

Research Article

Sustainability and Innovative Solutions in the Financial Sector: The Success of Vakıf Participation Bank

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Abstract

Sustainability is becoming increasingly important in today's world to maintain environmental, social, and economic balances. Climate change, depletion of natural resources, and increasing social expectations necessitate the adoption of sustainability-oriented approaches in finance and banking, as in all sectors. Banks are not only financial service providers, but also strategic actors that support sustainable development. In this context, effective use of natural resources, digitalization, and environmentally friendly practices offer long-term benefits to both society and the sector. Innovative approaches of banks in sustainability studies play a critical role in reducing carbon footprint, increasing operational efficiency, and improving customer experience. In this study, a general framework for sustainable banking practices is presented and detailed with the Mobile Approval System project developed by Vakıf Participation Bank. The system in question contributes to sustainability by significantly reducing paper consumption by integrating technology into sustainability, minimizing resource use, and increasing operational efficiency. This innovative project of Vakıf Participation Bank presents the relationship between sustainability and digital transformation as a concrete success story.

Keywords: Sustainability, Digital Transformation, Green Transformation, Sustainable Finance

1. Introduction

The banking sector has made sustainability one of its primary goals due to the climate crisis, the Paris Agreement, and the increasing awareness among individuals about

sustainability [1]. The ultimate goal of the practices adopted by banks is to promote sustainability among institutions and individuals through green financing. Banks support companies' efforts to reduce their carbon footprints and provide incentives to companies and individuals who make progress in this area.

Through the services provided by the banking sector, companies are encouraged to use green financing to reduce their carbon footprints and expand the use of renewable and sustainable energy. Beyond the financial support offered by green financing, banks are also making technological advances aimed at achieving sustainability goals.

Thanks to technological advances in the banking sector, processes that require printing and paper, such as agreements and receipts, have been moved to electronic platforms. Banks have significantly reduced paper and other waste generated during banking transactions by transferring data and contracts to electronic formats. Similarly, developments in mobile banking have reduced carbon emissions by allowing customers to complete their transactions through mobile applications instead of going to bank branches. Mobile applications also include gamification features to involve individual customers in the green transition. These features aim to raise awareness among individuals about climate action and encourage them to reduce their carbon footprint. Just like companies, individual customers who support these initiatives are rewarded by banks as incentives. In addition to these efforts, banks promote technological developments in various sectors, including banking, through R&D support programs aligned with sustainability goals.

The banking sector's ability to reach a broad customer base allows it to contribute significantly to the global climate movement. With a strong awareness of sustainability, the sector aims to use its resources to educate and encourage its customers. Existing customers who already prioritize sustainability often choose banks that share their goals. This reciprocal relationship enables collaborative measures to combat the global climate crisis. For groups that have not yet adopted sustainability, banks provide information and incentives to encourage their participation in these efforts.

2. Related Works

Developments in technology have not only altered consumption habits but also led to an increase in consumption levels. This has accelerated the depletion of limited natural resources. However, sustainable consumption is crucial for ensuring the continuity of human life and the efficient and economical use of natural resources.

The concept of sustainability, with historical roots tracing back to Ancient Rome and defined as "the capacity to continue its existence without interruption or decrease" was first formally addressed in the literature at the United Nations (UN) conference held in 1992. The work initiated during this conference is widely regarded as the starting point for studies in sustainable consumption [2] [3]. In Turkey, a study that guides the

sustainability efforts of the finance and banking sector was presented with the "Sustainability Guide for the Banking Sector" prepared by the Turkish Banks Association (TBB) in 2014 and updated in 2021 [4]. In addition, the Capital Markets Board, the Ministry of Trade of the Republic of Turkey, the Ministry of Treasury and Finance of the Republic of Turkey, the Banking Regulation and Supervision Agency, the Central Bank of the Republic of Turkey, and commercial banks are carrying out studies on the scope of compliance with sustainability strategies, working groups on sustainability, incentive and guidance studies on green finance, and the publication of strategic plans on sustainability in the field of finance and banking in Turkey [5]. In addition, by the EU Green Deal and the "Adaptation Package for 55", the Turkish Banking Sustainability Strategy Action Plan has been created for the period 2022-2025, with 3 goals and 6 targets, to ensure that our banking sector achieves the necessary adaptation before 2026 [6].

Sustainability aims to establish a balance between economic growth, efficient use of natural resources, environmental protection, and social welfare. In the banking sector, sustainability can be achieved through green financing, environmentally friendly operational processes, and strategies that benefit both nature and society [7]. Banks, as the primary source of financing for individuals and businesses, hold significant influence over the sustainable consumption of natural resources due to their reach across all segments of society. Consequently, banks' support for projects with sustainable objectives can not only enhance their profitability but also provide a competitive advantage [8].

The sustainability approach adopted by banks enables them to carry out sustainability-related activities such as issuing green bonds, using renewable energy, reducing paper consumption, and corporate social responsibility projects. In this context, as a result of a survey conducted by the BAT with the participation of the member banks, it was determined that approximately 90% of the banks have future targets for sustainable financing, 74% for green financing, and 68% for social financing. In addition, within the scope of this research, it was determined that most of the banks utilize bonds and loans in sustainability and the distribution of the resources utilized is shared in Figure 1 [9].

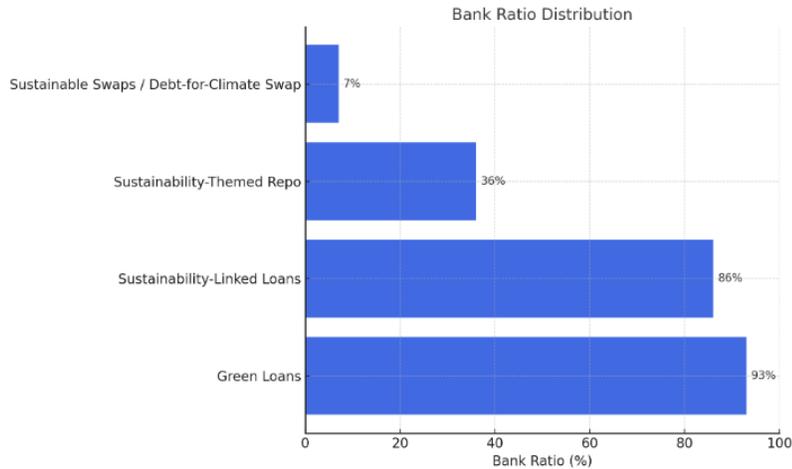


Figure 1: Distribution of Resources Utilized by Banks for Climate Finance (%)

Additionally, banks can contribute to operational sustainability by reducing the consumption of natural resources such as energy, paper, and water. In this context, technology plays a crucial role in enhancing operational efficiency within the banking sector and in supporting sustainability initiatives. Specifically, technologies such as artificial intelligence (AI), robotic process automation (RPA), blockchain, and cloud computing present significant opportunities in sustainability, including accelerating operations, minimizing errors and improving energy efficiency [5] [10].

In addition to all this, digital banking is at the forefront of sustainability. Digital banking services such as mobile and internet branches support sustainability by reducing the use of physical branches and greatly reducing the consumption of energy and other natural resources [11].

On the other hand, traditional banking processes, such as account statements, loan application forms, transaction slips, and receipts used in customer information increase the use of paper. This situation increases the consumption of natural resources and operational costs and causes a serious carbon footprint. By integrating technology into sustainability practices, paper consumption has been substantially reduced. For instance, instead of sending physical statements, customers now receive digital statements via email or mobile banking. Additionally, electronic signatures are used for loan applications, contracts, and other documents.

3. Sustainable Development Goals and the Banking Sector

Sustainable Development Goals consist of 17 universal goals determined by the United Nations in 2015, aiming to ensure peace, prosperity, and sustainability in the world by 2030. These goals cover the work in the main areas listed in Figure 2.



Figure 2: Sustainable Development Goals

To achieve sustainable development goals, all sectors and individuals contribute to achieving the goals by carrying out various studies within this scope. While governments support this process by developing sustainable policies and legal regulations, private sector institutions contribute to achieving the goals by developing innovative solutions and projects with green technologies. These projects are supported and supervised as a priority area with funds provided by national and international institutions. These funds contribute to achieving effective results and disseminating projects by providing financial resources for the planning, implementation, and sustainability processes of the projects. While national funds are generally provided by governments and local institutions, international funds are provided by global institutions such as the United Nations, the World Bank, the European Union, and others.

The banking sector is of critical importance in achieving sustainable development goals due to its large customer base and central role in other sectors. Policies and practices that promote environmental, social, and economic sustainability ensure long-term success for the banking sector while providing value for customers, employees, and institutions. Banks are working to evaluate sustainability not only as a responsibility but also as an opportunity that offers a competitive advantage. In this context, digital transformation, process optimization, and efficient use of resources are among the basic strategies that support sustainability goals.

The studies carried out within the scope of sustainability studies in banks provide advantages to banks in terms of environmental sustainability and operational efficiency such as reducing paper use or energy consumption, while also providing significant benefits to the environment. Thanks to digital banking applications, electronic document management systems, and the widespread use of online transactions, paper-based processes are reduced, thus preventing waste of natural resources and reducing carbon

footprint. Therefore, the studies and transformations of banks in this direction provide a competitive advantage by improving customer experience while reducing environmental impacts. One of these sustainability studies is the Mobile Approval System project carried out by Vakıf Participation Bank. This project, which aims to contribute to sustainability goals by digitalizing banking operations, has significantly reduced the time, resource, and environmental costs incurred in transactions carried out with traditional methods.

3.1. Sustainability Studies at Vakıf Participation Bank: Mobile Approval System Project

The Mobile Approval System is an innovative technology that aims to increase efficiency in operational processes and support sustainability by providing a digital solution to traditional banking transactions. This system has replaced paper-based processes and introduced digital approval mechanisms, thus allowing transactions to be carried out in a faster, more secure, and more environmentally friendly manner. Designed with a parametric structure, the system has increased the efficiency of banking operations by offering adaptable flexibility according to transaction amounts and customer competencies. In addition, critical technical requirements such as data security, customer notification processes, and keeping transaction records in an electronic environment were successfully met during the development of the Mobile Approval System Project.

The table below shows the benefits of Vakıf Participation Bank's Mobile Approval System project in terms of sustainability and operational efficiency.

Table 1: Main Achievements of the Project

| Area of Achievements | Explanation | Results |
|---------------------------------|--|---|
| Time Saving | Reducing operational time through the digitalization of manual processes. | In 11 months, 286,000 transactions were processed, resulting in a total savings of 14,300 hours with a 3-minute saving per transaction. |
| Environmental Benefit | Reducing environmental footprint by replacing paper receipts with digital approval. | A major reduction in paper usage, a positive contribution to nature. |
| Operational Efficiency | Elimination of processes such as end-of-day reconciliation and archiving, reducing the error rate. | Saving 35-40 minutes per branch per day and minimizing the risk of incorrect transactions. |
| Customer Experience Improvement | Providing customers with a fast and reliable transaction process via a digital platform. | Transactions under 185,000 TL were completed with mobile approval; 286,000 transactions were completed successfully in 11 months. |

| | | |
|-------------------|---|---|
| Cost Reduction | Reducing operational costs with the digitalization of processes. | Significant savings in paper, ink, and archiving costs were achieved. |
| Use of Technology | Supporting the digitalization strategy of the bank by integrating parametric structures and digital approval processes. | Internal bank digitalization has accelerated; Flexibility was provided for the processes to be expanded to other screens. |

The Mobile Approval System has implemented many innovative applications in terms of sustainable banking. This project, which focuses on digitalization, has significantly reduced paper consumption by adopting an environmentally friendly approach and contributed to the protection of natural resources. At the same time, it has achieved operational excellence by completing banking transactions faster, more securely, and at lower costs. In this way, both efficiency increases and cost savings have been achieved in business processes. The system, developed with a customer-focused approach, has increased customer satisfaction and strengthened trust in the bank by offering innovative services through digital platforms. The Mobile Approval System offers an effective model that brings together digital transformation and sustainability goals and demonstrates that environmental, economic, and social benefits can be achieved simultaneously.

4. Results

The finance and banking sector plays a critical role in achieving sustainable development goals. Sustainability is not only limited to reducing environmental impacts and using resources more efficiently but also provides the sector with a competitive advantage by increasing operational efficiency, cost savings, and customer satisfaction. In this context, the Mobile Approval System implemented by Vakıf Participation Bank is an important example of the contributions of digitalization to sustainable banking. Environmental benefits have been achieved by reducing paper consumption, efficiency has been increased in banking processes with customer-focused digital transformation strategies and tangible gains have been achieved. In particular, thanks to this project, the prevention of the cutting down of thousands of trees demonstrates a tangible and measurable success of sustainability in the finance sector. As a result, such innovative approaches will guide the sustainability and digitalization journey of the banking sector in the future. In addition to the positive effects of technology use in banking on sustainability, it is also discussed due to the intensive consumption of natural resources. Therefore, for banks to achieve their sustainability goals, they need to carefully integrate technology in a way that supports society, the environment, and the economy in terms of sustainability.

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