fücks, Heidi Hautala, Ute Brümmer

Six years after the global financial, economic and debt crisis, Europe is still struggling with the consequences and trying to improve its economic situation. The relatively good position of the Federal Republic of Germany is the exception in a generally crisis-ridden environment. The devastating effects of the financial crisis of 2008/2009 and the recession that followed have yet to be fully overcome.

The aggressive monetary policy of the European Central Bank may have relieved the financial crisis but it has not boosted the real economy. The risks of deflation are now being discussed in view of the policy of low interest rates followed by the ECB.

At the same time we are faced with the challenge of hastening the convergence of economics and ecology. Climate change and the crisis facing the world's ecology demand an urgent shift away from an economic system that is based on the ruthless exploitation of natural resources. The European Union cannot resolve its financial and social crisis without economic growth. However, the old economic model is not viable for the future because it leads us deeper into crisis. The way out of this dilemma is a new, sustainable model for growth based on renewable energy, a high degree of resource efficiency and re-utilisation of valuable raw materials. This is in fact a green industrial revolution – no more, no less – which will dramatically reduce depletion of the environment and also lead to a new boom in green technologies, products and jobs. This requires innovation and investment on a large scale.

Concepts for an ecological orientation to European economic and financial policies were the focus of a conference held in Berlin at the beginning of May 2014 and organised by the Heinrich Böll Foundation, the Green European Foundation and the German Trade Union Federation (DGB). The key question was how to finance extensive modernisation of the economy in Europe according to ecological considerations. This requires re-regulation of the financial sector which would lead to greater alignment with the real economy and would offer sustained investment opportunities for private investors.

Europe has the opportunity to make ecological re-orientation the springboard for new creation of value. This requires steering capital flow that is searching for investment opportunities into areas suitable for investment. Solutions that satisfy these criteria are sustainable in two ways: from an ecological point of view and from the point of view of a stable financial and economic system.

This publication is a collection of articles from participants at this conference as well as from other authors. These contributions aim to find answers to two key questions: In which fields are investment needed in order to drive forward remodelling on ecological lines and generate sustainable growth? And how should the financial system be organised in order to release enough capital for ecological innovations and investments?

In his introductory article **Gerhard Schick** illustrates the connection between a greater focus of the financial world on the real economy and financing a green transformation; he then names the most important areas to promote green investment. **Simon Wolf** then raises the question of whether we need a policy for the financial sector even more than before, in view of the investment required for this green transformation, or whether green investments would flow automatically if we improved the general conditions for ecological economic activity.

The next four contributions primarily address the problems of financing the real economy in Europe. **Thierry Philipponnat** warns against a hasty reversion to more capital market financing as a response to a lack of bank lending; instead the banking sector should be geared more towards the needs of the real economy. **Andreas Botsch** sees the main problem as being the paradox of savings and the drop in investment rates, and proposes the formation of a private equity fund that could be used to finance this ecological transformation. **Benoît Lallemand** explains why breaking up the large banks would have a positive effect on financing opportunities for both small and large companies and why the resulting financial system would also favour ecological projects. For **Reinhard Bütikofer** the decisive key factor for economic recovery in Europe lies in a renaissance and eco-orientation of industry and he investigates financing opportunities beyond the banking sector.

The remaining articles discuss how to encourage green investment. In his interview **Karsten Löffler** advocates green mainstreaming in the financial sector instead of promoting individual projects. **Stanislas Dupré** and **Jakob Thomä** identify three promising initiatives to dismantle the obstacles in the financial sector to reducing the carbon footprint of the economy. **Mehrdad Payandeh** explains his proposal for a European Marshall Plan which combines public investment and private investment to secure ecological modernisation. **Ana Belén Sánchez** analyses the current status of ecological transformation in Spain and the challenges of how to finance it. The contributions of **Claudia Kemfert** and **Dorothea Schäfer**, as well as **Silvia Kreibiehl** and **Ulf Mostener**, use the example of the energy transition in Germany to examine the question of how more private capital, especially from large institutional investors, can drive the transition of energy systems. Finally, **Philipp Lamberts** takes a look at the previous and future role of the European Parliament in promoting a green transformation.

We would like to thank the German Trade Union Federation for its cooperation in the orientation of the conference, as well as Finance Watch and the 2nd Investing Initiative for their advice regarding content when preparing the conference and, of course, all authors of this publication for their contributions.

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1.1. Instruments and coalitions for sustainable and social investments in Europe

Gerhard Schick

Ways towards greening the economy

The environmental movement has achieved a lot: the nuclear energy phase-out now has consensus in Germany and the energy turnaround has kicked off even though it is currently stagnating under the government of Christian and Social Democrats. However, we still have a major task ahead of us: *greening the economy* as a whole. Climate change and the loss of biodiversity, e.g. through the monopolisation of seeds in the hands of a few, are forcing us to change tack.

When talking about greening the economy, this often suggests huge investment needs which are linked to enormous costs. This might well be true; what is equally widespread, however, is that transformations of an economic model occur from within the market. Market economies undergo permanent change processes, which are triggered and carried by the innovative strength of companies. The IT revolution is probably the most well-known example of this in recent times. IT companies have invested in new products and have been successful on the market. The result of this revolution were far-reaching changes in the composition of added value, which also extended to other industries. Companies from every sector have bought and used IT products. This changed their way of doing business – in purchasing, production and sales. Entire value-added chains and structures have emerged as a consequence. Nowadays, we see new companies which render web-based services that had not existed before. Instead of booking a taxi by phone, you can now use an app. Cloud computing de facto allows us to access our data from almost any location. These are just a few examples of the radical changes that have hit our economic system.

Was this transformation a conscious social decision supported and driven by policy-makers? No. Has it been a gigantic transformation process? Yes.

Like all transformation processes, such changes first and foremost require tremendous investments. Nobody had calculated before the IT revolution, however, how much investment would be necessary for this transformation. Nobody had then decided

that it would be socially meaningful to make such investments. At the end of the day, it was – despite all the support of military research and other state actors – a market-driven development.

Greening the global economy is both similar and different to this change process. What they have in common is the gigantic investment sums that are needed in order to finance this process as well as the enormous changes which consequently arise for economic structures and value-added chains. The key difference lies in the conscious political shaping of this process, in the rationale of saying that it is better to invest in such change than having to shoulder the cost of destroying our ecosystems.

The German Federal Environmental Ministry estimates the required investment volume at approx. 200 billion euros in the next ten years if the share of renewable energy sources is to be doubled in Germany. As regards the global level, the recent expert report of the German government's Scientific Advisory Board on Global Environmental Issues goes even further: they even assume that about 1 billion US dollars need to be invested annually only to green current energy generation systems.

Such figures sometimes tempt us to believe that those investments will have to be mobilised on top of investments already made and that this constitutes an issue. In that instance, people often refer to the lack of long-term capital in Germany. Especially the financial industry likes to abuse the necessary green transformation as an argument in favour of capital-friendly policies.

However, it must be said in no uncertain terms that we initially need to talk about a diversion of capital, i.e. a shifting of **already existing** investment capital – away from fossil energy sources and resource-intensive technologies towards a circular economy. Above all, however, the mobilisation of **additional** private and public investments is not the problem that causes the green transformation; it is rather an economic necessity that we need to face in one way or the other. The green transformation issue thus offers an answer to the question of how we may tackle the lack of investment.

Therefore, before we talk about the concrete question of how to reform the financial sector in order to incentivise the shift of capital towards a green transformation, I would like to talk briefly about the low German investment ratio and thus the potential of additional investment.

The need to increase investment ratios

By international standards, the German investment ratio is very low and declining further. In 1999, it was at about 21.9% of the GDP; today it is just 17.7%. So, investments in Germany are below the average for the rest of the Eurozone. Even in countries that are currently in a difficult economic situation, like Spain, France and Italy, the investment ratio today is higher than in Germany.

If you compare investments in Germany since 2000 with the hypothetical path which would have emerged if Germany had achieved the same investment ratios as the other European countries in the years after 2000, you can see a cumulative “investment gap” for Germany amounting to approx. 831 billion euros¹. In Germany, we have even seen a situation where public investments are lower than depreciations on public capital assets. In short: Germany is living off its own substance while the infrastructure goes to rack and ruin.

At the same time, it has been shown in the last few years that there absolutely is a lot of savings potential for additional investment in Germany. The German current account surplus – often praised as a sign of tremendous German competitiveness – also has a downside: it indicates that about 6% of GDP is invested abroad as investment opportunities in Germany are too unattractive. These investments abroad turned out to be very unprofitable for German savers. Since 2000, also as a consequence of the euro crisis, 269 billion euros of saving capital invested abroad were destroyed². This corresponds to about 10% of Germany’s annual economic output. So the core problem is not a lack of capital but a lack of real investment opportunities. At the European level, this situation is reflected in low long-term interest, which – in contrast to the widespread belief – can hardly be controlled by the European Central Bank. In the end, they are an expression of a surplus of savings capital in relation to investment demand.

So, the basic idea of the Green New Deal of using this surplus for a targeted investment programme in order to transform value-added structures in Europe and counter the radical social implications of a monolateral austerity policy remains correct.

In the light of this finding, the around 200 billion euros needed in the next ten years according to the Federal Environmental Ministry are a sum that could be mobilized. This amount seems rather modest if you compare it with the following scenario: according to estimates, the German government alone saved 88 billion euros due to the crisis as a consequence of excessively cheap refinancing between 2009 and 2013³. However, the current German government is repeating the mistake some Southern European governments committed before 2008: it is not using the advantages of low interest rates to master future challenges but giving them away in favour of short-term popular policies.

Let me give you two examples that would be effective in helping to increase domestic investments:

Make highest energy efficiency the standard

Setting industry standards has to focus more on ambitious ecological targets. With the *Top Runner Approach*, we would see significant amounts of money go into energy efficiency within a few years. This approach seeks to provide a market overview e.g. of electrical appliances on a specific date. The consumption of the most efficient appliance would then become the standard for the entire industry which would have to be reached on a specific date in the future – be it three, five or seven years.

Public-law basic product as pension scheme to mobilise private capital

In Sweden, the government offers a standard pension scheme which directly competes with products offered in the private sector. Such a pension fund not only makes sense from a consumer rights perspective: in Sweden, it was proven that private savings capital does not seep away into non-transparent sales structures but is actually used for domestic corporate investments. In Germany, life assurance companies invest the lion’s share of pension scheme capital in government bonds. Such a pension fund would therefore not only increase competition for private pension schemes in Germany but would also shift more capital from sales structures into real economy undertakings.

1 Cf. Monthly report of the Federal Ministry of Economics and Energy, December 2013.

2 Cf. Dieter, Heribert: 2013, *Deutschlands zweischneidiges Geschäftsmodell – Leistungsbilanzüberschüsse finanzieren Investitionen und Konsum – jedoch im Ausland*, edited by the German Institute for International and Security Affairs, p. 4.

3 Cf. Bertelsmann Foundation, 2013, *Vorteile Deutschlands durch die Währungsunion – Szenarienrechnungen bis zum Jahr 2025*.

New framework conditions to redirect private capital

In contrast to the IT revolution, the green transformation needs to be politically organised even though necessary investments and innovations cannot and should not be made by the government in detail. In the end, it comes down to protecting our commons, such as the climate and biodiversity. Markets fail at this task. It is therefore necessary for policy-makers to set the right framework conditions in order to drive a realignment of the economy towards sustainable value-added structures. If politicians clearly communicate that social and ecological costs will really be treated as costs, there will be clear goals as to the need for new value-added structures which will eventually result in the redirection of capital.

At this juncture, let me emphasise that the setting of framework conditions does not have to mean that the government takes the risks of green investments off private hands and thus drives a redirection of capital. At the end of the day, such an approach would be nothing but state funding of the green transformation which does not occur within the state budget. In individual cases, such an approach might be reasonable but surely not in order to meet high investment needs. We have seen all too often that such deals eventually put a strain on taxpayers.

When realigning the system, the first and logical step is to change price relations in the real economy and thus provide incentives for private investments in the green transformation. This path has been embarked upon with the German Renewable Energy Act (EEG) which, despite all the problems that exist, has been the right approach. This thought was the inspiration behind the Green Dot and the pricing of waste. In both cases – with varying degrees of success – incentives for resource-efficient economic management were created by pricing in ecological costs. Such measures need to make sure that it is worth relying on sustainable technologies.

Companies interested in the green economy often complain about high market entry barriers and hostile economic policies. For instance, through the betterment of the environmentally harmful technologies of major corporations. The most recent example of this is the automotive industry: Chancellor Merkel opposed the introduc-

tion of CO₂ caps for major fuel-guzzling cars in Europe. Though barely calculable, the sum that will not be ploughed into sustainable technologies as a consequence is said to be considerable. The consequence: environmentally harmful subsidies must be reduced, an ecological tax reform and ecological regulations must be created as incentives for “green behaviour”.

Reforming a financial sector to serve the green transformation

This economic policy framework aside, the question of how to finance the green transformation is ultimately decisive in determining whether the financial industry can return to serve the real economy. The objective has to be to make sure that there is more merit in once again investing in socially productive innovations rather than using money to earn money. Currently, we tend to see the opposite trends that would appear to show that the real economy is there to serve the financial industry: if the differences between returns on investment and salaries are such that it is more worthwhile to invest in new transatlantic cables for high-frequency trade than in energy-saving IT, real economy capacities will not be used for purposes that bring any social added value. Every single objective of financial market regulation must therefore be made a part of the green reform agenda. A bloated financial sector that pays out high returns on investment for financial market activities of no use to national economies has no place in a green transformation setting.

Specifically speaking, reforms of the financial industry could come in areas like the duty of disclosure and corporate law. Such an approach is not sector-specific; it does not target specific change objectives, but strives to extend its impact across the entire national economy.

To begin with, it is essential that consumers be provided with the required decision-making basis that enables them to incorporate ecological, social and ethical criteria into their investment decisions provided that they seek these. This means that nothing should get in the way of the decision made by the consumer. That would be paternalistic. Instead, all of the actors should be set on a level playing field to allow market economy principles to take effect. On the other hand, it must be ensured that companies, which procure cost advantages through unethical and resource-

intensive production processes, must also specifically disclose what external effects occur as a result.

Allow me please to outline a few concrete measures that would have great prospects of success here.

Companies: accounting rules

We need to standardise non-financial key indicators for companies in terms of the environment, climate and sustainability. Although various self-commitment projects exist for companies to expand their reporting on social, ecological and ethical criteria, for example the guidelines of the Global Reporting Initiative, which proposes over 120 indicators and parameters on economic, ecological and social aspects of companies, the quality and comparability of the published data are not guaranteed. After all, these are all exclusively voluntary initiatives. This type of reporting obligations seeks to grant non-financial, including green, indicators the same status as financial indicators. This means that, just like depreciations, emissions figures and resource throughputs should be shown in the balance sheet, certified and be an equal benchmark for evaluating a company's performance.

In the medium-term, such standards must be established at the European level. In April 2013, the EU Commission presented a proposal to *harmonise non-financial reporting at the EU level*. This can only be seen as a first step, however: instead of binding and standardised information, the proposal was to allow providers and suppliers to determine for themselves how they may disclose non-financial parameters – and they can even refrain from doing so if reasons are provided (“comply or explain”). Even this soft proposal was rejected in the upper house, the Bundesrat, by the Christian and Liberal Democratic coalition government. The Social Democrats were more open to more far-reaching transparency obligations during the last legislative period. Since taking on government responsibilities in this legislative period,

none of that is noticeable any more. We must move forward in this area once and for all.

Private households: definition of “sustainable financial investments”

Today, every provider calls a financial investment sustainable if they feel like it. There are no criteria. For consumers there is a complete lack of transparency, however. A study commissioned by the parliamentary group Alliance 90/The Greens on investment funds claiming to be sustainable confirmed this view: the fund portfolios included manufacturers of helicopters and machine guns as well as uranium mine, nuclear power plant and oil well operators and many other industry sectors that have incredibly little to do with “sustainability”⁴. Accordingly, it will come as no surprise to learn that, in a survey, only 14% of the investors said that they felt very well informed about sustainable investment funds, while 40% of the respondents stated that it was important for them to know that funds invest in climate-friendly companies⁵. An Emnid survey revealed that 86% of the sample believed that catering to environmental and human rights aspects when investing pension money is important or very important⁶. By contrast, the share of sustainable investment funds and mandates in Germany in 2013 stood at an anaemic 1.3%⁷. This discrepancy between demand and investment decision makes clear that a transparent, standardised basis of information must be established.

With this in mind, we need a common definition and a label for sustainable financial investments, along the lines of the Biosiegel (organic label). One model that could be used here would be Austria's “Umweltzeichen”, its ecolabel for sustainable financial products. Such a label for sustainable financial investments must especially exclude investments in nuclear power and armaments, must guarantee compliance with norms such as the ILO Core Labour Standards and environmental standards, and must prohibit exploitative child labour. Moreover, investments in anti-personnel mines and cluster munitions must be expressly banned.

4 Bettzieche, Jochen: 2012, *Von ethischen Maschinenpistolen und ökologischem Uranabbau – Kurzstudie über den Inhalt von Nachhaltigkeitsfonds*. Study commissioned by the parliamentary group of Alliance 90/The Greens, which can be downloaded at: http://www.gruene-bundestag.de/fileadmin/media/gruenebundestag_de/themen_az/finanzen/mit_gutem_gewissen_anlegen/studie_nachhaltige_geldanlagen.pdf

5 von Flotow, Paschen (2010): *Herausforderung Klimakompetenz: Kundenerwartungen an Finanzdienstleister, Ergebnisse einer Befragung von Privat- und Geschäftskunden*, ed. by Sustainable Business Institute (SBI) e.V., p. 14.

6 Hesse, Axel (2008): *Betriebliche Altersvorsorge und nachhaltige Investments in Deutschland. Eine empirische Studie mit Vollerhebung zum Para. 115 Abs. 4 VAG und Experten-Interviews*, ed. by Fortis Investments, Dezember 2008, p. 28.

7 Forum Nachhaltige Geldanlagen: 2013, *Marktbericht Nachhaltige Geldanlagen 2013, Deutschland, Österreich und die Schweiz*, p. 12.

The standardisation of the organic label has shown that, contrary to what many had expected, there is still room for other private labels – which often have even more stringent criteria. Alternative sustainability labels for financial investments therefore could and should remain.

State: link state subsidies for private pension schemes to sustainability criteria

Especially in cases where investment products are subsidised by the state, the state itself must insist on obligations to report on ecological, social and ethical criteria being met comprehensively. At present, insurers offering state-subsidised pension schemes (e.g. the Riester pension) can release themselves from this reporting obligation by stating once only that their products do not account for any ecological, social or ethical criteria. This loophole must be closed and, moreover, such reporting obligations applied to all insurers that build capital stock.

All of these measures emanate from the notion that consumers can only incorporate into their decision-making what they know, in other words, what is measured and published. This approach is therefore shaped by great optimism that, also today in fact, if the right information is drawn on, the ecologically beneficial version will be selected. These approaches are therefore neither paternalistic nor state-oriented but heavily market-based as they seek to create equality of information for all concerned.

Apart from these measures, which seek to provide transparent information, a wealth of additional financial market reforms are needed:

Public banks: legitimisation through market leadership in the green transformation

Over the past few years, public banks have not exactly covered themselves in glory when it came to acting as a counterbalance to private banks. The scepticism felt among the population that public banks were in a position to lead the way in sustainable investments is therefore understandable. The green transformation, however, offers enormous potential to counteract this perception and re-establish public banks as servants of the common good. However, this would entail then having to align their entire business policies strictly to ecological, social and ethical criteria. The savings banks and *Landesbanken* can thus be turned into the

financers of the green transformation and consequently become the benchmark for the private financial sector.

State promotional banks such as the Development Loan Corporation KfW, the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD) must align their investment and promotion decisions to the EU's climate objectives. In the EIB's energy sector, around 33% of all projects between 2007-2010 involved fossil fuels and, as such, ran therefore completely counter to the EU's climate objectives.

State: adapt regulation to green transformation

In certain areas, mutterings are rightly heard that ecologically meaningful investments are placed at a disadvantage by the regulations because such investments do not fit into the existing regulatory framework. A recent case in point reiterated this perception when the Directive on Alternative Investment Fund Managers (the AIFM Directive) was supposed to be implemented in Germany. Complying with the requirements of the Directive would have meant that citizens' participation in the energy turnaround, in the form of citizens' cooperatives for example, would have been rendered impossible. We were able to tweak this, but there is a wealth of other areas where adjustments still need to be made.

Green investments, in part, also encounter structural disadvantages when regulating banks and insurance companies. However, this should not hide the fact that a large number of green investments are actually fraught with financial risks and also need to be treated as such in the regulations. Applying special regulations that do not adequately reflect the financial risks of green investments would be a dangerous move here. For example, calls are, at times, made for the risk weighting of loans to be reduced (and, linked to this, the equity securitisation obligation to be reduced) that are associated with the energy turnaround. Such exceptions must be rejected. The need for green investments must not occur at the expense of adequate risk assessment.

The same can be said of investor protection. Investors must also be protected from the "black sheep" in the area of renewable energy sources. Effective regulations aimed at providing high

levels of investor protection must therefore not be held back merely to facilitate investments in renewable energy sources.

This is always a fine balancing act, however. Precisely this trade-off became apparent at the time that the above-mentioned AIFM Directive was transposed into national law: on the one hand, the move to largely exclude regional investments and investments made by citizens in renewable energy sources from the investment fund regulation was successful. At the same time, however, it was possible to prevent “black sheep” from rearing their heads through loopholes that could have occurred.

Re-align companies

As joint-stock companies, business organisations today are virtually always geared towards increasing the wealth of their shareholders. This is actually a pathological objective that ignores the needs of stakeholders and the environment alike. Accordingly, corporate law needs to be refined to such an extent that companies equally consider other parameters. In his book, *Corporation 2020*, Pavan Sukhdev provides vital guidelines as to what shape such a transformation could take. With his demands, Sukhdev, a former manager at Deutsche Bank, comes very close to what the Greens believe to be necessary. He clearly recognises the need for external effects to be disclosed in balance sheets, the consumption of resources to be increasingly taxed, and for the raising of loan capital to be restricted as a means of re-establishing the commitment of joint-stock companies to serve the common good. These measures are not sufficient, however. The objective of working towards the common good must also be reflected in corporate law.

This also includes active shareholder involvement. Every institutional investor, fund manager, etc. must be bound to exercise the voting rights of their shareholders at annual general meetings and to report on this. What’s more, shareholders can place demands on the company and thus effect changes that benefit more sustainable economic management (“commitment”).

The green transformation: business as usual in a green hue

The debate surrounding how investments can be mobilised to bring about a green transformation of the economy does not go far enough, however. From a green perspective, too, the need for economic structural change must not be allowed to be reduced to a greening of added-value processes and how these are financed.

Thirty years of neo-liberalism have furthermore led to a concentration of economic power that invalidates the market structures; structures in which better performance for the customer no longer necessarily equates to market success. The green transformation needs well-functioning markets, however. That is why it is absolutely vital that competition policy reforms are set in motion.

Thirty years of neo-liberalism and financial capitalism have furthermore led to a concentration of wealth and skewed relations of distribution, which present a barrier to ecological change. How are price signals supposed to work if some no longer react to the price because they are so rich that they can afford whatever they desire, and others are not able to make the right economic decisions in the long run any longer because they are forced to fight to make ends meet in the short run? How is majority support for a new trend supposed to come about in a society in which the earnings from economic development only fall to a handful of beneficiaries? Based on the experiences of the past few decades, no-one will believe the promise any more that all of us will then be better off.

Both thoughts impact the political dimension: economic power generates political power. Wealth generates political power. In making these statements, I concur with Walter Eucken and the OECD’s most recent publications on the connection between concentration of wealth and political influence⁸. And this is of significance for the green transformation: how can there possibly be stable green guardrails if policies are geared towards the interest of well-heeled groups? It would be wanton negligence to ignore the findings of economic research on rent-seeking. If a person investing in an ice-hockey arena can bring the city of Mannheim to have an air corridor filled in that had been defended for years; when Angela Merkel – not very long

8 Cf. OECD: 2011, *Divided We Stand: Why Inequality Keeps Rising*, OECD Publishing, which can be downloaded at: <http://dx.doi.org/10.1787/9789264119536-en>

after the shareholder's family had made sizeable donations – places the interests of certain German carmakers before climate protection goals, that is more than just a one-off political mishap. These examples are problematical in terms of their configuration. In their totality, they clearly show that

the green transformation is a question of power which cannot be won in an environment where economic power is heavily concentrated, in an environment of state weakness in the face of the economically powerful.

Dr Gerhard Schick is Member of the German Parliament and the spokesman for financial policy of the parliamentary group of the German Greens. He is author of "Machtwirtschaft – nein danke! Für eine Wirtschaft, die uns allen dient" (*Power Economics – no thanks! For an economy that serves us all*) (Campus 2014).

1.2. Financing the green transformation: do we need a policy for the financial sector?

Simon Wolf

Financing the ecological remodelling of our industrial society has become the focus of (economic) policy discussions of recent years. A large number of studies have calculated the financing requirements for global climate protection or the transformation of individual sectors such as the energy system. The costs of energy transition are being discussed more and more in Germany and Europe.

No lack of capital, but of investment

Three important insights have emerged from these discussions over the past few years. *First, private investment must be at the heart of a green transformation.* Not only because the investment needed far exceeds the resources of the public budget but primarily because any ecological remodelling must be a transformation of our whole economy and hence a switch in existing capital flow from grey to green.

Second, it is clear that any discussion about the exact amount of investment required is idle talk. The basic signal that there is a very great need for capital is important – and hence great opportunities for investment. Exactly how great this need is is highly uncertain, not only due to the many determining factors, but also it is irrelevant because it is not a question of collecting a large pot of money, but of turning many small screws to facilitate as many green investment decisions as possible.

And third, it is clear that there is no fundamental lack of private capital; however, in many cases it is difficult to steer this into the right investment projects⁹. This problem extends far beyond financing an ecological transformation to important parts of the real economy in Europe, and leads to the initially apparently paradoxical situation that in some countries companies are desperately looking for capital while investors are searching for profitable investment opportu-

nities¹⁰. A politically motivated ecological transformation could also build new bridges between business financing and the real economy.

While with most measures for climate protection or the remodelling of energy systems the sources of CO₂ emissions were the main focus for many years, the question of financing this ecological transformation places investors at the centre of political interest: discussions about green bonds or the Green Investment Bank established in Great Britain are an important expression of this. So do we need a dedicated policy for the financial sector in order to make ecological transformation become a reality? Or will green investors come of their own accord if the general conditions for green business are right?

Push and pull factors when promoting green investments

At this point let us take a close look at the instruments that encourage investments in existing marketable products. The differentiation between *push and pull factors* can be useful when deciding which instruments should be given the highest priority in order to promote green investments.

Demand-pull instruments exert a *positive force on the demand* for green products or services and thus create an incentive to invest in the relevant areas¹¹. In the narrowest sense this is a form of regulation which allows the development of certain sectors, technologies or services to be promoted in a targeted manner. This includes first of all instruments which push down the costs for certain technologies or bring prices to an acceptable level for the market¹². The best known example is the German Renewable Energy Law. The feed-in tariff it contains was aimed less at potential investors than at the producers of renewable energy.

The other side of boosting demand is all forms of regulation that prescribe ecological products or raise the price of less eco-friendly alternatives: from green and CO₂ taxes to emission standards for cars and returnable deposits on tins through

⁹ This is illustrated by many studies which compare the need for capital for climate protection or an ecological transformation with the capital available in financial markets, and which frequently look at institutional investors in particular, whose long-term financing time frame is basically well suited to the long-term aspect of climate protection projects [see also the interview with Karsten Löffler in this publication].

¹⁰ This has encouraged the European Commission to publish a Green Paper on better long-term financing for the European economy [see also the contributions from Philipponat and Lallemand in this publication].

¹¹ Of course, direct demand plays an important role through the public procurement system, which in turn exerts multiple influences on buying and investment behaviour of private players.

¹² In addition to financial stimulus this also includes market rules that facilitate market access for renewables.

to energy standards for refrigerators. Emissions trading also belongs in this category: by setting a price on CO₂ emissions, it creates incentives to develop alternatives to energy and material intensive production processes.

Emissions trading also illustrates that stimulating demand does not always have a direct impact on investment decisions. In order to influence investment decisions, regulation must have a minimum of credibility for investors. Nicholas Stern made the slogan “long, loud and legal” popular in this respect: regulation must be *long-term* in order to cover financing periods; *loud* in order to make a difference to investment decisions; and *legal* in the sense of anchored in general regulations that investors trust.

Put plainly, this means it is a problem for investors if the conditions for promoting renewable energy are amended, as has happened in Spain or Germany, or if the prices for emissions trading fluctuate too much and above all are much lower than originally contemplated. These *political risks* are added to existing investment risks such as fluctuating prices for raw materials and unpredictable innovation dynamics for (clean) technology and further complicate investment in a green transformation.

These risks are an important starting point for the discussion on **finance-push instruments**, which have become much more important in recent years. The basic idea: if climate protection and green transformation are politically desirable, but the fundamentally excellent investment opportunities for renewable energy and efficient technology are hampered for the foreseeable future by high risks, then politicians must minimise or provide safeguards against these risks.

Hence finance-push instruments address the actions of investors directly. Many of these instruments are not fundamentally new, but they are used more and more for climate protection or to promote green transformation. Public business development banks play a central role here. KfW (Development Finance Group) in Germany or the European Investment Bank increasingly offer financing aids for green projects as well, especially as part of energy transition. Co-financing

instruments are aimed directly at project funders and also assume part of the investment risks by providing part of funding. The following can happen implicitly: if a public bank such as KfW or EIB, with their excellent ratings, act as part of a consortium then the financing conditions are improved automatically. However, the assumption of risk can also be direct if the business development bank insures certain default risks or bears the first potential losses in the financing chain and hence minimises the loss risk of the other partners. In this manner KfW promotes the construction of offshore wind parks that are linked to a particularly high investment risk.

A less important instrument in practical terms to date, but nevertheless hotly debated, are green bonds. Private investors do not finance specific projects, but invest in a fixed income product: how the money is then actually invested is decided by the bond issuer through their lending practice. In many cases these are public banks, although individual private banks, such as the Swedish SEB, also offer green bonds.¹³ The main target group of green bonds are – as is usual in this market – institutional investors such as pension funds or insurance companies, for whom the risk of directly financing projects is too high. Many players have high hopes that these bonds will close the wide gap between the capital needs of companies or project financing and investors searching for investment opportunities, as well as steering investments into areas considered important by society.

How both approaches can be combined in practice has been shown by the European Commission and the EIB with their project bond initiative¹⁴, which is intended to combat the investment backlog in areas such as transport and energy infrastructure. Here, too, the target group comprises institutional lenders. However, the bonds are not issued by public institutions, but by private project sponsors. The interesting point about the initiative is that the project sponsors can divide their liabilities into a first tier and a second tier tranche, with the second tier tranche being provided as a loan or as a contingent credit line by the EIB and the European Commission. If the project sponsors have difficulty in paying back their loans, private investors take precedence.

13 KfW has abstained from issuing green bonds to date: Its approach is rather to mainstream sustainability criteria in its lending practices; therefore it would be irrelevant whether its bonds were offered as “green” bonds or not: <https://www.kfw.de/Presse-Newsroom/Pressematerial/Interviews-und-Namensartikel/Interview-PDF/KfW.pdf>

14 <http://www.eib.org/products/project-bonds/?lang=de>

Since this increases security for these lenders, the project can attract simpler (and more advantageous) financing in private capital markets.

A long-term strategy is crucial

The question of the right political road map for financing ecological transformation is increasingly linked with the question of whether – more than before – we need a policy for the financial sector.

An important reason for the increased importance of this question is surely the significantly more active role played by banks and investors in the debate on climate protection or energy transition. Investors have their own distinct view of challenges such as climate change. Firstly they emphasise the investment risks described above and correspondingly welcome instruments which governments use to cover these risks: and why shouldn't they, since a near risk-free return on investment is partly on offer. A further segment of the financial market is similarly interested in green or climate protection bonds which are normally issued with an excellent rating.

However, as we have seen, investors emphasise another important aspect: that reliable conditions are the prime factor in facilitating investment in climate protection and the green transformation. Investor associations such as the International Investors Group on Climate Change are demanding that governments set the signals for a rapid expansion of renewable energy and clean technology with clear, long-term regulation.

Irrespective of how useful and necessary specific funding instruments for individual projects may be, the broad transformation movement cannot let go of the apron strings of business develop-

ment banks and other public institutions. In fact, the decisive factor is that strategy for the whole macroeconomic transformation is implemented in the long term and with credibility.

Clear and reliable regulatory conditions offer a further advantage; as Nick Robins and Mark Fulton from the two major banks HSBC and Deutsche Bank emphasised (2009: 143) these are the lowest-cost option for climate protection and ecological transformation¹⁵.

So the answer is relatively clear in principle: it would be desirable if funding for the green transformation could be encouraged largely through a highly regulated environment in the sense of a pull factor. This can be feed-in tariffs for renewable energy or stronger emissions trading: If these send a long-term, reliable price signal, and this is consistently emphasised by investors, then the corresponding investments will follow.

The central instrument to send this price signal should in actual fact be emissions trading in the EU. The advantage of emissions trading is to create an incentive for investment that does not require subsidies – the same applies to a CO₂ tax¹⁶. Strong political resistance has so far stood in the way of the success of emissions trading: What appears to be a political risk from the point of view of investors, namely the high level of uncertainty regarding the actual price signal sent by emissions trading, is a question of power in political terms. It was the interests of existing industrial sectors that prevented greater investment incentives with a clearer delineation of the emissions allowance. The point of view of investors alone cannot break this resistance; however, it again illustrates that massive economic opportunities are linked to ecological remodelling.

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15 Nick Robins and Mark Fulton (2009). Investment Opportunities and Catalysts. Analysis and proposals from the Climate Finance Industry on Funding Climate Mitigation, in: Richard Stewart et al. Climate Finance. New York University Press, pp. 143-151.

16 The effect of emissions trading and a CO₂ tax is not as different as the acrimonious discussion between the pertinent supporters would appear to indicate. With the former the aspect of market efficiency is emphasised more strongly because players retain the possibility of making a profit from major reductions in CO₂ emissions; regarding the latter the price signal is clearer because it is not dependent on changes in the market and therefore is easier to calculate for investors. And finally, in the current political situation the argument that emissions trading has already been introduced and meets with basic approval from the key players is decisive.

Part II: Financing the real economy and the Green transformation



2.1. Reflections on Long-Term Financing¹⁷

Thierry Philipponnat

In this article, I will take a critical look at the increasingly accepted idea that, in order to stimulate investment in SMEs and infrastructure, the EU should promote a revival of securitisation and public-private partnerships.

These ideas have been raised in the context of the EC's initiative on Long-Term Financing and are becoming a consensus response to the task of restoring growth after the crisis. Finance Watch's preliminary analysis, which looks at the rationale and at some of the issues raised, points to a cautious approach to these measures.

1. What is LTF about?

In the current context of low growth, the European Commission has made it one of its main priorities to promote sustainable growth and job creation. A number of initiatives have been launched to that effect, including "Europe 2020", "Connecting Europe", and the "2030 climate and energy package".

While these programs focus on the investments necessary to restore growth and competitiveness, the Long Term Financing initiative complements them and will focus on how these initiatives are financed, and more specifically on the access to financing of infrastructure and SMEs.

In this respect we understand the overarching purpose of the Long Term Financing initiative to be not so much about promoting long-term over short-term but rather about fostering growth, via the promotion of alternative non-bank financing channels. Incidentally the bundling in one initiative of assets with such different maturities as infrastructure and SME loans might also raise the question of what is long term.

2. Is the rationale sound?

Looking at the data, we find that the emerging narrative, which says that bank lending will have to decline due to deleveraging and therefore we need to promote capital market financing to fill the gap, is somewhat simplified.

First the current lack of growth and job creation has structural causes beyond the crisis, linked to demographics (ageing populations) and to rising inequality, the latter being a consequence of globalisation and financialisation.

Several studies have also demonstrated that when the financial sector grows beyond a certain level, more credit actually lowers growth, as it increases the probability of crashes and takes resources away from the real economy.

Therefore, while it is important to avoid a lack of credit supply after a crisis, one might question whether policy responses should be targeted only at the availability of credit, instead of addressing the more fundamental and structural issues behind the lack of aggregate demand, such as inequality.

Secondly bank lending does not have to decline: loans to NFC (non-financial corporations) and households represent 28% of European banks balance sheets, whereas deleveraging needs are estimated to be around 7.5%. Additionally banks have several ways to deleverage, including reducing lending, but also reducing other assets, issuing new equity or retaining earnings. Therefore a decline in bank lending would be a decision by bank managers to allocate capital to more profitable activities, not an inevitable feature of the post-crisis economy.

This raises the question of why the need to change the model, and we believe that the promotion of capital market financing is a choice, as is the promotion of the investment banking model over the traditional banking model, rather than the only alternative.

3. Concerns and new risks

The push to revive securitisation in particular has to do among other reasons with increasing banks' profitability and collateral creation: One way for central banks to inject liquidity in the system in order to boost growth and fight deflation is through purchasing securities.

Securitisation being the process that transforms loans and real assets into securities, it creates additional securities that can be used as collateral when financial institutions lend to each other.

¹⁷ This text is the transcript of a speech by Thierry Philipponnat at the symposium "Financing the Green Transformation. Instruments and Coalitions for Sustainable and Social Investment in Europe", 5 May 2014, Berlin, Germany.

This creates three concerns in our view:

a. For the purpose of growth creation, you can encourage cheap credit and in the process risk creating new bubbles, but we should not overlook more sustainable alternatives, such as attempts to address income inequalities and increase the purchasing power of the lower and middle classes.

Even the Davos summit recognised the key role of inequalities in the current lack of growth, and political measures addressing it could prove to be more sustainable than repeating the cycle of credit booms and busts.

b. Secondly, securities lending is a major source of bank funding, but this is a very short term procyclical type of funding that contributes to interconnectedness, a key factor of systemic risk.

This type of funding is also not the kind of long term, patient, non-cyclical capital that we need.

c. Lastly on the investment side, the promotion of public private partnerships raises a number of questions:

While infrastructure investing is considered the 'holy grail' of economic stimulus, PPPs have a debatable track record, in terms of value for money for the user, cost to taxpayers and opacity.

There is also a risk that the partial privatisation of European infrastructure might favour user-fee based projects and increase the excludability of quasi-public goods, when not all infrastructure is suitable for user-charging.

Additionally, retail investors are to be incentivised to invest in privatised infrastructure, either via retail investment funds or indirectly via their pension fund. There is a risk that the political argument that we need to provide a return to pensioners and retail investors will be to the detriment of value-for-money for users of services, and this might weaken consumer protection advocacy.

Incidentally as there is no shortage of available capital, but rather a problem of channeling all this capital to the needed investments, any initiative to promote retail savings would present a paradox, as what is needed is more consumption, not more savings. Such initiatives may have more to do with the pension reform agenda.

At the very least, it is fundamental in our view to advocate for increased transparency in public private partnerships, in order to increase the democratic accountability of projects that will commit public finances for decades to come.

4. Conclusion

In summary, we support the objective of promoting sustainable growth and job creation, provided the tools used do not create new systemic risks or undermine social outcomes. We therefore urge policymakers not to rush to embrace measures before exploring alternatives that may be more sustainable.

Thierry Philipponnat was Secretary General of Finance Watch, a financially independent non-profit membership-based organisation located in Brussels, from its foundation until May 2014.

2.2. Financial conditions for the green transformation in the crisis – a macro-economic approach

Andreas Botsch

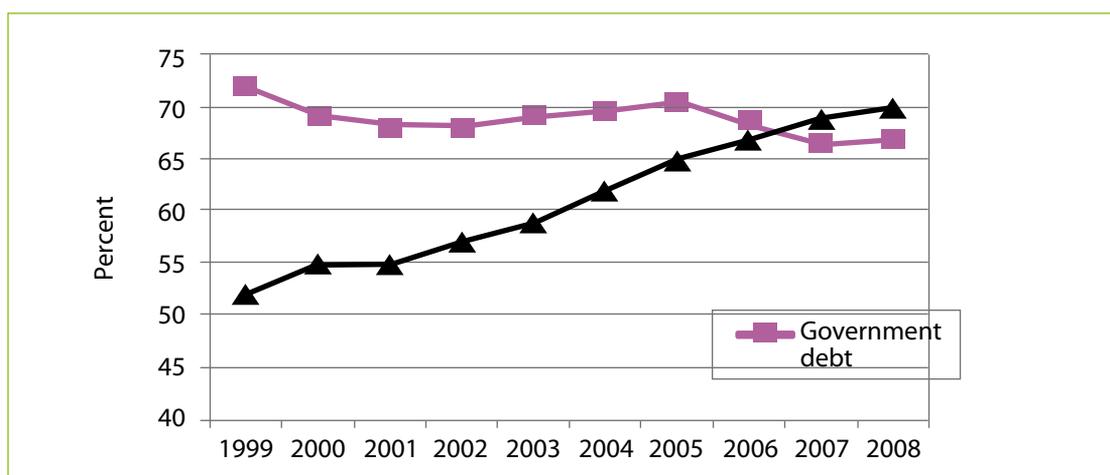
The green transformation requires a massive structural reorganisation of the growth model for European economies and not least a gigantic investment programme for their social and ecological modernisation, through to better and increased resource efficiency. A decisive step in this direction would therefore be to restart economic dynamism in the Eurozone after the crisis, especially lending to the private sector. If the right course is set, ecological and economic goals could strengthen each other.

The crisis that started in 2008 is multi-layered – a banking crisis in the narrower sense of the word, a crisis in the distribution of wealth, and the misallocation of capital between longer term real investments and virtual financial investments, the latter without a recognisable social benefit. Furthermore, it is in fact a deep crisis of trust which required a clear analysis and response from the governments of Europe¹⁸.

By 2010 it was clear that Europe's governments were neither grappling with the causes and deeper lying reasons for the financial crisis, nor did they want to tackle the grave consequences of an incomplete monetary union. Their answer to the crisis can be summed up in one sentence: the major structural problems that resulted from a completely overstretched banking and financial sector were and are being combated with a failed macroeconomic policy¹⁹, as Europe responds to essentially macroeconomic problems of insufficient capacity utilisation, underemployment and unemployment with the wrong structural reforms of the labour market and general austerity in social spending. This economic policy can only be described as hypocritical²⁰.

Governments in Europe should – and still could – have known better and acted differently. Contrary to popular prejudices the countries on the edge of the Eurozone did not live "beyond their means". Only the Greek government can be accused of unsound budgetary policy and was able to disguise the actual size of its deficit for years with the aid of the financial instruments of the investment bank Goldman Sachs. Overall deficits and public debt dropped in real terms between 1999 and 2007, despite the dotcom bubble bursting and the global recession after 9/11, while private debt rose by 50%²¹:

Fig. 1 Public and private debt before the crisis



Source: European Commission (EC 2011)

- 18 Skidelsky, Robert (2010), Die Rückkehr des Meisters. Keynes für das 21. Jahrhundert. (The Return of the Master. Keynes for the 21st century.) Kunstmann, Munich 2010.
- 19 Botsch, Andreas (2014), Die mangelnde Finanzmarkt- und Bankenregulierung als weitere Gefahr für Europa (A lack of regulation of financial markets and banking as a further risk to Europe, WISO 37th Yr. (2014), No. 1, p. 44-57.
- 20 Regarding the seven most devastating hypocrisies of European economic policy cf. Botsch, Andreas (2013), Hypocritical versus Hippocratic economics, in Palley, Thomas and Horn, Gustav (eds.), Restoring Shared Prosperity. A Policy Agenda from leading Keynesian Economists. Washington 2013 (December), p. 15-22; <http://www.amazon.de/Restoring-Shared-Prosperity-Keynesian-Economists/dp/1493749420>
- 21 EC (European Commission) (2011), European economic forecast – autumn 2011, European Economy 6(2011), Brussels.

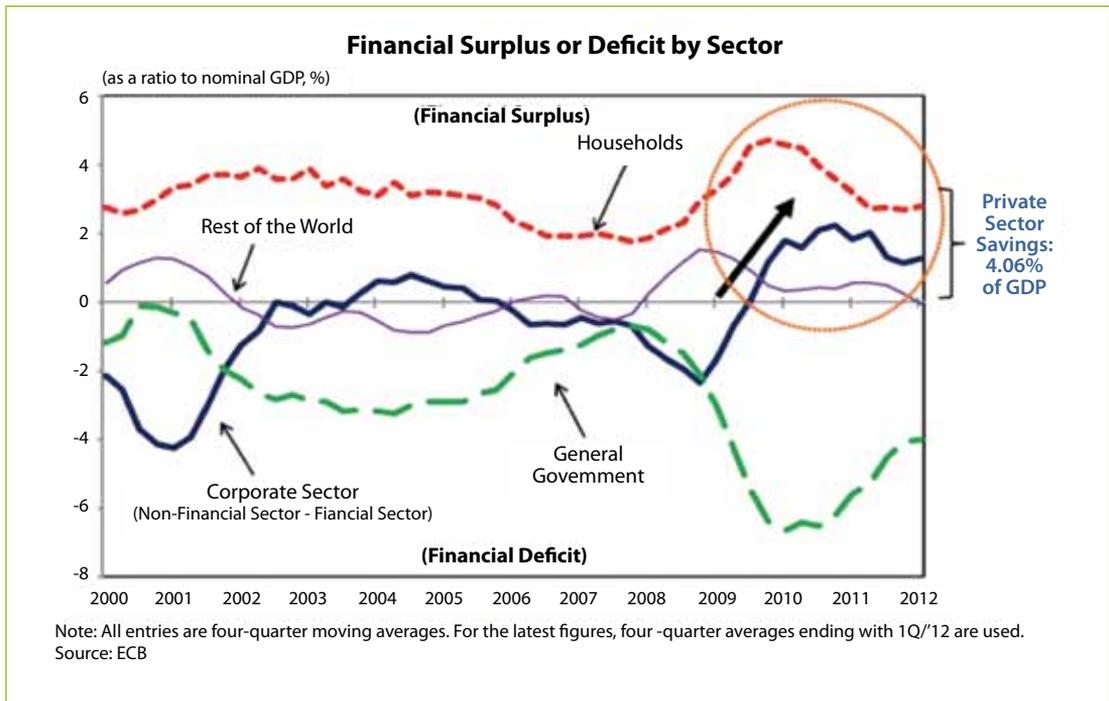
Bank bail-outs (i.e. public assumption of private debts amounting to more than 1.3 billion euros or 13% of GDP in the EU) and the great recession resulted in gross debts of the countries in the Euro zone rising to 93% of GDP (end of 2013). The rapid rise in national debt was the *result* of bank bail-outs and the great recession in Europe, not its cause.

However, a short and thoroughly successful spring of Keynesian economic policy²² was followed by recourse to dysfunctional and counter-productive recipes of the mainstream neoclassical economics, whose neoliberal aberrations were in fact the cause of the most serious global crisis since 1929. Its renewed hegemony determines the policy to overcome the crisis in the Euro zone - and not only causes great social hardship, but also the deep-seated economic collapse in Southern Europe. The crisis was reframed: a financial crisis became a fiscal crisis. Simple algebra was ignored when, using an influential study²³, the term “expansive contraction” spread throughout Europe in order to show that austerity policy ultimately promotes growth.

However, the fact was “overlooked” that the debt level is a quotient with GDP as the denominator. If the latter drops, i.e. if GDP contracts, the value of the quotient rises, i.e. national debt levels.

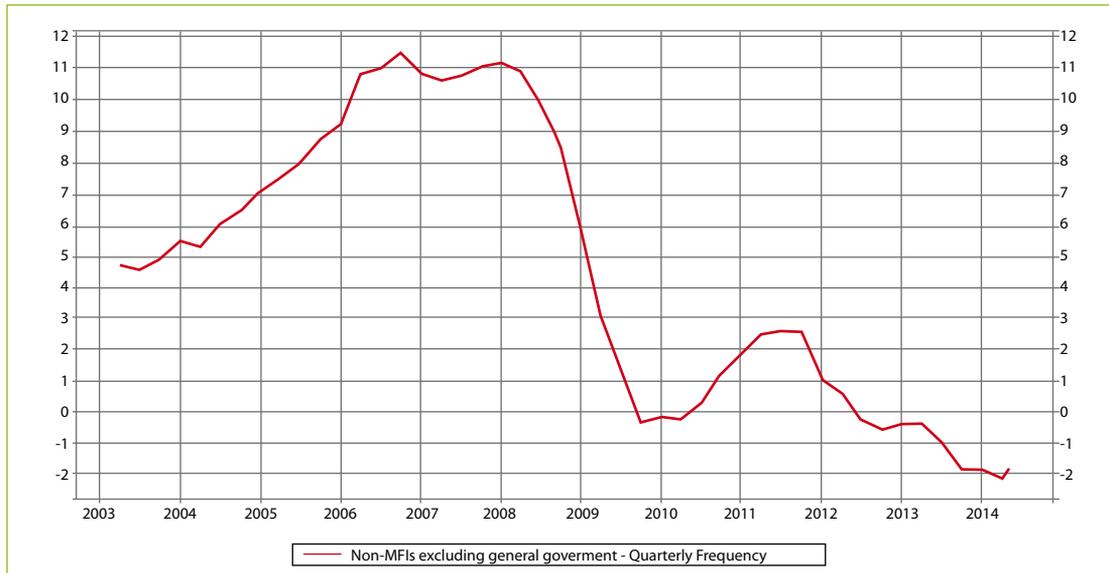
Equating public with private debt sustainability is a classic false conclusion from part to whole (fallacy of composition): what is right for the individual can be detrimental to the whole. While private households and companies have to watch their debt sustainability and reduce their interest charges to a bearable level, national budgets were virtually required to ensure macroeconomic stability. In a balance sheet recession, where private players have to write off their assets, the state - or at a European level the EU as a whole, either through Eurobonds or a European Monetary Fund - has to ensure that macroeconomic demand does not collapse. If Japanese policy had functioned as the EU did after the housing bubble in 1990, the level of prosperity of the Japanese economy would be one third lower than is currently the case²⁴.

Fig. 2 Eurozone in a balance sheet recession



Source: Koo 2012

22 Skidelsky 2010.
 23 Alesina, Alberto and Ardagna, Silvia (2010), Large Changes in Fiscal Policy: Taxes Versus Spending, Tax Policy and the Economy, Volume 24 (2010), The University of Chicago Press.
 24 Koo, Richard (2012), Balance Sheet Recession as the Other-Half of Macroeconomics, http://www.boeckler.de/pdf/v_2012_10_25_koo.pdf

Fig. 3 Loans to companies in the Euro zone 2003-2014, changes in %

Source: European Central Bank

The policy of the European Union since 2010 has been to test the paradox of thrift described by Keynes in 1936: as soon as private households and companies in an economy limit consumption and investments in order to increase their wealth through saving, incomes and savings for all fall due to this supposed saving. At the same time it becomes less and less useful for the ECB to flood markets with money. Banks' liquidity does not increase the money supply: the classic transmission channels are disrupted. Investments in the Euro zone are at a historic low, companies are applying for ever fewer loans. The balance sheet recession in the Euro zone has developed to become a classic demand crisis. The guild of economists with their Keynesian orientation calls this situation a liquidity trap.

The debt limit prescribed by the Basic Law in Germany and the instruments of European economic governance such as the six pack, the two pack and the fiscal contract prevent Europe's governments from using fiscal policy as a significant stabiliser. The "Japanese scenario" frequently evoked by critical economists of a depression lasting decades is therefore becoming ever more tangible. However, fiscal policy in Japan again and again intervened as a stabilising factor in macroeconomic terms, at least at certain times²⁵, even at

the price of allowing the national debt to increase tenfold within 20 years to c. 250% of GDP.

A further basic error in European policy is to leave the unduly bloated banking sector essentially untouched – as in Japan – and to keep so-called zombie banks above water instead of winding them up. Regulation of the EU financial market in 2009-2014 was anything but a success. Despite tens of thousands of printed pages of European laws on the financial market, the basic principle of self-regulation by banks and financial institutions has not been touched. At 350% of GDP the financial sector in Europe is today more concentrated and bigger than ever before and has shown itself to be one of the greatest obstacles to growth²⁶. It is not sufficient to prohibit one or another deal for banks or to allow them to assess the risks to equity themselves.

The Basel mandate does not cover business models of banks. An absolute equity ratio must be imposed on them in order to prevent them from continuing to inflate their balance sheets and debt policy via the interbank market and securitisation²⁷. Banks serving the real economy instead of creating speculation bubbles must be smaller, structured more simply, less orientated to the short term and better controlled democratically²⁸.

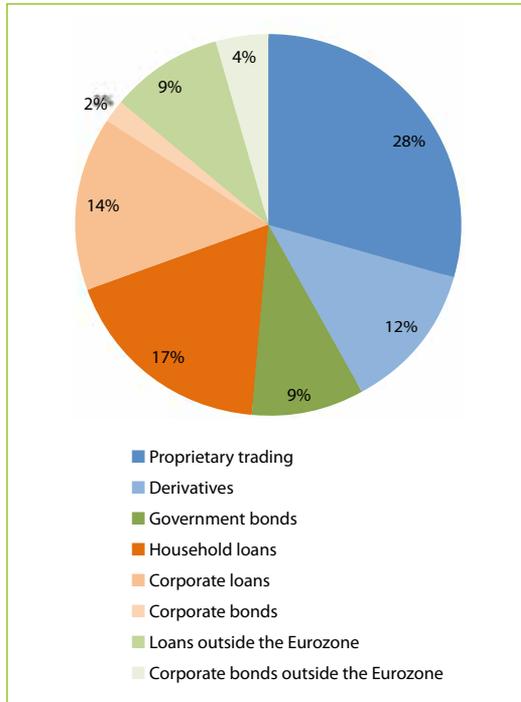
25 Koo 2012

26 OECD (2014): The role of the financial sector for economic growth in OECD and G20 countries, 6 February 2014, Paris (ECO/CPE/WP1(2014)6).

27 Admati, Anat and Hellwig, Martin (2013): *Des Bankers neue Kleider: Was bei Banken wirklich schief läuft und was sich ändern muss* (The Banker's New Clothes: what is really going wrong with banks and what has to change) Munich Finanzbuchverlag.

28 Cf. Botsch 2014.

Fig. 4 Composition of bank balance sheets in the Euro zone 2013



Source: ECB, in-house calculations

In the financial capitalism of today monetary assets are no longer hidden under the mattress but “invested” in the virtual worlds of financial markets. Banks have largely abandoned their function as intermediaries and are specialising in unproductive investments. The percentage of proprietary trading and derivatives on the assets side of all banks’ balance sheets in the Euro zone is 40% higher than the amount of loans given to households and companies (31%). In no country in the Euro zone does the latter figure exceed the risk business of banks. The composition of the balance assets illustrates the extent of the risk (fig.4).

The ongoing crisis of 2008 has strengthened a basic tendency of uncontrolled financial capitalism: the drying up real investments and the current liquidity trap of the real economy in Europe on the one hand is accompanied by massive excess liquidity on the other. This can be seen in the development of net fixed assets. While net fixed assets in the Euro zone amounted to nearly 12 billion euros in 2000, they had almost doubled to more than 22 billion euros by mid-2013. For the European Union as a whole the volume of net fixed assets is more than 31 billion euros, or nearly two and a half times European GDP.

Fig. 5 Private assets in the Euro zone (mid-2013)

	Code	Gross financial assets (€million)	Debt (€million)	Net fixed assets (€million)
Austria	AT	918,539.99	-298,701.66	619,838.34
Belgium	BE	1,807,617.82	-383,276.25	1,424,341.57
Cyprus	CY	84.18	-54.33	29.85
Germany	DE	8,811,256.35	-2,790,407.73	6,020,848.62
Estonia	EE	33,230.60	-15,542.84	17,687.76
Greece	EL	504,096.96	-236,026.18	268,070.78
Spain	ES	3,147,694.57	-1,583,591.54	1,564,103.03
Finland	FI	390,843.54	-238,201.96	152,641.58
France	FR	7,633,279.70	-2,507,936.54	5,125,343.15
Ireland	IE	581,673.36	-336,674.49	244,998.86
Italy	IT	6,293,154.92	-1,680,773.92	4,612,381.00
Luxemburg	LU	100.82	-44.44	56.38
Latvia	LV	32,268.93	-14,349.25	17,919.68
Malta	MT	29.92	-9.87	20.05
Netherlands	NL	3,331,635.72	-1,551,651.97	1,779,983.76
Portugal	PT	674,871.58	-290,652.73	384,218.86
Slovenia	SI	65,633.33	-22,230.79	43,402.54
Slovakia	SK	88,477.64	-41,401.10	47,076.54
Euro Area	EA-18	34,314,489.93	-11,991,527.60	22,322,962.34
EU	EU-28	48,047,443.71	-17,025,140.53	31,022,303.18

Source: Eurostat, Credit Suisse, in-house calculations

Which policy options are available with excess liquidity? The traditional method throughout history of physically destroying the capital stock through war and the subsequent reconstruction went out of fashion after the peace order and the unification of Europe after the Second World War. Europe exports wars, but its local capital stock remains unaffected. There is growing resistance among civil society to the second, very effective, method of deregulation and privatisation of public property. In addition, there is no longer sufficient family silver to absorb this excess liquidity. As long as private deleveraging continues and the most recent experiences are still fresh in people's minds, a third possibility seems to be excluded, at least for the time being, namely continuing with a policy of creating bubbles financed by debt.

How can private net fixed assets now be mobilised to finance a Green New Deal? Recently it has been

prominent conservative economists in the USA, of all places, who remind us that the Western world regained prosperity and growth after the war through financial repression. The acquisition of government bonds with low interest rates were applied in fiscal terms in order to reduce the then high income taxes, with top tax rates of up to 90%. Today US economists are in favour of a single capital levy of up to 4.5% as a tax on capital²⁹.

A further alternative that has been little discussed to date, of channelling private fixed assets to sustainable real investments, would consist in the requirement of a public equity fund on a European basis that would finance an investment and reconstruction programme for ecological modernisation. This approach largely follows the concept of a Marshall Plan for Europe, as proposed by the DGB and other trade unions in Europe³⁰.

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29 Reinhart, Carmen and Rogoff, Kenneth (2013), Financial and Sovereign Debt Crises: Some Lessons Learned and Those Forgotten, CEPR Discussion Paper DP9750, November 2013.

30 Cf. the interview with Mehrdad Payandeh in this publication and DGB (2012), Ein Marshallplan für Europa (A Marshall Plan for Europe). Proposal of the German Trade Union Federation for an economic stimulus, investment and reconstruction plan for Europe, Berlin, http://www.dgb.de/repository/public_storage/64e1dc32-4081-11e2-9bfe-00188b4dc422/file/ein-Marshallplan-fuer-europa.pdf

2.3. Reforming the mega banks – or “what happened after the tsunami”

Benoît Lallemand

Where did the tsunami come from?

According to the financial lobby, the banking sector has suffered a tsunami of reform. It has faced new rules on capital, liquidity, bank resolution and even a cap on bonuses. If there is any more regulation, we are told, the sector may sink below the waves. If this is true, then surely the European Commission’s recent proposal on bank structure reform should be blocked or watered down? (Commission, January 2014)

Finance Watch does not see it this way. This is not because we want more regulation. We actually want less in quantity, but more in quality. To explain why we think the European Commission’s proposal on bank structure reform is so important, let us return to the image of the tsunami.

At the peak of the financial crisis in autumn 2008, a different tsunami, made up of major bank losses, was rolling through the financial system and hitting coastline villages (representing citizens) in what became the worst financial shock in nearly a century. This shock cost taxpayers €1,600 billion and resulted in what economists have called “the Great Recession”, with public debt and unemployment (among youth in particular) soaring all over Europe. Since the crisis, the number of jobless has increased by two million in Spain alone.

The approach taken by the G20 was to ensure that the next tsunami would not harm coastal villages. For that, they decided to build or strengthen embankments to absorb any future the waves/losses.

There are three such embankments in the regulators’ plan:

The first, bank capital, is covered by the Basel III rules (CRD IV in the EU). A bank’s providers of capital are the first to be “wiped out” by the wave, when the value of their shares is written down to absorb losses. Capital requirements have doubled since the crisis but are still a fraction of the level that many commentators and regulators believe to be necessary. The embankment also has major weaknesses, some of which are recognized by the Basel Committee itself. These

include that banks use their own internal risk models to calculate their capital requirements, with major discrepancies in the final outcome.

The second “embankment” is creditors, who absorb losses after the shareholders have been wiped out. Here, the EU’s Banking Union (Bank Recovery and Resolution Directive) includes “bail-in” provisions that aim to make creditors take their share of losses. The main weakness of this second line of defence is that, currently, too-big-to-fail banks are also very much interconnected, so if creditors of one bank have to take a large loss, it could spread quickly through the whole system of megabanks. As long as this remains the case, we think the risk of a “domino effect” makes it unlikely that a significant bail-in would be implemented in a systemic crisis.

The third line of defence is a single resolution fund introduced under the Banking Union and based on contributions by banks. It will be up to €55 billion in size within ten years. We only need to compare it with the €1,600 billion that was required from taxpayers following the crisis of 2008 to understand that this fund will be of little use should a major bank – or banks – go under.

These embankments are too small to protect us from a future tsunami. Something more is needed.

To extend the metaphor, let us imagine that the source of these tsunamis is a chain of giant underwater volcanos (representing too-big-to-fail megabanks) whose periodic eruptions cause damage far and wide.

Experts (the IMF, ECB, OECD, FSB, academics...) agree that the largest volcanos are still there, are still too big, and are still too close to the coasts. This also includes Germany, despite its relatively diverse banking sector. And the question is not whether there will there be another eruption, but when. Corporations fail and banks make losses; that’s economic life.

So the missing part of the “coastal defences” is working to scale back the giant volcanos and make them safer. The same experts agree that structural reform of too-big-to-fail banks would greatly reduce the distorting incentives that stimulated these giant underwater volcanos to form in the first place (the implicit subsidy that provides cheap funding for banks’ trading arms).

Of course, it is not possible to change the structure of real volcanos but it should be possible to change the structure of banks. Right?

Scenario 1: The financial lobby kills the proposal

Let us now imagine the following scenario. There will be no reform of the structure of megabanks, they remain too-big-and too-interconnected-to-be-allowed-to-fail, too-complex-to-manage, supervise and resolve. The European Commission's bank structure proposal is scrapped or drastically watered down.

The main reason is that financial reform is not an intellectual, technical debate, but a power struggle. Six years after the financial crisis, the financial lobby is stronger than ever. It employs more than 1,600 lobbyists in Brussels alone. That's one for every billion euros of public money used to rescue banks after the last crisis! It outnumbers civil society lobbyists 30 to one and the ratio is similar in other key political capitals like Washington and London.

In this scenario, the lobbyists for these megabanks will argue that reforming their structure would impede the ability of Europe's economy to recover from recession – never minding that it was these very banks put us in that recession. They will tell you that structural reform – breaking up the too-big-to-fail banks – would cause business lending to fall, would lead to job losses, and would reduce their competitiveness *vis-à-vis* large US banks.

They will insist that their main mission in life is to support the economy and society, despite the fact that less than half of their assets represent lending to the real economy (12% of EU bank balance sheets represent lending to non-financial corporations and 16% lending to households – HLEG 2012).

Small and medium-sized banks, including Germany's public banks and those with an alternative business models, will side with their bigger sisters, convinced by them and the trade bodies they share that structural reform is bad for the whole sector.

Policymakers will succumb to what Simon Johnson, ex-IMF, now Massachusetts Institute of Technology, calls "the fear factor": they desper-

ately want economic growth but lack the courage to confront the financial lobby because of its power, perhaps also worrying that the lobbyists might just be right, despite the wealth of evidence to the contrary.

There is also a human factor: we mostly dislike change and sometimes find it easier to buckle down and tolerate a bad situation, knowing it will become someone else's problem in the future.

In this scenario, there will be no reform as some of the largest EU member states will aggressively defend their national champions and act as the mouthpiece for the banking sector, opposing reform. The April 2014 ECOFIN meeting sent a pretty clear message in this regard – making it difficult for any specialist to distinguish between the arguments of the banking lobby and some of Europe's finance ministries, including Germany's.

There will be no reform because corporations, trade unions and consumers, influenced by the "fear factor" just mentioned, will not actively support the proposal – even though the current situation works against their interests. There will be no reform because civil society will stumble on a technically complex topic, failing to engage the broad audience needed to influence the democratic balance and drive through change.

I am afraid this scenario is unfolding before our eyes as we speak. And at the end are the inevitable major losses that will echo the tsunamis we experienced only a few years ago.

Scenario 2: Public interest prevails: banks are separated!

There is another scenario. In this one, the European Commission's proposal on bank structure will be strengthened and adopted. The structure of megabanks will be reformed to separate investment banking (including market making) from deposit taking, and society will benefit from less financial risk and more productive economies.

At the heart of big banks' opposition to structural reform is their (understandable) desire to hang on to the valuable implicit subsidy that banks receive because they are too-big or too-interconnected-to-fail. The subsidy is largest for the biggest banks, and largest in countries with highly rated sovereigns, such as Germany.

The value of the subsidy was estimated by the European Commission at between €59 billion and €95 billion a year in cheaper funding to a sample of EU banks in 2011-2013, around a third to a half of those banks' profits in that period. The IMF estimated the subsidy even higher, at between €90 billion and €300 billion a year in the EU.

That's quite a powerful motivation to resist change but, in this scenario, there will nevertheless be structural reform of banks because public interest will prevail over the interests of the financial sector.

Policymakers will abandon their belief, held over the last 25 years of deregulation, that whatever is good for the financial sector is automatically good for the economy and society. They know that removing a big subsidy will also remove a big distortion from our market economy, helping to channel credit to the real economy. Politicians will overcome their fear of change and confront the special interest lobbying of banks.

Germany's co-operative banks and savings banks, which are mostly outside the European Commission's reform proposal, will see how structural reform could make them and their customers more competitive and will stand behind the proposal. Small and medium-sized banks will speak out against too-big-to-fail in the hope of restoring a level playing field, calling for fair competition, diversity of bank business models and lower barriers to entry.

Large corporations will celebrate the end of conflicts of interest inside the banks that serve them, and small and medium-sized enterprises will welcome an increase in lending as banks' deposit funding is no longer diverted to support investment banking. Non-bank business lobbies will back smaller banks, knowing that an outsize financial sector has only increased the amount they must pay for financial services over the years, instead of reducing it (Philippon 2013, Bazot 2014).

Unions will support the proposal because they want to create sustainable, high-quality jobs for their members. They know that growth and employment are negatively affected by excessive development of the financial system – a threshold that has been reached in all developed countries (Cecchetti and Kharroubi 2012).

Investors will support more diversity in the banking sector as it will enable them to spread their risk and choose between higher and lower risk banks in which to invest. They do not want unsustainably high returns on bank equity followed by big losses in a crash. So they will exert pressure on the too-big-to-fail banks that they have invested in to demerge and break themselves up into more manageable entities.

Civil society will make its voice heard, making the connection between financial reform and the many relevant, urgent causes that people care about (fighting climate change, reducing inequalities, creating a sustainable and inclusive economy, etc.).

Supervisors will welcome clear, simple, supervisable bank structures that are subject to market discipline.

In this scenario, there will be a separation because banks, businesses, investors, unions, consumers, civil society and supervisors all want to see a banking system that is capable of serving society better.

Conclusion

I don't need to tell you which scenario we prefer. Unfortunately, however, it is not going to happen unless everyone plays their part. Let's act together to change finance and ensure that public interest prevails on this crucial piece of financial reform.

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2.4. Financing a green industrial transformation – looking beyond the banking sector

Reinhard Bütikofer

Europe's economy is stuck in a troubled state. Low-inflation is increasing the spectre of a Japanese-style deflationary spiral. Unemployment is at record highs and social precarity is growing unabated while the environmental crisis and risks of climate change are becoming ever more apparent. Too much focus has been put on austerity, too little on sustainability and investment for new jobs. The European Union has not been able to find a plan to master this triple economic, social and environmental crisis. A green industrial transformation encompassing a low-carbon modernisation offensive presents an answer to these challenges. It would drive an economic recovery based on sustainability, create new jobs, increase competitiveness and ensure Europe leads the next industrial revolution.

However, this transformation to a sustainable, efficient hi-tech economy will cost money. It will need investments in our energy system, in mobility, in the building sector, and in many other areas. Financing this industrial turnaround is key. Yet, the financing is not there. The EU has faced a steep drop in investment. In the eurozone, gross fixed capital formation has fallen by almost 20 per cent between 2007 and 2013.

The reasons are manifold. First, public sector spending has significantly reduced as governments are trying to get to grips with their deficits. Second, economic uncertainty is forcing a number of European companies to sit on their cash rather than invest. Bloomberg estimates that European companies have build up cash balances of roughly two trillion EUR. Third, credit markets have frozen and in some parts of Europe lending to the real economy has shrivelled up. According to the European Commission, 2013 saw the lowest bank lending yet to the European economy with no signs of this trend abating. This has particularly hurt small and medium-sized businesses, especially in Europe's southern periphery.

Regrettably, the macro-economic strategy of the EU Member States has been unable to address these issues. The austerity straitjacket is kill-

ing off public investment, there is a lack of economic vision, there is no plan to restore market attractiveness, and experts deem it unlikely that the European Central Bank's latest monetary policies – negative interest rates and targeted longer-term refinancing operations – will restore sufficient lending to the economy.

Yet, if we want to give Europe a new investment surge that allows it to finance a green industrial transformation, we need to get these three elements – public investment, attractiveness of market conditions, and restoration of credit markets – right.

First and foremost, this entails a shift away from the austerity dogma. Reforms need to go hand-in-hand with investments that drive competitiveness and sustainable growth combined. Public spending on energy efficiency, for example, would not only create jobs but also lower public expenditure on energy and be of benefit to the environment and those citizens that are threatened by energy poverty. Green infrastructure development banks could make a substantial contribution while cutting fossil fuel subsidies would not only help the public purse but it would also change the energy market dynamic allowing more investments into renewables.

Second, through governance that addresses the environmental crisis via regulations and incentives, favourable economic conditions and new markets can actually be created thereby encouraging companies and citizens to invest rather than sit on their cash. The renewable energy feed-in tariff in Germany is a prime example. This policy provided a fixed price for renewable electricity and created an entire new class of entrepreneurs while simultaneously boosting the uptake of renewable energies and with it the entire value chain of that sector. Citi Investment Research, for example, has found that more stringent fuel efficiency standards in fact boost sales for car manufacturers as demand for more fuel efficient cars increases. In this context, the environmental crisis can be transformed into a business opportunity. By setting economic framework conditions to "price in" the environment not only does the environment benefit, but new markets are created and a sustainable industrial renaissance is promoted. An effective emissions trading system is a primary tool to set that market framework. It is in this context that the EU must undertake a serious reform of the present system.

Third, credit markets need to be restored. An important contribution in this endeavour could come from outside the traditional banking sector. Contrary to the US, for example, European firms rely heavily on bank credit. Loans from banks account for roughly 80 per cent of European companies' corporate finance, while in the US this represents a meagre 20 per cent with most of the financing coming from private credit markets. As such, there are a range of measures that could help European industry to loosen its dependence on bank credit by unleashing different financing avenues.

One such avenue could be to provide financing to small and medium sized enterprises via local bond markets. In Germany, five stock exchanges have carried out over 50 bond issuances for midcaps, with the exchange in Stuttgart leading the way. Local bond markets are also being established now in France and Sweden. One proposal could be to learn from these experiences and allow successful regions and cities, such as Stuttgart, to team up with their Southern counterparts, for example Madrid or Lisboa, facilitating an establishment of similar exchanges in those cities.

Crowdfunding is another, albeit smaller, example holding great promise. In fact, crowdfunding has been holding such a potential that the United States promoted it in its JOBS Act allowing small companies to access this financing. It is also a great opportunity to advance financing for the *Energiewende*. The crowdfunding platform Mosaic, for example, has funded numerous solar power plants. In Germany, first steps are also being taken in that direction, with the platform Bettervest allowing individuals to contribute to fi-

ancing energy efficiency improvements while at the same time reaping an attractive rate of return for their investments, particularly in the current environment of record-low interest rates.

Other financing channels could also be investigated, such as the private placement system – well established in the US – which allows the pension fund and insurance industries to directly supply credit to businesses, while a careful revival of the securitisation market could stimulate new bank lending. Collateralised bonds for SMEs could be sold to national investment banks that would link the purchase to further SME lending targets for banks. The European Commission has calculated that an investment of EUR 10 billion together with limited funds from the Commission could, via a joint securitisation and risk pooling instrument, leverage up to EUR 100 billion in SME lending benefiting roughly one million SMEs. Such a policy, however, would undoubtedly need careful scrutiny before receiving the green light.

Last but not least, enabling an investment surge for a green industrial transformation is not only an issue for Greens or Environment Ministries. It is a transversal issue. As such, finance ministries and financial entities should become more involved. From the financial carbon bubble to the design of a sustainable financial system, which the UN Environment Programme is currently looking at, there are enough issues that deserve attention. In order to get Europe back on its feet with a green industrial transformation, we need a broad alliance of actors to help unleash the financing for a green economy.

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Part III: Promoting Green Investment



3.1. Greening the Mainstream

Interview with Karsten Löffler

In the discussion on green transformation of the economy or achieving European climate goals the question of how high the required investment level is for renewable energy or clean technology is often at the heart of the debate. The required level of investment is normally discussed as a challenge and rarely as an opportunity. In view of the enormous volume of available investment capital, is this discussion targeted or is it rather a question of how the largest possible amount of available capital can be invested more sustainably in future?

Löffler: A high level of investment will be necessary over the next few years to modernise the infrastructure. According to the International Energy Agency, in the energy sector, for example, investments to the tune of a total of USD 19.2 billion will be required until 2035 in order to achieve the 2° climate goal. If the regulatory course is set in time, the infrastructure can accordingly be modelled to be much more sustainable.

People tend to overlook the fact that even “business as usual” requires investment and incurs ongoing costs. A power station plant has an average service life of 30 to 40 years. Investments in renewable energy must be seen alongside savings, for example the non-incurred costs of fossil fuels, quite apart from avoiding damage to the environment and to health. Rising prices for fuels and CO₂ in particular make it expensive to stop the expansion of renewable energy and focus on conventional power plants. A new energy system would be less costly. That is why it is so important to send clear investment signals at an early stage. In the next three to four years, according to the International Energy Agency, global investment decisions will be made that would use up the entire available CO₂ budget. Much more costly measures would then have to be implemented in order to slow this rise in emissions. It is clearly a question of how to make investments possible that are future-proof and do not lead us down a dead end.

With the feed-in tariffs determined in the Renewable Energy Law, Germany focussed less on large investors and more on the producers of renewable electricity: what role do large institutional investors play in financing the energy transition, both until now and in the future? And what would have to change in the general conditions and in-

centives in order to place a greater focus on the importance of this energy transition?

Löffler: Institutional investors have a great interest in participating in financing renewable energies and other infrastructure projects. They need long-term, reliable conditions to do so. At the same time we can see increased demand for profitable pension products in view of demographic change.

Long-term investments in renewable energy are therefore well suited to long-term liabilities vis-à-vis our clients. This is all the more valid in the current climate of low interest rates. If we combine the challenges of climate protection and demographic change, a dual benefit can be created: first, the need for long-term investment opportunities in retirement provision is rising in view of the increasing percentage of older people; at the same time we have a high and also long-term need for capital to finance the transition to a green economy. If both could be combined, the climate and our citizens would benefit in equal proportion.

In climate policy there have been numerous initiatives in recent years to enable large investors to make investments in climate protection or green technology, e.g. through co-investments or guarantee instruments. From the point of view of investors, at what level would intervention have to start in order to operationalise goals such as climate protection for investment practices?

Löffler: In order to anchor climate protection in investment practices, in our opinion it is not sufficient to act at the level of individual projects. The investment domain must be developed further in order to generate larger volumes and to scale markets. Institutional investors such as Allianz are always careful; they prefer established investments. Their investment criteria are conventional and simple: first, the returns must reflect the risk. Second, the market must be as liquid as possible. Third, there must be a strong project pipeline that is not too fragmented and of sufficient quality.

Institutional investors prefer well-known investment categories. Investments in new categories and in particular in direct project investments presuppose the gathering of inside knowledge - that requires time and money. The motto should therefore be “greening the mainstream”. Institutional investors like us are active primarily in bonds. A practicable approach would be to fi-

nance “green assets” via bonds, e.g. to create climate bonds. A key factor here would be that the influence of the bond on the environment and climate would have to be transparent and measurable; the returns would also have to reflect the risk – and this should not necessarily be higher than for classic bonds.

What potential do you see for green or climate protection bonds?

Löffler: We are watching the rapid growth of the market for climate bonds with great interest. It combines sustainability with standardised financial instruments, some of which have very good credit standing and increasing liquidity; for example, in 2014 it is expected that the volume will quadruple compared to 2013, to over USD 40 thousand million. This raises the market’s attractiveness and can act as an example of how classic financial instruments can support investments in green bonds. The prerequisite remains, of course, that the projects financed through bonds are profitable. Another idea is to allow plants to be used as an asset pool for bonds or renewable energy investments, similar to German Pfandbriefe (bonds) that were introduced to the property market in Germany in the 1950s.

With regard to investment strategies, what role do large investors such as Allianz see for public business development banks such as KfW and the European Investment Bank, that are promoting green and climate protection investments in this and other ways?

Löffler: Public business development banks can play a supportive role, particularly in young market segments. They are doing pioneering work in the climate bond segment and are making a decisive contribution to market growth. This develops a broad interest on the part of investors, and not only specialised investors. Issuing large volume bonds with investment grade rating is a decisive factor. Project pooling and bond structuring also help in scaling the market without pushing debt capital investors out of the market.

Capital market indices are frequently used by financial institutions as an opportunity to raise the percentage of green investments or to give them greater weight in investment decisions on the ecological performance of enterprises. What potential do you see in this area and is it a question of adapting current indices or rather of developing alternative indices?

Löffler: Fund managers use benchmark indices as a matter of course. These are generally applied to market capitalisation of companies, i.e. the value at which companies are traded on the stock exchange. Oil and gas companies have a large share of market capitalisation, and hence of indices. As an institutional investor you are normally correspondingly involved in this emissions intensive sector.

The discussion on the role of these indices has only just begun. There are indices that include sustainability criteria; however, their market penetration tends to be weak. The ideal situation would be to structure the mainstream indices with more sustainability in mind. This would raise the leverage effect considerably.

(Interview by: Simon Wolf)

Karsten Löffler is Managing Director of Allianz Climate Solutions since 2008. From 2009 to 2011 he coordinated the WWF partnership on climate change within the Allianz Group, which led to several climate related projects and publications, as well as emission reduction targets for the Allianz Group.

3.2. Pathways for aligning private capital with climate goals: The role of investment processes, metrics and financial regulatory regimes

Stanislas Dupré and Jakob Thomä

A growing body of evidence suggests that investment processes and tools, accounting frameworks, and financial regulatory regimes contain an intrinsic “carbon bias” that create barriers to aligning the finance sector with energy transition roadmaps³¹. Macroprudential initiatives following the financial crisis, notably Basel III at global level and Solvency II at European level, seem to bias short-term investment at the expense of more long-term, climate-friendly investment³². This short-termism is aggravated by investment processes, notably in the application of short-term performance metrics and benchmark indices³³; processes which come at the expense of institutional investors seeking long-term exposure. In addition, financial sector ‘environmental’ metrics play almost no role in impacting capital allocation decisions within the finance sector³⁴.

The implications of this analysis are that achieving global climate goals will require not just a strong industrial policy driving the energy transition, but a response, both by investors and policymakers, to the barriers to decarbonisation intrinsic to the financial system. The following presents three brief examples of the most promising initiatives in this regard. The text concludes with a concrete exploration of how these initiatives can become actionable in the short-term.

Reforming indices. Benchmark equity and fixed-income indices increasingly operate as investment guidelines for investors, determining the capital allocation of both passive and active investors³⁵. Among these indices in turn, capitalisation-weighted indices are the most prominent³⁶. According to a survey by Fidelity, 87% of Asian investors and 75% of European investors use cap-weighted equity indices as the primary bench-

mark³⁷. The challenge this poses to financing the energy transition is that these equity indices, as a result of the rules underpinning their composition, are not line with optimal diversification strategies. They exhibit an intrinsic bias in favour of “high-carbon” and against “low-carbon”. Crucially, this bias is in clear violation of the modern portfolio theory and the capital asset pricing model with their respective focus on “holding the market”. Reform in this area will need to come from both institutional investors increasingly aligning their investment tools of choice with their self-stated investment strategies, regulators addressing the potential systemic risk associated with market distorting investment processes, and index providers developing more broadly-diversified, forward-looking alternatives.

Accounting climate performance. Currently, accounting of the climate impact of finance sector activities is largely limited to so-called “financed emissions methodologies”, which seek to measure the GHG-emissions financed by financial institutions, and green/brown ratios, comparing the relationship between climate-friendly and high-carbon investments. Unfortunately, the nature of these approaches renders them largely irrelevant to mainstream investors interested in measuring (and adjusting their portfolio allocation strategy on the basis of) their exposure to the energy transition. The implication is that their reporting and use largely remains an exercise in CSR. This is despite the fact that particularly for long-term investors, these types of metrics can be very relevant to measure long-term risks (and inform potential investment opportunities). For socially-responsible investors and public banks with a climate mandate, these metrics do not inform the alignment with 2°C investment roadmaps. Even public banks noted for their climate finance engagement such as the KfW are unable to report on whether their portfolio finances a 2°C, 3°C, or 6°C world. What is needed is a new generation of metrics satisfying just that demand. Metrics of this nature will also help the development of new investment tools and help regulators and policy makers fine-tune incentives.

31 2° Investing Initiative (2012) “Connecting the Dots between Financial Regulatory Regimes, Portfolio Allocation, and Climate Change”.

32 2° Investing Initiative (2013) “Shifting Private Capital to Climate-Friendly Investments: The Role of Financial Regulatory Regimes”.

33 2° Investing Initiative (2014) “The Carbon Bias: Implications of Benchmark Equity Indices for Climate Finance”.

34 2° Investing Initiative (2013) “From Financed Emissions To Long-Term Investing Metrics: State-of-the-art Review of GHG-Emissions Accounting for the Financial Sector”.

35 2° Investing Initiative (2014) “The Carbon Bias: Implications of Benchmark Equity Indices for Climate Finance”.

36 A capitalization-weighted (or “cap-weighted”) index, also called a market-value-weighted index is a stock market index whose components are weighted according to the total market value of their outstanding shares.

37 Fidelity (2013) “Better Beta and Beyond”.

Towards green policy incentives for the financial sector. A continuous drive to ensure that public banks operate in the service of energy transition policy goals is crucial. However, public policy incentives need not be exhausted by looking to public banks to foot the energy transition financing bill. A range of additional public sector incentives, many of them likely to be public-revenue neutral, appear as promising avenues in this regard. For example, households can be incentivized to invest in low-carbon financial products by modulating tax scales applied to savings products (life insurance contracts, accounts, funds, etc.) based on the contribution of the underlying asset portfolio to the financing of the energy transition. The French government is currently exploring this path.

COP 21 in Paris and the opportunity for a public-private commitment model. Mobilising private capital for financing the transition to a low-carbon economy is expected to be a crucial component of the climate change negotiations in Paris in 2015. In this regard, the avenues highlighted above can be subsumed in a public-private commitment model between governments and institutional investors as part of the negotiations. The model could consist of three core actions to be developed and presented at the UN Climate Summit in September 2014 and adopted by financial institutions and governments as part of the COP21 summit in 2015:

Action 1 – Monitor investment: The partners to the commitment model can put in place a monitoring system to assess the alignment of investment at global, country, or company level with climate-energy investment roadmaps. Governments would commit to assessing the alignment of financial assets as reported in national accounts with energy-climate investment roadmaps. Investors party to the commitment model in turn would commit to

reporting on the alignment of the stocks of assets they own and the investment flows they influence relative to energy-climate investment roadmaps. The basis of this monitoring would be the next generation of metrics currently being developed by an international/European consortium led by the 2° investing initiative.

Action 2 – Reallocate financial assets: In order to influence capital allocation, governments would commit to supporting the development and implementation of assessment frameworks including mandatory corporate reporting schemes, labelling schemes for investment products, and associated reporting and disclosure requirements. Investors in turn would commit to reallocating a proportion of their total assets to investment products aligned with climate-goals, progressively increase the proportion, and update the assessment framework used to reflect “best available methodologies”.

Action 3 – Create financial sector incentives: Governments commit to mobilizing key governmental entities (including treasuries, central banks, and market authorities) to review existing frameworks in a comprehensive way and embed climate goals in financial reform plans (including for example reform of the taxation incentives highlighted above). Investors in turn commit to engaging key departments (including asset liability management, risk management, asset management, research and public affairs) in the review of public policies.

An action plan of this nature that addresses in a comprehensive manner the key barriers to mobilising private capital to financing the transition to a low-carbon economy, mobilises the relevant stakeholders, and allows for actionable commitments, is likely to be the most promising way forward in aligning the finance sector with climate goals.

Stanislas Dupré launched the 2nd Investing Initiative and is its Director; previously he was Executive Director of Utopies (a CSR consultancy). He is also a member of the supervisory board of a green private equity fund (NEF-CEM).

Jakob Thomä is Programme Manager – International Research at the 2nd Investing Initiative. He is author of the working paper “Shifting Private Capital to Financing the Transition to a Low-Carbon Economy. The Role of Financial Regulatory Regimes”.

3.3. The Marshall Plan is not a centrally-planned economic monster

Interview with Mehrdad Payandeh

Mr Payandeh, in 2012 the DGB proposed a Marshall Plan as a response to the economic and financial crisis: is this proposal still appropriate in view of the stabilisation and recovery of the economy in Europe in the last two years and measures such as increasing the capital of the EIB?

Payandeh: Absolutely. The stabilisation achieved should not hide the fact that we are not running the economy sustainably. Our proposal is not a classic economic stimulus package. It is an investment campaign with the aim of laying the economic foundations for the competitiveness and prosperity of tomorrow. A programme for the modernisation of our 21st century economy and society that is ecological, social, knowhow-intensive, age-appropriate and mobile. Furthermore, this stabilisation of the crisis-ridden countries was to be expected. Sooner or later the bottom is reached; however, that does not mean that the crisis has passed: the economic, social and ecological crisis. Is that the troika to be celebrated? Relative calm has ensued because the pressure shortly before the European elections has abated; because savings and cuts are not so severe and because of the expansive monetary policy and the announcement of the EIB that it will buy up government bonds, if necessary in unlimited quantities, has given countries and states air to breathe. Countries have no future if no long-term investments are made. And this is where our proposal starts. Investments in the future in energy and age-appropriate restructuring, in infrastructure, education, etc. also give these countries a better outlook than the policy of the troika.

The Marshall Plan would have to take effect primarily outside Germany, in the Euro crisis countries: how has the proposal of the DGB been received there? Have trade unions in those countries made similar proposals, is the DGB looking for cross-border cooperation?

Payandeh: Yes, similar proposals have been made by Swedish and Italian trade unions, although more within a national context. Our programme is not the sum of national programmes but was consciously conceived at a European level. This is also the reason why our proposal has in the meantime

met with the support of all trade unions in Europe, in almost all its points, and was adopted unanimously as a proposal of the European Trade Union Confederation. In an article, the Guardian recognised this "Marshall Plan for Europe" as the only detailed and thoroughly calculated alternative to the policy of austerity, and the Italian broadcaster RAI and Arte have also broadcast in-depth reports on it. The programme combines the Green and Social Democratic visions of a future economy and society and supplies a solid basis for financing: if Europe re-creates itself ecologically and socially, up to 11 million new full-time jobs can be created and fiscal revenue would rise by around 104 thousand million euros; at the same time Europe can develop greener, low CO₂ cities and communities and save around 300 thousand million euros on fuel imports. This programme could also become a platform for a red-green programme for Europe. The actual potential of this proposal is only just being discovered across Europe. Even emerging markets such as Brazil and China have asked for information about it.

Investments in sustainable energy production, in reducing energy consumption, in sustainable industries and services, in modern transport infrastructure: is the Marshall Plan a type of Green New Deal?

Payandeh: There are areas in common with the "Green New Deal"; however, our programme goes beyond the Green proposal: it also includes aspects such as age-appropriate and disabled-friendly restructuring of our body politic, as well as a training and services campaign. One example: if we adapted our living space and public infrastructure to accommodate age-appropriate concerns so that people could remain within their own four walls with the aid of mobile assistance, we would enable our parents and grandparents to live out their old age with dignity. This would also reduce costs for residential care, by almost 60 thousand million euros in Germany alone. Furthermore, modified living space would be preserved for future generations, which would relieve the financial burden on these generations.

But the Marshall Plan contains elements that may ring alarm bells in the Green camp, such as the proposed incentives for consumption in order to stabilise the economy or the clear aim of quantitative growth: are economic recovery and jobs more important in the end than an ecological focus of the economy?

Payandeh: No, that is not a contradiction at all. As an incentive to consumption we have proposed offering an environmental bonus for replacing old domestic appliances with low energy ones, and hence reduce electricity consumption drastically. These types of measures encourage growth both in quantitative as well as qualitative terms. However, I absolutely ask that the interests of the public should not be forgotten in proposals such as the ecological transformation. Even the best vision is condemned to fail if you do not take people with you, if they cannot see any improvements for themselves.

The core of the Marshall Plan is a future fund which is intended to finance public investments, investment aid and low-interest loans. Can a figure be put on how high their ratio is? Is it more a question of direct public investments or rather of encouraging the investment activity of the private sector?

Payandeh: In our calculations we included three types of promotion: direct public investments, investment subsidies depending on the energy efficiency level, and low interest loans. 100 thousand million euros out of a total of 260 thousand million euros have been earmarked for low interest loans which will be awarded via the European Investment Bank or national business development banks such as KfW to companies and private households, as well as to public authorities. The private and public sectors could benefit from investment subsidies as well, for example, if buildings are renovated in energy terms or a company replaces its energy and raw material-intensive machines with more efficient equipment. You should not view the Marshall Plan as a centrally planned economic monster: the intention is not to implement it top-down at a European level, but to intervene via incentive systems such as cheap loans or discounts on green investments in the market. Companies and private households are just as important players in this market as public authorities. So it is not a question of either/or.

Are instruments such as co-investment and investment subsidies, which ultimately are a form of subsidising private investments, justified as simply a reaction to the crisis? Or can these instruments also make sense in the long term, for example in order to promote the development of desperately needed infrastructure or sectors and activities desirable in social terms, such as the expansion of renewable energies?

Payandeh: At the beginning I described that we are aiming at a green and social transformation of our economy and society, not a flash in the pan. That is why such a programme makes sense as long as there is a need for action and the ecological and social restructuring of our society is not yet complete. But we have designed our programme for ten years initially, so that we can calculate its effects and illustrate the benefits more clearly. I am convinced that when politics, companies and the general public see the advantages, then they will be prepared to support such a programme for longer than ten years.

One of the greatest challenges of each public investment programme is the utilisation of funds; this applies especially to dynamic and innovation-intensive areas such as renewable energy. The most recent experience with the Renewable Energy Law has shown that public financing instruments very quickly lose their justification if they allow deadweight effects. How do you intend to ensure that the funds from the Marshall Plan are directed to the right place and used efficiently?

Pasyandeh: This discussion is justified: during implementation we must ensure that measures do not lose their meaning; for example, that a large sewage works is not built in a small village simply because sewage farms are to be promoted by the state. Therefore, in our proposal we have proposed democratic control over measures by the European Parliament, the European Commission and the Council. However, despite all justified doubts, I would like to emphasise that errors can occur in all large projects and that the State's error rate is not automatically higher than in the private sector. Take a look at Thyssen-Krupp's mistaken investment in Brazil, for example, or the abortive and expensive merger of Mercedes and Chrysler. Often you only see the problem cases such as the Berlin-Brandenburg airport or the Elb-Philharmonie. Unfortunately you almost always forget successful investments. Allow me to make a rather polemic criticism of a basic attitude that is very often to be found in Germany, which you could characterise as a culture of grumbling and distrust: we always see the risks and seldom the opportunities. The best example is the Renewable Energy Law: this law conferred a pioneer role on Germany in environmental technology; we are world leaders in this field. In this context the deadweight effects you mentioned have scarcely any effect.

Does the decisive obstacle to the success of a European investment programme not consist rather in the fact that the structures and institutions are missing in many countries that would allow a future-oriented economy to be built up using investments?

Pasyandeh: That applies to only a few countries such as Greece - most countries do have the necessary structures and institutions. And where

these structures and institutions are missing, neighbouring countries can help with their experience. We have shown this successfully in Eastern Germany. After reunification the Federal Länder in the west helped a Federal Land assigned to them to build up its institutions, authorities and structures. This could be a template for Europe.

(Interview by: Simon Wolf)

Mehrdad Payandeh is Head of Department for Economic, Financial and Fiscal Policy at the German Trade Union Federation (DGB).

3.4. The Green economy in Spain and its financing

Ana Belén Sánchez

Spain has great potential to undertake a green transformation. Institutional, business and industrial capacity as much as skilled workers are available in renewable energy production, energy efficiency and eco-construction as key sectors to the green economy. Spain has been a leader in renewable energy industries and energy production in the past, with Spanish companies working around the world installing renewable energies in those countries with active support schemes. Spain is also strong in other areas, e.g. in organic agriculture producing.

However, the situation in Spain in relation to the green economy has worsened more recently, most the prominently during the last 2 years, due to the deregulation in important areas like industrial pollution and control or environmental impact assessment of new infrastructures; deep cuts in renewable energy support programmes add to this picture. The budget of the department of environment has reduced more than 65% in the same period. All this has resulted in a reduction of new investments in environmental protection undertaken by industrial companies in Spain of around 40% since 2007.

This article asks for ways to start off the green transformation in Spain, in particular its financing. It highlights that setting conducive framework conditions is most important, and suggests three main areas of action in this respect: sectoral policies, taxes, and public enterprises. In the second part, it looks at pension funds as a more direct way of encouraging investment into a green transformation.

Getting the framework right

Public policies are essential in defining the development and structure of economic sectors. In this regard, greening public policies is an undoubtedly a first step required to allow greater financial flows to be directed towards green activities. Agreements on the European level, especially if they are binding, have proven to be

essential in pushing environmentally friendly framework conditions at the national level in Spain. Renewable energy promotion, reduction of climate change emissions, industrial pollution control or energy efficiency measures in new buildings are some areas where progress would have been much slower or even inexistent without the influence of EU policy.

The construction sector is a good example of how the right incentives can help align economic and ecological objectives. The construction bubble played a key role in the current crisis of the Spanish economy by creating unemployment, increasing private debt (more than 70% of the family debt is linked to mortgages payment, 633,482 million € in 2013³⁸), and contributing to a GDP loss of 11.5%. Construction used to account for 22% of GDP in 2007 but is responsible for only 10.5% of GDP today³⁹.

However, the sector could also contribute greatly to greening the Spanish economy. Opportunities to transform the sector are mainly based on a large-scale programme to retrofit existing buildings that are often inefficient in terms of energy consumption. The rehabilitation of ten million houses would create around 150,000 jobs by 2050. Investment needs are between two and ten billion Euro between now and 2050. Lower public expenditure on unemployment benefits would compensate for a great share of these costs.

Spain does not have to start from scratch in relation to rehabilitation: the industrial capacity needed to undertake such a programme already exists. Workers would need some re-training programmes that could be integrated into active labour policies to ensure an optimal match between employment programmes and newly created jobs. Important first steps for such a programme to be carried out are the development a Retrofitting Road Map (including responsibilities and skills needed), the creation of a pioneering Rehabilitation Agency, and the creation of an Energy Rehabilitation Fund⁴⁰.

Green Taxes: The Spanish fiscal system does not only have the lowest level of green taxes in relation to GDP in Europe, but also a high level of tax deduction that encourages unsustainable action (in areas such as transport or coal-based energy

38 <http://www.elmundo.es/elmundo/2013/05/03/suvienda/1367573505.html>

39 According to Confederación Nacional de la Construcción. <http://www.europapress.es/economia/construccion-y-vivienda-00342/noticia-economia-macro-construccion-mermo-diez-puntos-peso-pib-crisis-suoner-105-20140316121237.html>

40 See more information about background and current situation in relation to the Energy Efficiency Fund here: <http://www.energias-renovables.com/articulo/el-fondo-nacional-de-eficiencia-energetica-del-20140611-dicho-20140611>

production). Taxes are also high on employment (income taxes and social security taxes paid by companies and workers), while the taxes on energy, natural resources consumption are very low in comparison. The EU Commission recommended reversing this trend, in order to promote a sustainable recovery from the current crisis. Recommendations included boosting green taxes in sectors such as waste management, water supply and management and renewable energy production. In 2009, a number of civil society groups proposed to the parliament a Green Fiscal Tax Law. The proposal included the introduction of green criteria in existing taxes; new environmental taxes for polluting activities such as nuclear power, waste incineration, land use change; and the elimination of fiscal benefits in polluting sectors (airplanes, cars). However, the Parliament did not adopt this proposal.

Greening public enterprises: There are more than 20,600 national, regional and local public bodies in Spain. These public enterprises, public foundations and companies with public participations (among other legal structures⁴¹) are active in all sectors from waste management, water supply, education, I&D to the housing sector. They could have a significant impact in greening the Spanish economy if they would introduce environmental criteria for their operation.

This impact would be greatest if environmental guidelines were introduced in those public bodies with a direct influence in the Spanish economy. One of these institutions is the state-owned bank Instituto de Crédito Oficial (ICO). Its main function is “to promote economic activities contributing to growth, the development of the country and improving the distribution of the national wealth. Particularly, those activities of a social, cultural, environmental or innovative significance are awarded special attention⁴².” The Institute used to support the installation of renewable energy capacity by both companies and private households through guarantees, but closed this line of work years ago.

Another public body highly influential in greening the Spanish economy due to its expertise and mandate is the Institute for Energy Saving and Diversification (IDAE) that acts as the expert

branch of the energy ministry on these issues. The Institute successfully implemented the different EU Directives related to promotion of clean energy and energy efficiency. IDAE had a major role in the expansion of renewable energy use in industries, public buildings and private households, through tailored financial support as much as technical advice to local, regional and national governments. However, over the last few years the Institute drastically reduced its activities in these areas. The examples of ICO and IDAE show that Spain already used to have the institutions in place that work in support of a green transformation in different areas of the economy, but needs to get back on track in this regard.

Enhancing green investment in Spain: The role of pensions funds

Of the many options for supporting green investment more directly, pension funds are one of the most promising in Spain. Pensions in Spain are mainly provided by the public system that works with intergenerational solidarity criteria (workers today pay current pensions) and high levels of redistribution. A social security reserve fund was established in 1997 in order to accumulate and invest surpluses, to be able to attend future needs of the social security system, including increasing pension payments due to an ageing population. This fund held 53,7 billion Euros by the end 2013, which is 5.3% of the Spanish GDP.

Decisions about where to invest these funds are taken by the Department of Social Security, the Ministry of Employment and the Ministry of Economy. Representatives of trade unions and employers are part of the Monitoring Committee that does not have voting rights in relation to investments decisions. The criteria for investing these funds are “security, profitability and diversification”, but not (yet) sustainability. So far, 97% of the Public Pension Fund is invested in Spanish Public Debt. If part of this money would be re-directed to sustainable ends, it would become a powerful trigger for the green transformation in Spain. Public pension funds in several other European countries (including France, Sweden, and the UK)⁴³ could serve as a role model here, as they are actively seeking sustainable investment options.

41 See more information here: http://www.transparencia.org.es/ENTES_PUBLICAS_EN_ESPA%C3%91A/INDICE_ENTES_PUBLICAS_EN_ESPA%C3%91A.htm noticia-economia-macro-construccion-mermo-diez-puntos-peso-pib-crisis-suponer-105-20140316121237.html

42 http://www.ico.es/en_GB/web/ico_en/mission-and-functions

43 <http://www.telegraph.co.uk/finance/personalfinance/pensions/9902745/The-best-pensions-in-the-world.html>

In addition to the public pension system, private pension schemes are available in Spain. The size of these pension funds has increased since 1988 with a slight decrease in 2008 and 2009 years (due to the economic crisis). Together, these funds managed a volume of capital worth around 8% of Spanish GDP in 2009.

The largest of these schemes are the so-called Individual Pensions Funds (IPFs) managed by banks or other financial institutions, with more than 8.6 million clients. IPFs have hardly incorporated sustainability criteria into their investment guidelines yet. The second and smaller system is the so-called Employment Pension Plans (EPFs), managed by companies for their workers. Though smaller regarding membership and total volume of investments, these funds are nevertheless very interesting from the perspective of financing the green transformation, as they have close links with the system of collective bargaining in Spain. Trade unions and workers are part of the control committees that decide on the guidelines for investing these funds. An independent institution takes the actual investment decisions on the basis of these guidelines.

As of today, EPFs are the most progressive in integrating social, environmental and governance criteria in their investment policies. 70% of all EPFs have shown their general willingness to incorporate sustainability criteria in the management of their portfolios. In order for this potential to be realised, one important next step would be to inform and train the members of the control committees in current sustainability criteria and their use in the management of investment funds.

If EPFs would develop that way, they could also have a strong and positive effect on the demand for Socially Responsible Investments (SRI) in Spain. Today, this market is still very small, though it has grown about 71% between 2009 and 2011⁴⁴. Sustainable investment choices are still widely seen to be less reliable than “traditional” ones in Spain. The small scale of the market is one important reason for this wariness. An increase in sustainable investment due to the demand from pension funds like the EPFs could thus help the entire SRI market to become more visible and reliable, and to experience stronger growth in consequence.

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44 La inversión socialmente responsable en España, ECODES and SPAINIF, 2012.

3.5. Financing the energy transition: the contribution of private investors

Claudia Kemfert and Dorothea Schäfer

The energy transition is currently one of the most pressing tasks facing the government. In order to implement the plans of the German government to expand renewable energies, enormous sums will have to be invested in the coming years and decades: an estimate by the Federal Ministry of the Environment, for example, came to around 200 thousand million euros of cumulative investments for the coming ten years. However, the state tends to be limited regarding financing due to the cost of stabilising the financial sector and through the Fiscal Compact or the brake on debt.

This is why the role of private investors is increasingly coming to the fore. We have discussed the role of the Renewable Energy Law in ensuring planning reliability for investment projects in more detail elsewhere⁴⁵. In this contribution we are concentrating on another key challenge to the implementation of investment projects for the energy transition: sufficient provision of private capital, whether as equity or external finance. We make proposals for a stronger involvement of banks and private equity funds.

Financing the energy transition: requiring banks to assume their responsibilities

In order to ensure investors' access to loans and to make bottlenecks in external financing less likely for projects related to the energy transition, it is essential to stabilise the banking sector. The core of stabilisation activity should be to strengthen the equity capital base of the banks⁴⁶. Only recently in a study on the lending behaviour of German banks over the last few decades it was found that high equity ratios go hand in hand with a high level of lending⁴⁷.

Financial institutions are continually submitting demands to politicians to determine the smallest possible risk weighting (and hence the smallest possible equity adequacy requirement) for loans related to the energy transition. This is a further indication that banks will primarily tend to use risk weighting within the scope of Basel III as a vehicle to persuade politicians to make extensive concessions when determining equity capitalisation. The basis of these demands could be removed by a general move away from risk weighting and the introduction of an unweighted minimum equity capital ratio of, for example, five per cent. A ratio of five per cent equity to an unweighted balance sheet total is being aimed at, for example, by the Swiss Federal Banking Commission for the large banks of Switzerland. In order to obtain better equity capitalisation of banks rapidly, dividend and bonus prohibitions for limited periods should be as non-taboo as the direct involvement of the government in banks.

To this end and in order to basically secure the financial system which is still operating in crisis mode, public funds must be kept ready; however these are particularly scarce at present. Financial latitude for co-financing the energy transition via the state beyond the current level is therefore restricted. Furthermore, the fiscal compact agreed with the German Parliament with a level of 0.5 per cent of GDP for new indebtedness sets narrow limits to sourcing additional funds in financial markets. The sudden emergence of gaps in the planned private contributions to financing the energy transition can therefore scarcely be filled by the government.

In this situation coupling the stabilisation of financial markets with financing for the energy transition could help. Since the financial crisis erupted, governments have been offering an implicit general guarantee for large banks, without a substantial quid pro quo being offered to date by the banks. An example for coupling macroeconomic needs

45 Cf. Kemfert, Claudia and Schäfer, Dorothea (2012): Finanzierung der Energiewende in Zeiten großer Finanzmarktinstabilität (Financing the energy transition in times of great instability in financial markets). DIW Wochenbericht No. 31.2012. Essentially the Renewable Energy Law creates comparatively high planning reliability for investors with regard to expected revenue, even if the discussion around the amendment to the Renewable Energy Law and modification of subsidy rates has led to uncertainty. Another important effect of the Renewable Energy Law was that a large part of investments to date had been made by private persons. A total of 40 per cent of installed capacity is ascribed to them. Project developers (14%), banks/funds (11%) and agriculture (11%) are far behind. A comparatively low percentage of 6.5% is borne by the four large energy companies.

46 Cf. Schäfer, Dorothea (2011): Banken: Leverage Ratio ist das bessere Risikomaß (Banks: Leverage Ratio is the Better Measure of Risk). DIW Wochenbericht No. 46/2011; Binder, Sascha, Schäfer, Dorothea (2011): Banken werden immer größer (Banks are getting ever bigger). DIW Wochenbericht No. 32/2011.

47 Cf. Buch, Claudia M., Prieto, Esteban (2012): Do Better Capitalized Banks Lend Less? Long-Run Panel Evidence from Germany. University of Tübingen Working Papers in Economics and Finance No. 37.

with protecting the functional capability of the financial system was provided by the conditions for aid of the Special Financial Market Stabilisation Fund (SoFFin) when it was initially set up in 2008. Capital aid to banks was coupled at the time with sufficient allocation of loans to medium sized companies. Following this example, the government could require the banking sector in return to participate in the government's efforts to stabilise the financial market, measured by financing for the energy transition. The energy transition could thus be completed without compromising on equity adequacy and the similarly expensive stabilisation of the banking sector.

Sharing risk more widely – bundling equity and structured external capital financing

In addition to the call for an appropriate involvement of banks, politicians should also take a closer look at potential investors. New types of infrastructure projects normally need a substantial percentage of equity financing. For investment projects such as off-shore wind farms or new power lines this lends itself to a greater involvement of private equity (PE), for example. It can be assumed that the PE sector has accumulated significant expert knowledge that could be used to finance infrastructure projects in the field of renewable energy. The financing model could be based on the method of structured buy-out financing. This method centres around a private equity firm founding a project company, which takes up all equity capital and external capital from financial institutions. The project company is the actual financier and operator of the infrastructure installation. The aim of this method is to deal with high financing volumes while limiting risks and sharing them more widely. Many energy transition projects are characterised by the fact that liability is not limited to the project only, but that it extends to the parent company. The proposed financing model can limit liability to the equity contributed⁴⁸.

Private equity companies normally have an investment timeline of five years to a maximum of

ten years. In order to be able to pay out to their own investors, they generally have to sell their shares to the project company and hence to the infrastructure installation before current long term loans come to maturity. If the shares are sold on by the co-investors before the maturity date, the loan holders become assignors. Their claims could be included in the structured financing concept of the new owner. However, they could also be paid back before term by the new owner as part of a restructuring of financing for the object of purchase. Banks usually protect themselves in such cases with special agreements in the loan agreement. These covenants could determine, for example, that the loan must be redeemed if there is a change of ownership⁴⁹.

If, from the point of view of the individual bank, too high a volume of infrastructure loans remains on its books, the loans could be securitised in part and offered to interested investors, such as institutional investors or hedge funds, for purchase in tranches with differing risk levels⁵⁰. Securitisation would bring with it further dispersal of the investment risks. This waterfall payment principle ensures that if difficulties with loan payments occur, first the loans classed as highly risky and therefore high interest tranches will be liable for the losses. However, the tranches considered less risky would not share in the losses in the case of smaller payment defaults. These are therefore especially attractive for safety-conscious investors with a long timeline, such as insurance companies.

A financing model for the energy transition

In order to achieve adequate dispersal of the risks of infrastructure investments, a consortium of several investors could be created initially (including energy companies and local authorities). The various investors would pool their funds in a common parent company. The parent company would then establish a project company for the purposes of investment, the shares of which would be held 100% by the parent company.

48 The readiness to provide financing of potential equity providers depends largely on whether liability is limited to the equity provided for the project and, if greater losses are incurred, no recourse is made to the other assets of the equity provider. Cf. grid connection for the offshore wind project in the North Sea by the grid operator Tennet, www.tennetso.de/site/news/2012/februar/offshore-strukturlosung.html

49 Schäfer, Dorothea., Fisher, Alexander (2008): Die Bedeutung von Buy-Outs/Ins für unternehmerische Effizienz, Effektivität und Corporate Governance (The significance of buy-outs/ins for entrepreneurial efficiency, effectiveness and corporate governance). Report commissioned by the Bundesverband Deutscher Kapitalbeteiligungsgesellschaften (BVK), Politikberatung kompakt No. 38, DIW Berlin.

50 Part of the loan must remain on the books of the banks according to the law passed in 2010 on implementation of the amended banking guideline and the amended capital adequacy guideline.

Financing for the actual investment would be provided via the capital contribution of the parent company (equity, equity contribution) and via syndicated external capital in the form of credit with different tiers and mezzanine financing, which the “project company” would take out. External capital is syndicated, i.e. it is provided by a consortium of financial institutions, which is assembled by a consortium bank. Normally the consortium bank selected by the investors also assumes the guarantee for the provision of the whole of external financing. Syndication of external capital extends the financial possibilities and also spreads the risks (see figure).

The project company is investor and owner of the infrastructure installation. Credits are collateralised by the assets of the project company as well as possibly by shareholder guarantees. External capital is financed via the revenue of the project company.

Structured financing models for the method described above have the advantage that the risks of new types of long term infrastructure investments are widely distributed. This can prevent the risk premiums required of private investors from becoming prohibitively high. Providers of external capital will also be protected by the equity cushion of the project company from being directly involved in every loss.

Nevertheless, state involvement will probably still be necessary in the initial phase of such project financing in order to help these financing models to make a general breakthrough. In the initial phase it would therefore lend itself to KfW

or the European Investment Bank acting as possible equity provider or as the consortium bank.

Inclusion of project bonds

As part of the proposed financing model, part of external financing could also be found using guaranteed project bonds. This type of bond has already been approved by the EU member states and the European Parliament⁵¹. They are launched by private obligors and guaranteed via the European Investment Bank (EIB). The debt claims of the EIB are then collateralised via the EU budget. The guarantee of the EIB protects private external capital investors from losses so that the risk premium to be paid by private investors can fall. In the pilot phase around 230 million euros were callable from the EU budget for project bonds. However, the modest sum of ten million was earmarked for energy projects. This figure should be raised significantly in the future⁵².

The leverage effect of EU funds is difficult to estimate. It depends crucially on the needs of investors for security. The EIB is guarantor for project bonds, but recoverability of the warranty bond is decisively determined by whether the reinsurance offered by the EIB via the EU budget is considered to be sufficient by investors. In order to explore financing opportunities and financing models comprehensively, a round table with all political decision-makers and potential financiers could help, starting with private equity and hedge funds, through private banks and insurance companies, to national banks with a development mandate.

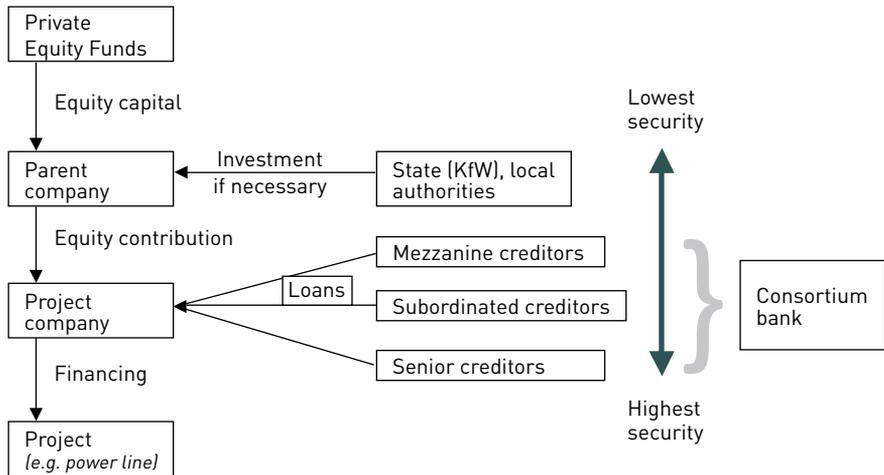
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51 See the press release of the European Parliament <http://www.europarl.europa.eu/news/en/news-room/content/20120705IPR48349/html/Project-bond-pilot-testing-Parliament-approves-EU-guarantees>

52 Until December 2014 the board of the EIB can still approve projects which will be brought to a financial conclusion by the end of 2016. The project bonds will finally be introduced as part of the facility “Connecting Europe (CE)”. CE is part of the financial framework of the EU 2014-2020, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0929:FIN:DE:PDF>

Financing model for the energy transition



Source: Chart from DIW Berlin, 2012

Financing plants for renewable energies

In order to ensure an adequate spread of the risks inherent in infrastructure investments, a consortium comprising several co-investors could first be created (including energy companies and local authorities). The various investors would pool their funds in a common parent company. The parent company would then establish a project company for the purposes of investment, the shares of which would be held 100% by the parent company. Financing for the actual investment would be provided via the capital contribution of the parent company (equity, equity contribution) and via syndicated external capital in the form of credit with different tiers and mezzanine financing¹, which the “project company” would take out. External capital is syndicated, i.e. it is provided by a consortium of banks which is composed by a consortium bank. Normally the consortium bank selected by the investors assumes the guarantee for the provision of the whole of

external financing. Syndication of external capital extends the financial possibilities² and also spreads the risks (see figure).

The project company is the investor and owner of the infrastructure installation. Credits are collateralised by the assets of the project company, as well as possibly by guarantees of the shareholders. External capital is financed via the revenue of the project company.

External financing could consist of bullet loans, as in a typical buy-out. The advantage of long-term bullet loans is that no interest payments are made until the end of the loan period. Only a small part of the senior debt is depreciated and repaid over the loan period.

Subordinated loans are in a worse collateral position than senior creditors’ claims in the case of insolvency, resulting in a higher risk premium. Subordinated loans could be taken up by hedge funds, for example.

1 Mezzanine financing uses external capital at conditions that would normally be found for equity financing. For example, silent investments are a form of mezzanine financing.

2 In the case of large loans an individual bank can easily fall foul of the provisions of the German Banking Act on large loans.

3.6. Financing the energy transition – what capital do we need?

Silvia Kreibiehl and Ulf Moslener

The German “Energiewende” – further clarification required!

While there is a lot of talk around the German energy transition, there are still many open issues. A transition towards a green energy sector can be achieved in a number of ways. In particular the level of centralization versus decentralization or aspects related to the European single market for electricity such as grid integration or storage capacity need further discussion, consensus finding and clarification.

This will help to define the actual financing needs and the market design required to manage the targeted generation mix structure. A more decentralized energy sector may provide more concrete investment opportunities for households while financial intermediaries and institutional investors will play a crucial role in a more centralized scenario.

On top of this the regulatory framework for household investments as well as financial sector regulation as a whole will play a crucial role: will the government (continue to) support the concept of “Bürgeranleihen” (Citizen bonds), for example for the financing of transmission lines? Will the government and regulator soften again the reporting and supervising rules for small fund managers to allow for a smooth investment vehicle for retail investments? Will restrictions to long-term lending affect the attractiveness of renewable energy investments from the institutional investors’ perspective? Such regulatory questions will drive investor demand and the relative importance of investor groups.

Characteristics of “Energiewende-Investments”

In order to provide a general characterization of the type of investments driving the “Energiewende” we look at three particularly relevant types of investment in a more general way: renewable energy infrastructure investments, grid investments, and energy efficiency investments.

Renewable energy infrastructure projects directly contribute to structural change as they aim to produce power based on renewables, typically low or no-carbon technologies. These projects have a limited capacity to adjust to changing conditions in general. They tend to be capital intense (and large in terms of capital required) and either need a stable environment or need to hedge against changes in the critical environment.

Financing is also required for the development phase of such projects and the upstream part of the renewable energy value chain (related to the production of the technologies used – such as PV module or wind turbine manufacturing). These financing needs are, however, less different to business-as-usual financing of industrial companies.

Grid investments indirectly contribute to the structural change towards a low carbon economy as they improve the quality and flexibility of the electricity grid to integrate a higher fraction of renewables into the energy mix. Corresponding investments are very long-term projects. Similar to investments in renewable-based generation infrastructure, the corresponding timescales are higher than the ones related to corporate financing. As a natural monopoly, the electricity grid is strongly regulated which is most relevant to the investor. The regulation naturally determines the trade-off between providing attractive investment conditions which might lead to an expensive but high-quality grid on the one hand and less generous returns that come with a cheaper and perhaps less stable grid on the other.

The characteristics of *energy efficiency (EE) investments* vary significantly depending on the underlying sector. Significant energy efficiency potential exists for industrial processes, residential buildings and transportation. In general, energy efficiency is not a major issue in the overall project/activity. EE makes the investment more expensive, but delivers cost savings over the lifetime of the EE equipment. Different ambition levels and a highly heterogeneous technology portfolio make it extremely difficult to discuss general characteristics. The major driver for the financial attractiveness of these projects is the price of energy.

Major differences to the business as usual scenario

As outlined before one general characteristic of green investments is the higher capital intensi-

ty and reduced ability to adjust business models and use of projects. Consequently the importance of a stable sector environment is increased. This requires a shift to long-termism with regard to capital allocation but also strategic decisions in the energy sector in a way that helps creating a reliable investment environment.

The increasing capital intensity will massively change the business models of large utilities which have historically been the owners of the majority of the generation assets. Assuming a shift towards green generation assets under the current business models, utilities would have to cope with a massively increasing amount of capital required and employed. Large utilities around the globe are redefining their business models and might reduce their investment in infrastructure-like projects, thereby accepting a reduction of market share in terms of total generation assets. This breakup of oligopoly structures in electricity generation may support increased competition in the energy sector, in particular if the energy transition gets a more decentralized character. This, however, needs to be carefully managed to avoid reductions in efficiency, also in terms of capital costs.

Sources of financing and investor preferences

It is essential to understand why investors are active in climate finance and what goals they want to achieve. As capital is a scarce resource, “green” projects are competing with other “non-green” projects all trying to attract the investors’ money. In this context it cannot be assumed that private actors value public goods in their investment decisions.

Different investors and intermediaries have very different investment strategies, level of risk appetite, return expectations and investment horizons. While their investment preferences vary, they are all based on three major dimensions: risk, return and tenor.

The risk-return profile is the major decision parameter. The higher the (perceived) risk, the higher the expected return. Taking and managing commercial risks is in the nature of private actors. Firms and investors are willing to take those types of risk, which they can manage, influence, hedge and insure, as long as they are compensated for taking and managing the risk.

Investment horizon is the third important dimension. Green investments are usually characterized by stable returns which, however, occur over a relatively long payback period. From an investor’s perspective, however, it is more attractive if the tenor of the investment opportunity matches the liability (time-)profile of the investor: an institution collecting short-term money from savers will find it more challenging to invest in very long-term assets.

For the sake of simplicity we briefly cover the sources of financing by describing for investor types: institutional investors, banks, strategic investors, and private households.

Institutional investors: by far the largest group of private sector climate financiers are institutional investors, such as insurance companies and pension funds, despite ongoing challenges in regulation of energy markets, policies and financial regulations. Institutional investors comprise a multitude of actors ranging from insurance companies to investment funds and including asset owners and asset managers. With an overall USD 71 trillion in assets under management (CPI), they can have long-time horizon investments diversified across asset classes with varying risk return profiles and investment tenors, sectors and geographies.

Asset allocation is the distribution of investor’s portfolio according to their risk appetite in different asset classes such as bonds, stocks and cash optimal for the investor. Returns of different assets are not fully correlated, and hence diversification of assets reduces the overall risk of the expected return on the portfolio. Asset allocation is important to determine the right combination of different assets for the investors to meet their financial goals. Taking a certain amount of risk can be important to reach the return targets on the investments. Also, the addition of some more risky – but uncorrelated – investments to a portfolio might even reduce the overall portfolio risk.

Within the overall portfolio institutional investors can also invest in illiquid and long-term assets. They need to (re)invest significant volumes every day and also need to closely monitor their portfolio. Therefore, they look for investment opportunities offering an appropriate ticket size (investment volume) and level of standardisation. Alternatively, they (co)invest in funds managed by specialised investment managers, e.g. private equity funds.

Within the broad range of climate finance institutional investors are particularly active through listed equity shares and corporate bonds. Direct investments in RE projects are less common (but increasing) due to transaction sizes as well as skills required and expenses related to proper due diligence and monitoring. Public-private partnership (PPP) funds can help to overcome these barriers.

It is estimated⁵³, however, that while institutional investors manage large amounts of assets, their potential as a growing source of climate finance is restricted and direct contributions are much lower than the total USD 71 trillion. Breaking down Institutional Investors contributions to climate finance, we see that commercial financial institutions represented approximately USD 21 billion; Venture Capital, Private Equity and Infrastructure funds represented approximately USD 1 billion in 2012 (CPI 2013). These two groups represent approximately 6% of global climate finance and played a vital role in addressing investor needs. Institutional investors manage large portfolio of assets and based on their asset allocation strategy they invest in various asset classes/instruments.

This category of climate financiers does face challenges. Core objectives of institutional investors align most often with the investment profile of infrastructure which in theory should help lower the costs of financing. However in reality whilst institutional investors potentially could supply a significant share of the total climate financing requirement globally, several factors impede their investment capacity. Factors such as financial regulation of institutional investors, energy market regulations, renewable and climate finance energy policies are all impediments in continuing to grow Institutional Investor contributions to climate finance sources. Professionals in climate finance therefore need to consider the options available to increase Institutional Investor participation such as removing policy barriers, improving and regulating investment practices, amending national pension policies and financial regulation particularly to promote safe and healthy risk appetite, potentially developing pooled investment vehicles for projects (project finance), and strengthening the role of potential corporate investors.

Commercial banks: Commercial banks are financial intermediaries. They provide financial serv-

ices and bring together supply of financing and demand for financing. Most importantly, banks collect money from depositors, essentially borrowing the money, and then simultaneously lend it out to other borrowers, forging a chain of debts. On the one hand, many investors are willing to invest on a short term basis only. On the other hand, many projects/companies require long-term financial commitments. What banks do, then, is borrow short-term, in the form of demand deposits or short term savings, but lend long-term. By doing this, banks transform debts with very short maturities (deposits) into credits with very long maturities (loans). If the banks would not fulfil this important function of maturity transformation, the real economy would face significantly higher barriers and costs to attract financing. The availability of long-term capital, including long-term debt is of outstanding importance for the realization of mostly capital intensive green projects.

A particularly relevant sub-group of the banks are the public finance institutions. In Germany the KfW plays a special role as it is within its mandate to contribute to driving the energy transformation forward. The role of a public bank in applying support instruments will be discussed later on.

Strategic investors: Strategic investors provide significantly more climate finance than households, and in fact they have roughly contributed USD 95 – 110 billion for low-carbon finance in 2011 (CPI 2012). Providing financing for low carbon projects is a core revenue generating mechanism for these investors. Included within the category of strategic and corporate investors are corporations and energy sector actors that act as dedicated vehicles with the capacity to design, commission, operate and maintain emissions reduction and climate financing projects. These corporate actors or strategic investors include those that engineer, procure and construct projects, namely, power and gas utilities, independent power producers, energy companies, contractors and independent developers of projects.

These actors represent the largest class⁵⁴ of climate finance related investors (or sources of finance). Renewable energy investments from these actors alone are estimated at USD 102 billion which represents 28% of the total pool. For established utilities a transformation towards

53 See Climate Policy Initiative (2013): The Global Landscape of Climate Finance 2013: <http://climatepolicyinitiative.org/wp-content/uploads/2013/10/The-Global-Landscape-of-Climate-Finance-2013.pdf>

54 See Climate Policy Initiative 2013.

a green economy, including a green electricity sector triggers the necessity for substantial changes to their business model. While utilities are used to owning and operating generation assets, a higher share of RE in the generation mix and the capital intensity of RE result in either significant increase in financing requirements (and – assuming constant profit – a decreasing return on capital) or the necessity to rethink the targeted ownership structures. In an environment of only slightly increasing electricity demand, established utilities might lose market shares and come under pressure.

Corporate Investors include various non-energy and partial energy actors, including manufacturers, various technology companies, general industrial companies, those in broader end-user mining services, and companies with substantial real estate and facility portfolios. Corporate investors or non-energy actors contributed to the global climate finance pot approximately USD 65 to USD 74 billion in 2011 for low carbon investment initiatives.

Households: Households either invest on their own, for example in decentralized renewable energy generation (see excursus below), or provide financing to climate projects by investing savings. They therefore often act through commercial or institutional investors.

The success of the German wind power company Prokon in raising capital from retail investors (success in collecting the investment, not their asset liability management!) demonstrates the potential of households to contribute to the supply of capital for green infrastructure projects. Prokon used crowdfunding to finance 54 wind parks in Germany, Poland and Finland. Rather than taking bank loans, Prokon has raised EUR 1.4 billion since 1995 by selling “profit-participation certificates” to the public, offering 6-8% annual returns to its 75,000 investors. While these certificates offered potentially high interest payments, they also exposed investors to potential losses, and unlike traditional equity, did not allow investors to partake in the management of the company.

Smart instruments required – bridging gaps between investor preferences and characteristics of underlying green assets

While it is the role of the financial sector to allocate capital to the most productive use for an economy, direct investments in green infrastructure projects are in many cases not possible for a significant share of the investors’ portfolio. The development and appropriate structuring of financing instruments and vehicles – i.e. with the help of a public finance institution – will be a crucial element to provide channels for the various sources of financing:

Risk allocation: Smart structuring can ensure that the risk appetite of investors can be matched and that risks are allocated to the parties which request the lowest possible risk premia.

Transformation of ticket sizes: While institutional investors might look for bundling entities to simplify management and monitoring procedures but also to achieve a certain portfolio effect, a significant investment of retail investors will require vehicles which offer investments which do not request too high minimum amounts.

Standardization: Complex and new transaction structures increase the due diligence requirements and consequently transaction costs of investors. Transaction structures, which can be applied to a broad range of projects, need to emerge and will be accepted by investors.

Tradability: Green infrastructure projects usually face long payback periods with investors (and financial markets regulation) still rating liquidity very highly. Allowing for a secondary market and sufficient liquidity will increase the attractiveness of investments for private sector investors. The above mentioned standardization is a prerequisite for a liquid secondary market. The example of Prokon underpins the necessity for a decent asset liability management and the avoidance of tenor mismatches on the balance sheet of green companies: following negative media coverage in 2013, which questioned the Prokon’s ability to make interest payments worth more than double its current operating profitability (i.e. EBITDA) over several months of that year, many of its investors have moved to pull out their funds. Despite its statements that it is operating profitably and its appeals to its investors not to withdraw

their funds, the company lacked sufficient liquid assets to cover the claims. Consequently, Prokon filed for insolvency, and will be restructured in late 2014.

Off-balance-sheet structures: In particular for energy efficiency investments it will be crucial to mainstream investment structures which allow for a carving out of the EE component to avoid a significant increase of capital employed for the involved stakeholders and to decouple the bankable EE potential from the creditworthiness of the owner of the underlying asset.

Managing the transition

The transition towards a low-carbon economy will require a significant reallocation of capital. Such reallocation needs to be compatible with risk-return expectations of investors, i.e. within the existing financial eco-system.

The transformation has started: global investment volumes were steadily increasing⁵⁵ from only USD 40 bn in 2004 to almost USD 280 bn in 2011. The years 2012 and 2013 have seen sharp declines (-11% and -14%, respectively) although costs have continued to fall. Until a few years ago, renewables-based electricity generation has been a niche. Now, issues around integrating a large proportion of electricity based on renewables may start to become an issue that needs to be resolved credibly.

Leadership of investors in climate finance is required to re-allocate capital from business-as-usual into new, green asset classes with an already appealing risk-return profile. Where costs have yet to come down a learning curve, or where risk perception remains high, leadership in climate finance is required to overcome initial transaction costs relating to new technologies and markets. Leaders are required to demonstrate the viability of green business models and green banking approaches and to mainstream these. The financial viability of green projects/business models is the key pre-requisite.

Real economy regulation and/or a pricing of climate externalities are required to create this necessary financial viability and allow finance sector leaders to become first movers. Finance sector

regulation could potentially further incentivize financial institutions to supply capital to green assets, but the original reasons for the finance sector regulation need to be kept in mind.

A number of NGOs regularly attack financial institutions for financing business-as-usual rather than supplying financing for green business models and projects. They insist that FIs fail to use their power to drive transformation. Private sector representatives remain cautious on the ability of large financial institutions to easily re-allocate capital and consequently drive transformation. The number and volume of green investment opportunities with appropriate risk-return-profile remains limited (even at "normal" financing costs). Representatives of large financial intermediaries and institutional investors regularly stress that it is currently nearly impossible to avoid some allocation of their capital to brown investments because green investment opportunities are lacking.

While leadership by first mover private sector financial institutions is an important early catalyst to sector transformation, their actions are generally limited to identifying and realizing investment opportunities in the existing "financial eco-system", e.g. within existing risk-return expectations.

Leadership by the public sector will be needed i) to address the global greenhouse gases externality (by putting a price on carbon; etc.) and ii) to mobilize public finance at-scale with a view to leveraging sufficient volumes of private climate finance in low carbon solutions.

The example of PensionDanmark's investment in the Jädraas Onshore windfarm is an illustrative example on how the public sector can help investors which are not yet familiar with green investments to overcome barriers relating to new markets and asset classes and resulting high transaction costs and high perceived risk. The 203MW project which was commissioned in 2013 represented the first investment direct investment of PensionDanmark in a green generation asset. PensionDenmark supplied 50% of the required long-term debt. To overcome barriers relating to their market entry, the Danish export credit agency EKF provided a state-backed guarantee to PensionDanmark. The resulting invest-

55 See FS-UNEP (2014): Global Trends in Renewable Energy Investment: <http://fs-unesp-centre.org/publications/gtr-2014>.

ment opportunity for the pension fund offered returns exceeding those of government bonds at a comparable risk profile (due to the state-backed guarantee). While the scalability of such transaction structures is limited and would not make

economic sense in the mid-term, it can be used to successfully crowd-in new investor groups and to create a track record of investments in new asset classes.

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3.7. The European Parliament blows hot and cold on the financing the Green New Deal

Philippe Lamberts

In April 2014, the IPCC published its wide-ranging Fifth Assessment Report on climate change. The outlook is even darker than what came out of its previous report: according to the latest estimates, the +2°C threshold that is the internationally agreed objective is likely to be exceeded by 2030!

A couple of weeks later, on the 12th of May, the International Energy Agency published a report showing the cost of the global energy transition. “The report finds that an additional USD 44 trillion in investment is needed to secure a clean-energy future by 2050, but this represents only a small portion of global GDP and is offset by over USD 115 trillion in fuel savings! The new estimate compares to the previously announced figure of USD 36 trillion. The increase reflects that the longer we wait, the more expensive it becomes to transform our energy system. Attracting capital investments will be key to financing the transition to a clean energy system, but higher capital costs (despite lower operating costs) of low-carbon technologies mean investors will need support to alleviate their exposure to a shift in risk profiles.”

Studies⁵⁶ tend to converge on the need to invest 1,5 to 2% of annual GDP to trigger and accompany the Green New Deal. The public sector would bear about 1/4th of the total effort and the private sector the largest chunk. In the OECD countries, the energy- and environment-related public spending in R&D – which lies at the heart of the transition – fell from 0,06% of GDP in 1990 to less than 0,05% in 2009. Needless to say that a quantitative leap is urgently required to match the awareness of the ongoing climate change and the funds to be devoted to tackle that challenge and to minimize the risk of a 6th extinction of species.

Some encouraging gestures

While the austerity policies constrain public investments, the only way to preserve the investments in projects whose benefits will not be felt within this electoral cycle (and for this reason,

their implementation will face reluctance by the governments concerned), is to amend the budgetary rules defined in the so-called six-pack. When this set of budgetary rules that significantly strengthened the 1997 Stability and Growth Pact was designed in 2011, it was not possible to achieve this outcome due to the opposition of the right-wing parties. Two years later, we could get a foot in the door when the complementary two pack was negotiated. The Regulation⁵⁷ foreseeing the upstream monitoring of the draft budgetary plans by the Commission states that “national medium-term fiscal plans and national reform programmes shall include indications on how the reforms and measures set out are expected to contribute to the achievement of the targets and national commitments established within the framework of the Union’s strategy for growth and jobs.” Note that this Strategy pursues several quantified goals including in terms of energy efficiency, greenhouse gas emissions reduction and promotion of renewables. Furthermore, “the draft budgetary plan shall contain the following information for the forthcoming year: indications on how reforms and measures in the draft budgetary plan, including in particular public investment are instrumental to the achievement of the targets set by the Union’s strategy for growth and jobs.” Therefore, it has to be understood that if the respect of the budgetary commitments is the primary objective, governments have nevertheless to take into account the energy-climate issues.

In a non-legislative resolution on innovative financing at global and European level⁵⁸, the EP called “on the Commission:

- to research the feasibility of a European carbon-added tax along the lines of VAT, imposed on every product within the internal market, which would be a less distortive and fairer tool; (...)
- to raise the issue of a global carbon tax in order to rule out competitive disadvantages for the internal market and to strengthen the fight to establish carbon-free, sustainable and renewable energy production”.

Bearing in mind that under the ETS Directive at least 50% of revenues from carbon dioxide emissions auctioning under the EU ETS should be earmarked for measures to combat climate change,

56 <http://re-define.org/sites/default/files/GEF-Funding%20the%20GND%20web.pdf>

57 <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013R0473&from=En>

58 <http://www.europarl.europa.eu/sides/getDoc.do?type=REPORT&reference=A7-2011-0036&language=EN>

including in the developing countries, the EP also called “on the Member States to consider allocating revenues from climate-change taxation to finance R&D and measures aimed at reducing carbon emissions and combating global warming, stimulating energy efficiency, tackling energy poverty and improving energy infrastructure in the EU and in developing countries.”

The EP also “welcome[d] the creation of a dedicated financial facility, which could also attract private investors (in the framework of public-private partnerships (PPPs)), which would use uncommitted funds from the European Energy Programme for Recovery (EPR) Regulation to support energy efficiency and renewable initiatives”. In that perspective, it “ask[ed] the Commission to assess carefully the effectiveness of this instrument and to analyse the potential for applying a similar approach, including initiatives on energy, energy efficiency and raw materials, to future unspent funds in the EU budget.”

The EP eventually “remind[ed] Member States of the possibility of applying reduced rates of VAT to services offering home improvement and enhanced energy efficiency”.

The new Regulation on the structural funds⁵⁹ put also the emphasis on the support of the ecological transition of the EU regions. Its Article 8 foresees that “the Member States and the Commission shall ensure that environmental protection requirements, resource efficiency, climate change mitigation and adaptation, biodiversity, disaster resilience, and risk prevention and management are promoted in the preparation and implementation of Partnership Agreements and programmes. Member States shall provide information on the support for climate change objectives using a[n agreed] methodology”. At the same time, some important commitments have been made, for example, to devote 20 per cent of spending under the multiannual financial framework to climate activities.

A Regulation on European Long-term Investment Funds (ELTIF) was adopted in 2014⁶⁰. Following an amendment voted by the EP, “each ELTIF should take into account the social impact

of eligible investments, taking into account its environmental, social and governance characteristics. In particular, the ELTIF manager should consider the inherent contribution of the selected asset to the objectives of the European model of growth, namely enhancing social infrastructures, sustainable mobility, renewable energy production and distribution, energy efficiency processes, as well as firms operating in sectors fostering environmental and social solutions, or having a high potential of innovation.” It is obviously too early to assess the effectiveness of this provision. This will be done in 2017-2018.

An uncertain battle...

However, the EP showed worrying signs that their support towards the Green New Deal is bounded by a narrow-minded conception of competitiveness. Take the following two cases.

The first concerns the proposal continue to State Aid for uncompetitive coal mines (2010). ALDE, EPP and S&D⁶¹ joined forces to secure the postponement of the phasing out of such aid maintaining artificially this environmentally harmful sector and, hereby, weakening the urgency of the ecological transition of our energy system and of the whole economy.

The second relates to the industrial, energy and other aspects of shale gas and oil and puts to the fore the ambiguity about clean and cheap energy. All political groups except the Greens and GUE⁶² believe that “shale gas has in the short to medium term a role to play in the EU, contributing to achieving the EU’s goal of reducing greenhouse gas emissions by 80-95% by 2050 compared to 1990 levels in the context of reductions by developed countries as a group, while at the same time ensuring security of energy supply and competitiveness,” According to them, “the EU’s energy and climate policy needs to recognise and tackle the potential investment barriers to shale gas development in the EU”. They finally “urge the Member States interested in developing shale gas to introduce the necessary skills required into their mainstream education and training systems, in order to prepare the necessary skilled labour force”!

59 <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013R1303&from=FR>

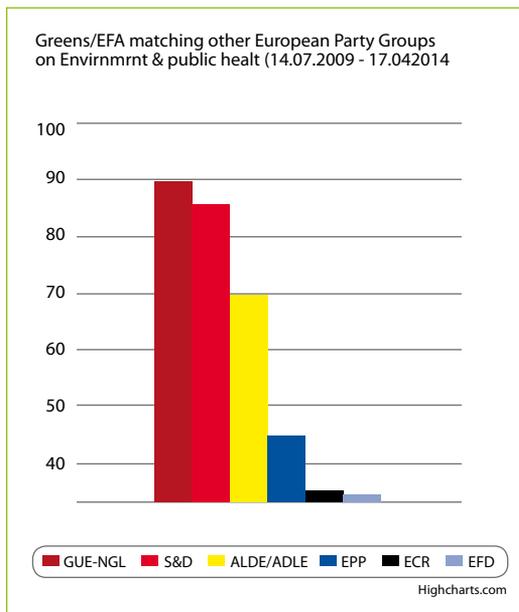
60 <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P7-TA-2014-0448&language=EN>

61 <http://term7.votewatch.eu/en/state-aid-to-facilitate-the-closure-of-uncompetitive-coal-mines-draft-legislative-resolution-vote-le.html>

62 <http://term7.votewatch.eu/en/industrial-energy-and-other-aspects-of-shale-gas-and-oil-motion-for-a-resolution-vote-resolution-as-.html>

...to be continued

Even though the EU took some actions to start the transformation of our economies, it was often not quick and ambitious enough with respect to what is necessary to ensure an absolute decoupling and to remain within the biophysical boundaries of our planet. Some proposals were issued as communications rather than as legislative texts such as the one deemed to facilitate better information on the environmental performance of products and organisations or the recent green SMEs plan. These non-binding texts provide Member States and stakeholders with no effective incentive to rethink their behaviour, their production process, and so on.



Source: VoteWatch

Further, it is at the very least questionable that the green economy package so far has halted to a grind until the very end of the Barroso II Commission. That is five years after a first call by the Ministers of Environment⁶³. This package comprising five texts (green SMEs, green jobs and skills, circular economy, revision of the waste legislation, sustainable building sector) was only published in June 2014! It remains to be seen how committed towards the implementation of the package the incoming Commission and the Member States.

With the growing importance of eurosceptics in the European Parliament, one can say that climatoscepticism is on the rise as well. Should the 2009 energy-climate package be adopted under this new EP, it is quite unlikely that it would succeed. Indeed, when it comes to votes related to the environment and public health, a close look at the matching of the votes of the Greens (that can be considered as the most ambitious group as regards environmental and climate files) and the other groups during the previous term reveals the following: the Greens were pretty much in line with GUE, S&D and to a lesser extent with ALDE. However, the Greens tend to strongly disagree with the eurosceptics (EFD and ECR) groups whose influence (expressed in numerical terms) has swollen after the 25 May 2014.

If growth – which is the Holy Grail for all group except the Greens – remains tenuous, the alliance with climate defenders in the EP will eventually wane because as we saw above with the votes on state aid in the coal sector and on the supply of energy for the industrial renaissance, environmental concerns will account for little in front of the economic stake.

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63 <http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%207065%202009%20INIT>



Europe has the opportunity to make ecological re-orientation the springboard for new value creation. This requires steering capital flows searching for investment opportunities into areas suitable for investment. Solutions that satisfy these criteria are sustainable in two ways: from an ecological point of view and from the point of view of a stable financial and economic system.

The collection of articles that make up this publication aims to answer two key questions: in which fields is investment needed in order to drive forward economic remodelling along ecological lines and generate sustainable growth? And how should the financial system be organised in order to release enough capital for ecological innovations and investments?

The publication is based on the conclusions of the expert symposium “Financing the Green transformation: Instruments and coalitions for sustainable and social investment in Europe” held in Berlin in May 2014 and organised by the Heinrich Böll Foundation, the Green European Foundation and the German Trade Union Federation (DGB).



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