

Financial Institutions: preparing the market for adapting to climate change – Climabiz ^[1]

Climate change will have an adverse impact on many economic sectors (such as energy, food, construction, tourism, insurance). In the banking sector, it is acknowledged that risks faced by clients also create risks for banks. Risk management activities should therefore aim at the management of risk for the benefit of the clients, the financial institutions and the business community alike. Climabiz was an innovative LIFE project aimed to quantify risks and opportunities for Greek enterprises deriving from climate change. Piraeus Bank, the coordinating beneficiary, implemented the project in close cooperation with two associated beneficiaries, WWF Greece and Facets, with the goal to trigger the adaptation of the market to the risks and financial impacts of climate change. At the same time, the project was a case study of a financial institution's attempt to prepare the market to combat (adapt and mitigate) climate change. The project's innovation regarding the identification of adaptive responses towards climate change rested in the creation of the Climate Risk Management Model, which calculates, in monetized terms, the climate risk for Greek businesses and provides solutions to reducing this risk.

Case Study Description

Challenges:

Since climate change affects the economy, it is obvious that the business world will not remain untouched. Climate change implies a series of risks for businesses, which might impact the smooth functioning of their services and activities. These risks are:

- Physical risks: impacts on infrastructure and buildings due to floods, fire, storms, etc.
- Regulatory risks: pertains to all possible impacts stemming from the introduction of climate change policies, like new legal and regulatory frameworks, taxation and newly imposed operational procedures.
- Market/reputational risks: pertains to potential consequences from changes in the market condition or from any disruption of the relation between producers and consumers.

However, there are some opportunities from climate change such as business opportunities due to new products or change in demand for low carbon dioxide products. The degree of challenges and opportunities is primarily related to sectorial parameters as well as to geographical/spatial location. For example, agriculture and tourism are more subject to physical risks than industry, which is facing significant risks from a change in the regulatory framework. Climate change is not only a challenge for large companies but also for SMEs, which comprise the backbone of the economy in many countries. While theoretically all enterprises are subject to climate risks, a quantitative analysis inevitably needs to be restricted to considerable risks only given the very large number of individual loan recipients at a single bank's level. Thus, the Climate Risk Management Model was focused on 'priority sectors/ sub-sectors', whose economic performance is to be significantly affected by climate change or where their aggregated risk turns to be significant because of their share to the total bank's lending portfolio. Within the development of the Climate Risk Management Model, a major challenge faced during the risk analysis was the diversification of the bank's clientele. Even within the same economic sub-sector, the number of enterprises may be large and their characteristics very diverse. To reduce this problem to a manageable size, the development of a 'typical' unit for appropriately identified groups of units in each sector/ sub-sector was performed. This approach has been utilised to date for the assessment of extreme weather and natural disaster related risk for industries (Geldermann et al. 2008) and the promotion of Best Available Techniques (BAT) in industry (Geldermann and Rentz 2004; Georgopoulou et al. 2007). (For further information please see:

Georgopoulou et al., 2015. A methodological framework and tool for assessing the climate change related risks in the banking sector. *Journal of Environmental Planning and Management*, vol. 58, issue 5, pp. 874-897).

Objectives:

The objectives of the project were to:

- Identify business impacts and opportunities that arise from climate change in Greece and South-eastern Europe in general;
- Develop special tools (computational models) to estimate the costs of climate change impacts for businesses and the costs of their adaptation practices;
- Inform, guide and support companies towards a smoother adaptation to climate change;
- Raise awareness and educate shareholders, suppliers, employees and the broader public with regard to tackling climate change and adapting to the new conditions.

Solutions:

One of the solutions is the development of the Climate Risk Management Model (CRMM) which provides integrated solutions, suggesting interventions that enhance businesses' adaptability to new climatic conditions and reduce their carbon footprint. More specifically, the Model includes a database of potential measures, used in various economic sectors worldwide, in order for a business to reduce its GHG emissions. Additionally, the Model provides some basic cost estimations for each potential intervention as well as the incurred mitigation potential in terms of GHG emissions.

Piraeus Bank, using the CRMM, was able to estimate the climate risk of its portfolio in monetary terms. It covers any risk resulting from climate change and affecting businesses: physical risks (increase of temperature, extreme weather phenomena, crop failure etc.) and regulatory risks (emission costs, fines, increase in the price of consumed energy etc.). However, it still constitutes a first effort to quantitatively estimate climate risk in Greece. With the CRMM, Piraeus Bank examined a specific sample of businesses in branches of the economy that may be adversely affected by climate change. This estimate allows an assessment of climate risk in relation to the other financial risks and enables climate risk to be integrated in a general risk management strategy for the financial sector.

Within the framework of the Climabiz project, three e-learning programmes were completed. The first one was assigned to the Bank's Human Resources Division and was completed by 829 employees in Greece, 113 in Cyprus, 178 in Romania and 28 in Bulgaria. The second and a third part was completed and assigned to the Bank's employees. In total, over 1,300 unique employees completed the e-learning programmes. Moreover, 19 workshops were held for green banking advisors, small business officers and credit analysts in Greece, as well as 3 workshops for the top management of subsidiaries in Bulgaria, Romania, and Cyprus with around 450 participants. Additionally, a permanent section titled "Green News", which thousands of employees has access to, was uploaded on the intranet, with a weekly update on global news regarding climate change, the economy and the environment and also green business. The Green News also features on the intranet of the subsidiary Piraeus Bank Cyprus Ltd.

Furthermore, in total 68 small business officers, located at 68 different branches all around Greece, were trained on how to use the CRMM and how to communicate the results to clients. The small business officers approached 680 clients belonging to almost all economic sectors included in the Model. Each case study was saved in the Model and sent to the environment Unit and the green banking division, which analysed the results as regards the potential investments on energy saving, the potential cost saving and the potential reduction of greenhouse gases with the hypothesis that the majority of those investments would take place.

It is important to notice that Piraeus Bank, the Climabiz project and all associated partners successfully managed for the first time in Greece to communicate in monetary terms the impacts of climate change on economic sectors in general and specific impacts to individual business. With the implementation of this task, the main target of the project being "assisting the Greek market to adapt to climate change", was achieved. A sample of

healthy businesses of the Greek market were informed on how they were going to be affected by climate change and what were the most economically beneficial technical solutions to timely and efficiently adapt to climate change. The CRMM is in the process of being fully incorporated into the standard procedures of the Bank and become part and parcel of its credit policies. In 2013, planning was continued towards the incorporation of climate risk into the credit - rating system of Bank customers. In 2014, updating and upgrading of the CRMM was designed so that it will provide more in- depth data assessment in the agriculture and tourism sectors; this will conclude in early 2015.

In addition, the Bank is committed to measuring and continuously monitoring its environmental impacts with a view towards climate change mitigation. Environmental impacts are also defined as the Bank's "footprint" on the environment, which is affected through the consumption of natural resources, the emission of greenhouse gasses, waste disposal etc. Indicatively, data concerning electricity, heating fuel, water and other natural resource consumption are collected annually and, by means of the Environmental Footprint Calculator Database, are applied to calculate specific indices that reflect the total environmental performance. In 2012, the Group's environmental footprint was reduced with almost all environmental performance indices showing improvement. Since 2008, there has been an 18% per capita reduction in carbon dioxide emissions.

Importance and relevance of the adaptation:

Case developed and implemented and partially funded as a CCA measure.

Additional Details

Stakeholder engagement:

A one-day workshop was organized, personal interviews took place and an online questionnaire was offered to around 50 stakeholders representing the industry/private sector, small-medium enterprises, NGO's, the public sector and the academia, to discuss how the Greek market perceives the impacts of climate change.

Success and limiting factors:

The principal goal of the Climabiz project was to trigger the adaptation of the market to the risks and financial impacts of climate change. This goal was achieved by developing an innovative approach to adaptation of enterprises to the financial impacts of climate change. Piraeus Bank, Facets and WWF Greece quantified risks and opportunities deriving from climate change, trained the Bank's personnel to comprehend those issues, investigated how different businesses could adapt to such changes, disseminated this information and provided assistance to the business community by using the Bank's extensive network of branches. An important outcome of the project was that the main target of the project, "assisting the Greek market to adapt to climate change" was achieved by assessing the climate risk and valorising the climate adaptation solutions for 680 enterprises (clients of the Bank) and disseminating this information to them.

Budget, funding and additional benefits:

Total cost at the end of the project was € 1.683.141,41. Direct / quantitative benefits can be summarised as follow:

- Climate risk estimation for the Greek financial sector: for the first time ever climate risk was estimated, in monetary terms, for a financial institution in Greece. This estimation allows an assessment of climate risks in relation to the other financial risks, to enable climate risk to be integrated in a general risk management strategy for the financial sector. It also provides a benchmarking value for other banks both at national and international level, allowing setting targets during decision and policy making at European level.
- Adaptation of Greek business to climate change: a total of 677 clients from several economic sectors responded to Piraeus Bank campaign on climate adaptation solutions. A pilot exercise on the adoption of the majority of the climate mitigation measures by hotels taking part in the pilot indicated that a risk reduction of 22% per year and a carbon reduction of 70% per year are possible in a cost-benefit manner.
- Increase in low carbon investments. The Climabiz project enhanced Piraeus Bank's effort in low carbon investments. During 2012 Piraeus Bank increased its green credit limits and balances by 26% from the year prior to €1,3 billion and €861 million, respectively.

Legal aspects:

There were no legal issues faced in this project.

Implementation time:

Start date of the project: 11 January 2010 - end date of the project: 31 December 2012.

Reference Information

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<http://www.greenbanking.gr/en> [3]

<http://www.climabiz.gr/en> [4]

Sources:

"LIFE+ Environment Policy and Governance" project Climabiz

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