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## A comparison of three mega bank groups' strategies towards a low carbon economy focusing on activities of their securities companies

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**Abstract:** This paper analysed Japan's top three mega bank groups' activities towards a low carbon economy by focusing on their securities companies. The three groups, namely MUFG, SMFG and MHFG, have enormously influenced, not only in Japan's economy, but the global economy owing to their sizes. Overall, this paper confirmed that the three mega bank groups have been trying to promote environmental business through their services as leading financial institutions. Moreover, they have utilized not only financial products, but other various environmental activities as well. When comparing their comprehensive activities, their activities are similar but this paper revealed clear differences among their strategies. The defining characteristic of each group's strategy is: MUFG is likely to focus heavily on the project development and emission trading business; SMBC seems to focus on eco funds; and MHFG might not work on climate change issue very hard owing to their system troubles. In this paper, various promising activities have been identified, all of which should be appreciated equally with SRI. The three mega bank groups surely have powers that can change the social systems. It would be beneficial for both the three groups and society to continue to expand their activities for a low carbon economy by pursuing their own strategy. Looking back at history, humankind has improved quality of life by making innovation happen, such as the industrial and green revolutions. Hence, it is hoped that three groups will provide their companies with enough funds to promptly and efficiently stipulate the development of clean projects and/or the invention of innovative technologies. In some sense, inducing innovation is thought of as the most important key for clearing up the root of the climate change issue.

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## 1. Introduction

Due to increasing carbon dioxide concentration, it has been expected that climate change would have negative environmental and socio-economic impacts in the long run. A report of Working Group I of the Intergovernmental Panel on Climate Change Fourth Assessment Report (IPCC 4AR) (IPCC, 2007) states that most of the observed increases in global average temperatures since the mid-20th century are likely caused by anthropogenic greenhouse gas (GHG) emissions. The average annual temperature, in fact, has risen by 0.74 degree centigrade over the last hundred years (IPCC, 2007). Although there are still a lot of uncertainties about the mechanisms of the climate system, it is predicted that existing disadvantages resulting from global warming will be serious (UNDP, 2008).

From the standpoint of risk management, it is very important for firms to properly address social and environmental issues because, reflecting the aforementioned situation, the demand for Corporate Social Responsibility (CSR) has been increasing worldwide. In other words, firms cannot ignore social and environmental issues due to the trend changes that consumers prefer, ones that contribute to the mitigation of the negative impacts of environmental problems (Nakamura, 2006). Likewise, there is a movement that investors should consider social aspects of their choice of investments. Vogel (2002) states that it sometimes is better for firms to address social issues by acceding to pressure from stakeholders than to counter the pressure. This should then ensure the rise of Social Responsible Investment (SRI).

SRI is an investment strategy which decides investments based on both financial and non-financial information. It contains three functions: (i) screening of portfolios, (ii) stakeholders' activities and (iii) investments in community development financial institutes (Domini, 2002). Generally, investors require firms to promote environmental management, to comply with regulations, and to enhance corporate governance. SRI is carried out by both corporate investors and individuals, usually through mutual funds. There are some barriers to corporate investors adopting SRI, for example, concerns about the investment performance and legal restrictions (Sparkes, 2008).

This paper analyses Japan's top three mega bank groups' activities towards a low carbon economy by focusing on their securities companies. Those three groups, namely Mitsubishi UFJ Financial Group, Inc. (MUFG), Sumitomo Mitsui Financial Group, Inc. (SMFG), and Mizuho Financial Group, Inc. (MHFG), have enormous influence not only in Japan's economy but also global economy owing to their sizes. While many articles argue that Japan's SRI is not as active as those in western countries (e.g., Adachi, 2007), aside from SRI, there must be various activities that help with the promotion of a low carbon economy. This paper, therefore, aims to identify those activities and reveal the three groups' different strategies in order to enhance the fosterage of activities towards a low carbon economy. This paper consists of three sections: Section 2 reviews the three mega bank group's basic information and current practices; their strategies are discussed based on literature reviews and comparisons in Section 3; followed by closing summary and remarks in Section 4.

## 2. Activities towards for a low carbon economy

### 2.1. Mitsubishi UFJ Financial Group, Inc. (MUFG)

#### 2.1.1. Basic information

MUFG is a Japanese bank holding company headquartered in Chiyoda-ku, Tokyo, Japan. It holds capital of about 2.1 trillion JPY as of March 31, 2011 (see Table 1). It is one of three mega bank groups in Japan and the 52nd largest company in the world according to Forbes Global 2000 rankings in 2011 (Forbes website).

**Table 1. Company profile of MUFG (As of Mar. 31, 2011)**

Company Name		Mitsubishi UFJ Financial Group, Inc.
Business Description		MUFG manages the affairs of its subsidiaries within the group and the business of the group as a whole along with all relevant ancillary business.
Chairman:		Takamune Okihara
President & CEO		Katsunori Nagayasu
Address		7-1, Marunouchi 2-Chome, Chiyoda-ku, Tokyo, Japan
Date of Establishment		April 2, 2001
Amount of Capital		2, 137 billion yen
Stock Exchange Listings		Tokyo, Osaka, Nagoya, New York Stock Exchange
Major group companies	Bank	The Bank of Tokyo-Mitsubishi UFJ, Ltd. Mitsubishi UFJ Trust and Banking
	Securities company	Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.
	Credit card company	Mitsubishi UFJ NICOS Co., Ltd.
	Leasing company	Mitsubishi UFJ Lease & Finance Co., Ltd.
	Consulting company	UFJ Credit Co., Ltd.

Source: MUFG website

#### 2.1.2. MUFG's activities

In this section, MUFG's activities for a low carbon economy are briefly explained. MUFG is likely to consider a low carbon economy by looking at group's philosophy (5) as shown below:

##### **Group's Management Philosophy**

- (1) We will respond promptly and accurately to the diverse needs of our customers around the world and seek to inspire their trust and confidence.
- (2) We will offer innovative and high-quality financial services by actively pursuing the cultivation of new business areas and developing new technologies.
- (3) We will comply strictly with all laws and regulations and conduct our business in a fair and transparent manner to gain the public's trust and confidence.
- (4) We will seek to inspire the trust of our shareholders by enhancing corporate value through continuous business development and appropriate risk management, and by disclosing corporate information in a timely and appropriate manner.
- (5) We will contribute to progress toward a sustainable society by assisting with development in the areas in which we operate and conducting our business activities with consideration for the environment.**
- (6) We will provide the opportunities and work environment necessary for all employees to enhance their expertise and make full use of their abilities (MUFG website).

## CSR activities

According to MUFG's CSR Report 2011, eight project teams comprised of employees are organized and carry out specific initiatives based on the MUFG Environmental Action Policy. An overview of the activities for FY2011 is shown in Table 2. Most activities are closely related to the contribution to realising a low carbon economy.

**Table 2. Eight environmental plans of FY2011**

Project Team	FY2011 Plans
Individuals	<ul style="list-style-type: none"> <li>- Promote eco-equipment and eco-housing loans.</li> <li>- Study and promote new financial products related to eco-products.</li> <li>- Promote the elimination of paper use.</li> </ul>
Domestic Corporations	<ul style="list-style-type: none"> <li>- Further develop and promote financial products and schemes.</li> <li>- Provide more information to customers (via seminars, etc.) and bolster activities proposing solutions to clients' environment-related management issues.</li> <li>- Build know-how and hold workshops on saving energy in real estate field.</li> </ul>
Pension Funds	<ul style="list-style-type: none"> <li>- Promote SRI outside the company through seminars, lectures, etc.</li> <li>- Promote initiatives by ESG research office.</li> </ul>
Overseas	<ul style="list-style-type: none"> <li>- Demonstrate MUFG's comprehensive capabilities, starting with environmental technology transfer and CDM consulting.</li> <li>- Expand renewable energy-related project finance.</li> </ul>
Credit Screening	<ul style="list-style-type: none"> <li>- Consider detailed screening from environmental and social perspectives, based on Equator Principles.</li> </ul>
Markets	<ul style="list-style-type: none"> <li>- Research emissions trading market trends, bolster related systems.</li> <li>- Make progress on initiatives in European market (EU-ETS).</li> </ul>
Internal	<ul style="list-style-type: none"> <li>- Promote energy-conservation for the overall Group.</li> </ul>
Social Contributions	<ul style="list-style-type: none"> <li>- Promote Group collaborative activities.</li> <li>- Enhance local contribution activities at each office.</li> </ul>

\* Activities contributing to a low carbon economy are written in green.

Source: MUFG's CSR Report 2011

### 2.1.3. Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.'s activities

Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. (MUMSS) is one of group companies under MUFG and a financial services company, one of the largest in Japan measured by assets. MUMSS was formed in May 2010, as an MUFG majority-owned joint venture with Morgan Stanley's Japan operation (MUMSS website).

MUMSS's activities towards a low carbon economy may differ from other securities companies in Japan (at least) because MUMSS focuses exclusively on carbon credits trading business which is conducted by Clean Finance Committee.

MUMSS has established Clean Finance Committee (CEF-is this right? Should it be CFC?) who provide a one-stop service consulting for the development of Clean Development Mechanism (CDM) projects, Joint Implementation (JI) projects and trading of carbon credits (CERs, ERU, etc.) throughout the world. MUMSS is also one of major GHG reduction project developers that provide various information and guidance. This can be confirmed through CDM pipeline created by UNEP Riose Center as shown in Table 3. Furthermore, MUMSS has created many CDM

methodologies, which attests that MUMSS strongly drives forward GHG reduction business as the creation of methodologies requires solid understanding of sciences and/or technologies (see Table 4). This would not be easy for a securities company without strong commitment.

According to MUMSS' website, whilst there are no eco funds, MUMSS sells World Bank Green Bonds (Climate Bonds Initiatives website). Instead of MUMSS, Mitsubishi UFJ Trust and Banking have dealt with SRI stuff in MUFG.

**Table 3. The numbers of registered CDM projects by project types**

Authorized Buyers	Total number of projects	Biomass energy	Coal bed/mine methane	EE own generation	EE supply side	Fossil fuel switch	Hydro	Landfill gas	Methane avoidance	Solar	Wind
MUMSS	36	11	1	1	2	1	9	2	7	1	1

Source: UNEP Risoe Center

**Table 4. Approved methodologies created by MUMSS**

Name of methodology	Title	Category
AMS-III.O.	Hydrogen production using methane extracted from biogas	Biogas Processing
AMS-III.AN.	Fossil fuel switch in existing manufacturing industries	Fuel Switch
AMS-III.AT.	Transportation energy efficiency activities installing digital tachograph systems to commercial freight transport fleets	Transportation
AM0004 (now ACM0006)	Grid-connected biomass power generation that avoids uncontrolled burning of biomass (NM0019, Thailand)	Renewable Energy (Biomass)
AM0013 (now ACM0014)	Avoided methane emissions from organic wastewater treatment (NM0039, Malaysia)	Waste Handling and Disposal
AM0025	Avoided emissions from organic waste through alternative waste treatment processes (NM0127, Indonesia)	Waste Handling and Disposal
AM0042	Grid-connected electricity generation using biomass from newly developed dedicated plantations (NM0133-rev, Thailand)	Renewable Energy (Biomass) and Plantation
AM0044	Energy efficiency improvement projects: boiler rehabilitation or replacement in industrial and district heating sectors (NM0144-rev, Mongolia)	Energy Efficiency (ESCO)
AM0054	Energy efficiency improvement of a boiler by introducing oil/water emulsion technology (NM0171, Pakistan)	Energy Efficiency
AM0081	Flare or vent reduction at coke plants through the conversion of their waste gas into dimethyl ether for use as a fuel (NM0265, China)	Renewable Fuel from Waste Gas
AM0099	Installation of a new natural gas turbine to an existing CHP plant (NM0344, Uzbekistan)	Energy Generation Efficiency Improvement

Source: UNFCCC website

## 2.2. Sumitomo Mitsui Financial Group, Inc. (SMFG)

### 2.2.1. Basic information

SMFG is a Japanese bank holding company headquartered in Chiyoda-ku, Tokyo, Japan. It holds capital of about 2.3 trillion JPY as of September 30, 2011 (see Table 5). It is one of three mega bank groups in Japan and the 96th largest company in the world according to Forbes Global 2000 rankings in 2011 (Forbes website).

**Table 5. Company profile of SMFG (As of September 30, 2011)**

Company Name		Sumitomo Mitsui Financial Group, Inc.
Business Description		Management of the affairs of subsidiaries within the group and relevant ancillary
Chairman:		Masayuki Oku
President & CEO		Koichi Miyata (Director at SMBC)
Address		1-2, Marunouchi 1-chome, Chiyoda-Ku, Tokyo, Japan
Date of Establishment		December 2002
Amount of Capital		2,337.8 billion yen
Stock Exchange Listings		Tokyo, Osaka, Nagoya, New York Stock Exchange
Major group companies	Bank	Sumitomo Mitsui Banking Corporation
	Securities company	SMBC Nikko Securities IMC
	Credit card company	Sumitomo Mitsui Card Company, Limited
	Leasing company	Sumitomo Mitsui Finance & Lease Co., Ltd.
	Consulting company	The Japan Research Institute, Limited

Source: SMBC website

### 2.2.2. MHFG's activities

In this section, MHFG's activities for a low carbon economy are briefly explained. MHFG's commitment for a low carbon economy cannot be confirmed by looking at the "Our Mission" statement as indicated below:

SMFG's follow "Our Mission" below as a universal guide for Group management and position this mission as the anchor for corporate action.

- (1) To provide optimum added value to our customers and together with them achieve growth.
- (2) To create sustainable shareholder value through business growth.
- (3) To provide a challenging and professionally rewarding work environment for our dedicated employees (SMFG website).

### CSR activities

According to SMFG's CSR report 2010, there are four categories of CSR activities based on the SMFG's "Our Mission". An overview of the activities for FY2011 is shown in Table 6. The group's activities for FY2011 seem not to be very efficient for the contribution to a low carbon economy.

**Table 6. SMFG's CSR activities for FY2011**

Customers	<ul style="list-style-type: none"><li>- Considerations of customer satisfactions.</li><li>- Cooperations with group companies to create new products/services.</li></ul>
Stakeholders/Markets	<ul style="list-style-type: none"><li>- Improvement of CSR website using mutual links, etc.</li></ul>

Social/Environment	<ul style="list-style-type: none"> <li>- <b>Hold environmental events.</b></li> <li>- <b>Energy conservation activities.</b></li> <li>- Reconstruction assistance to of Great East Japan Earthquake.</li> </ul>
Employees	<ul style="list-style-type: none"> <li>- Hold communication meetings among employees.</li> <li>- Improvement of data disclosure practices.</li> <li>- Dissemination of elderly nursing systems.</li> </ul>

\* Activities contributing to a low carbon economy are written in green.

Source: SMFG's CSR Report 2010

In addition, SMFG's shares have been included in the following major global SRI indexes (as of March 31, 2010):

- Dow Jones Sustainability Asia/Pacific Index (DJSI Asia Pacific),
- Dow Jones Sustainability Asia/Pacific 40 Index(DJSI Asia Pacific 40),
- FTSE4Good Global Index,
- FTSE4Good Global 100 Index,
- ESI (Ethibel Sustainability Index) Excellence Global,
- Morningstar Socially Responsible Investment Index (MS-SRI) (SMFG website).

### 2.2.3. SMBC Nikko Securities Inc.'s activities

SMBC Nikko Securities Inc. (SMBC Nikko) is one of group companies under SMBC which was acquired from Citigroup in 2009 (SMBC Nikko website).

SMBC Nikko believes financial institutions have significant responsibilities to establish systems that enable markets to appreciate the proactive efforts made by corporations to resolve a wide range of social issues (SMBC Nikko website). SMBC NIKKO is likely to choose to utilize SRI funds as a means of encouraging markets to execute own commitments.

To provide support for investors who wish to realize a clean environment (low carbon economy) through their investments, SMBC Nikko offers several financial products that contribute to the realization of a low carbon economy as shown in Table 7. In addition, SMBC Nikko sells Green Bonds which is the generic name used for various bonds offered by SMBC Nikko.

**Table 7. SMBC NIKKO's SRI Funds**

Date of opening	Name of fund	Balance as of 31 Mar.2010 (million JPY)
20 Aug. 1999	Nikko Eco Fund	16,379
20 Dec. 2006	Nikko DWS New Resource Fund	48,600
31 Aug. 2007	UBS (JP) Climate Change Fund	21,144
28 Apr. 2009	Nikko World Trust – Nikko Green New Deal Fund	38,100
19 Feb. 2010	SMBC Nikko World Bank Bond Fund	16,096
30 Jun. 2010	UBS (JP) Global Smart Grid Fund	No Data

Source: SMBC website and SMBC Nikko website



## 2.3. Mizuho Financial Group, Inc. (MHFG)

### 2.3.1. Basic information

MHFG is a banking holding company headquartered in the Ōtemachi district of Chiyoda-ku, Tokyo, Japan. It holds capital of around 2.2 trillion JPY as of June 21, 2011 (see Table 8). It is one of three mega bank groups in Japan and the 115th largest company in the world according to Forbes Global 2000 rankings in 2011 (Forbes website).

**Table 8. Company profile of MHFG (As of Jun 21, 2011)**

Company Name		Mizuho Financial Group, Inc. (MHFG)
Business Description		Promotion of improvement of overall operation and management of the Mizuho Financial Group.
Chairman:		Takashi Tsukamoto
President & CEO		Yasuhiro Sato
Address		Marunouchi 2-chome Building, 2-5-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8333, Japan
Date of Establishment		Jan 8, 2003
Amount of Capital		2,181,375 million yen
Stock Exchange Listings		Tokyo Stock Exchange (First section), Osaka Securities Exchange (First section), New York Stock Exchange*
Major group companies	Bank	Mizuho Bank
	Securities company	Mizuho Securities Co., Ltd.
	Credit card company	UC CARD Co., Ltd.
	Leasing company	Fuyo General Lease Co., Ltd.
	Consulting company	Mizuho Research Institute

Source: MHFG website

### 2.3.2. MHFG's activities

In this section, MHFG's activities for a low carbon economy are briefly explained. MHFG's commitment for a low carbon economy cannot be confirmed by looking at the "Brand slogan", "Brand vision" and "Brand promise" as shown below:

#### **Brand slogan**

"Challenge to discovery"

The slogan expresses the role Mizuho will play, not only to realize today's dreams, but also to discover new possibilities that lie ahead and to create a better future (MHFG website).

#### **Brand vision**

All senior executives and employees are working to increase the Mizuho brand's market penetration in order to realize Mizuho's "Brand Vision," which is to become. A financial partner that helps customers shape their future and achieve their dreams (MHFG website)

#### **Brand promise**

To customers ranging from domestic retail, corporate to international, Mizuho Financial Group is comprised of enterprising, spirited professionals who use creative and original methods to respond to customer needs today, while helping them achieve a bright future tomorrow. Because we want to play a meaningful role in our customers' lives by always being available to them, we offer a full range of leading-edge products and services designed to help them achieve their goals and make their lives more enjoyable and gratifying (MHFG website).

## CSR activities

According to MHFG's CSR Report 2011, MHFG focuses on three forms of CSR activities: (i) Maintain orderly credit conditions and protect depositors; (ii) Offer finance that shapes the future; and (iii) Enhance the quality of corporate management to achieve substantial progress in CSR activities. Detailed information of activities are shown in Table 9.

**Table 9. Three forms of CSR activities**

Maintain orderly credit conditions and protect depositors	<b><u>Intrinsic Business Responsibilities</u></b> <ul style="list-style-type: none"> <li>- Maintain trust and protect depositors,</li> <li>- Contribute to the healthy and sustainable development of the global economy by working to facilitate financing and making responsible loans and investments,</li> <li>- Earn the unwavering trust of customers and society as a whole by faithfully carrying out business activities through sound and appropriate management.</li> </ul>
Finance that Shapes the Future	<b><u>Environmental Initiatives</u></b> Recognizing that restricting and reducing impact on the global environment is a shared challenge, provide financial services that contribute to the prevention of global warming, etc., and reduce our own consumption of resources. <b><u>Support for Financial Education</u></b> Support financial education for the next generation on whom society's future depends to enable them not only to acquire financial awareness but also to cope with the issues they will face in their daily lives.
Enhance the quality of corporate management to achieve substantial progress in CSR activities	<b><u>Highly Responsive Communications</u></b> Realize responsive communications with stakeholders by further promoting information disclosure to ensure greater transparency in corporate activities. <b><u>Enhance Corporate Governance</u></b> Establish a corporate governance structure capable of earning a reputation for excellence in global financial and capital markets by maintaining fairness and integrity in our corporate activities.

\* Activities contributing to a low carbon economy are written in red.

Source: MHFG's CSR Report 2011

In addition, MHFG participates in international initiatives, namely the United Nations Global Compact and the UNEP Finance Initiative (CSR Report 2011).

### 2.3.3. Mizuho Securities Co., Ltd' activities

Mizuho Securities Co., Ltd. (MHSC) is one of group companies under MHFG and a financial services company which was established by a merger between Shinko Securities and the former Mizuho Securities in 2009 (MHSC website). Based on MHFG and MHSC websites, two financial products relating to a low carbon economy are confirmed; eco funds and a clean energy bond.

With respect to eco funds, according to the MHSC website, they handle only one eco fund, DIAM World Environmental Business Fund. The basic information of the fund is indicated in Table 10.

**Table 10. DIAM World Environmental Business Fund**

Fund Manager	DLIBJ Asset Management International
Research Provider	Impax Asset Management
Nickname:	White Bear
Launch Date:	Aug-07
Asset Size:	16.6 Billion Yen
Investment Principle	The fund mainly invests in environmentally-related equities globally. Target business: clean energy, water sources, waste treatment, etc.

Source: MHSC website and Association for Sustainable & Responsible Investment in Asia website

As for the clean energy bond, MHSC began to sell the bond issued by the African Development Bank (AfDB) in March 2010 (MHSC's news release, 2010). This move was to respond to investors who wished to aid global environmental issues and contribute to the economic growth of Africa (AfDB website).

### 3. Discussions

In the previous section, each group and its securities company's major activities for a low carbon economy were described. Those activities will be compared against the efforts of three mega bank groups in the following paragraphs.

By checking the three mega bank groups' activities towards a low carbon economy, it can be confirmed that they all address the promotion of environmental business comprehensively as major players in the financial field, both at national and international levels. This does not mean that they only perform in terms of finance, but they effectively run and join various environmental activities. From this it can be ascertained they must be trying to contribute to social problems including climate change issue in many ways.

Comparing their activities, mainly based on their CSR reports and websites, as stated above, illustrates that their activities are similar. However, there exist clear differences among their strategies. As can be seen from Table 11, while MUFG explicitly declare their commitment on environmental issues, SMBC and MHFG do not mention the environment in their slogans. It should be very important for companies to state this message as part of their corporate philosophy because, needless to say, philosophy should drive company ethos. In this light, MUFG's strong attitude towards sustainable and environmental issues is outstanding.

There are two kinds of activities that help promote a low carbon economy: activities with direct impacts on reducing Greenhouse Gases (GHGs) and activities with indirect impacts on reducing GHGs. When looking at direct impacts, while SMBC and MHFG merely conduct "energy saving activities" under ISO14001, MUFG aggressively facilitates the development of GHG reduction projects internationally, such as CDM/JI projects. This business is carried out by CFC, established under MUMSS, who are regarded as a pioneer of these projects in Japan. Again, MUFG's activity is superior. On the other hand, MUMSS is unlikely to handle funds that support SRI different from securities companies under SMBC and MHFG.

**Table 11. A comparison of three mega bank groups' activities towards a low carbon economy**

		MUFG		SMBC		MHFG	
Statement for a low carbon economy in Group Philosophy, Slogan or Mission		○	We will contribute to progress toward a sustainable society by assisting with development in the areas in which we operate and conducting our business activities with consideration for the environment.	×	None	×	None
Activities towards a low carbon economy	Direct impacts <sup>1)</sup>	◎	- The development CDM/JI projects - Energy saving activities	Δ	Energy saving activity	Δ	Energy saving activity
	Indirect impacts <sup>2)</sup>	◎	- SRI - Green bonds - Emission trading. - Environmental education.	◎	- SRI - Green bonds - Emission trading - Environmental education.	◎	- SRI - Green bonds - Emission trading - Environmental education..

1) Activities that directly reduce GHGs emissions (e.g., CDM/JI projects)

2) Activities that indirectly reduce GHGs emissions (e.g., SRI, eco funds, etc.)

Legend: ◎: Very significant ○: Significant Δ: Moderate ×: None

Regarding activities that indirectly contribute to a low carbon economy, it can be said that all the groups have almost the same activities but each group seems to have a different strategy. MUFG focuses heavily on the project development and emission trading business, SMBC focuses on eco funds and comparatively MHFG's activities do not appear as proactive. The reason that MHFG does not concentrate on a low carbon strategy is most likely as result of the significant system trouble that occurred in 2011 (Financial Service Agency website). After the Great East Japan Earthquake hit Japan, MHFG's settlement transactions, such as fund transfer services and automatic debit transactions, malfunctioned as a result of the group's computer system failures and they are focusing efforts to repair these network failures and need more time to resume activities for a low carbon economy.

#### 4. Conclusion

This paper analysed Japan's top three mega bank groups' activities towards a low carbon economy by focusing on their securities companies. Those three groups, namely MUFG, SMFG and MHFG, have enormously influenced, not only in Japan's economy, but the global economy owing to their sizes. This paper also attempted to identify activities for a low carbon economy and reveal the differences amongst three groups' strategies to enhance the fosterage of activities towards a low carbon economy.

Overall, this paper confirmed that the three mega bank groups have been trying to promote environmental business through their services as leading financial institutions. Moreover, they have utilized not only financial products, but other various environmental activities as well. When comparing their comprehensive activities, while their activities are similar, this paper revealed clear differences among their strategies. The defining characteristic of each group's strategy is: MUFG is likely to focus heavily on the project development and emission trading business; SMBC seems to focus on eco funds; and MHFG might not work on climate change issue very hard owing to their system troubles.

Japan is currently suffering through a hard time due to the Great East Japan Earthquake and its associated issues, particularly in the reconstruction of devastated areas and the treatment of Fukushima nuclear plant crisis. In a sense, this may be a chance for momentum to grow in support of efforts to proactively tackle environmental issues, and this will hopefully then lead to a greater willingness to work towards the realization of a sustainable society. Given this context, financial institutions must play a significant role in society.

In this paper, various promising activities have been identified, all of which should be appreciated equally with SRI. The three mega bank groups surely have powers that can change the social systems. Because there must be wide gaps between the three groups' SRIs and that of western countries, it would be beneficial for them to continue to expand their activities for a low carbon economy by learning methods from leading financial institutions and by pursuing their own strategy, simultaneously.

Looking back at history, humankind has improved quality of life by making innovation happen, such as the industrial and green revolutions. Hence, it is hoped that three groups will provide their companies with enough funds to promptly and efficiently stipulate the development of clean projects and/or the invention of innovative technologies. In some sense, inducing innovation is thought of as the most important key for clearing up the root of the climate change issue.

## Bibliography

- African Development Bank Group website, <http://www.afdb.org/en/news-and-events/article/african-development-bank-launches-its-clean-energy-bond-6400/>.
- Adachi, Eiichiro, 2007, “SRI in Asia - Its Trends and Challenges”, [http://www.adbi.org/files/session3\\_02\\_eiichiro\\_adachi.pdf](http://www.adbi.org/files/session3_02_eiichiro_adachi.pdf).
- Association for Sustainable & Responsible Investment in Asia, [http://www.asria.org/portal/SRI\\_Fund/Japan\\_Fund/1203049163](http://www.asria.org/portal/SRI_Fund/Japan_Fund/1203049163).
- Climate Bonds Initiative website, <http://climatebonds.net/resources/bonds-issued/>.
- Domini, Amy, “Socially Responsible Investing: Making a Difference and Making Money”. Kaplan Publishing, New York.
- Financial Service Agency website, <http://www.fsa.go.jp/en/news/2011/20110531-1.html>.
- Forbes website, Global 2000 Leading Companies, <http://www.forbes.com/global2000/list/>.
- Hill, P. Ronald, Thomas Ainscough, Todd Shank, and Daryl Manullang (2007) “Corporate Social Responsibility and Socially Responsible Investing: A Global Perspective”, *Journal of Business Ethics*, Vol.70:165–174.
- IPCC (2007) Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Geneva, IPCC.
- Japan’s SRI Annual Report 2009, Social Investment Forum Japan [http://www.sifjapan.org/document/nenpo09\\_jp.pdf](http://www.sifjapan.org/document/nenpo09_jp.pdf).
- MHSC Annual Report 2011, [http://www.mizuho-sc.com/english/company/financial/financial\\_results/ar/pdf/ar\\_2011.pdf](http://www.mizuho-sc.com/english/company/financial/financial_results/ar/pdf/ar_2011.pdf).
- MHFG CSR Report 2011, [http://www.mizuho-fg.co.jp/english/csr/report/list/2011/pdf/2011\\_all.pdf](http://www.mizuho-fg.co.jp/english/csr/report/list/2011/pdf/2011_all.pdf).
- MHFG website. <http://www.mizuho-fg.co.jp/english/index.html> (accessed 17 March 2012).
- MHSC website. <http://www.mizuho-sc.com/index.html>.
- Mitsubishi Morgan Stanley Securities Co., Ltd. website. <http://www.sc.mufig.jp/english/index.html>.
- Mizuho Securities’ news release, 2010, “Selling the Clean Energy Bond issued by African Development Bank”, [http://result.www.mizuho-sc.com/i-viewer\\_s/?p\\_no=1&m\\_p=3&p\\_id=43870&file\\_name=http%3A%2F%2Fwww.mizuho-sc.com%2Fcompany%2Fnewsrelease%2F2009%2Fpdf%2F20100308\\_01\\_jp.pdf&t=2010%E5%B9%B4%E6%9C%88%E6%97%A5%E5%90%84%E4%BD%8D%E3%81%BF%E3%81%9A%E3%81%BB%E8%A8%BC%E5%88%B8%E6%A0%AA%E5%BC%8F%E4%BC%9A%E7%A4%BE%E3%82%A2%E3%83%95%E3%83%AA%E3%82%AB%E9%96%8B...&kw=%E3%82%AF%E3%83%A%E3%83%BC%E3%83%B3%E3%82%A8](http://result.www.mizuho-sc.com/i-viewer_s/?p_no=1&m_p=3&p_id=43870&file_name=http%3A%2F%2Fwww.mizuho-sc.com%2Fcompany%2Fnewsrelease%2F2009%2Fpdf%2F20100308_01_jp.pdf&t=2010%E5%B9%B4%E6%9C%88%E6%97%A5%E5%90%84%E4%BD%8D%E3%81%BF%E3%81%9A%E3%81%BB%E8%A8%BC%E5%88%B8%E6%A0%AA%E5%BC%8F%E4%BC%9A%E7%A4%BE%E3%82%A2%E3%83%95%E3%83%AA%E3%82%AB%E9%96%8B...&kw=%E3%82%AF%E3%83%A%E3%83%BC%E3%83%B3%E3%82%A8).
- MUFG CSR Report 2011. <http://www.mufig.jp/english/csr/csrreport/>.
- MUFG website. <http://www.mufig.jp/english/> (accessed 15 March 2012).
- Nakamura, Hisato (2006) “Discussion on Socially Responsible Investment”. *KEIEIRONSUYU*, Vol.68: pp.67-78.

- Sakuma, Kyoko, Ce'line Louche (2008) "Socially Responsible Investment in Japan: Its Mechanism and Drivers", *Journal of Business Ethics*, Vol. 82(2): 425-448.
- SMBC Annual Report 2010. [http://www.smfg.co.jp/english/investor/library/annual/h2203annu\\_pdf/h2203\\_e\\_00.pdf](http://www.smfg.co.jp/english/investor/library/annual/h2203annu_pdf/h2203_e_00.pdf).
- SMBC Nikko Securities Inc. CSR Report 2011, [http://www.smbcnikko.co.jp/company/pdf/csr\\_report/report\\_all.pdf](http://www.smbcnikko.co.jp/company/pdf/csr_report/report_all.pdf).
- SMBC Nikko Securities Inc. website, <http://www.smbcnikko.co.jp/en/index.html>.
- SMFG CSR Report 2010. <http://www.smfg.co.jp/english/responsibility/report/pdf/2010/all.pdf>.
- SMFG website. <http://www.smfg.co.jp/english/> (accessed 16 March 2012).
- Social Investment Forum Japan's website, <http://www.sifjapan.org/english/index.html>.
- Sparkes, Russel (2008) *Socially Responsible Investment. Handbook of Finance*, Wiley.
- United Nations Development Program (UNDP) (2008) *Human Development Report 2007/2008: Fighting climate change: Human solidarity in a divided world*. New York, UNDP.
- UNEP Risoe Centre, CDM pipeline overview, <http://www.cdmpipeline.org/>.
- UNFCCC website, CDM methodologies, <http://cdm.unfccc.int/methodologies/index.html>.
- Vogel, David (2005) "The Market for Virtue: The Potential and Limits of Corporate Social Responsibility." *Brookings Institution Press*, Wasignton DC: 222 pp.