Module: Introduction

Page: Introduction

0.1
Introduction
Please give a general description and introduction to your organization

Garanti Bank, with an established history of 64 years, is Turkey's second largest private bank with total consolidated assets reaching USD 90 billion. Garanti provides a wide range of financial services to its 10 million customers through an extensive distribution network of 853 domestic branches; 6 foreign branches in Cyprus, Luxembourg and Malta; 4 international representative offices in Moscow, London, Düsseldorf and Shanghai; over 3,000 ATMs; an award-winning Call Center; and state-of-the-art internet and mobile banking platforms built on cutting-edge technological infrastructure.
Garanti operates in every segment of the banking sector including corporate, commercial, SME, retail, private and investment banking. Along with its nine expert subsidiaries providing services in payment systems, pension, leasing, factoring, securities, and portfolio management, Garanti is an integrated financial services group. Moscow-based GarantiBank Moscow (GBM), Amsterdam-based GarantiBank International (GBI), and Romania-based Garanti Bank SA with its 65 branches are also included among these subsidiaries.
Refraining from limiting its contribution to the sector and the national economy via banking services alone, Garanti is dedicated to creating added value for society. Within this context, Garanti's long-term support in the areas of culture, arts, environment, education and sports reflects its commitment to this mission, as well as its keen sensitivity to sustainability.
This is Garanti's second submission to the Carbon Disclosure Project. 2010 has been an important period of planning and strategy for Garanti related to the challenges and opportunities presented by global climate change. During the period, and in-line with core business efforts, Garanti has created an Environment Committee composed of key business leaders to manage climate change and other environmental concerns, launched a process to create a comprehensive environmental management system and set a company-wide greenhouse gas reduction goal. Garanti views these important steps as only the beginning for what will be an on-going commitment to reducing direct emissions and influencing emissions reductions in the broader community in which the company operates.

0.2
Reporting Year
Please state the start and end date of the year for which you are reporting data.
The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.
We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.
Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed
Fri 01 Jan 2010 - Fri 31 Dec 2010

0.3
Country list configuration

Please select the countries for which you will be supplying data. This selection will be carried forward to assist you in completing your response

Select country
Turkey

0.4
Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

USD($)

0.5
Please select if you wish to complete a shorter information request

0.6
Modules
As part of the Investor CDP information request, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sectors and companies in the oil and gas industry should complete supplementary questions in addition to the main questionnaire.
If you are in these sectors (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will be marked as default options to your information request. If you want to query your classification, please email respond@cdproject.net.

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see https://www.cdproject.net/en-US/Programmes/Pages/More-questionnaires.aspx.

Module: Management [Investor]

Page: 1. Governance

1.1
Where is the highest level of direct responsibility for climate change within your company?

Individual/Sub-set of the Board or other committee appointed by the Board

1.1a
Please identify the position of the individual or name of the committee with this responsibility

Garanti's climate change efforts are coordinated by the Environment Committee which is chaired at the Board level and includes three senior executives (from Support Services, Loans and Project and Acquisition Finance) and five department heads (from Commercial and Corporate Loans, Project and Acquisition Finance, Investor Relations, Financial Institutions, and Internal Control and Compliance Department). The Environment Committee is scheduled to meet a minimum of four times a year in order to monitor the progress on and to provide input to all sustainability efforts, including climate change.

The Committee is deliberately structured to integrate climate change and other environmental concerns and opportunities into all operations, products and services. In addition, this structure ensures that all efforts are consistent with internal policies and related regulations.

The Committee oversees activities with regard to assessing and mitigating climate-related and other risks derived from both direct and indirect impacts of the Bank with the help of its Sustainability Team and the Environmental Impact Assessment Team.

The Sustainability Team is led by the Executive Vice President of Support Services and is composed of participants from Construction, Corporate Communications and Brand Management, Purchasing, Training, Human Resources, Internal Control and Compliance, and Investor Relations departments. The Sustainability Team conducts weekly meetings to monitor performance in regards to previously determined goals and collects input from all related departments of the Bank to be utilized in sustainability efforts.

The Environmental Impact Assessment (EIA) Team which is working on mitigating environmental risks occurring through financed projects and other credit granting activities. The EIA team is led by the Executive Vice President of Loans and composed of participants from Corporate and Commercial Loans, Project and Acquisition Finance, Financial Institutions, Corporate Banking Coordination, Commercial Marketing and Internal Control departments.

1.2
Do you provide incentives for the management of climate change issues, including the attainment of targets?

No

Further Information

As part of Garanti's emerging program to address climate change and other sustainability topics, the company expects to launch incentives to support pursuit of any climate change targets in the near future.

Page: 2. Strategy

2.1
Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

2.1a
Please provide further details (see guidance)

Assessment of climate change-related risks and opportunities is now led by the newly-created Environment Committee (and its supporting teams) but ultimately relies on a diverse array of existing and emerging efforts as well as each individual unit. In this structure, the Environment Committee keeps all relevant departments and efforts informed of emerging climate change related risks and opportunities. It does this through three primary methods: (1) direct communication with company leadership (2) direct communication with specific departments or effort leaders and (3) by virtue of its cross-functional membership. In addition, the Environment Committee monitors efforts to meet the new company-wide emissions reduction target. In service of this larger goal, individual business units "own" specific supporting projects and sub-goals.
Ownership for estimating the financial implications of any climate change-related risk or opportunity will vary depending upon the nature of the risk or opportunity and the extent to which it has already been accepted as a priority by relevant departments. For those risks and opportunities newly emerging for the organization, the Environment Committee will play the lead role in initial estimation of financial implications, which will serve as a key tactic for enrolling relevant divisions. For those risks and opportunities already determined to be a priority for the organization, and for which program or effort development may have already begun, one or more relevant departments, supported by the Environment Committee, will take ownership for estimating financial implications. Such detail will be essential for project planning, especially for making any investment decisions.
Risk assessment at Garanti covers capital markets, trading, financial risks (such as interest rate risk and liquidity risk), credit portfolios, operations, reputation, business continuity (which includes natural disasters) and regulations. The Departments of Internal Systems (namely Internal Audit, Risk Management, Internal Control, and Compliance), which report directly to the board of

directors, have been created to manage these risks. Of particular relevance to Climate Change, Garanti's Business Continuity and Disaster Recovery efforts are being coordinated by the Internal Control Department. The company's Business Continuity and Disaster Recovery Plan cover all of the following in case of natural disaster or significant hazard: ensuring continuity in customer service, fulfilling legal obligations, minimizing financial losses, providing employee security and safeguarding of information assets. This unit defines specific business risks, assesses their likelihood and potential impacts and develops strategies for minimizing the likelihood of impact and for restoration of optimal operational performance.
Reputational aspects of climate change, while owned by the Environment Committee and all relevant departments, receive particular attention from Investor Relations and Communications. Additionally, Garanti is in the process of strengthening and formalizing review of environmental risks associated with project finance. Additionally, the company pays particular attention to a number of key stakeholders (including investors, customers, government entities, local public and non-profit organizations) when determining the magnitude of specific risks.
Climate change-related opportunity assessment includes new market opportunities across our banking divisions (Retail, Corporate and Commercial Banking and Project Finance), cost saving opportunities through greater efficiency, brand enhancement and employee engagement. As with risks, opportunities are prioritized based on a combination of environmental/social potential and business potential, which includes, when feasible, quantification of required investments and potential cost savings or return.
Garanti believes the above protocols to be sufficient for both company-wide issues and issues potentially affecting individual assets, such as bank branches. For example, the disaster recovery and continuity of service protocols described above prescribe actions to be taken when necessary for specific properties, for example, in the event of extreme weather. However, Garanti also has specific measures for critical, unique properties upon which all operations depend. For example, Garanti's data processing center has been designed with full backup systems to avoid technical and mechanical hardware problems. In addition, Garanti has established a secondary back-up center for vital operations in the case of physical disaster and sabotage.

2.2
Is climate change integrated into your business strategy?

Yes

2.2a
Please describe the process and outcomes (see guidance)

Garanti views climate change as a strategic issue deserving of full integration into the core business. This includes owned operations and the indirect impacts created by our customers and suppliers.
i. Garanti has several specific mechanisms in place to ensure that climate change influences the business strategy, both at the company-level and for individual units: (a) communication to senior leadership and relevant departments by the Environment Committee, which has primary responsibility for identifying and assessing climate change risks and opportunities, (b) company-wide communication for specific efforts (e.g., branch and office energy efficiency opportunities), (c) the nature of the Environment Committee itself, which is made up of business unit heads and leaders from across the company, and (d) the regular tracking and reporting of performance to senior executives and relevant department heads for the company-wide emissions reduction target and supporting sub-goals.
ii. Below, is a listing of specific company-wide strategic priorities, with a description of sample climate change initiatives that now support these priorities and the specific forces that have influenced this integration.

a. High product and service quality with continuous innovation: As part of our commitment to product and service innovation, Garanti is positioning as a leader in meeting the needs of the growing "low-carbon economy". These efforts have been influenced by a belief in future market potential as well as the high likelihood of future regulation on all sectors of the economy, starting with the most energy-intensive ones. Through the European Bank for Reconstruction and Development and European Investment Bank, Garanti offers up to US$60 million and EUR 150 million of favored lending for renewable energy and energy efficiency projects. Similarly, Garanti intends to remain a leader in the finance of renewable energy projects. In 2010, Garanti provided long-term financing of US$ 210 million for 5 wind power installations with total generation capacity of 145 megawatts. We also provided another US$ 432 million in finance for 10 hydroelectric plants with total generation capacity of 732 megawatts. As of 2011 Q1, the total capacity of all fully-operational wind projects financed solely by Garanti has reached 587 MW from total financing of US$ 823 million. Lastly, since 2009, we offer customers our Green Auto Loan, a low-interest package specifically for hybrid vehicles.
b. Unmatched convenience and customer satisfaction: Garanti seeks to provide customers with convenient, uninterrupted service, which neatly aligns with the company's desire to reduce emissions from the value chain and minimize the impact from climate-driven weather events. First, Garanti is the market leader in utilization of Alternative Delivery Channels, which include internet and mobile banking. These channels reduce the use of energy, paper and other resources associated with operations and customer travel. Second, Garanti has a comprehensive program for ensuring business continuity. This includes plans for minimizing disruption at branches and maintenance of data functions.
c. Process excellence throughout the organization: Actions to address climate change naturally align with Garanti's commitment to operational efficiency and effective cost management, essential for a large, facility-intensive company. In particular, the bank is committed to increased energy efficiency across all operations. This priority is influenced by a clear business case for cost optimization, industry best practices, emerging technology and a desire to get ahead of future regulations that could increase energy prices. To further drive progress against this opportunity, Garanti has set a company-wide CO_2 reduction goal. Specific related efforts include retrofit of branches (including lighting and AC units), virtualization of data centers, and promotion of e-learning and virtual meetings in lieu of in-person events which require travel.
d. A reputation built on leadership by example: As expectations rise for leadership on climate-change, Garanti intends to walk the walk. In addition to the efforts described above, the company plans to rigorously monitor, assess and report performance. In support of this, Garanti is in the process of establishing a comprehensive environmental management system with the ultimate goal of becoming ISO 14001 certified. In addition, the company will be using selected public communication channels, including CDP and an annual Sustainability Report.

iii. For the short-term, Garanti is focused on the efforts mentioned above: positioning to meet the growing market for energy-efficient banking products and services (which includes the financing of renewable energy), provision of low-impact alternative banking options, energy and operational efficiency and communicating these efforts to key stakeholders.
iv. For the long-term, Garanti intends to increasingly focus on integration of climate-change and other environmental concerns into all project finance activities to further ensure selection of loan projects with the highest likelihood of success. This includes further understanding how climate associated regulation, physical impacts and other factors affect project performance.
v. Ultimately, integration of climate change risks and opportunities into business strategy improves the bank's competitive position by reducing costs and protecting and enhancing reputation, and thus achieving higher revenues. To date, Garanti has emerged as the market leader for use of low-impact alternative delivery channels (such as internet and mobile banking) and grant financing for renewable energy projects. Garanti expects to achieve further top-line growth by meeting the growing market for "green" banking

services, starting with energy-efficiency. Total profitability is enhanced by numerous efforts that lower cost, while reducing carbon emissions. Additionally, Garanti believes the cumulative weight of these efforts will further the company's reputation as a responsible business entity that cares about stakeholder concerns.
vi. Garanti has made a number of substantial business decisions during the past reporting year that have been influenced by climate change related risks and opportunities. These include but are not limited to:

- Refurbishment of bank branches to increase energy efficiency
- Finance of wind energy farms
- Virtualization of data centers to increase server efficiency
- Piloting of ATMs with the ability to receive deposits, update accounts in real time and redispense deposited money, greatly reducing the need to service machines and associated transportation
- Use of energy-efficient LED lighting for marketing displays
- Reduction of staff travel through reliance on e-learning and teleconferencing

Garanti considers investment amounts and pay-back periods associated with these efforts as confidential.

2.3
Do you engage with policy makers to encourage further action on mitigation and/or adaptation?

No

Page: 3. Targets and Initiatives

3.1
Did you have an emissions reduction target that was active (ongoing or reached completion) in the reporting year?

No

3.1e
Please explain (i) why not; and (ii) forecast how your emissions will change over the next five years

Garanti has now set an emissions reduction target that will apply to the current reporting year (2011) (see more detail in the next paragraph). The company did not, however, have an active emissions reduction target for 2010 as that was Garanti's first year calculating a GHG footprint. Additionally, data gaps in this first reporting year did not allow for a complete inventory that could serve as an accurate baseline for judging future emissions reduction. In particular, Garanti had to rely on the use of estimation techniques for a significant portion of the company's nearly (then) 800 bank branches and, in the case of on-site fuel use, excluded data due to concerns over accuracy and completeness.
Over the past year, Garanti has greatly enhanced its ability to capture accurate, comprehensive data across its facilities and mobile sources, paving the way for establishing a baseline and setting an emissions reduction target. **By the end of 2012, Garanti seeks to reduce total greenhouse gas emissions by 7% per total assets under management against a baseline of 2010 emissions.** This target covers the entire range of emissions reported here: Scope 1 and 2 emissions from all owned or operated properties and emissions from employee air travel (limited Scope 3).
Over the next 5 years, Garanti expects absolute emissions will increase by roughly 5-7% per year. This is based on expected annual growth of roughly 10% in the number of facilities (the main driver behind direct carbon emissions) with a corresponding annual drop in emissions intensity of 3-5%. Key drivers of expected changes in emissions include the following:
Factors likely to increase emissions:

- Eventual growth in number of bank branches and other facilities: In 2010, bank branches, Garanti's main source of emissions, grew by 9%, from 792 to 863. Similar growth is expected over the next few years, likely to result in an absolute increase in emissions.
- International travel: Reflecting the increasingly global nature of Garanti's business, international travel grew by more than 35% in 2010. This increase was completely mitigated by a decrease in domestic air travel, stemming from efforts to use virtual meetings and e-learning. In fact, for 2010, scope 3 emissions from total air travel actually decreased by 5% compared to 2009. However, it is unlikely that Garanti will be able to achieve such a dramatic drop in domestic travel in this manner again. Nevertheless, emissions from air travel account for less than 3% of total emissions.

Factors likely to decrease emissions:

- Energy efficiency efforts to be put in place across Garanti's collection of facilities and vehicles: The bank has begun to roll-out energy efficiency initiatives throughout operations. Existing projects include energy-efficient design for new branches, refurbishment of existing branches, elimination of non-essential vehicles, virtualization of the data center and greater reliance on technology to reduce travel. Garanti expects many more similar programs in the future. These efforts will form the backbone of achieving the company's 2012 reduction target as well as subsequent short-term reduction targets.
- Garanti's LEED-certified data center (The Pendik Technology Campus), expected to be opened in 2013: Data centers, due to their electricity load and cooling needs, are the company's highest emitter of carbon emissions per square meter of property. To reduce long-term costs and emissions, the bank will be building a new energy-efficient data center. This facility is expected to achieve certification under the US Green Building Council's Leadership in Energy & Environmental Design (LEED) program. This building alone will likely play a meaningful role in helping the company to achieve any future emissions reduction target.
- Purchase of renewable energy: Garanti intends to purchase renewable energy for its own use when it is cost competitive to do so. Widespread use of renewable energy could allow for significant reduction in total emissions, well beyond the 2012 target.

3.2
Does the use of your goods and/or services directly enable GHG emissions to be avoided by a third party?

Yes

3.2a
Please provide details (see guidance)

In 2010, Garanti provided long-term financing of US$ 210 million for 5 wind power installations with total generation capacity of 145 megawatts. While numerous players are required for realization of such large-scale projects, provision of capital is critical and, therefore, Garanti believes, worth including as a service that helps a third-party (in this case, the plant operator) to reduce total emissions. Garanti has conservatively estimated that these wind farms will, collectively, reduce carbon emissions by 139,157 metric tons CO_2e per year, based on the current average grid factor for Turkey. Wind turbines have a typical lifespan of about 25 years. As use of renewable energy becomes more wide-spread in Turkey, it is expected that the average grid factor will decrease, somewhat reducing year-on-year carbon emissions savings from these farms. Garanti will continue to actively look for additional opportunities to support wind projects and other renewable energy projects, such as solar, as government incentives and market dynamics allow them to become viable. (scroll to the end of this answer to see how estimated reduction in emissions was calculated)

Garanti remains the leader in the wind energy project finance market with an approximate share of 40%. The bank has financed 24 greenfield wind projects and 587 MW of those projects are fully operational as of end of Q1 2011. These projects collectively reduce CO_2 emissions by an estimated 563,348 mt CO_2e per year (using the same estimation technique described below).

In addition, Garanti is in the process of rapidly expanding existing efforts to provide financing for energy and resource efficiency projects across a wide array of market segments. For example, with support from the European Bank for Reconstruction and Development, European Investment Bank and the Clean Technology Fund, Garanti is offering up to US$ 60 million and EUR 150 million of favored lending for energy efficiency improvements in residences, small and medium enterprises, industry/manufacturing, commercial buildings and renewable energy projects. As these funds could be used to cover a wide variety of investments (on-site renewable energy, efficient heating and cooling systems, insulation, environmentally-friendly materials and more) Garanti has not attempted to estimate likely avoided emissions. Nevertheless, the company believes these efforts will be significant by directly reducing emissions and by helping to launch a variety of new markets and technologies.

Calculation for estimated reductions from wind farms

Annual Energy Generated [MWh/year] = Capacity [MW] x Capacity Factor [Dimensionless] x Hours per Year [Hrs/year]

Annual CO_2e Emissions Avoided [metric tons/year] = Annual Energy Generated [MWh/year] x CO_2e Emission Factor [metric tons/MWh] Capacity: 145 MW

MWh Capacity Factor (Estimated): 25% (conservative estimate)

Time: 365*24 = 8,760 hrs

Turkish Emission Factor: 0.438222 metric tons/MWh (Emission Factor Source: "World Resources Institute (2009). GHG Protocol tool for Purchased Electricity, Heat, or Steam". GWP Source: "IPCC Second Assessment Report: Climate Change 1995")

3.3

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)

Yes

3.3a

Please provide details in the table below

Activity type	Description of activity	Annual monetary savings (unit currency)	Investment required (unit currency)	Payback period
Behavioral change	Garanti has significantly increased the level of training and information sharing carried out remotely using Webinars, interactive remote learning and teleconferencing. These efforts have reduced domestic air travel in 2010 by 17% (in total number of flights) over the previous year, saving an estimated 170 tons of CO_2e. Garanti considers investments and savings associated with this effort confidential.			
Energy efficiency: building services	Garanti has a refurbishment program for branches intended to give them a 'greener' profile: replacing air-conditioning units with systems that are up to 40% more efficient and reducing the overall electricity consumption of a typical branch by 10%. This is a key role for the Construction Department, working closely with Garanti Technology and with the Procurement staff. The energy profile of a branch is a critical element in determining its priority for refurbishment. Given the numerous confounding factors that can affect total branch energy use, emissions reductions associated with this effort have not been estimated. Garanti considers savings and investment associated with this effort confidential.			
Energy efficiency: processes	In 2007, Garanti began to consolidate and "virtualize" servers in its data centers. This effort elevates real time computing power per server, reducing total server need (and associated electricity use) as well as the tremendous cooling demand that servers require. Per square meter of property, data centers emit the greatest total amount of carbon across all bank properties. As of end of 2010, 71% of the servers in Garanti's data center have been virtualized. As Garanti has just recently set a CO_2 emissions reduction target, there has been no estimation of emissions reduction associated with this effort. Garanti considers savings and investment associated with this effort confidential.			
Energy efficiency: processes	In 2010, Garanti began piloting use of ATMs that allow for "real-time" cash deposits. In essence, this equips machines with the ability to "recycle" money, dramatically reducing the need to service machines. While this meaningfully enhances customer convenience, it also reduces the greenhouse gas emissions associated with service calls by allowing real-time account updating and thus allowing the reuse of money for cash withdrawals at the machine. By the end of 2011, Garanti expects to have more than 300 of these machines in operation. Garanti has not attempted to estimate emission reductions associated with these machines. The company considers savings and investment associated with this effort confidential.			
Energy efficiency: processes	Garanti has worked to increase the number of customers who receive account and other statements as digital documents instead of paper documents. Today, more than 60,000 daily customer request pages that previously were sent by ordinary mail are digitalized, reducing			

Activity type	Description of activity	Annual monetary savings (unit currency)	Investment required (unit currency)	Payback period
	emissions associated with paper and transportation. Given the inherent difficulty involved, Garanti has not attempted to calculate emissions reductions associated with this effort. Garanti considers savings and investment associated with this effort confidential.			

3.3b
What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for energy efficiency	Garanti has a dedicated budget for driving operational efficiency, which includes energy use across our facilities. This budget and the details of this effort are considered strategic and confidential.
Dedicated budget for other emission reduction activities	Nearly all of the projects listed above (which include e-learning, virtualization of servers, promotion of e-statements and use of next generation ATMs) have dedicated budgets. These budgets are considered confidential.
Employee engagement	To support achievement of its recently announced CO2 emissions reduction target, Garanti intends to accelerate, expand and formalize associated employee engagement efforts. In 2010, employee engagement has included widespread involvement and outreach performed by the Environment Committee, as well as company-wide communication on CO2 emissions and reductions efforts.

Page: 4. Communication

4.1
Have you published information about your company's response to climate change and GHG emissions performance for this reporting year in other places than in your CDP response? If so, please attach the publication(s)

Publication	Page/Section Reference	Identify the attachment
In voluntary communications (complete)	Introduction, Letter from the CEO, and Section 3	Sustainability Review 2010

Further Information

The attachment referenced above is Garanti's Sustainability Review, announced simultaneously with the 2010 Annual Report. It provides comprehensive information on the bank's environmental and social efforts, including a description of efforts to measure total greenhouse gas emissions, report this footprint to CDP and the specific actions (existing and planned) to reduce this footprint.

Attachments

https://www.cdproject.net/Sites/2011/29/21129/Investor%20CDP%202011/Shared%20Documents/Attachments/InvestorCDP2011/4.Communication/2010_04_06_garanti_sustainability_review.pdf

Module: Risks and Opportunities [Investor]

Page: 5. Climate Change Risks

5.1
Have you identified any climate change risks (current or future) that have potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Risks driven by changes in regulation
Risks driven by changes in physical climate parameters
Risks driven by changes in other climate-related developments

5.1a
Please describe your risks driven by changes in regulation

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
Risk1	International agreements	Emerging regulation, such as specific emissions reduction targets, resulting from Turkey's ratification of the Kyoto Protocol.	Increased operational cost	6-10 years	Direct	More likely than not	Medium-high
Risk2	Cap and trade schemes	Cap and trade could be a mechanism to support any emissions reduction target resulting from Turkey's ratification of the Kyoto Protocol.	Increased operational cost	6-10 years	Indirect (Client)	About as likely as not	Medium-high
Risk3	Carbon taxes	Use of a carbon tax could be used to support any emissions reduction target resulting from	Increased operational cost	6-10 years	Indirect (Client)	About as likely as not	Medium-high

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
Risk4	Fuel/energy taxes and regulations	Turkey's ratification of the Kyoto Protocol. Turkey recently passed a law that will soon require specific energy efficiency measures for buildings above a certain size limit.	Increased operational cost	Current	Direct	Virtually certain	Low-medium
Risk5	Fuel/energy taxes and regulations	The Energy Efficiency Law of 2007 imposes specific requirements for the generation, transmission, distribution and consumption of energy.	Increased operational cost	Current	Direct	Virtually certain	Low

5.1b

Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; and (iii) the costs associated with these actions

RISK 1: INTERNATIONAL AGREEMENTS

Turkey Ratified the Kyoto Protocol in 2009. While Turkey's requirements under Kyoto remain unclear, it could raise the likelihood of regulation of greenhouse gas emissions and specifically require energy-intensive industries to meet specific emission reduction targets. In addition, it could result in either a cap and trade scheme or carbon tax (discussed below).

i. Regulation targeting electricity production in particular could directly impact Garanti's operations by raising costs. Depending on the exact level of commitment, electricity costs may rise by 2-3%. Garanti owns and operates a large number of properties, predominantly regional offices and bank branches, requiring energy and fuel sources. These requirements make up a large part of Garanti's total operational expenses.

ii. Garanti has already launched numerous programs aimed at reducing its energy demand. Current efforts include lighting timers for branch facade lighting, replacement of air conditioning systems with more efficient models, virtualization of data centers, and energy-efficiency specifications for purchase of new computing equipment. The bank expects to introduce a wide variety of new energy-efficiency projects as part of the current effort to develop a comprehensive environmental management system.

iii. Garanti considers the above efforts strategic in nature and, therefore, does not wish to reveal associated investment expenditures.

RISK 2: CAP AND TRADE AND RISK 3: CARBON TAXES

Turkey is now in the process of analyzing specific emissions reduction strategies and the mechanisms that would support accomplishment of any target, such as a cap and trade scheme or carbon tax. As Garanti is not in an energy-intensive industry, such schemes are not expected to directly apply to the bank. However, they would likely have a meaningful indirect impact on Garanti by affecting loan recipients. Potential target industries where Garanti is active include steel manufacture, energy production (including coal), paper industries, chemicals, cement, transportation and other infrastructure sectors.

i. Garanti expects the potential impact on loan recipients to be highly dependent upon the specific mechanism implemented, the specific industry and the specific project. As such, Garanti has not attempted to estimate the specific financial implications of such schemes.

ii. In anticipation of such climate related regulations, Garanti already includes potential future carbon taxes in financial modeling and projections of thermal power plant projects to ensure that they would still fulfill their financial obligations. Additionally, Garanti is in the process of developing a more comprehensive approach to analyze each project against specific environmental and social criteria. For this, Garanti is working with an independent consultant and expects to be able to announce key aspects of this approach in the coming months.

iii. Garanti considers the above effort as strategic in nature and, therefore, does not wish to reveal associated investment expenditures.

RISK 4: REGULATION ON ENERGY PERFORMANCE IN BUILDINGS

Turkey's Regulation on Energy Performance in Buildings came into force in December of 2009. As of January 2011, all qualifying new buildings must meet minimum design requirements for energy efficiency. This law is expected to apply to new Garanti office buildings, for example the new data center we expect to begin building in 2012.

i. Garanti expects to exceed the design requirements of this law for new buildings based solely on ability to generate attractive costs savings. For example, the bank expects to achieve certification under the Leadership in Energy Efficiency and Design (LEED) program for its planned data center. Therefore, while more energy efficient buildings typically involve increased upfront investment (>5%), Garanti does not perceive a specific financial implication associated with this law.

ii. Garanti plans to build all new buildings to industry leading specifications for energy efficiency. It is expected that this will include virtually all aspects of building design, structure orientation and thermal envelope, selection of building materials and systems for heating, cooling, lighting and ventilation.

iii. Building to LEED standards in Turkey can impose significantly higher costs than traditional building. While highly dependent upon specific building design, we assume a price premium of more than 5%.

RISK 5: ENERGY EFFICIENCY LAW

In 2007, Turkey passed the “Energy Efficiency Law,” requiring new measures for the generation, transmission, distribution and consumption of energy. For buildings of a certain size or energy consumption level, this law will require designation of a building energy manager and submission of an annual report on energy consumption to the Directorate General of Electricity Works.

i. The specific mechanisms for enforcement of this regulation are still being considered. However, we anticipate that failure to comply could bring administrative action. Garanti has not attempted to estimate the size of any such corrective action. In any event the bank intends to be in full compliance with this and any other applicable regulation.

ii. Garanti has now begun to assess which of its properties will be covered by this regulation. Additionally, the bank plans for selection of "energy managers" for all applicable facilities, starting with those that will clearly fall under the scope of this regulation.

iii. The primary cost of compliance with this regulation will be the time devoted by select staff members. Garanti does not anticipate needing to hire additional employees for this role. As such, the company perceives no extra cost associated with compliance measures.

5.1c

Please describe your risks that are driven by change in physical climate parameters

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
Risk6	Change in precipitation extremes and droughts	Extreme weather events could interrupt bank operations, imposing costs and/or loss of revenue.	Increased operational cost	Current	Direct	More likely than not	Low-medium
Risk7	Change in temperature extremes	Extreme heat could interrupt bank operations, imposing costs and/or loss of revenue.	Increased operational cost	Current	Direct	More likely than not	Low-medium
Risk8	Change in precipitation pattern	Changes in precipitation patterns can affect the overall health of the communities that Garanti serves.	Reduced demand for goods/services	6-10 years	Direct	About as likely as not	Medium

5.1d
Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; and (iii) the costs associated with these actions

RISK 6: EXTREME WEATHER AND DROUGHTS AND RISK 7: TEMPERATURE EXTREMES
Extreme weather events resulting from climate change likely to have the biggest impact on Garanti's operations include flooding (both from localized storms and rising sea-levels), severe storms and severe heat. Flooding, in particular, can pose a threat to operation of individual branches. Severe storm events could also threaten the ability of employees to get to and from key facilities or cause critical damage to key facilities, such as headquarters and Garanti's data management center. Further, extreme heat/cold or changing temperature patterns could raise cooling/heating costs.
i. Inability to provide timely service, such as completion of banking transactions, could result in both immediate loss of revenue and damage to company reputation, which could lead to longer-term loss of revenues. Due to the significant uncertainty involved, Garanti has not attempted to quantify the risk associated with interruption of service but considers it significant and is taking numerous steps to decrease the likelihood and severity of occurrence. Similarly, due to inherent uncertainty, Garanti has not estimated the potential increases in heating and cooling costs, but believes they could be as high as 5% of existing costs if no energy efficiency measures are taken.
ii. To minimize potential disruption, Garanti offers a variety of customer service options, including on-line banking and banking with mobile devices. In addition, Garanti has established back-up plans for critical operations, such as data security. For example, Garanti's data processing center has been designed with full backup systems to avoid technical and mechanical hardware problems. In addition, Garanti has established a secondary back-up center for vital operations in the case of physical disaster and sabotage. As part of a wider campaign to reduce operational energy expenses, Garanti is currently investigating opportunities to reduce heating and cooling needs at new and existing properties. For example, Garanti intends to open a new LEED-certified data center (The Pendik Technology Campus) in 2013. Data centers are Garanti's largest user of energy per square meter of property. All bank offices and branches carry standard insurance policies that typically cover weather-related incidents/disaster, including flooding.
iii. Garanti considers the efforts described here as strategic in nature and, therefore, does not wish to reveal associated investment expenditures.
RISK 8: CHANGE IN PRECIPITATION PATTERN
Many regions in Turkey are already prone to drought. Any increase in these events could further exacerbate challenges related to water scarcity for communities and key sectors, such as agriculture. This could affect Garanti indirectly by threatening the livelihoods of current and prospective customers, potentially reducing total transaction volume and interest. It could also affect Garanti in the event of civil unrest related to water scarcity. With its broad reach of retail banks, in particular, Garanti is a part of communities throughout Turkey. Unrest could threaten the operation of individual branches and pose a safety hazard for employees and customers.
i. Due to the high degree of associated uncertainty, Garanti has not attempted to quantify the size of such risks.
ii. Nevertheless, the bank believes management of these risks could be important for future operations. As such, Garanti's newly-created Environment Committee will be considering what, if any actions, to take.
iii. For now, Garanti will simply be strategizing potential actions to take. As such, there are no additional costs imposed beyond existing measures to assemble and operate the Environmental Committee and fees for advisory services.

5.1e
Please describe your risks that are driven by changes in other climate-related developments

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
Risk9	Reputation	Failure to meet stakeholder expectations for action on climate change (or association with a negative publicity event related to climate change) could threaten company reputation and customer perceptions.	Reduced demand for goods/services	1-5 years	Direct	About as likely as not	Medium-high
Ris10	Uncertainty in market signals	Investors, in particular, have increasingly demanded leadership from corporations regarding climate change. Failure to meet these rising expectations could threaten share value and result in a	Reduced stock price (market valuation)	Current	Direct	Very likely	Medium-high

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
		number of financial implications.					
Ris11	Fluctuating socio-economic conditions	The physical impacts of climate change and the regulatory, business-led or customer efforts to prevent or minimize these impacts are likely to bring significant changes to the economy and, by extension, the marketplace for banking and financial services.	Reduced demand for goods/services	1-5 years	Indirect (Client)	About as likely as not	High

5.1f

Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; (iii) the costs associated with these actions

RISK 9: REPUTATION

Stakeholders increasingly expect companies, especially banks, to proactively address climate change issues. Garanti believes that these expectations demand that a company have a comprehensive climate change program. While such programs necessarily focus on emissions from owned and operated sources, they should also include key value chain issues. Banks, in particular, face risks associated with loans that could be associated with high greenhouse gas emissions or flashpoint issues capable of generating significant negative publicity, such as an oil spill. Failure to meet these expectations could damage reputation, threaten customer loyalty and harm the company's ability to win new customers.

i. Due to the inherent uncertainty involved, Garanti has not attempted to quantify the risk to reputation posed by failure to proactively address climate change issues. Nevertheless, the bank considers this a critical issue to manage. Reputational concerns are a key driver behind all current and emerging climate change and other environmental activities.

ii. Driven in large part to ensure that Garanti retains a reputation for excellence and leadership in the Turkish market, the bank has and will continue to institute comprehensive efforts to address climate change. These include establishment of an environment committee to manage climate change issues, development of a comprehensive environmental management plan (currently in progress), communication of climate change activities (most recently in Garanti's Sustainability Review which was released as an accompanying document with the 2010 Annual Report in April 2011), participation in CDP, the setting of a company-wide carbon reduction goal, strengthening environmental criteria in our project finance activities and the launch of numerous specific projects under the above structures. Individual carbon reduction projects are discussed throughout this submission and include branch and office energy efficiency projects, provision of electronic transaction options to reduce customer footprint, office recycling activities, promotion of on-line training to reduce emissions from transportation and the financing of renewable energy projects.

iii. Garanti has invested directly for the projects described above and has retained advisory services to support overall efforts to address climate change and other environmental impacts. However, Garanti does not wish to reveal specific costs associated with these efforts.

RISK 10: UNCERTAINTY IN MARKET SIGNALS

Loss of share price value/market capitalization can harm reputation, limit M&A opportunities and threaten credit rating. To eliminate any such risk associated with climate change, Garanti endeavors to always exceed investor expectations. This is viewed as vital for attracting "green" investors who already have screens regarding the environment and to preserve interest from investors who are likely to adopt such screens in the near future. We see large, institutional investors as those most-likely to adopt such screens. Such investors represent a significant portion of Garanti's existing investor base.

i. Due to the inherent difficulty involved, Garanti has not attempted to quantify this risk. Yet, the bank considers this a critical issue to manage.

ii. As stated with regards to reputation-related risk, to satisfy growing investor expectations, Garanti has and will continue to institute a number of comprehensive efforts to address climate change. These include establishment of an environment committee to manage climate change issues, development of a comprehensive environmental management plan (currently in progress), communication of climate change activities (most recently in Garanti's Sustainability Review which was released as an accompanying document with the 2010 Annual Report in April 2011), participation in CDP, the setting of a company-wide carbon reduction goal, strengthening environmental criteria for project finance activities and the launch of numerous specific projects under the above structures. Individual carbon reduction projects are discussed throughout this submission and include branch and office energy efficiency projects, provision of electronic transaction options to reduce customer footprint, office recycling activities, promotion of on-line training to reduce transport footprint and the financing of renewable energy projects.

iii. Garanti has invested directly for the projects described above and has retained advisory services to support efforts to address climate change and other environmental impacts. However, Garanti does not wish to reveal specific costs associated with these efforts.

RISK 11: FLUCTUATING SOCIO-ECONOMIC CONDITIONS

The physical impacts of climate change and the regulatory, business-led or customer efforts to prevent or minimize these impacts are likely to bring significant changes to the economy and, by extension, the marketplace for banking and financial services. For example, individual regions (e.g., those prone to flooding or that experience climate change-led severe weather) and entire sectors of the economy (those unable to transition to a low-carbon business model or dependent on stable weather patterns, such as agriculture) could suffer significant loss of income. This could translate to inability to repay loans for banking customers or decreased demand for banking services.

i. Due to the inherent uncertainty involved, Garanti has not attempted to quantify potential lost revenue from climate-driven loan defaults or reduced demand. Nevertheless, the bank considers such concerns critical to future business.

ii. There is nothing Garanti (or any other company acting in isolation) can do to reduce the likelihood of the physical impacts of global warming or associated regulation and their impact on community or sector viability. Garanti is, however, diversifying its products and services to prepare for transition to a low-carbon economy, something that could potentially ease the burden on heavily impacted sectors and help the bank gain new revenue that could compensate for climate-related losses.

iii. Garanti has not attempted to quantify the investment costs associated with diversification of its product mix in preparation for a low-carbon economy.

Page: 6. Climate Change Opportunities

6.1

Have you identified any climate change opportunities (current or future) that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Opportunities driven by changes in regulation
Opportunities driven by changes in physical climate parameters
Opportunities driven by changes in other climate-related developments

6.1a
Please describe your opportunities that are driven by changes in regulation

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact
OPP_1	International agreements	Emerging regulation, such as specific emissions reduction targets, resulting from Turkey's ratification of the Kyoto Protocol.	Increased demand for existing products/services	6-10 years	Indirect (Client)	About as likely as not	Medium-high
OPP_2	Cap and trade schemes	Cap and trade could be a mechanism to support any emissions reduction target resulting from Turkey's ratification of the Kyoto Protocol.	New products/business services	6-10 years	Indirect (Client)	About as likely as not	Medium-high
OPP_3	Carbon taxes	Use of a carbon tax could be used to support any emissions reduction target resulting from Turkey's ratification of the Kyoto Protocol.	New products/business services	6-10 years	Indirect (Client)	About as likely as not	Medium-high
OPP_4	Fuel/energy taxes and regulations	Turkey recently passed a law that will soon require specific energy efficiency measures for buildings above a certain size limit.	New products/business services	Current	Indirect (Client)	Virtually certain	Medium-high

6.1b
Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions

OPP_1: INTERNATIONAL AGREEMENTS
Turkey ratified the Kyoto Protocol in 2009. While Turkey's requirements under Kyoto remain unclear, it could raise the likelihood of regulation of greenhouse gas emissions and specifically require energy-intensive industries to meet specific emission reduction targets. In addition, it could result in either a cap and trade scheme or carbon tax (discussed below). These factors could rapidly grow the market for finance of energy-efficient, renewable energy or other low-carbon projects.
i. While Garanti has not attempted to estimate the financial implications associated with this opportunity, the bank believes it could ultimately generate hundreds of millions of dollars in finance opportunities, ranging from large scale energy or infrastructure type projects to much smaller, facility-specific investments.
ii. Garanti has engaged its project finance department and all of its banking departments (retail, corporate and commercial) to investigate product and service opportunities related to climate change, including new regulations. The bank has already established a leadership position for investment in renewable energy projects (wind and hydro). Additionally, through a program funded by the European Bank for Reconstruction and Development and Europea Investment Bank, Garanti expects to provide over US$60 million and EUR 150 million in loans for energy-efficiency and renewable energy projects for small and medium-sized enterprises. Lastly, since 2009, Garanti has offered customers a low-interest Green Auto Loan package specifically for hybrid vehicles.
iii. The primary cost associated with these actions has been training of loan officers in all relevant departments. As these expenditures are built into existing roles and efforts, Garanti has not attempted to specifically quantify them.
OPP_2: CAP AND TRADE SCHEMES AND OPP_3: CARBON TAXES
Turkey is now in the process of analyzing specific emissions reduction strategies and the mechanisms that would support accomplishment of any target, such as a cap and trade scheme or carbon tax. Both mechanisms would greatly accelerate investment in renewable energy and energy-efficiency projects, creating new finance opportunities. Additionally, a cap and trade scheme, which could be tied to the European Emissions Trading Scheme, would create a formal, regulated market for carbon in Turkey. This could present new opportunities to act as a broker of carbon and provide related services.
i. Due to uncertainty regarding likelihood and timing for either mechanism, Garanti has not attempted to formally estimate associated financial implications of this opportunity. However, the bank expects resulting finance opportunities and/or carbon trading opportunities could represent hundreds of millions of dollars.
ii. As described above, Garanti has already begun to position as a leader in the finance of renewable energy and energy-efficiency projects, ranging from large infrastructure-style projects to facility-specific investments for small and medium enterprises.

Additionally, Garanti now monitors legal developments related to climate change that could pave the way for a role in emissions trading.
iii. To date, the company's primary cost has been training of key staff for existing green lending opportunities and participation of key individuals in our Environment Committee (and its sub-committees). As these roles have been built into existing responsibilities, Garanti has not estimated associated costs. The bank has also retained advisory services to support these efforts but considers these expenses confidential.
OPP_4: FUEL/ENERGY TAXES AND REGULATIONS
Turkey's Regulation on Energy Performance in Buildings came into force in December of 2009. As of January 2011, all qualifying new buildings must meet minimum design requirements for energy efficiency. This will likely spur increased investment in energy-efficiency projects, which should present new opportunities for financing.
i. Given remaining uncertainties about application and enforcement of the law as well as any resulting market, Garanti has not attempted to formally estimate associated new business opportunities. However, the bank believes these opportunities could represent millions of dollars.
ii. As described above, Garanti has already begun to position as a leader in meeting the needs of a market increasingly interested in finance for energy-efficiency and renewable energy projects. For example, Garanti is one of four banks in Turkey participating in the TURSEFF program, backed by the European Bank for Reconstruction and Development. Through TURSEFF, Garanti has begun to provide up to US$ 60 million of favored lending for energy efficiency improvements in residences, small and medium enterprises, industry/manufacturing, commercial buildings and renewable energy projects. These packages follow our previously launched "Efficient Small and Medium Enterprise Package" focused on process efficiency, building efficiency and waste management. Typical investments include building insulation, double-glazing, rehabilitation of heating and power systems, and use of energy-efficient materials.
iii. To date, the primary cost associated with participation in the EBRD/TURSEFF program has been training of loan officers and other staff. As these efforts are built into existing roles, Garanti has not attempted to put an amount to this cost.
Additionally, Garanti has retaiend independent consultants to help (among other things) ensure that the company stays abreast of emerging market trends related to climate change and positions accordingly. Consultant expenses are confidential.

6.1c
Please describe the opportunities that are driven by changes in physical climate parameters

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
OPP_5	Other physical climate drivers	Physical impacts on existing settlements could necessitate new infrastructure projects, creating finance opportunities. However, there is meaningful uncertainty on timing of this development.	Increased demand for existing products/services	Unknown	Indirect (Client)	Unknown	High

6.1d
Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions

Many experts believe that climate change could severely impact existing human settlements and commercial establishments over the next half-century and beyond, especially in low-lying coastal regions. While this is a significant threat, the flip-side to this threat will be a growing need for new infrastructure projects to support the resettlement of existing populations and new commerce. Garanti has long been a key lender to infrastructure projects in Turkey and would expect to capitalize on any new market opportunities associated with the physical impacts of climate change. To do so, the bank would expect to leverage existing experience with such projects and relevant relationships with financial and governmental institutions. Given the high degree of uncertainty and what would likely be a relatively long timeframe surrounding this occurrence, Garanti has not attempted to estimate associated financial implications nor begun to take any specific action beyond efforts to stay abreast of climate change issues.

6.1e
Please describe the opportunities that are driven by changes in other climate-related developments

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
OPP_6	Reputation	By proactively addressing climate change and other social and environmental concerns, we can exceed stakeholder expectations and enhance our reputation. This could produce numerous benefits to our business.	Increased stock price (market valuation)	Current	Direct	Very likely	High
OPP_7	Other drivers	By formalizing our approach to carbon emissions management, we enhance our ability to strategically reduce energy costs.	Reduced operational costs	Current	Direct	Virtually certain	Medium

6.1f
Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions

OPP_6: REPUTATION
Stakeholders increasingly demand that companies take action regarding climate change. As such, meeting these expectations presents an opportunity to enhance reputation.

i. By meeting and exceeding stakeholder concerns for performance, Garanti has the potential to increase market valuation, demonstrating that the company is positioned for emerging opportunities and capable of avoiding risks related to climate change. Also, climate change leadership has the ability to differentiate the bank with customers who increasingly care about this topic. Lastly, Garanti firmly believes that leadership on sustainability topics (especially climate change) makes the bank a more desirable place to work. This can meaningfully impact ability to retain and attract talent. While Garanti has not attempted to quantify these values, each is considered highly significant and deserving of committed action.
ii. Garanti has taken numerous steps to demonstrate a credible approach to addressing our contribution to greenhouse gas emissions. As discussed throughout this submission, these actions fall into three main categories (all of which are essential for meeting stakeholder expectations): program building, specific projects and communication of results and aspirations. Key program building actions from the past year include establishment of an Environment Committee (and various subcommittees) with responsibility for climate change issues, integration of climate change risk into all other risk assessment processes, consideration of climate change risks and opportunities in lending activities, launch of a process to create a formal environmental management system for Garanti and setting a company-wide goal for CO2 emissions reduction. Specific individual projects include enhancing the energy-efficiency of bank branches, reducing air travel through reliance on e-learning and communications, upgrading energy-efficiency specs for new appliances and electronics, virtualizing our data center, elimination of unnecessary vehicles and more. To date, communications efforts have focused on participation in CDP, direct communication with investors and the recently released Sustainability Review, which can be downloaded from Garanti's website.
iii. The majority of the actions listed above have been built into existing activities and, therefore, cannot be easily expensed as separate items. Garanti has also retained independent consultants to assist program building efforts, but consider these expenses confidential.

OPP_7: PROGRAM-DRIVEN ENERGY COST MANAGEMENT

It is Garanti's view that climate change and other sustainability challenges can accelerate support for cost management projects, an existing strategic priority for the company. Energy use, in particular, is a key expense for operations. CO2 reductions, typically, are energy cost reductions.
i. Accelerated by our efforts to reduce CO2 emissions, Garanti believes it can reduce energy costs by 5 to 10% by the end of 2012 and by as much as 20% or more over the next 5 years.
ii. As described above, and supported by formal program-building efforts, Garanti has launched and will continue to launch numerous efforts aimed at reducing CO2 and energy costs. These include enhancing the energy-efficiency of bank branches, reducing air travel through reliance on e-learning and communications, upgrading energy-efficiency specs for new appliances and electronics, virtualizing the data center, planning for construction of an energy-efficient, LEED-certified data center, elimination of unnecessary vehicles, increasing focus on converting customers to e-statements and more.
iii. The majority of the actions listed above have been built into existing activities and, therefore, cannot be easily expensed as separate items. Additionally, Garanti has retained advisory services to support all climate change and sustainability efforts (these expenses are confidential).

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading [Investor]

Page: 7. Emissions Methodology

7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Base year	Scope 1 Base year emissions (metric tonnes CO2e)	Scope 2 Base year emissions (metric tonnes CO2e)
Thu 01 Jan 2009 - Thu 31 Dec 2009	12619	37845

7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

7.2a

If you have selected "Other", please provide details below

7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	IPCC Second Assessment Report (SAR - 100 year)
CH4	IPCC Second Assessment Report (SAR - 100 year)
N20	IPCC Second Assessment Report (SAR - 100 year)
Other: HCFC-22	IPCC Second Assessment Report (SAR - 100 year)
Other: HFC-134a	IPCC Second Assessment Report (SAR - 100 year)
Other: R407a	Other: ASHRAE Standard 34
Other: R410a	Other: ASHRAE Standard 34

7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data

Fuel/Material/Energy	Emission Factor	Unit	Reference
Diesel/Gas oil	2.68	kg CO2e per litre	World Resources Institute. Emission Factors Compilation from Cross-Sector Tools. Version 1.0. July 2009.

Fuel/Material/Energy	Emission Factor	Unit	Reference
Motor gasoline	2.34	kg CO2e per litre	World Resources Institute. Emission Factors Compilation from Cross-Sector Tools. Version 1.0. July 2009.
Natural gas	1.89	Other: kg CO2e per m3	orld Resources Institute. Emission Factors Compilation from Cross-Sector Tools. Version 1.0. July 2009.
Lignite	1.21	metric tonnes CO2e per metric tonne	orld Resources Institute. Emission Factors Compilation from Cross-Sector Tools. Version 1.0. July 2009.
Distillate fuel oil No 2	2.69	metric tonnes CO2e per m3	orld Resources Institute. Emission Factors Compilation from Cross-Sector Tools. Version 1.0. July 2009.
Electricity	438.22	kg CO2e per MWh	World Resources Institute. Emission Factors Compilation from Cross-Sector Tools. Version 1.0. July 2009.
Other: Business Air Travel: Long-haul	.12	Other: kg CO2e per passenger km	EPA Climate Leaders: Optional Emissions from Employee Commuting, Business Travel and Product Transport. May 2008.
Other: Business Air Travel: Medium-haul	.14	Other: kg CO2e per passenger km	EPA Climate Leaders: Optional Emissions from Employee Commuting, Business Travel and Product Transport. May 2008.
Other: Business Air Travel: Short-haul	.17	Other: kg CO2e per passenger km	EPA Climate Leaders: Optional Emissions from Employee Commuting, Business Travel and Product Transport. May 2008.

Further Information

Above, we have provided our 2009 emissions to allow for comparison with our 2010 emissions. As we had incomplete data last year (as a first time reporter), the 2009 figure presented here has been adjusted compared to last year's CDP submission. Specifically, we increased the total scope 1 emissions to account for last year's omission of on-site fuel use. The incomplete scope 1 figure reported to CDP last year was 8,458 mt CO2e. Due to widespread use of estimation techniques for our 2009 inventory, we will be using 2010 as our base year for our recently established greenhouse gas emissions reduction goal.

Page: 8. Emissions Data - (1 Jan 2010 - 31 Dec 2010)

8.1
Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

8.2a
Please provide your gross global Scope 1 emissions figure in metric tonnes CO2e

10703.47

8.3a
Please provide your gross global Scope 2 emissions figure in metric tonnes CO2e

49266.01

8.4
Are there are any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions which are not included in your disclosure?

No

8.5
Please estimate the level of uncertainty of the total gross global Scope 1 and Scope 2 figures that you have supplied and specify the sources of uncertainty in your data gathering, handling, and calculations

Scope	Uncertainty Range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 2% but less than or equal to 5%	Data Gaps Assumptions Extrapolation Metering/ Measurement Constraints	Estimation techniques were used to fill missing data as follows: For refrigerants (3.2% of total scope 1 emissions), actual recharge amounts were unavailable. Refrigerant leakage was estimated using the capacity of units and an estimated leakage rate based on the type of system (provided by Climate Savers). Estimation using this technique was assumed to have an activity margin of error of 50%. For on-site use of natural gas at facilities, estimates were used to fill data gaps for less than 2% of all properties (0.5% of all scope 1 emissions). This estimation was assumed to have an activity margin of error of 20%. For on-site use of diesel fuel (8.9% of scope 1 emissions), only data on fuel purchases was available (not actual usage amounts) requiring us to assume that usage rates match purchase rates over time. Estimated use of on-site diesel is assumed to have an activity margin of error of 30%. For fuel use by company vehicles, emissions are based on complete fuel records. Using a sum of squares method, Garanti estimates uncertainty for scope 1 emissions at 3.1%. This estimate does not include any inherent uncertainty associated with the GHG protocol methodology.
Scope 2	Less than or equal to 2%	Data Gaps Assumptions Extrapolation	Facilities, which include branches, offices and other buildings, accounted for 92% of total electricity use for 2010. For all but 2% of facility electricity use we were able to rely on actual kwh usage figures. The missing 2% was estimated based on average

Scope	Uncertainty Range	Main sources of uncertainty	Please expand on the uncertainty in your data
		Metering/ Measurement Constraints	kwh usage per m2 for like properties. For this estimation, we assumed an activity margin of error of 25%. The remaining electricity use was for ATMs (8% of the total). For this, we relied on estimation using cost data and assigned an activity margin of error of 10%. Using a sum of squares method, Garanti estimates level of uncertainty at 0.93%. This estimate does not include any inherent uncertainty associated with the GHG protocol methodology.

8.6
Please indicate the verification/assurance status that applies to your Scope 1 emissions

Not verified or assured

8.7
Please indicate the verification/assurance status that applies to your Scope 2 emissions

Not verified or assured

8.8
Are carbon dioxide emissions from the combustion of biologically sequestered carbon (i.e. carbon dioxide emissions from burning biomass/biofuels) relevant to your company?

No

Page: 9. Scope 1 Emissions Breakdown - (1 Jan 2010 - 31 Dec 2010)

9.1
Do you have Scope 1 emissions sources in more than one country or region (if covered by emissions regulation at a regional level)?

No

9.2
Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By GHG type

9.2c
Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 metric tonnes CO2e
CO2	10310.78
CH4	12.87
N20	33.24
HFCs	346.57

Page: 10. Scope 2 Emissions Breakdown - (1 Jan 2010 - 31 Dec 2010)

10.1
Do you have Scope 2 emissions sources in more than one country or region (if covered by emissions regulation at a regional level)?

No

10.2
Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By business division

10.2a
Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2 metric tonnes CO2e
Bank branches, offices and other facilities	45353.82
ATMs	3912.19

Page: 11. Emissions Scope 2 Contractual

11.1
Do you consider that the grid average factors used to report Scope 2 emissions in Question 8.3 reflect the contractual arrangements you have with electricity suppliers?

Yes

11.2
Has your organization retired any certificates, e.g. Renewable Energy Certificates, associated with zero or low carbon electricity within the reporting year or has this been done on your behalf?

No

Page: 12. Energy

12.1
What percentage of your total operational spend in the reporting year was on energy?

12.2
Please state how much fuel, electricity, heat, steam, and cooling in MWh your organization has consumed during the reporting year

Energy type	MWh
Fuel	46380.10
Electricity	112422.50
Heat	0
Steam	0
Cooling	0

12.3
Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Lignite	.32
Diesel/Gas oil	5794.52
Motor gasoline	17875.78
Distillate fuel oil No 2	3796.19
Natural gas	18913.28

Page: 13. Emissions Performance

13.1
How do your absolute emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Increased

13.1a
Please complete the table

Reason	Emissions value (percentage)	Direction of change	Comment
Other: Inability to find competitively priced renewable energy this year	20	Increase	Garanti remains committed to purchasing renewable electricity for its own use when it is cost-competitive to do so. For 2009, Garanti used electricity from wind for slightly more than 20% of its total electricity use. For 2010, Garanti was unable to source renewable energy at a competitive price.
Change in output	9	Increase	Garanti's bank branches, the predominant piece of the company's carbon footprint, grew by roughly 9% in 2010. Without any intervention, the bank would expect this to grow total emissions by the same amount (see next item on reduction activities).
Emissions reduction activities	5	Decrease	In 2010, Garanti launched a number of emissions reduction activities which slowed our absolute increase in total emissions. While a total increase of 29% over 2009 was anticipated, the observed increase over adjusted 2009 emissions was actually 19%. As the 2009 inventory relied on significant use of estimation techniques to make up for limited data, Garanti does not have a precise understanding of how much the observed reduction comes from reduction activities versus other factors, such as data uncertainty. As such, half of this 10% has been attributed to each.
Other: Estimation uncertainty in previous year	5	Decrease	Garanti expects that roughly half of the 10 percentage point shortfall results from use of conservative estimates in 2009, which would have overstated actual emissions.

13.2

Please describe your gross combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Explanation
12.39	metric tonnes CO2e	unit total revenue	24.22	Increase	While experiencing an absolute increase in emissions, "revenue" decreased in 2010 by 4.3%. Thus, this metric inflates apparent emissions. As a bank, we consider assets under management a more useful denominator for an intensity measure, which we now use for our company-wide reduction goal. (This intensity metric is based on million $ of revenue)

13.3
Please describe your gross combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per full time equivalent (FTE) employee

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Explanation
3.6	metric tonnes CO2e	FTE Employee	19.9	Increase	Although we grew total number of branches by roughly 9%, we actually did so with a small decrease in total number of employees. Thus, this metric artificially inflates CO2e.

13.4
Please provide an additional intensity (normalized) metric that is appropriate to your business operations

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Explanation
690.08	metric tonnes CO2e	Other: billions in assets under management	.43	Increase	Using this metric we still experienced a slight increase in total emissions due to not repeating purchase of wind energy in 2010, compared to 2009. As announced earlier in this submission, we target to reduce 7% by end of 2012 against a baseline of 2010 using this intensity measure.

Page: 14. Emissions Trading

14.1
Do you participate in any emission trading schemes?

No, but we anticipate doing so in the next two years

14.1b
What is your strategy for complying with the schemes in which you participate or anticipate participating?

As part of an overall plan to reduce emissions from key sectors, new legislation could also allow Turkish companies to participate in the European Emission Trading System. As a financial institution, we would not expect to be regulated under this scheme. However, we believe such an event could pose significant opportunity for us by rapidly growing the market for related services, including acting as a broker for emissions rights and lending to emission-reducing projects (such as for renewable energy and energy-efficiency). Garanti intends to position as a leader in this emerging market across its broad base of customers. Many of our largest corporate clients are in energy-intensive sectors and would likely be required to participate in any trading scheme adopted by Turkey.

14.2
Has your company originated any project-based carbon credits or purchased any within the reporting period?

No

Page: 15. Scope 3 Emissions

15.1

Please provide data on sources of Scope 3 emissions that are relevant to your organization

Sources of Scope 3 emissions	metric tonnes CO2e	Methodology	If you cannot provide a figure for emissions, please describe them
Business travel	1324	The calculation was made using EPA passenger emissions factors and flight data from Garanti's travel agent. Each flight leg was assigned the appropriate emission factor based on the distance of the flight. The flight distance was multiplied by the following provided emission factors to arrive at the Scope 3 business air travel emissions. Short-Haul (483 km)- 0.17 kg CO2e/ passenger-km; Medium-Haul (>=483 km and <1127 km)- 0.14 kg CO2e/ passenger-km; and Long-Haul (>1127 km)- 0.12 kg CO2e/ passenger-km. From EPA Climate Leaders Optional Emissions from Employee Commuting, Business Travel and Product Transport (June 2008).	

15.2
Please indicate the verification/assurance status that applies to your Scope 3 emissions

Not verified or assured

15.3
How do your absolute Scope 3 emissions for the reporting year compare to the previous year?

Decreased

15.3a
Please complete the table

Reason	Emissions value (percentage)	Direction of Change	Comment
Emissions reduction activities	5	Decrease	Our efforts to promote e-learning and conferencing have led to a meaningful reduction in air travel, especially for domestic itineraries.

Module: Sign Off

Page: Sign Off

Please enter the name of the individual that has signed off (approved) the response and their job title

Ayca Paksoy, VP, Investor Relations