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Shariah Governance and Regulatory Aspects of Takaful

Kazi Md. Mortuza Ali

Introduction

Every takaful scheme is and intended to be a legally binding agreement between the participants and the takaful operator and between the participants. Thus the law of contract is the very basis of the takaful operation. There are social and economic aspects of takaful which set it apart from tangible goods. Takaful operators, in effect serve as trustee of participants fund. Therefore, it is necessary to protect the best interests of participants, shareholders and all related stakeholders. Regulations and supervision of takaful industry is a practical necessity. In this paper, we will discuss the laws of contract, Sharia governance, and regulatory aspects of takaful operation.

Shariah Principles of the laws of contract

The simple definition of a contract is that it is a legally binding agreement. In other words a contract is an agreement enforceable at law. As a general rule, all agreements are binding to law unless they fall under one of three exceptions:

- a) One can not be forced in to making contract, if it is not legally binding.
- b) Agreements between members of a family or friends relating to purely social or domestic matters.
- c) Agreements which are void abinitio and no legal consequences can arise from entering into them.

The essentials of a valid contract are as follows:

- a) The parties to the contract must have contractual capacity
- b) The object of the agreement must be lawful
- c) There must be valid offer and acceptance
- d) There must be a legally binding agreement
- e) Legal formalities if any are required to be complied with
- f) There must be some consideration

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Shariah scholars do not invalidate these essentials of a valid contract. However we will discuss some of the Shariah aspects of valid contract. In an Islamic financial transaction, validity of the contract is important in determining whether a transaction be considered Halal or Haram. According to the majority of jurists, there are only two possible rulings on the status of a contract: valid and invalid (Shahi or Gayer Sahi). A valid contract from an Islamic view point is one in which all the essential conditions of contract are fulfilled. Valid (shahi) contract establishes all the legal implications the Shariah has assigned in a contract of that type. For example, the buyer attains the exclusive right to possess and utilize the bought asset, when the seller becomes entitled to the consideration. The majority of jurists hold the view that the effectiveness of a valid contract may be suspended until the occurrence of a future event.

A contract is invalid which violates the Shariah conditions of the contract. From the Sharia point of view, an invalid contract does not produce the legal effects of the contract. There is no exchange of financial rights and responsibilities due to it. The buyer does not have any right to dispose off the assets, while the seller cannot possess the income realized out of invalid sale transaction. Some of the factors which render a contract invalid are:

- a) If the sold item is prohibited by the Shariah
- b) If the asset is not fully possessed by the seller
- c) If there is gharar (excessive uncertainty) regarding delivery date, price, etc.
- d) If the parties involved in the contract do not qualify the legal eligibility to execute contract.

The Hanafi school of thought classifies contracts into three categories. These are (a) Shahi, (valid) Fasid (irregular) and Batil (void). According to this classification "Fasid" is an intermediary class between Shahi and Batil. If the defect in a fasid contract can be rectified it becomes a valid contract. If the defect is fundamental and cannot be rectified, it becomes void or batil. Batil is a contract that is invalid due to a defect in any of the essential elements fundamental to a valid contract. A fasid contract on the other hand is not valid because it contains an element of some external prohibited factor attached to the fundamental elements of valid contract.

Since the defect element is not fundamental one, the contract is irregular but rectifiable by removing the external factor attached to fundamental elements. For example, when an insane person sells pork for a payment of wine to another drunk person the contract is absolutely void. But if one gram of gold is exchanged with two grams of gold the contract is irregular. This is because of existence of increment in weight. If and when this increment is removed, the contract becomes valid.

There are several factors which lead to an irregular contract. These are

- a) Selling essential items which will cause harm to seller
- b) Ambiguity regarding time of delivery, price, quantity etc.
- c) Insufficient information or lack of information regarding quantity, price, surety, delivery time etc.
- d) Existence of an element of riba makes a contract irregular
- e) Existence of an invalid condition (inconsistent with nature and implication of the contract)
- f) Existence of duress (ikrah) of lower grade.

An Islamic insurance/ takaful contract must fulfill the following requirements to be valid:

- a) There must be an offer (ijab) and an unqualified acceptance (kabal) of that offer. However, the takaful contract is contract of donation based on mutual help and mutual protection. Therefore, takaful contract is a contract between those who are giving and receiving protection at the same time and the takaful operator. The takaful contract defines a unique relationship between the takaful operators and participants. It requires takaful operators to duly observe fundamental obligations towards participants and other stakeholders.
- b) The parties to a contract can be individual, group or legal entities, if they have the legal capacity to enter into the contract. A takaful contract fulfills this criteria
- c) The object of the contract refers to the subject matter. In case of takaful contract, the subject matter is risk coverage.
- d) The object must be known to the contacting parties in terms of nature, quality, quantity and delivery. This is why a takaful contract has to be transparent.
- e) A takaful contract must be binding by Shariah laws

There is no insurer-insured relationship between takaful participants and takaful operator. Takaful contract is essentially concluded between a participant and other participants with the purpose to provide mutual help and mutual protection. This is unilateral contract wherein the consent of the recipient is not required. In a unilateral contract only one party makes a promise to donate for creating a common fund (tabarru).

Tabarru is initially at the discretion of the donor. Muslim scholars have permitted commitment to tabarru in takaful products in order to promote cooperation which takaful aims to achieve. The payment of the compensation and or financial aid to the participants is made from the common fund created from donation. It is permissible to make conditional donation (hibah-bi-shari). Donation is a non-commercial contract but this is linked to commercial venture of the operator.

Apart from donation contract, in takaful there is contract of engagement between participants and takaful operator. This is called mudarabah contract wherein the takaful participants provide the capital (the collected contribution) and the takaful operators provide the management service. There can be also Wakalah contract wherein the takaful participants create the fund and authorize the takaful operator to manage the fund and related activities on behalf of the fund. The operators act as fund manager in exchange of fixed fee paid up front. Performance fee may also be paid based on certain benchmark in relation to surplus. Surplus is defined as the balance outstanding after the payment of all claims to participants and relevant expenses. Some scholars advocate the trust concept wherein the participants as the settlors pay contribution to the trustee (operator) for the benefit of beneficiaries which may include the settlors themselves.

Shariah Governance system and role of Shariah Council

The takaful contract defines a unique relationship between the takaful operators and participants. It requires takaful operators to duly observe fundamental obligations toward participants, particularly in terms of adhering to Shariah principles, undertaking fiduciary duties and meeting prudential standards. In order to ensure compliance with Shariah rules and principles, it is necessary to develop a Sharia Governance system in takaful operation.

Shariah Governance system refers to the set of institutional and organizational arrangements through which a takaful operator needs to ensure that there is effective independent oversight of Sharia compliance. A key characteristic of independence is the ability to exercise sound judgment and views without any influence from any quarter. While carrying of his/her duties a member of the Shariah Council/Board should always have complete moral, intellectual and professional independence.

Islamic Financial Services Board (IFSB) has prescribed certain guiding principles on Shariah Governance system for institutions offering Islamic financial services. A takaful operator can follow these guiding principles to ensure Sharia compliance. These principles are as follows:

- a) The concerned Shariah council must have clear terms of reference regarding its mandate and responsibility. There can be a sound code of ethics and conduct that would enhance the integrity, professionalism and credibility of the members of the Shariah council.
- b) The takaful operator shall ensure that any person mandated with overseeing the Sharia governance system (SGS) fulfills acceptable fit and pooper criteria.
- c) The takaful operator shall facilitate continuous professional development of persons serving on its Shariah council as well as its internal Shariah Compliance & Audit department.
- d) There should be a formal assessment of the effectiveness of the Shariah council as a whole and of the contribution by each member to the effectiveness of the Shariah council.
- e) The Shariah council should play a strong and independent oversight role, to excise objective judgment on Shariah related matters. No individual or group of individuals shall be allowed to dominate the Sharia council's decision making process
- f) In order to fulfill its responsibilities the Sharia council should be provided with complete, adequate and timely information prior to all meetings and on an ongoing basis.
- g) Shariah council members should ensure that internal information obtained in the course of their duties is kept confidential
- h) The takaful operator should fully understand the legal and regulatory framework for issuance of Shariah pronouncements/resolutions. It should also ensure that the Shariah council strictly observes the said framework and, wherever possible, promotes convergence of the Shariah governance standards.

Shariah pronouncements/resolutions refers to a juristic opinion on any matter pertaining to Shariah issues in Islamic insurance/takaful given by the appropriately mandated Sharia council. A Shariah pronouncement/resolution shall be issued only through appropriate due process. In jurisdictions where there is a central authority such as National Shariah Board/Council or Fatwa council, the central authority should have power to issue such pronouncements and the respeative Shariah councils of the operators should ensure its compliance

Each takaful operator should have Shariah compliance review/audit department for verifying that Shariah compliance has been satisfied. Any non-compliance should be recorded and reported and as far as possible be addressed and rectified. The internal Shariah compliance and audit department shall recommend to management to rectify and address the issues and report to Shariah council.

The burden of ensuring a sound and effective Shariah Governance system should not be left to members of the Shariah council only. Every stakeholder in takaful business, the customers, employees, agents, brokers, management, shareholders and the regulatory authority should also play a part in sharing the responsibility. However, the primary duties of Shariah council are as follows:

- a) Advise the Board of directors on Shariah related matters.
- b) Preview and endorse Shariah related policies and guidelines
- c) Prepare a Shariah process manual.
- d) Endorse and validate relevant documentation for new products and services, including contracts, agreements etc.
- f) Observe the computation and distribution of Zakat or any welfare fund channeled to charity
- g) Delegate some of its functions to any or group of council members, management team or outside experts.
- h) Endorse and validate product guidelines, investment guidelines, marketing, advertising and sales literatures, illustrations etc.
- i) Submit reports regularly to Board of directors in relation to Shariah Audit findings, product design, balance sheet, financial statements
- j) Submit annual Shariah compliance report for onward disclosure & distribution to share holders, policy holders and member of the public.
- k) The secretary of the Shariah council shall be responsible for recording the minutes of meetings. All minutes be properly archived by the secretary for future reference.
- l) Relevant minutes of the Sharia council meeting be submitted to relevant departments and senior members of management.
- m) Ensure that the council is transparent and its independent character is not jeopardized
- n) Promote appropriate ethics and values within the organization and ensure continuous improvement of Shariah control process

- o) Each member of Shariah council should contribute to the best of his/her ability in enriching the discussion and deliberation of the issues raised in the Shariah council's meetings.
- p) Each member of Shariah council should strive for continuous self-improvement, demonstrate integrity and accept responsibility with due care and diligence.
- q) Each member of the Shariah council should exercise rational and logical reasoning, demonstrate willingness to learn from others and strive to be in achieving qualities.

Shariah members should possess competencies in respect of academic qualification and or reasonable experience in Islamic finance, Islamic commercial law (fiqh al Muamalat) and be able to demonstrate an adequate understanding of Shariah based financial transactions. Shariah members are also expected to have strong skills in the philosophy of Islamic law (Usul-al-fiqh) and be very conversant with the primary sources of the Shariah. It is also expected that the members of the Shariah council should have good knowledge of Arabic and be able to converse in English. Furthermore, a member be able to display and understanding of the following:

- a) Shariah rules relating to takaful operation
- b) General legal and regulatory framework that may apply in takaful transactions
- c) Impact of introducing takaful schemes to the market in achieving the object of Shariah (maqasid al Shariah)

Rules, Regulations and Role of Regulator

Generally rules are promulgated by the government and executed by the Regulatory Authority. However, the rules are usually drafted by the regulator or by a special committee for the purpose. Takaful industry needs appropriate rules and regulations in different jurisdictions. There are few countries which have promulgated separate Takaful Act but in most jurisdictions the regulators and or operators have raised several issues and it becomes difficult to resolve those.

In majority of the jurisdictions, the cart has been put before the horse. Despite this situation, the takaful industry has witnessed significant transformation in the last three decades and more. The rapid expansion of the industry warrants for an operational framework to be clearly laid out to guide the takaful operations. These guidelines may be provided by the respective regulatory authority in line with the I.F.S.B guidelines or of the regulatory guidelines of Malaysia, Bahrain, K.S.A, Pakistan and other countries where separate Act or appropriate rules have been promulgated.

Takaful industry requires legal and the regulatory frame work, because they are expected to conduct operations in prudent and ethical manner as per Shariah law. To promote takaful, the regulator should provide guidelines, regulations and or rules if not separate law. The regulations/rules should outline the parameters to govern operational processes of takaful operators. The guidelines in the form of rules/regulation define in detail requirements to promote the sustainability of takaful operations and concurrently fulfill the prudential requirements expected by the regulatory authority. The purpose of these rules/regulations should and or law of the parliament is to promote uniformity in takaful business practice and to enhance the operational efficiency of the takaful industry to safeguard the interests of participants and other stakeholders.

Takaful operators are required to undertake the necessary measures to enhance operational system, procedures and process to be consistent with the rules and regulations. The operational model shall be based on contracts (Mudarabah, Wakalah, Hybird etc) preformed by the takaful operator and duly approved by the Shariah council and the regulatory authority. The operational model of the takaful operator shall define clearly its contractual relationship and fiduciary duties to the participants. The takaful operators are also required to segregate the assets of the takaful operators. Within the takaful fund the takaful operators are required to establish and maintain separate takaful funds for each class of takaful business. The takaful funds for the family takaful business shall be segregated into two funds viz participants risk fund (PRF) and participants investment fund (PIF). The separation of the risk and savings /investment funds is necessary to recognize the different ownership, purpose and risks associated with the contributions.

The participants risk fund (PRF) shall be used to pool the tabarru portion of the contributions. The PRF is maintained to provide mutual financial help and aid to participants when claims are made from risks covered under the takaful contracts. The PIF is to be maintained to pool the savings/ investment portions of the contributions. The PIF is individually owned by participants.

As per Shariah and regulatory guidelines, the takaful operators shall adopt appropriate investment and management strategies to earn returns that are reasonable. For investment linked takaful schemes, the PIF shall be in unitized form ie the amounts invested are converted into units. For nonlife takaful business the PRF is maintained to pool the tabarru portion of the contribution for the general takaful schemes. The PRF shall be utilized to provide mutual financial aid and assistance to participants when claims are made for risks covered under the general takaful contract.

As per regulations/ guidelines provided by the regulatory authority the takaful operators shall maintain records of all the assets, liabilities, revenues and expenses relevant to the funds. The method of allocation and the proportion of contribution allocated to the takaful funds must be made transparent in the takaful contracts. It is necessary that the wordings of the takaful contracts and funds are consistent with the operation and management of the takaful products and funds.

In case of family takaful and health/ medical takaful schemes the method and proportion of allocation must also be consistent with the actuarial certificates and Shariah guidelines. Takaful operators must ensure that efficient processes are established to manage the takaful funds and effective risk controls and monitoring systems with a view to safeguard the takaful fund and protect the interest of all the stakeholders.

It is the responsibility of the Regulatory Authority to ensure that takaful operators exercise diligence in product design and ensure that the products offered include adequate takaful coverage and are suitable and appropriate to the targeted market segment. Takaful operators shall ensure adequate tabarru allocation into the participant risk fund to cover risk and obligations associated with the takaful contract. Takaful operators shall also ensure that the contribution charged is sufficient to cover the tabarru throughout the term of the product.

In determining the price of the products, prudence must be maintained to avoid under pricing and balanced with due care to avoid participants from being charged excessively. Takaful operators shall manage the underwriting process effectively to avoid anti-selection and ensure viability of takaful funds in the long run. They are also be made responsible to objectively evaluate and assess the underwriting risk and expositors of potential participants to ensure that risks accepted are consistent with assumptions used in determining the contributions.

Rules and regulations be framed in the following areas of takaful operations:

- a) Retakaful policy and management strategy to be followed to ensure that the retakaful arrangements are well diversified.
- b) Sound investment management in line with Shariah requirements and participants expectations
- c) Appropriate and prudent valuation basis and methodologies taking into consideration the nature of the products, in term of the takaful contracts and the amount of takaful benefits.

- d) Appropriate systems and controls in claims handling process and payment of claims from the correct funds in line with the takaful contracts.
- e) Effective management of takaful funds operation to ensure that the funds experience is within the assumptions made in the pricing of takaful products.
- f) Assessment of the strengths of takaful funds to ascertain the extent to which it would be appropriate for surplus distribution without affecting the solvency
- g) Effective management of operating cost to result in fairer contribution and higher returns to the shareholders.

Role of IFSB

IFSB (Islamic Financial Services Board) is an international standard setting organization which was inaugurated in November, 2002 at Kuala Lumpur Malaysia, and became operational in March, 2003. As on 2015, it has total strength of 188 members out of which 61 are supervisory and regulatory authorities, eight, inter-governmental and international organizations and more than one hundred (119) are market & professional players in over 45 jurisdiction. The organization promotes and enhances the soundness and stability of the Islamic financial services industry by issuing global prudential standards and guiding principles for the sectors providing Islamic financial services which includes banking, insurance (takaful), capital markets, sukuks, (Islamic bonds) etc. The IFSB conducts research and coordinates initiatives on industry related issues. It also organizes roundtables, seminars and conferences for regulators and industry stakeholders. Towards this end the IFSB works closely with relevant international, regional and national organizations.

The objectives of IFSB are as under:

- To promote the development of a prudent and transparent Islamic financial service industry through introducing new, or adapting existing, international standards consistent with Shariah principles, and recommending these for adoption.
- To provide guidance on the effective supervision and regulation of institutions offering Islamic financial products and to develop for the Islamic financial service industry the criteria of identifying, measuring, managing and disclosing risks, taking into account international standards for valuation, income and expense calculation, and disclosure.

- To liaise and cooperate with relevant organizations currently setting standards for the stability and the soundness of the international monetary and financial systems and those of the member countries.
- To enhance and coordinate initiatives to develop instruments and procedures for efficient operations and risk management.
- To encourage cooperation amongst member countries in developing the Islamic financial services industry.
- To facilitate training and personnel development in skills in areas relevant to effective regulation of the Islamic financial services industry and related markets.
- To undertake research into, and publish studies and surveys on, the Islamic financial services industry.
- To establish a database of Islamic banks, financial institutions and industry experts.
- Any other objectives which the General Assembly of the IFSB may agree from time to time.

As on 2015 the IFSB has issued 24 Standards, Guiding principles, Guidance and technical Notes for the Islamic financial services industry. The standards and guidelines proposed by the IFSB follow a lengthy due process which involve, among others the issuance of exposure draft and where necessary, the holding of a public hearing. The IFSB is actively involved in the promotion of awareness of issues that are relevant or have an impact on the regulation and supervision of Islamic financial organizations by conducting seminars, workshops, conferences training and dialogue in different countries. The published documents are as follows:

- Risk Management (IFSB- 1)
- Capital Adequacy (IFSB- 2)
- Corporate Governance (IFSB- 3)
- Transparency and Market discipline (IFSB- 4)
- Supervisory Review process (IFSB- 5)
- Governance for Collective Investment Schemes (IFSB- 6).
- Special Issues in Capital Adequacy (IFSB- 7)
- Guiding principles on Governance for Islamic Insurance (Takaful) operations

(IFSB- 8)

- Conduct of Business for Institutions offering Islamic Financial Service (IIFS) (IFSB- 9)
- Guiding principles on Shariah Governance system (IFSB- 10)
- Standard on Solvency Requirements for takaful (Islamic Insurance) undertakings (IFSB- 11)
- Guiding principles on liquidity Risk Management (IFSB- 12)
- Guiding principles on Stress Testing (IFSB- 13)
- Standard on Risk Management for Takaful (Islamic Insurance) Undertakings (IFSB- 14)
- Revised Capital Adequacy Standard (IFSB- 15)
- Revised Guidance on key Elements in the Supervisory Review process (IFSB- 16)
- Core principles for Islamic Finance Regulations (IFSB- 17)
- Recognition of Ratings on Shariah Compliant Financial Instruments (GN-1)
- Guidance Note in Connection with the Risk Management and Capital Adequacy Standards: Commodity Murabahah Transactions (GN-2)
- Guidance Note on the practice of Smoothing the profits payout to Investment Account Holders (GN-3)
- Guidance Note in Connection with the IFSB Capital Adequacy Standard: The Determination of Alpha in the Capital Adequacy Ratio (GN-4)
- Guidance Note on the Recognition of Ratings by External Credit Assessment Institutions (ECAIS) on Takaful and Re-Takaful Undertakings (GN-5)
- Quantitative Measures for Liquidity Risk Management (GN-6)
- Development of Islamic Money Markets (TN-1)

The IFSB in an effort to guide the takaful industry towards a stable and sound financial environment published its first two standards in December 2010. The first standard IFSB -8 provides the industry with guiding principles on the appropriate governance framework for a takaful operator. The second standard IFSB 11 provides a framework for ease of management of the takaful/ Islami insurance and the regulatory body.

Solvency supervision of a takaful operation and other related documents were published by the IFSB is IFSB-10 (Shariah governance system). IFSB -9

(Principles on conduct of business for Islamic financial service) also provide guidance in the areas of Shariah governance systems of takaful operators. Another important standard is IFSB – 14 which provides the standards on risk management for takaful (Islamic insurance) undertaking. The principles and recommendation set forth in IFSB – 14 are intended to help understand the risks to which a takaful operator is exposed and to provide minimum standard for the development of a risk management framework.

Why we need standards?

There must be honesty, integrity, trust and reliability involved in all sorts of financial transactions. The role of IFSB is to provide an unswerving podium to converse the problems and concern faced by IFIs and focus on the development of Islamic accounting, governance and other relevant standards. Their role is also to cater the needs and requirements of multiple countries with respect to their infrastructure and policy environment.

IFSB provides a comprehensive framework to the IFIs and all the other institutions dealing in Islamic financial services to promote and inculcate the importance of Islamic finance. It provides the significant inputs from the experts of the industry who are usually member of these standard setting bodies.. It provides regulations which are usually referred as mandatory or advisory services for meeting a specific requirements. The standards provided by IFSB are with the intent to frame regulations through different regulatory bodies, modify and amend them with respect to the countries' requirement, update and issue new standards on various products from time to time to ensure that the Islamic financial services across the globe are regularized and standardized.

Although the involvement of regulators is very critical in the development of the standards to justify the role of these standard setting bodies but their goal is comprehensive and as the demand for Islamic finance is increasing, which bring more practicable reasoning of their valuable role in the industry. The functions of the standard setting bodies especially the IFSB are to harmonize and converge all the standards under one roof. These bodies (IFSB) significantly add values to the Islamic money market, capital markets, banks, takaful operators and other relevant areas of Islamic finance like corporate governance, capital adequacy and supervisory review process.

The concept of Shariah governance, code of conduct in business and ethics are focused in these standards to assure the investors and authorities that the Islamic finance is indeed differently practiced and are indeed a better solution than conventional system. Initially when the IFIs started their operations the disclosure and transparency in the financial reports were not observed and thus these institutions faced a lot of criticism in terms of their operations and performance. The IFSB promoted and encouraged the Islamic financial institutions to be more

transparent to the investors and to the share holders as well as to other people so that they may have the confidence to engage with the IFIs.

The regulators role for applying the standard setting bodies does not look very dominant and still there is an extensive room for improvement. Since these bodies are playing their part in harmonizing the Islamic finance, other institutions must also perform in consonance with them to promulgate the idea of standardization among the Islamic finance industry. The global growth of Islamic banking and insurance is taking advantage of the diversity and flexibility in the fiqh opinions (often referred to as Shariah) to meet the challenges of growth.

While the flexibility in fiqh opinion is presently contributing to global growth, it may soon become a constraining factor in the global growth of the industry if the challenges arising out of the use of diversity and flexibility in fiqh are not properly recognized and taken care of. This is the area where Shariah standard setting bodies must perform their role in indulging and diversifying the Islamic financial services industry and should come up with the diversity in the Fiqh ruling and make their impression in the arena of market players. The IFSB need to be more efficient globally as well as their significance must be incumbent with the idea that the standardized procedures and guidelines must be in consonance with the Shariah and business requirements.

Concluding Remarks

The takaful industry is currently not transparent enough on details of Shariah application. IFSB is performing its roles and they kept emphasizing on the transparency in the financial reporting of the Islamic financial institution to gain more trust and social capital from the investors. Shariah scholars who understand and disagree with some declared applications chose to remain silent as an expression of respect for other Shariah opinions but it is not the Shariah scholars who needs to enforce compliance of these standards rather, the Regulators must govern and set conditions to the takaful operators for the implementation of the standards set by themselves or by international standard setting organizations.

Since takaful is known for its Islamic features, they ought to be free from shariah non-compliant elements. The products and services offered by the TOs carry with them not only a financial but also a religious obligation to be fulfilled. For takaful to achieve its objectives, concertect effort needs to be made by all the stakeholders. It is necessary to identify a successful cooperation mechanism between the regulatory authority, the Ministry of finance, takaful operators and the concerned Shariah Council. It is also necessary to understand the roles and responsibilities of each of the stakeholders.

Sustainable Life Insurance Business through Innovation and Creativity

Kazi Nazmul Huda

Abstract

Sustainable business of life insurance companies demands multidimensional interventions of innovation and creativity. The study tried to understand the necessity of an innovative culture to promote life insurance business in Bangladesh. Key objective of this study is to explore the sustainability issue of life insurance business and how innovation and creativity aid that practice. The current study is based on qualitative research mostly conducted through exploratory analysis by literature review and focused group discussion with the key stakeholders of life insurance industry of Bangladesh. The paper tries to offer a potential practice of innovation and creativity in the area of marketing and human resource management functions to be sustainable in competitive life insurance business.

Keywords: Sustainability, Sustainable Business, Innovation, Creativity, and Life Insurance

Introduction

Bangladeshi Life insurance business needs to take a sustainable journey through realizing the unrealized market potentials of life insurance products by culturing the practice of creativity and innovation at all the functional areas of life insurance business. From HRM to marketing and sales to customer service, practice of innovation and creativity should prevail in every sphere of life insurance business management to ensure financial and social sustainability. Theoretically, life insurance products are categorized in unsought service category and it is quite challenging to prospect it. But, the positive change in Bangladeshi economy facilitated the life insurance business to provoke a light interest among the low and mid income group as a necessary service. To grab the opportunities of this potential market, life insurance business should get rid of traditional practice and must redesign their operations to attract potential clients. However, the current

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challenge is at what area we should be creative and how the practice of creativity and innovation could be facilitated within the functional areas of life insurance companies. Followings are some forward thinking courses of action to practice and promote innovative and creative life insurance operations for sustainable business.

Objectives of the study

The prime objective of the paper is to study the necessity of innovation and creativity for sustainability of life insurance business of Bangladesh. To attain the prime objective, the following specific objectives are drawn.

1. To study the issues of business sustainability.
2. To explore the innovation and creativity issues for sustainable life insurance business.
3. To recommend possible intervention to foster the practice of innovation and creativity for sustainable life insurance business.

Literature review

Most of the time of the business sustainability issues are trapped in to environmental issues, but to consider other issues of sustainable business practice is the demand of time (Bansal & DesJardine, 2014). Business enterprises are mostly focusing on the triple bottom-line concept of business sustainability and mostly circling on social, economic, and environmental performance (Colbert & Kurucz, 2007). Effective role of human resource management practice is vital in this regard. In a journey to business sustainability, the companies have to rethink about their products, technologies, processes, and business models to sustain in a competitive landscape and innovation which is the key driver of sustainability (Nidumolu et. al., 2009). Innovation for sustainable business includes the interventions of an enterprise to change, update, or upscale their products, processes that directly aid environmental and social benefit leading to economic value (NBS, 2012). Innovation culture facilitates a company to bring about a dramatic improvements with the combination of innovation, sustainability and profitability which is powerful strategic arsenal (Visser, et. al., 2015, 52). However, creative potential for innovation is the core competency of service firm who intend to provide superior value to their clients (Kandampully, 2002).

Practice of innovation is as important in services as it is in manufacturing sector (Lyons, et. al., 2007). To be dynamic in the competitive market, service sector should take innovation as an integral processes (Miles, 2008) and life insurance

service is a promising business where creativity and innovation is a major segment to be emphasized and to be sustainable in a competitive economy which requires an extensive marketing processes for the satisfaction of clients (Morrill, 1959). According to Maynard, (1956), life insurance products should be honest, well-designed, keeping pace with changing consumer needs, but many company have lacking effective marketing practice and sales force management (Srivastava, et. al., 2012). The concept of internal marketing or effective human resource management practice in this sector is vital for outstanding business performance (Shiu, and Yu, 2010). According to Laursen and Foss, (2003), effective human resource management plays a pivotal role for innovation performance of a company where human resource is the key factor to succeed in service-oriented industries like life insurance (Huda 2015).

From the literature, it is found that, the concept of business sustainability is not mandatorily important to comply on social, economic and environmental development issues only. It is a blend of many other factors like creativity and innovation in marketing and peoples management issues.

Methodology

The author has adopted a subjective ontology and assumed a narrative epistemology and methodology to attain the objectives of the research. The study is qualitative in nature and the information has been decisively compiled from previously published relevant research journals and reference books. In that case, first we accumulated literature on sustainable business and innovation and creativity as possible irrespective of the country and field of study. After that, judgmental opinions of different stakeholders of insurance business are recorded through a homogenous focus group discussion session. This session was held with senior managers, and line executives. A common criterion was used where any issue was considered relevant whichever does have four out of five votes in the group. In addition, qualitative data were obtained through face-to-face in-depth interviews with the industry experts to validate the findings of the earlier stage. In-depth sessions were organized with three managers of local insurance companies who have long experience in working insurance sector. Each session lasted for one and half hour and expert comments were recorded in audio tapes.

Findings

The study shows a clear picture of the importance of innovation and creativity for sustainability of life insurance business.

1. Three key factors of business sustainability of life insurance business where innovation is evident. Innovative internal marketing, external marketing, and green operations management.
2. It is also found that, as a service providing sector, employee, and customer satisfaction is the key component for social and economic sustainability of life insurance business.
3. For environmental sustainability life insurance companies should focus on environmental friendly operation though maximum of the respondents said that this service sector have less negative impact on environmental and ecological issues.

Discussion & Recommendation

Creative Internal Marketing Practice for sustainability: The practice of innovation and creativity must be cultured among the human recourses of a life insurance company. Creative thinking skill could be developed through promoting teamwork among the employees. Moreover, the spirit of innovation and professionalism may be facilitated among the executives by providing modern training on marketing research, sales and customer service, NLP techniques, emotional intelligence etc. For better internal marketing, effective employee needs assessment to be conducted to devise time befitting compensation and reward package, incentive and benefit schemes. Human Resources Development interventions like, career planning, performance management, and change management could be patronized to accelerate individual and team performance of the insurance executives. Culture of good internal marketing may generate innovation & creativity and mostly the sustainable mindset among the life insurance professionals.

Innovation in life Insurance marketing for sustainability: According to many literatures, life insurance companies lack modern marketing practice. Most of the companies are sales oriented. Life insurance market cannot be successfully flourished unless an effective marketing mix is not offered to the potential customers. Life insurance products should be designed according to the changing pattern of clients' buying behavior. Formerly, the perception of life insurance was not more than a life security scheme. However, with the emergence of different consumer investment schemes by the banks and investment companies, people's

interest is more on investment and the security issues. Investment in life insurance is comparatively unattractive as the ultimate value of life insurance products are less visible. Insurance schemes are long term and the return is not as profitable like other financial institutions. Companies can offer small and simple package and may offer multi segment product (corporate, small entrepreneurs, professional category, or geographical segmentation like urban and rural) and customize pricing strategy to attract potential clients. Payment of premium should be convenient for the clients as current practice in most of the companies are stressed and time consuming to the clients. Digitalization of insurance management system would be a creative intervention where online and cellular technology would facilitate in minimizing hassle of premium payment and maximizing good governances. Digital life insurance management may reduce complexity and procrastination in insurance buying to claim recovery management. Digital advertising or social media marketing practice may be incorporated to attract the high tech-savvy young clients and mobile promotional campaign in a form of road show can be organized to attract the rural clients.

Life Insurance sales team must be accustomed to the philosophy that they are to sell a solution, not a product. They should be intelligent enough on the issues of creative prospecting and satisfactory closeout. Novice financial associates should try to learn from the predecessors and there should be a culture of knowledge sharing. Financial associates of life insurance companies should transform from salesperson role to financial advisory role.

To promote sales, insurance companies are suggested to organize life insurance fair and other promotional events like road show, kiosks service, beside the traditional personal selling practice. Multi level marketing (MLM) concept may be applied here to engage existing clients to prospect potential client.

Conclusion

The life insurance business is a major contributor in stable financial sector. The sector has very promising future in Bangladesh as the country and its government is voyaging towards the achievement of the status of middle-income nation. At present, life insurance business is in the challenge of sustainability as many marketing and HRM malpractices are prevailing in this sector. As a financial institution many of the insurance companies are failed to gain competitive advantage over other financial institutions and as an investment, it is struggling to attract potential clients. The malpractice of different insurance companies and the scarcity of qualified and morally enriched executive are declining the image of this

business. To ensure the sustainability of life insurance sector, entrepreneurs, policy makers, and administrators must understand the necessity of innovation and creativity as the lifeline of this business and should comply with this new age business theology at every stage of the value chain of insurance business. Further, an intensive empirical research work is suggested to explore the specific areas of innovation in insurance business.

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Challenges of Insurance Marketing in Bangladesh.

SM Ibrahim Hossain

Many factors contribute for making a business successful. Marketing is such a vital issue which makes a business prosperous. Today marketing must be understood not in the traditional way, that is not making a sale “telling & selling”, but in the new sense of satisfying customer needs.

Marketing may be explained as a business function entrusted with the creation and satisfaction of customers to achieve the aims of business. On the other hand, selling is connected to the distribution for a profit of those product a company produces.

Marketing is the "man in the middle"--mediating between Customers, Prospects, Sales, Development, and the Executive Team. As such, Marketing is pulled in multiple directions. Marketing has an obligation and needs to support both Development and Sales. Marketing trains the sales force on new products, manages the HQ visits of customers, prospects, and industry analysts, performs win/loss analyses, and gathers input on customer and prospect requirements. Drawing on the information gathered both externally and internally, Marketing supports the Executive Team in developing business strategy by identifying market opportunities and generating and executing marketing strategies and plans that support attainment of business objectives. Marketing works with Development to define requirements, plan products, and bring products to market.

From a management point of view, sales is considered as a part of marketing although the skills required are different. Sales often forms a separate grouping in a corporate structure employing separate specialist operatives known as sales person. Selling is considered by many to be a sort of persuading ‘art’.

Considering the definition & activities of sales & marketing it can be said that marketing is not getting importance, rather selling is getting more importance in the insurance industry of our country. Philip kotler, renowned

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marketing specialist stated that marketing is still poorly understood in the insurance industry. In his opinion, “marketing entered into the consciousness of different industries at different times. Marketing spreads most rapidly in customer packaged goods companies, consumer durable companies and industrial equipment companies in that order. Bankers initially showed great resistance to marketing, but in the end embraced it enthusiastically. Marketing has begun to attract interest in the insurance industry and the stock brokerage industry although marketing is still poorly understood in these industries.”

In Bangladesh, most of the insurance companies don't have marketing department, rather they have development or sales department for force selling which causes long-term negative impact on the companies.

If the marketer does a good job of understanding customer needs, develops products that provide superior value and prices, distributes and promotes them effectively, these products will sell very easily. But there are challenges in marketing which vary place to place and product to product. The rapid advancement of technology presents a host of challenges for today's marketing professionals. Even when a marketer has found a strategy that works, innovation and competition can cause a shift in the paradigm of their success.

In the circumstances, the current article has been written with the following objectives:

- the challenges in marketing that our insurance industry are facing currently
- steps that are required to take for mitigating the challenges of insurance industry.
- the techniques that we need to apply in the context of present insurance industry to overcome the challenges of marketing .
- the current global marketing techniques that we can follow to make our insurance market more strengthen and successful .

Survey compilation:

The survey made use of primary data. The survey was conducted on 96 (70 agents from life and 26 agents from nonlife insurance companies) respondents. The scope of the research is limited to nonlife insurance

companies' sample has been taken from Dhaka only. The respondent were asked the following questions.

- What are the challenges of marketing that are prevailing in the insurance industry of Bangladesh ?
- What are the steps that we need to take to mitigate the challenges of marketing.?
- What are the steps that we need to take to widen the insurance industry.?
- Are you satisfied working in insurance industry as an agent ? If, not satisfied, please narrate why you are not satisfied ?
- What are the marketing problems & challenges in insurance that are prevailing in our country?
- How do you handle the objections raise by the customers of insurance?

In response to the question regarding the challenges that are prevailing in the insurance industry of Bangladesh, following are the compilation of the respondents' opinion:

- Insurance is to sell forcefully. Maximum customers don't want to buy insurance.
- People don't trust insurance agents & companies.
- Claim settlement is delayed.
- Lack of educated field force /agent is a factor.
- Lack of professional agent is also responsible.
- People don't think insurance as an immediate necessity and hence become reluctant to buy insurance.

In response to the question about the steps that we need to take to mitigate the challenges of marketing of our insurance industry, the respondent's suggestions are stated below:

- To create trust among people about insurance
- Claim should be settled immediately.
- Insurance companies should recruit educated field force/ agent.
- Agent should be professionally trained up so that they can explain the benefits for insurance to customer properly.

The respondents' were asked about the steps that can be taken to widen the insurance industry, following are the compilation of the answers.

- Emphasis on Marketing of personal line Insurance (like Health, Flat, liability insurance etc.)
- To initiate and provide some salary for the agent
- To introduce a system of payment of premium through bank.
- To recruit educated agent.

The questionnaire contained the following question:

Are you satisfied working in the insurance marketing as an agent ?If, not satisfied, please narrate why you are not satisfied ? Following table shows the opinion of the respondent's:

Variables	Frequency	Percentage	Cumulative percentage
Yes	49	51.1	51%
No	32	33.3%	84.4%
So So	14	14.6%	99%
Not answered	1	1.0%	100%
Total	96	100%	

In response to the question why they are not satisfied working as an agent, following opinion were given by the respondents'.

- People see an agent as broker and took pity on him.
- The profession has no social recognition.
- People don't trust the agent and think that an agent is person who takes premium for his own interest (Commission) only but don't help in getting claim & benefits.
- Insurance companies do not provide any salary and other benefits like travelling allowance, bonus etc.
- The profession has no charm only has pain & sufferings in moving to & fro in search of customer.
- Some bad people (agent) has destroyed the insurance field cheating customer in many ways.

In response to the question about the marketing problems & challenges in insurance that are prevailing in our country, following opinion were given by the respondents’.

- People don't understand the difference between bank & insurance.
- People don't trust the agent.
- People have an idea that insurance companies don't pay claim

In an open ended question like what are the objections usually raise by the customers to purchase insurance, following are the compilation of the answers given by the respondents.

- Most people usually don't understand insurance properly & hesitate to take insurance for uncertainty of not getting indemnity.
- Most people usually don't trust the agent because of some bitter experience of not getting claim in the past.
- People don't give importance & priority on Insurance whereas they consider food ,education, treatment as top priority issue and hence show less interest to buy Insurance.
- Some customer says, 'Insurance company don't pay claim timely'.
- Some customer says, 'Insurance is against religious belief '.
- Some customer try to see Insurance company as temporary ones as if it may fly away like fake companies.
- Some customer believes, "I don't need Insurance now, so I will think about purchasing insurance later on "
- Some customer says "I don't have the capability to pay premium".
- Some customer only desire to take compulsory insurance like in Marine L/C, loan & Mortgage etc.
- Some customer don't evaluate the agent properly and think agents are those people who take premium only but don't help in getting claim.
- Some customer hesitate to give premium as if he/she will not get any reasonable return .
- Some customer don't want to talk for insurance without commission in case of property insurance.

- Sometime customer want to know whether insurance company have got reinsurance or not.
- Some customer want insurance on credit which is not permissible as per insurance act.
- Customer sometimes see premium as expenses because if claim don't arise, insured will not get return premium.(in case of property insurance)
- Some customer try to compare the premium with other companies.
- Some customer try to get always the benefit & facilities of Insurance.
- Some customer try to take coverage of excluded perils.
- Some customer thinks Insurance as a cheating business who cheat the people and take away money.
- Some customer says, "business is not in good condition, so I will think about Insurance later on"
- Some customer says," my factory/shop is in a good condition & location, so risk would not happen to me and that's why I don't need insurance".
- Some customer says, "I don't have the ability to pay premium".
- Some customer says," what is looted cannot be blotted. So, why should we think about Insurance?".
- Some customer don't want to give accurate information about their property.
- Some customer show less interest about pre inspection survey.

In an open ended question like how do they (Agents) handle the objections raise by the customers of insurance, following are the compilation of the answers given by the respondents:

- Establishing the creditably of Insurance organization among mass people. Insurer & agent should create such an environment where people will tell the story of the benefits of insurance to other people
- Ensuring that Insurance company are bound to pay valid & legal claim to indemnify the insured.
- letting the customer understand that accident may happen at any time, so Insurance is a immediate necessity.
- Clarifying the customer that customer's interest are given priority by the

companies & by the government.

- Assuring that claims are settled hassle free & quickly.
- Clarifying the customer that Insurance company is not a temporary organization.
- Ensuring that all risks are reinsured.
- Clarifying that customers should take insurance of maximum risks so that their property don't remain uninsured.
- Clarifying that insurance is not expensive in comparison to the risks taken under insurance and clarify that insurance is government approved & there are authorities of government to control insurance business.
- Ensuring that, insurance company has got financial ability to pay claim.
- Clarifying about different benefits of insurance.

Main causes behind different challenges of marketing in insurance :

Two focused group discussion was arranged with senior marketing & desk executives of life & nonlife insurance companies to know the main causes behind different challenges of marketing in insurance. Based on the discussion, following are the main causes behind challenges of marketing in insurance in Bangladesh..

- Agent/marketing force gives commitment of providing false wider coverage & benefit with less premium.
- Marketing concept has not gotten momentum in insurance industry, rather force selling is going on.
- Usually there is no immediate return in Insurance unless accident takes place. So, force selling & tactical marketing are going on instead of strategic marketing in insurance industry.
- Delay in claim settlement or repudiating the claim discourage the customers to buy Insurance and exerts a negative impact on Insurance industry.
- No benefit & less benefit in case of policy lapsation in life insurance.
- Promotional activities are not sufficient & attractive.
- As there are many insurance companies, unfair & unhealthy competition exist.

- There is no market research in our insurance industry (who's doing proper business, who's service is better, who's is innovation leader etc)
- There is no customer database.
- No brand management system
- No corporate agent system in Insurance industry but it exists in other countries.
- No innovative product both in life & general Insurance
- Lack of government patronization
- There is no talks how/ seminar discussion on Insurance in print & electronic media.

Recommendations;

- Insurer should create such an environment where people will tell the story of the benefits of insurance to other people. Then there will be positive environment for insurance marketing.
- Building trust and innovation are the key to winning the hearts of the customers as consumers are more conscious and demanding than ever before.
- There should be long term marketing strategy in insurance companies. There should be research on our insurance industry (who's doing proper business, who's service is better, who's is innovation leader etc.)
- There should be central database under IDRA linked with all companies so that agents /marketing forces don't get the opportunity to cheat the customers to give false money receipt.
- Insurance company should introduce online service system for depositing premium, proposal form and money receipt etc.
- Emphasis is to be given on the relationship between agents and customers to provide the best possible customer service and build customer loyalty.
- Different forms of marketing activities, such as promotion, advertising and communication to the customer need to be used in the effective way.
- Insurance company should set up one stop customer service cell for quick claim settlement.
- Insurance company should establish customer outlet for different alteration services in the field level also.

- Surrender value should be increased in life insurance.
- There should be emphasis on professional agents so that they continue services in the company and never think of cheating customer.
- Computer Database of customer along with photos of insured & nominees should be prepared so that in case of emergency, claim can be settled quickly by identifying insured/nominees.
- Marketing of personal line Insurance should be given emphasis (Health, Flat, liability insurance etc)
- IDRA should take initiative for market development like creating awareness program, seminar, talk show in electronic media etc.

Conclusion :

As insurance marketing is facing different challenges, there is renewed emphasis on creating & innovating with new & better products & services rather than just competing with traditional products & services. Customers will be pleased if claims are settled hustle free in the quickest possible time. There should be safeguarding system of the customer's interest such as premium payment should be centrally computerized by the company so that agent don't get the opportunity to provide fake money receipt to customer. In a nut shell, it can be said that insurer should create such an environment where people will tell the story of the benefits of insurance to other people. Then there will be positive environment for insurance marketing.

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Relationship between Performance of Insurance Industry and Economic Growth: Bangladesh Perspective

————— **Sadia Noor Khan**

Abstract

A handful of researchers around the world have dedicated their work of study to figure out the relationship between insurance industry's performance and economic development which is mostly represented by a country's GDP. Under the context of Bangladesh the use of word "handful" could prove to be exaggerating. With recently added two new non-life insurance companies and thirteen new life insurance companies the number of insurance companies stood at seventy seven. There are now forty six non-life insurance companies and thirty one life insurance companies operating in the country. Given the size of the industry, the first intuitive thought could be that it must be one of the biggest contributors to country's GDP. In reality the insurance industry has a long way to go to be able to have significant impact over country's GDP and other macroeconomic variables. This paper capitalizes the historical data of insurance industry and tries to predict relationship between insurance and economic growth. Using different statistical tools like, time series analysis, trend analysis, and forecasting, and regression analysis this paper focuses on the possible impact that insurance industry has been having on the country's economic growth and also on the future possibilities and prospects of such relationship. Using statistical tools and calculation it has been found that there is a weak relationship between insurance industry's performance and economic growth. Insurance industry's investment amount is a minor contributor to GDP and they share to some extent strong positive relationship between them. Forecasted numbers also indicate the relationship may get strengthened with increase in investment numbers.

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1. Introduction

Economy is affected by different aspects of a country. A single industry can merely influence an economy (Brezina, 2012). The combination of all the factors influence a country's economy to move in certain trend. Although various types of variables affect an economy, an industry with big size may have a positive affect over a country's GDP individually. Individual industry that has a good control over financial system and which has size of a big stature, just like insurance industry, may put a great impact over a country's GDP. Such hypothesis gives birth to this research. The relationship between insurance industry's performance and a country's GDP which is analyzed by statistical tools will give solid indication whether such relationship exists or not.

1.1. Literature Review

Quite a few theoretical and empirical analyses have endeavored to check and recheck the connection between insurance industry's performance and a country's economic growth. Links between better-developed financial system and long term growth is perceivable. In theory insurance companies are considered as a great motivator for economic growth. Empirical evidence has a mixed opinion over such judgment.

A panel data analysis over 55 countries from the year 1976 to 2004 conducted by Marco Arena suggested that there is solid evidence behind the connection between insurance and economic growth (Arena, 2008). He concluded that both life and non-life insurance have a positive and significant causal effect on economic growth. It was evident that life insurance had more impact over high income countries and non-life insurance had equal impact over both high income countries and developing countries. Maurice Kugler and Reza Ofoghi in their paper tried to prove that there is a long run relationship between insurance market size and economic growth rather than a cyclical effect (Kugler & Ofoghi, 2005). Their paper studied over the data collected from UK market and tested the relationship between Insurance and GDP. They posed a challenge against previous researches which found weak relationship between insurance industry's performance and a country's GDP. Their causality tests indicated a positive relationship which persisted in long run too. Haiss and Sumegi in their paper titled *The Relationship of Insurance and Economic Growth – A Theoretical and Empirical Analysis* found weak evidence in terms of the relationship between insurance and economic growth (Haiss & Sümegi, 2008). In the paper they produced data analysis of 29 European countries.

They derived coefficients and significance of each input factor which ultimately resulted in no solid relationship between insurance and economic growth. Thorsten Beck articulated the drivers of life insurance consumption in the paper titled “Economic, Demographic, and Institutional Determinants of Life Insurance Consumption across Countries” to postulate the theory behind the relationship between economic and demographic factors and insurance consumption, in this case life insurance. They found strong association of inflation, income per capita, and banking sector development with life insurance consumption (Beck, 2003). The paper also derived that education, life expectancy, size of social security system have no significant impact over life insurance consumption. Each country and their economy is dynamic. Bangladesh may not fall in the category of countries that were the subject matter of Thorsten Beck’s paper. Chien-Chiang Lee, Chi-Chuan Lee, and Yi-Bin Chiu produced a paper titled “The link between life insurance activities and economic growth: Some new evidence” and collected some evidences in support of long-run equilibrium relationship between real GDP and real life insurance premiums after allowing for the heterogeneous country effect. Their panel parameter results indicated that a 1% increase in the real life premium raises real GDP by 0.06% (Lee, Lee, & Chiu, 2013). They used regressions augmented Dickey-Fuller (SURADF) test to conduct the research which may not prove to effective for countries with different economic stature. J. François Outreville procured some evidences on the mechanisms of insurance sector on driving economic growth. In his paper “Life Insurance Markets in Developing Countries”, through cross sectional data and analysis he found weak relationship between insurance and economic growth in most developing countries (Outreville, 1996). Using GMM (Gaussian Mixture Models) Liyan Han, Donghui Li, Fariborz Moshirian and Yanhui Tian conducted research considering 77 economies for the period 1994-2005 to extract whether any relationship between insurance and economic growth exists. In their study they have found that for the developing economies, the overall insurance development, life insurance and non-life insurance development play a much more important role than they do for the developed economies (Han, Li, Moshirian, & Tian, 2010). On the basis of the results derived by Liyan Han, Donghui Li, Fariborz Moshirian and Yanhui Tian, Bangladesh, as it is also a developing country, the hypothesis can be built that insurance correlates positively to economic growth for Bangladesh too. Further study is needed to visualize the true picture. Kok Sook Ching, Mori Kogid and Fumitaka Furuoka took Malaysia under their research subject to perform Johansen cointegration test, and the Granger causality test based on the Vector Error

Correction Model (VECM) to demonstrate the possible causal relation between insurance industry's growth and economic growth (Ching, Kogid, & Furuoka, 2010). They found a long run between life insurance indicator and real GDP. While Malaysian insurance industry was in the growth stage at the time of the research conducted, Bangladesh insurance industry still remains stagnant. Hence, there is a possible doubt over the validity of positive relationship or any relationship for that matter between insurance industry's performance and GDP in Bangladesh Context.

The mixed results of same research topic raise many questions. The different dimension of different countries is the main reason behind the mixed results. Bangladesh' economy is unique in its own way too. This paper endeavors to bring some authentic results considering hypothesis established prior to the research.

1.2. Research Objectives

- Obtaining an understanding of the relationship between insurance companies' performance and economic growth
- Focusing on insurance companies' premium earnings, investment, and assets to assign a relationship with economic growth which is represented by GDP

1.3. Research Methodology

- Statistical tools applied on data collected from year 2012 to 2014
- Time series analysis with regression (Time series data from year 2001-2014)

1.4. Source

- IDRA (Insurance Development and Regulatory Authority)
- Bangladesh and Bangladesh Bureau of Statistics

2. Macroeconomic Scenario of Bangladesh

Economic growth refers to the substantial development in the facets that represent a country's efficiency and productivity (Barro, 2004). Mainly three factors are important in signifying the efficiency and productivity of an economy. They are GDP (Gross Domestic Product), inflation, and unemployment rate. These three factors also signify the wellbeing of the society. Developing countries enjoy

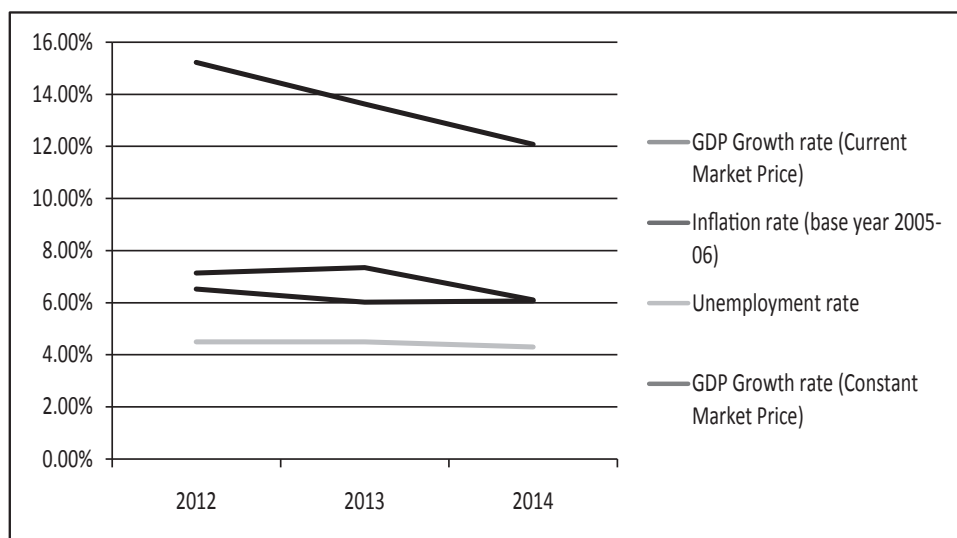
substantial growth in their GDP due to the scope of development left for them (Baffoe-Bonnie & Khayum, 2003). Bangladesh, one of the developing countries, has been enjoying substantial growth over its GDP. Table 1 shows the numbers associated with each macroeconomic variable from year 2012 to 2014. Year to year GDP growth rate earned double digit growth rate in current market prices. In this case the growth has slowed down from year to year. In constant prices the growth rate is different but the trend is almost the same. Here it is observable that the growth rate of GDP has remained quite stable which is a very good sign for the economy. Figure 1 shows the graphical representation of the growth rate of particular variables. Here, it is reasonable to point out that inflation rate and GDP growth rate at constant prices are almost touching each other at the same point. This is a good sign for the economy as it ensures stability in the economy.

Table 1: Macroeconomic Variables

Amount in Million			
Particulars	2012	2013	2014
GDP (Current Market Price)	10,552,040	11,989,232	13,436,744
GDP (Constant Market Price)	6,884,932	7,298,965	7,741,361
GDP Growth rate (Current Market Price)	15.22%	13.62%	12.07%
GDP Growth rate (Constant Market Price)	6.52%	6.01%	6.06%
Inflation rate (base year 2005-06)	7.14%	7.35%	6.11%
Unemployment rate	4.5%	4.5%	4.3%

Unemployment rate has been moving around 4% for quite some time. More employment opportunities are emerging as the economy is growing at a rate that is quite satisfactory. More business opportunities are making ways for employment for human resources who are remained unemployed. Considering the macroeconomic stature of Bangladesh, the country is moving towards right direction. More sectors need to evolve to be at a position to contribute more to the GDP. Insurance sector is one of the promising sectors.

Figure 1: Macroeconomic Variables Growth Rate



GDP growth rate at current market price has been hovering around 12%-14%. The consistency of the growth rate shows the extent of resilience of the economy. In a scenario when global market passed a tremendous stressed situation, Bangladesh kept the growth rate intact. Considering the factors that dictate the overall situation of an economy, Bangladesh is one of the frontier markets with potential to grow at a greater pace.

Service sector has been the biggest contributor to Bangladesh's GDP growth. In 2014 service sector contributed 3.03% out of total 6.06% GDP growth at constant prices. Banks and Non bank financial institutions are one of the major drivers behind the consistence growth of the economy. In later part of the paper, it will be revealed that insurance industry falls behind in this case. With potential to add more value to economy, insurance may turn out as a major player in driving the economy forward like many developed countries.

3. Scenario of Insurance Industry in Relation to the Economic Condition of Bangladesh

Insurance industry has a potential of making huge impact on a country's economy. As discussed in the literature review many studies found that there are mixed views over such prophecy. Bangladesh's Insurance industry possesses a huge size comparing to other industries. Especially the recent addition of 15 insurance companies in the year 2013 intensified the competition and growth of the industry.

Table 2 and Table 3 show the variables' figure associated with insurance industry. Table 4 brings out a significant finding. In the year 2013 insurance industry fell short on premium and investment producing negative growth rate but because of the addition of 15 new insurance companies, it bounced back with significant positive growth rate. Life insurance industry's performance indicators remained much more stable than that of Non-life insurance industry. While comparing with GDP, the current market prices are considered as the indicators of insurance industry's performance are also considered in current market prices rather than in constant prices.

Table 2: Life Insurance Industry Scenario Table

Life Insurance Scenario (Amount in million)			
Particulars	Year 2012	Year 2013	Year 2014
Premium Earnings	65871	64280	66879
Total Assets	239634	244680	297620
Total Investment	192900	192070	221060

3: Non Life Insurance Industry Scenario

Non Life Insurance Scenario (Amount in million)			
Particulars	Year 2012	Year 2013	Year 2014
Premium Earnings	15947	12505	22670
Total Assets	78121	85895	59113
Total Investment	22983	19258	29822

Table 4: Comparison of Growth Rate of Macroeconomic Variables and Insurance Industry's Variables

Growth Rate of Variables			
	2012	2013	2014
GDP Growth Rate (Current Market Prices)	15.22%	13.62%	12.07%
Inflation Rate (Base Year 2005-2006)	7.14%	7.35%	6.11%

Growth Rate of Variables			
Unemployment rate	4.5%	4.5%	4.3%
Total Life Insurance Premium Growth Rate	4.87%	-2.42%	4.04%
Total Non Life Insurance Premium Growth Rate	39.20%	-21.58%	81.29%
Total Life Insurance Asset Growth Rate	18.08%	2.11%	21.64%
Total Non Life Insurance Asset Growth Rate	40.90%	9.95%	-31.18%
Total Life Insurance Investment Growth Rate	25.82%	-0.43%	15.09%
Total Non Life Insurance Investment Growth Rate	0.14%	-16.21%	54.86%

Figure 2, Figure 3, and Figure 4 represent the trend of GDP growth rate alongside insurance premium growth rate, asset growth rate, and investment growth rate. The finding suggests that there is a close alignment between life insurance companies' performance and GDP, whereas, non-life insurance companies' performance doesn't align with GDP. It is an indication that life-insurance companies' performance indicators may have some significant over GDP.

Insurance penetration ratio and Insurance density ratio gives a better view to delineate the performance of insurance industry and the degree of contribution it delivers in the development of the economy.

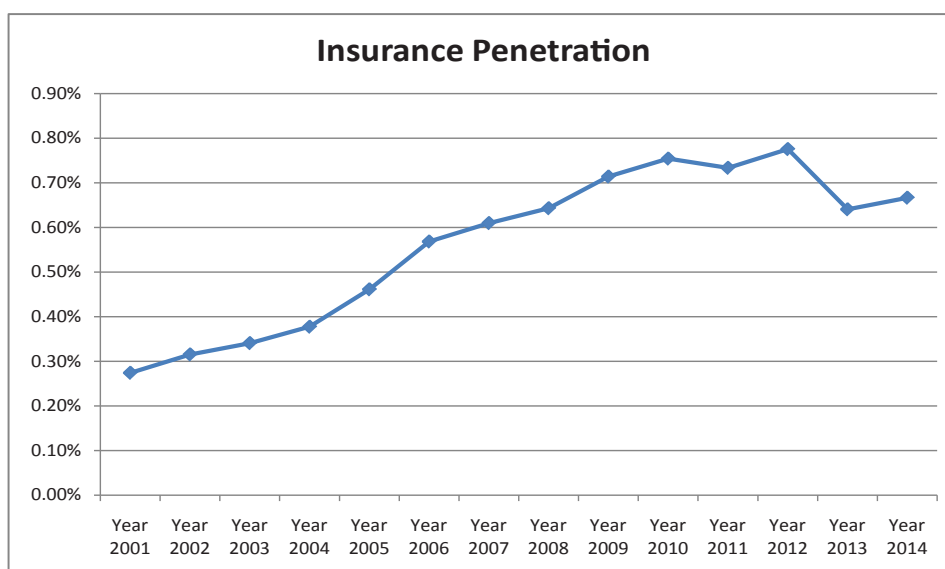
Table 5: Insurance Penetration and Insurance Density Ratio

Total Insurance Premium in BDT Million	GDP (Current Market Price) In BDT Million	Insurance Penetration	Population in Million	Insurance Density
11654	4250880	0.27%	133.78	87.12
13584	4307873	0.32%	136.23	99.71
16134	4735716	0.34%	138.60	116.41
19343	5125380	0.38%	140.84	137.34
25208	5466553	0.46%	142.93	176.37
32129	5653592	0.57%	144.84	221.83

Total Insurance Premium in BDT Million	GDP (Current Market Price) In BDT Million	Insurance Penetration	Population in Million	Insurance Density
38207	6267057	0.61%	146.59	260.63
46371	7213192	0.64%	148.25	312.78
57589	8067068	0.71%	149.91	384.17
68430	9074763	0.75%	151.62	451.34
74270	10126383	0.73%	153.41	484.14
81818	10552040	0.78%	155.26	526.98
76785	11989232	0.64%	157.16	488.59
89549	13436744	0.67%	159.08	562.93

Insurance penetration ratio gives a true picture of the insurance premium's contribution to GDP (Mashayekhi & Fernandes, 2007). Looking at the Table 5 it is evident that the contribution is very low. Insurance density is quite low. The numbers are increasing at a low rate. Given the growth of business and total economy, the slow growth of insurance should be a concern.

Figure 2: Insurance Penetration Ratio



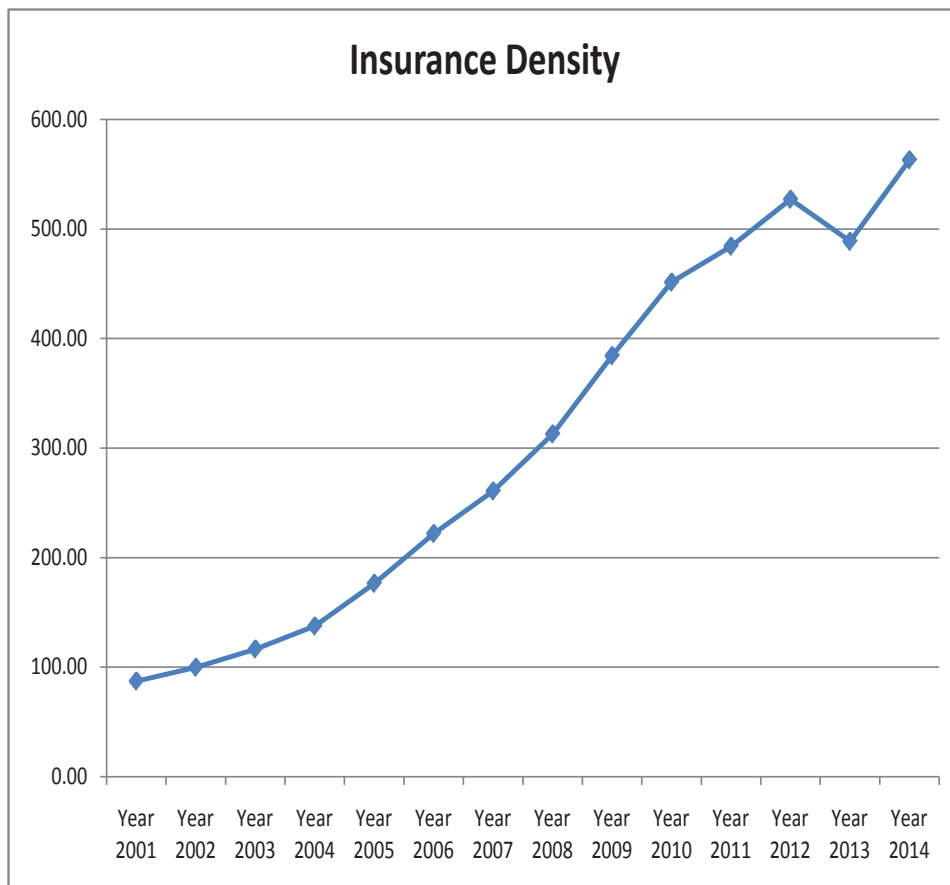
Over the years insurance penetration ratio has grown before the fall in the Year 2011 and Year 2013. The societal outlook and lack of product knowledge have remained bottleneck for insurance industry. Specialized human resources come second in the line of issues with insurance industry's slow growth.

A comparative picture can give a better view of the severity of low contribution from insurance industry.

Insurance penetration ratio in the Year 2014									
Japan	UK	France	Italy	USA	Germany	Brazil	India	China	Bangladesh
10.8%	10.6%	9.1%	8.6%	7.3%	6.5%	3.9%	3.3%	3.2%	0.67%

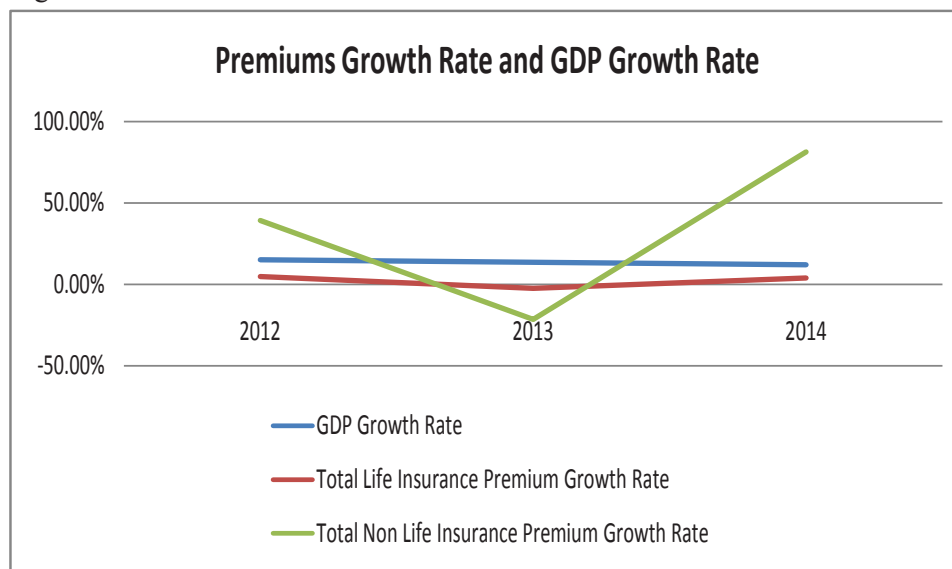
The above table shows the room for improvement for Bangladesh Insurance Industry. The emerging economies are also far ahead in including insurance industry in the composite of GDP.

Figure 3: Insurance Density



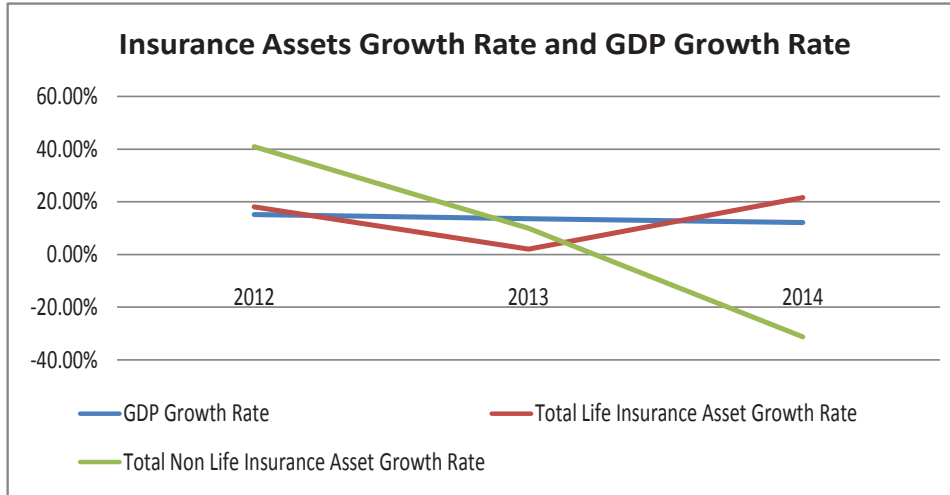
As evident in the insurance penetration ratio, insurance density provides the same picture. Insurance density is calculated by dividing the total premium by total population (Cummins & Mahul, 2009). It shows the level of insurance coverage over the each person of Bangladesh through the premium numbers. It comes as another way of showing the slow growth and low number of insurance industry. Insurance hasn't been the most popular service among the population of Bangladesh due to the complex nature of the products and the negative perception regarding the validity of the service in Bangladesh context.

Figure 4: Trend of GDP Growth Rate and Insurance Premium Growth Rate



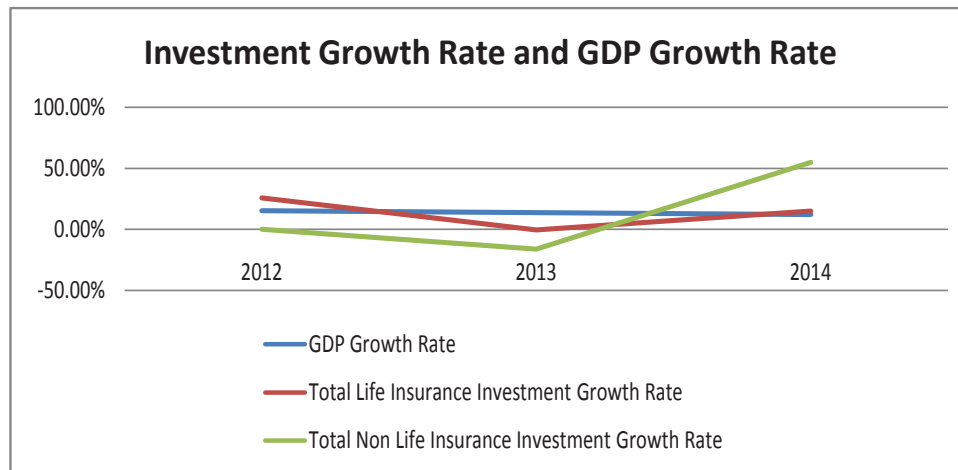
In the recent years Premiums growth rate hasn't seen much of a lift except the sharp increase of non life insurance premium growth rate in the year 2014. Compared to insurance growth rate, GDP growth rate has been steady. The result is expected as there insurance holds very low contribution towards GDP.

Figure 5: Trend of GDP Growth Rate and Insurance Asset Growth Rate



Non life insurance asset growth shows a sharp decline in the period 2012-14 resulting a negative growth, whereas life insurance asset growth increases after a fall indicating a fluctuating nature.

Figure 6: Trend of GDP Growth Rate and Insurance Companies' Investment Growth Rate



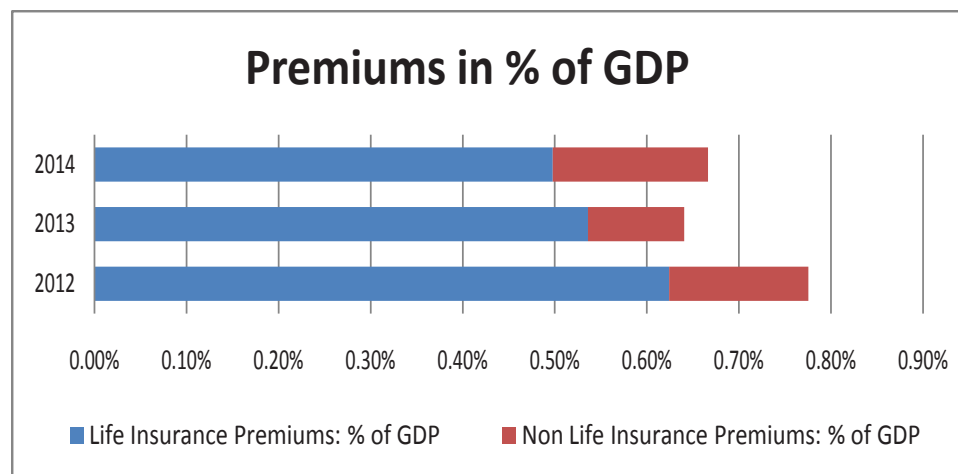
Investment from insurance industry lifts up from the year 2013 to 2014 due to the addition of 13 new life insurance companies and 2 new non life insurance companies.

Table 5, Figure 5, and Figure 6 shows percentage of GDP that is contributed by Premiums and GDP. The impact is very insignificant from insurance premiums. Compared to developed countries the contribution is far less than desirable.

Table 6: Premiums and Investments in % of GDP

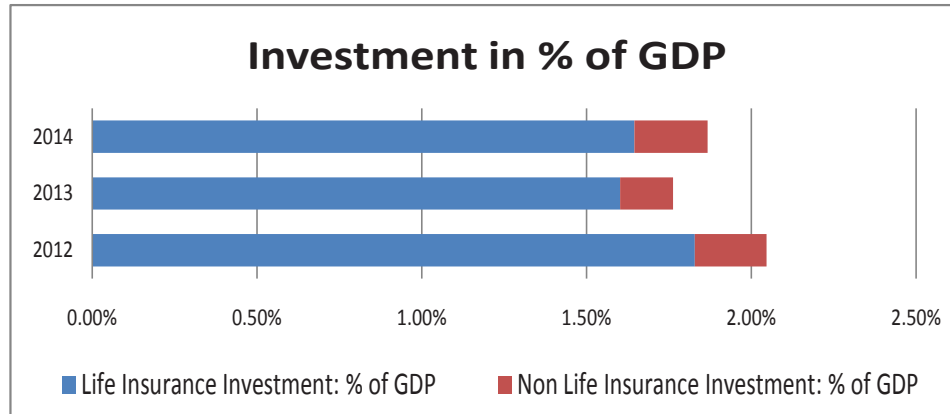
	Year 2012	Year 2013	Year 2014
Life Insurance Premiums: % of GDP	0.62%	0.54%	0.50%
Non Life Insurance Premiums: % of GDP	0.15%	0.10%	0.17%
Life Insurance Investment: % of GDP	1.83%	1.60%	1.65%
Non Life Insurance Investment: % of GDP	0.22%	0.16%	0.22%

Figure 7: Premiums in % of GDP



Comparing the contribution level of life insurance premium and non life insurance premium towards GDP shows a higher level of contribution from life insurance premium than that of non life insurance. The contribution level has decreased from the year 2012 which poses a question over the performance of insurance industry in future.

Figure 8: Investment in % of GDP



Investment from life insurance companies is significantly higher than that of non life insurance companies. Considering the contribution level, life insurance can be thought of a greater contributor and positively correlated to GDP. Further analysis with regression can provide evidence.

4. Regression Analysis

Regression develops mathematical relationship between dependent variable and independent variable (Sen & Srivastava, 1990). Through regression analysis the degree of relationship between two variables is found. In this case, the dependent variable is GDP. Regression analysis is conducted considering variables individually. First, total premium is taken into consideration as independent variable. Then total investment is taken into consideration as independent variable.

Dependent Variable: GDP

Independent Variable: Total Premium

<i>Regression Statistics</i>	
Multiple R	0.602876491
R Square	0.363460063
Adjusted R Square	-0.273079874
Standard Error	1627421.367
Observations	3
<i>Coefficients</i>	
Intercept	805248.3981
Total Premium	135.2488427
<i>Significance F</i>	
	0.588042333

Multiple R = 0.60

The positive correlation between total premium and GDP is not much strong. $R > .75$ could prove to be a significant relationship between the two variables.

R Square = 0.36

36% of GDP's movement can be determined by total premium proves to be insignificant holding all the other variables constant.

Significance F = 0.59

Here, the significance F is greater than 0.10 which suggests that there is a possibility that the numbers from regression output are random and by chance and the regression result is insignificant.

Holding $GDP = Y$ and $Total\ Premium = X$, the equation will be:

$$Y=805248.3981+135.2488427X.$$

Dependent Variable: GDP

Independent Variable: Investment

<i>Regression Statistics</i>	
Multiple R	0.809811929
R Square	0.65579536
Adjusted R Square	0.31159072
Standard Error	1196728.257
Observations	3
<i>Coefficients</i>	
Intercept	-206535.2732
Total Investment	53.97139009
<i>Significance F</i>	
	0.399138218

Multiple R = 0.81

The positive correlation between total premium and GDP is strong. $R > .75$ proves to be a significant relationship between the two variables.

R Square = 0.66

66% of GDP's movement can be determined by total premium proves to be insignificant holding all the other variables constant.

Significance F = 0.39

Here, the significance F is greater than 0.10 which suggests that there is a possibility that the numbers from regression output are random and by chance and the regression result is insignificant. Although there the result proves to hold a strong relationship, it is seen from Significance F that the results are not significant.

Holding GDP=Y and Total Investment = X, the equation will be:

$$Y = -206535.2732 + 53.97139009X$$

Here, the significance F is greater than 0.10 which suggests that the numbers of regression output could be random or by chance. Contrarily, the significance F in this case is less than that of regression analysis between GDP and total premium. So, this regression can be much more reliable than that of between GDP and total premium. The correlation between GDP and total investment is also on the stronger side proved by R=0.80.

Above analysis indicates that insurance companies' investment put more impact on GDP than anything else. In fact, total premium of insurance companies has minimum impact or no impact on GDP. Although premium is one source of fund for investment, the amount of premium earnings doesn't influence the movement of GDP's growth. The preferred equation in this case is $Y = -206535.2732 + 53.97139009X$ where Y = GDP (Current Market Prices) and X = Total Investment.

5. Time Series Analysis, Trend Analysis and Forecasting

For Time Series Analysis, Trend Analysis and Forecasting of insurance premiums and insurance companies' investment moving average method has been applied. As noted earlier the trend of life insurance companies' performance and non-life insurance companies' performance differ from each other. Non-life insurance companies' performance's trend deviate from that of GDP whereas, life insurance companies' performance trend is aligned with that of GDP. The separate analysis will provide much more accurate results as the moving average method takes into consideration the seasonal or cyclical aspects of the performance indicators.

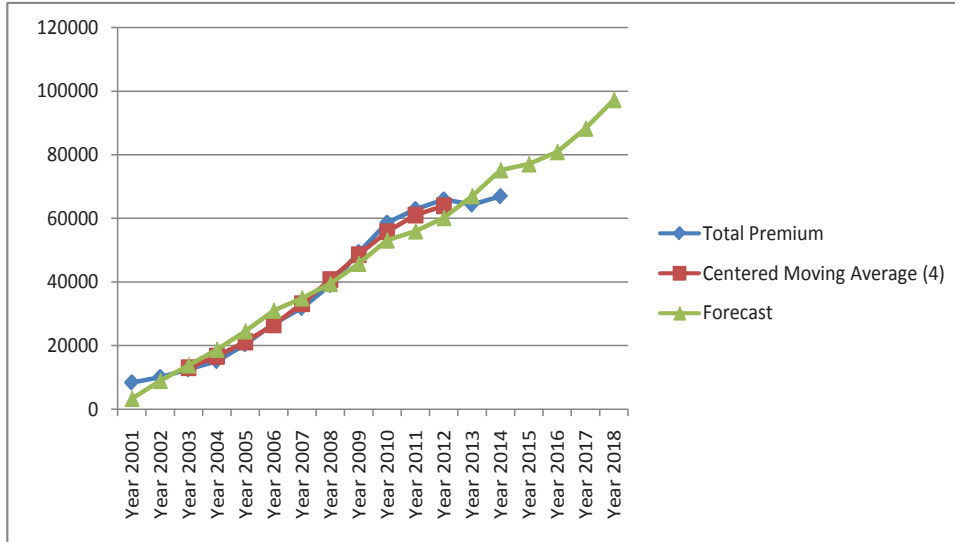
Moving average method, here, considers 4 years for the average. 4 is an even

number and hence, centered moving average is needed. Centered moving average is plotted on the graph to smoothen the time series graph of each performance indicator. With the help of centered moving average seasonality (S_t) and irregularity (I_t) is found. It is assumed from the observation that every 4 years have a cyclical trend in between which means 4 years consist of a cyclical period. There is another column which is titled as deseasonalize which indicates ruling out the seasonal effect from the trend (Yaffee & McGee, 2000). Holding deseasonalize variables as y variables and t (Time) as x variables regression analysis is conducted. With the intercept and the slopes multiplied to t (Time) the trend is derived under the head of T_t . Multiplication between S_t and T_t give forecasted value. The forecasted value is extended to 2018.

In this method some assumptions are made based on observation. The cyclical period is used on the basis of the regular changes over same time lapses. The forecasted value is based on moving average analysis of data collected over the years from 2001 to 2014.

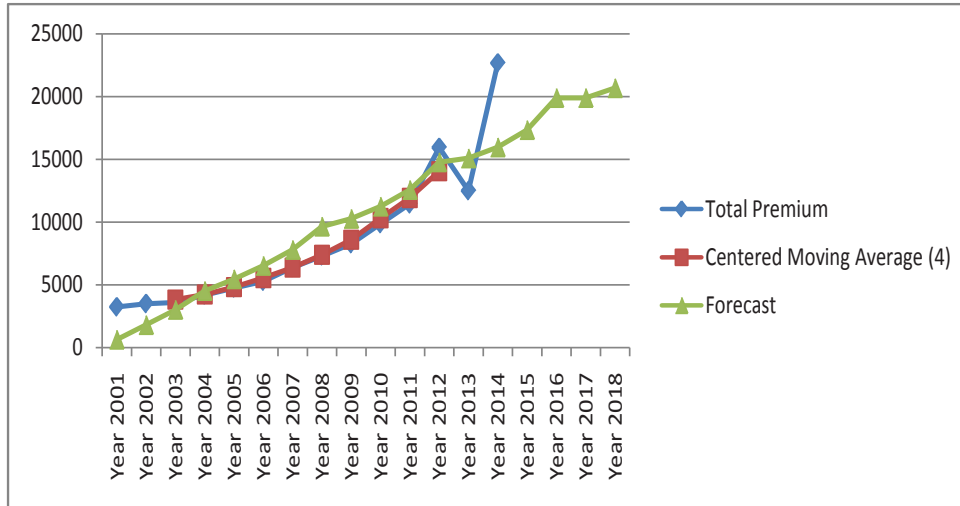
Time Series Analysis and Forecasting										
Forecasting for Total Life Insurance Premium										
			Y_t			Y_t /Centered Moving Average (4)		Y_t/S_t		
t	Cyclical Period	Year	Total Premium	Moving Average (4)	Centered Moving Average (4)	$S_t I_t$	S_t	Deseasonalize	T_t	Forecast
1	1	Year 2001	8400				0.99	8474.70	3374.12	3344.38
2	2	Year 2002	10066				1.03	9771.70	8728.23	8991.11
3	3	Year 2003	12529	11533	13038.88	0.96	0.98	12739.43	14082.3	13849.73
4	4	Year 2004	15137	14544.75	16640.13	0.91	0.97	15662.41	19436.5	18784.45
5	1	Year 2005	20447	18735.5	21146.25	0.97	0.99	20628.83	24790.6	24572.05
6	2	Year 2006	26829	23557	26546.50	1.01	1.03	26044.59	30144.7	31052.58
7	3	Year 2007	31815	29536	33143.25	0.96	0.98	32349.35	35498.8	34912.41
8	4	Year 2008	39053	36750.5	40715.50	0.96	0.97	40408.53	40852.9	39482.46
9	1	Year 2009	49305	44680.5	48555.38	1.02	0.99	49743.46	46207	45799.72
10	2	Year 2010	58549	52430.25	55782.50	1.05	1.03	56837.17	51561.1	53114.04
11	3	Year 2011	62814	59134.75	61006.63	1.03	0.98	63869.00	56915.2	55975.10
12	4	Year 2012	65871	62878.5	63919.75	1.03	0.97	68157.38	62269.3	60180.48
13	1	Year 2013	64280	64961			0.99	64851.63	67623.5	67027.39
14	2	Year 2014	66879				1.03	64923.63	72977.6	75175.51
15	3	Year 2015					0.98		78331.7	77037.78
16	4	Year 2016					0.97		83685.8	80878.49
17	1	Year 2017					0.99		89039.9	88255.07
18	2	Year 2018					1.03		94394	97236.97

Figure 9: Life Insurance Total Premium Time Series, Trend, Forecast



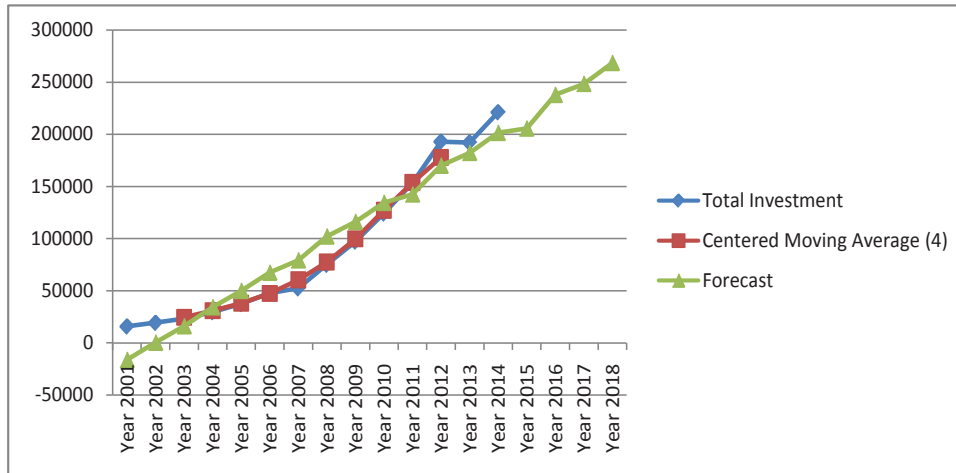
Time Series Analysis and Forecasting (Amount in Million)										
Forecasting for Total Non Life Insurance Premium										
t	Cyclical Period	Year	Y_t	Moving Average (4)	Centered Moving Average (4)	$S_t I_t$	S_t	Desseasonalize	T_t	Forecast
1	1	Year 2001	3254				0.98	3334.76	656.11	640.22
2	2	Year 2002	3518				0.96	3679.17	1889.32	1806.55
3	3	Year 2003	3605	3645.75	3834.13	0.94	0.97	3725.80	3122.52	3021.28
4	4	Year 2004	4206	4022.5	4245.25	0.99	1.04	4050.02	4355.73	4523.48
5	1	Year 2005	4761	4468	4816.38	0.99	0.98	4879.17	5588.93	5453.58
6	2	Year 2006	5300	5164.75	5553.75	0.95	0.96	5542.81	6822.14	6523.28
7	3	Year 2007	6392	5942.75	6383.13	1.00	0.97	6606.18	8055.34	7794.18
8	4	Year 2008	7318	6823.5	7396.13	0.99	1.04	7046.61	9288.55	9646.29
9	1	Year 2009	8284	7968.75	8601.75	0.96	0.98	8489.61	10521.75	10266.93
10	2	Year 2010	9881	9234.75	10313.38	0.96	0.96	10333.69	11754.96	11240.01
11	3	Year 2011	11456	11392	11919.63	0.96	0.97	11839.87	12988.17	12567.07
12	4	Year 2012	15947	12447.25	14045.88	1.14	1.04	15355.59	14221.37	14769.10
13	1	Year 2013	12505	15644.5			0.98	12815.37	15454.58	15080.29
14	2	Year 2014	22670				0.96	23708.60	16687.78	15956.74
15	3	Year 2015					0.97		17920.99	17339.96
16	4	Year 2016					1.04		19154.19	19891.90
17	1	Year 2017					0.98		20387.40	19893.64
18	2	Year 2018					0.96		21620.60	20673.48

Figure 10: Non Life Insurance Total Premium Time Series, Trend, Forecast



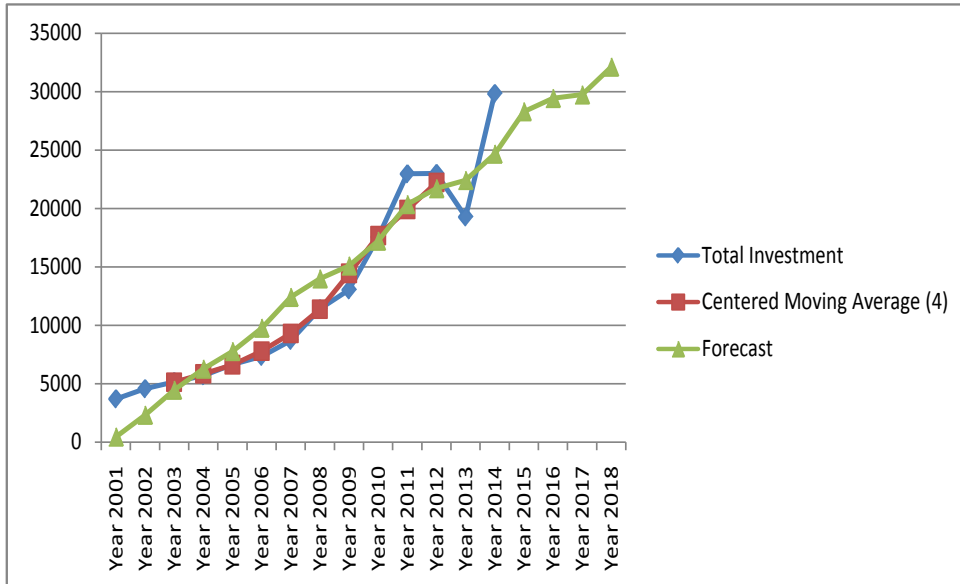
Time Series Analysis and Forecasting (Amount in Million)										
Forecasting for Total Life Insurance Investment										
			Y_t			$Y_t/\text{Centered Moving Average (4)}$		Y_t/S_t		
t	Cyclical Period	Year	Total Investment	Moving Average (4)	Centered Moving Average (4)	S_t, I_t	S_t	Desseasonalize	T_t	Forecast
1	1	Year 2001	15808				0.98	16166.88	-1615	-16147.99
2	2	Year 2002	19306				0.99	19489.25	399.61	395.86
3	3	Year 2003	23146	21959.5	24659.25	0.94	0.93	24792.74	17313.8	16163.83
4	4	Year 2004	29578	27359	30904.00	0.96	1.00	29495.11	34228	34324.21
5	1	Year 2005	37406	34449	38103.50	0.98	0.98	38255.20	51142.2	50006.95
6	2	Year 2006	47666	41758	47429.38	1.00	0.99	48118.44	68056.4	67416.51
7	3	Year 2007	52382	53100.75	60570.38	0.86	0.93	56108.76	84970.6	79326.84
8	4	Year 2008	74949	68040	77594.50	0.97	1.00	74738.96	101885	102171.16
9	1	Year 2009	97163	87149	99766.00	0.97	0.98	99368.81	118799	116161.90
10	2	Year 2010	124102	112383	127126.88	0.98	0.99	125279.95	135713	134437.17
11	3	Year 2011	153318	141870.75	153734.13	1.00	0.93	164225.94	152627	142489.86
12	4	Year 2012	192900	165597.5	177717.25	1.09	1.00	192359.40	169542	170018.10
13	1	Year 2013	192070	189837			0.98	196430.41	186456	182316.84
14	2	Year 2014	221060				0.99	223158.26	203370	201457.83
15	3	Year 2015					0.93		220284	205652.88
16	4	Year 2016					1.00		237198	237865.05
17	1	Year 2017					0.98		254113	248471.78
18	2	Year 2018					0.99		271027	268478.49

Figure 11: Life Insurance Total Investment Time Series, Trend, Forecast



Time Series Analysis and Forecasting (Amount in Million)										
Forecasting for Total Non Life Insurance Investment										
			Y_t			$Y_t / \text{Centered Moving Average (4)}$		Y_t / S_t		
t	Cyclical Period	Year	Total Investment	Moving Average (4)	Centered Moving Average (4)	S_{t-1}	S_t	Deseasonalize	T_t	Forecast
1	1	Year 2001	3686				0.95	3881.40	460.64	437.45
2	2	Year 2002	4553				0.97	4712.45	2388.17	2307.36
3	3	Year 2003	5160	4766.75	5134.00	1.01	1.03	5006.83	4315.70	4447.72
4	4	Year 2004	5668	5501.25	5847.25	0.97	1.00	5658.56	6243.23	6253.64
5	1	Year 2005	6624	6193.25	6634.63	1.00	0.95	6975.14	8170.75	7759.42
6	2	Year 2006	7321	7076	7792.50	0.94	0.97	7577.38	10098.28	9756.61
7	3	Year 2007	8691	8509	9307.88	0.93	1.03	8433.02	12025.81	12393.70
8	4	Year 2008	11400	10106.75	11385.38	1.00	1.00	11381.02	13953.34	13976.61
9	1	Year 2009	13015	12664	14446.38	0.90	0.95	13704.93	15880.87	15081.40
10	2	Year 2010	17550	16228.75	17676.63	0.99	0.97	18164.60	17808.40	17205.85
11	3	Year 2011	22950	19124.5	19904.88	1.15	1.03	22268.77	19735.93	20339.68
12	4	Year 2012	22983	20685.25	22219.25	1.03	1.00	22944.74	21663.46	21699.58
13	1	Year 2013	19258	23753.25			0.95	20278.87	23590.99	22403.38
14	2	Year 2014	29822				0.97	30866.37	25518.52	24655.10
15	3	Year 2015					1.03		27446.05	28285.66
16	4	Year 2016					1.00		29373.58	29422.56
17	1	Year 2017					0.95		31301.11	29725.36
18	2	Year 2018					0.97		33228.64	32104.34

Figure 12: Non Life Insurance Total Investment Time Series, Trend, Forecast



Forecast of GDP:

As it has been found that total investment from insurance industry is a solid indicator for GDP's growth, the regression equation between GDP and total investment can be used to forecast total GDP. Through time series analysis and forecasting, total investment up to year 2018 has been found. In the equation $Y = -206535.2732 + 53.97139009X$, X should be substituted by corresponding year's total investment.

Year	Total Investment (Forecasted)	GDP (Current Market Prices: Forecasted)	Growth Rate
2015	233938.5368	12419452.75	-7.57%
2016	267287.6042	14219348.28	14.49%
2017	278197.1409	14808151.14	4.14%
2018	300582.8273	16016337.75	8.16%

The negative growth rate of GDP in the year 2015 might seem surprising. It needs to be noted that the independent variable is considered as only total investment of insurance companies whereas there are many other variables responsible for GDP's growth left omitted in the equation. If GDP was influenced by total investment of insurance companies only, it would see a drop in productivity in the year 2015. In the next few years the growth would sustain. So, it can be assessed that insurance companies will be more influential in the coming years with increase in their investment.

6. Recommendation

As analyzed in the report through observation and various statistical tools, it has been found that total premium and economic growth has very minimum relation in between them. To some extent, investment has made positive impact over GDP. Regardless of amount of premium, investment alone can contribute to GDP. With forecasted amount it has also been found that relationship between total investment and GDP can create some undesirable results for a single year. It can substantially grow to be a positive motivator in later years.

The recommendation in this case is to direct insurance companies' investment to more productive sectors. The regulatory authority should set up some policies that will direct insurance companies to invest in selected productive sectors more. As investment is seen as slightly strong variable for which GDP can be influenced, the investment part of insurance companies should be carefully regulated. Although weak link between insurance and economic growth is found in this research, it should be noted that insurance industry has bigger in size very recently. The situation can also change in future bringing positive relationship between insurance industry and economic growth.

Another possible solution to intensify the growth of insurance industry is to promote composite financial services that will include banking and insurance services to businesses and individuals to spread the financial services further. A composite financial service will ultimately benefit the society by reaching to people with all around financial services with more saving and investment opportunities side by side the minimization of risk.

- Regulated investment activities of insurance industry
- Initiating insurance literacy program
- Composite financial services that involve banking and insurance services

7. Conclusion

The banking industry and non-bank financial institution industry has been evidently the driver of Bangladesh's economy. Economy of Bangladesh has been in a stable position for a while. The main reason behind this stability is the resilience of the financial system of the country. Even after the stock market crash in the year 2010-2011 the economy's growth didn't fall back. It continued to grow in times when US and Euro market saw a downfall of a big manner. Insurance industry is an integral part of the financial system of Bangladesh. Banking sector and non bank financial institutions flourished more in recent times than insurance industry. The same evidence is found in this research. The weak link between insurance and economic growth is vivid here. Some other findings are important too. Insurance industry's investment activities have a slightly significant impact over country's GDP. The regulated investment activities of insurance industry can be a good boost for country's GDP. The time series analysis, trend analysis, and regression analysis suggest that insurance industry's investment amount has stronger relationship with country's GDP than any other indicator of insurance industry has with GDP.

In future the impact will be stronger, as it is found in the research. So, regulated investment activities will bring new dimension to the insurance industry contributing more to the country's economy.

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Dynamics of Consumer Behavior in the Age of Economic Integration: Exploiting Benefits by Bangladesh Insurance Sector in the SAARC Region

————— **Dr. Bashir Ahmed Bhuiyan** Abstract

Abstract

Consumer behavior has been changing continuously in the contemporary world. Different emerging issues like demand to eat healthier products, lessening vivacious drinks, consideration of the issue of environment friendly concepts in consumption and recycling has been obtaining momentum. Due to multiplicity of factors consumer behavior is now becoming more complex to understand. To be successful marketers need to obtain knowledge on the dynamic and evolving nature of the market, technology and other factors influencing buying decisions and to formulate and implement appropriate time based strategies and to satisfy customer needs effectively and efficiently marketers should understand consumer behavior. Consumers throughout the world are now speaking out vigorously against the firms who are running their business only with a profit goal and boycotting the products and services of the enterprises practicing negative corporate citizenship behaviors. Economic integration advances multiple opportunities to various stakeholders in a diversified ways. Thus, to get foothold in the vast potentials of growing markets in emerging world companies need to establish sound business practices that address social and cultural concerns of the people across the borders and among the economically integrated region. Present paper provides framework for understanding and managing consumer behavior and identifies important factors such as sustainability, technological development, knowledge management and globalization which have the close nexus for changing the consumer behavior in the contemporary world and identifies

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different strategies for exploiting multiple benefits by Bangladesh Insurance Sector in the SAARC region.

Key Words: *Transformational Consumer Behavior, Sustainability, Technology Driven Environment, Knowledge Management, Globalization, Institutional behavior, Economic Integration.*

**Dynamics of Consumer Behavior in the Age of Economic Integration:
Exploiting Benefits by Bangladesh Insurance Sector in the SAARC Region**

Introduction

Consumer behavior has been changing continuously in the contemporary world. Changes in the demands for products have also been gaining new shape. Emergence of new issues, such as the demand to eat healthier products, the lessening vivacious drinks, the consideration of the issue of environmentally friendly concepts in consumption and recycling as a concept of daily consumption and manufacturing of the products are now obtaining momentum in buying patterns and characteristics. It is essential, vis-à-vis challenging for the policy makers and marketers, to expose why consumers behave in different ways and how to shape their behavior. Buyers face complexity in the buying decision processes and need to consider the variety of influences in the internal and external environments. The complexity further aggravates when these influences vary from one individual to another.

Trends in the transformational nature of consumer behavior including, technology driven environment, nexus between knowledge management and consumer behavior and globalization are contributing towards shifting consumer behavior in the emerging world where mechanisms of economic integration and regional agreements in different form at different levels are playing keen role in the dynamism of changes.

In the direction of changes adopting of appropriate strategies to attain effective performance through managing different buying situations are essential. Motivation of the present paper is to focus on determining suitable strategy and implementing them effectively for managing consumer behavior to exploit benefits by Bangladesh Insurance Sector in the SAARC region.

The Issue of Consumer Behavior and Hints of Marketing Strategies

Authors in the field of consumer behavior take the term with different connotations by considering its complexity and interactive influencing forces in the buying decision process. Hawkins et.al. (2007) explicate consumer behavior as the study of individuals, groups, or organizations and the processes to select, secure, use, and dispose of products, services, experiences or ideas to satisfy needs and the impacts that these processes have on the consumer and society. The American Marketing Association (2011) views consumer behavior from tripartite issues: (1) The dynamic interaction of affect and cognition, behavior, and the environment by which human beings conduct the exchange aspects of their lives, (2) the overt actions of consumers, (3) the behavior of the consumer or decision maker in the market place of products and services. According to this definition consumer behavior may be attributed as the interdisciplinary field of study that attempts to understand and describe the behavior of consumer.

The above definitions of consumer behavior comprises the process of a dynamic interaction between individuals, groups and organizations (as consumers) and environment to secure and evaluate information relating to the selection of, buying, and using goods, services, ideas and experiences which are expressed through the buying decisions and post use reactions affecting consumers, economy and society. Thus, important characteristics of consumer behavior can be elicited by examining the above definitions.

- Consumer behavior makes an emphasis on the process of buying decisions considering available resources for obtaining desired goods, services, ideas or experiences.
- Consumers' decisions have an impact on the economy at different levels such as local, national, regional, and international.
- To be successful marketers need to obtain knowledge on the dynamic and evolving nature of the market, technology and other factors influencing buying decisions.
- Consumer markets comprise individual consumers (local and global) and organizational consumers, including business market, nonprofit, government and global markets.
- Consumer behavior is an ongoing exchange process which comprises activities before, during and after purchase.

- Marketing strategies are based on the explicit and implicit knowledge of consumer behavior.
- It refers to the interactive process which takes place between the consumer and society using interdisciplinary skills, knowledge and exercises.
- Behavioral components like affect, mood and emotions vary across the cultures, and therefore influence physical and psychological needs of consumers.

It is evident from the above discussion that knowledge about consumers should be integrated into every facet of marketing strategies. Attainment of success through marketing strategies is justified by the consumers' response. Thus, understanding consumer behavior provides good business opportunities and indicates proper guidelines about how to satisfy customer needs effectively and efficiently. To formulate and implement appropriate time based strategies, marketers should ask important questions such as:

- Who are our customers?
- How they obtain, analyze and interpret the information?
- What are their characteristics?
- To which society customers belong?
- What they want to buy?
- What is the nature of their demand?
- Who are the influencers in the buying decision process?
- Do consumption processes and patterns vary?
- What is the implication of culture in the consumption patterns and processes?
- What would be the implication of the consumption of the products and marketers' strategies at the post purchase evaluation?
- To what extent consumers' behavior has impact on society? And so on.

¹ http://www.marketingpower.com/_layouts/Dictionary.aspx?dLetter=C#consumer+behavior, Powered by the American Marketing Association, Copyright © 2011 MarketingPower, Inc.

Consequently, through asking different questions the marketer can gather detail information about their customers and integrate these into marketing strategies that may act as the guidelines to achieve sustainable competitive advantage.

Factors Influencing Consumer Behavior: Theoretical Review and the Consumer Decision Model

Why consumers buy? How they buy? What factors influence the consumers buying decision? There are no unanimous answers to these questions. Rather, researchers and intellectuals in the field of consumer research and consumer behavior are fragmented on the issue. Many theories and models have been suggested by scholars and academicians in this domain. Solomon (2004) explained that the consumer does not buy only for a basic functional utility of the products, rather their decision making is influenced by the subjective perceived value regarding the specific products, even the role of products exceed their confined service limit. Trommsdorff (2002) holds the view that compared to personal characteristics, no other activities are as instead important to link consumption with consumer behavior research. Because conception leads to the identification of problems, which requires comprehension into personal roles: decision maker, buyer and consumer. For the basic needs satisfaction of consumers, consumption as a term has been explained widely, rather than taking it with contracted meaning. According to Solomon (2004) consumption can be explained into four diversified objectives: experience (emotive or aesthetic reactions), instrument of integration (it integrates consumer to the society), classification scale (Choice of products determine how consumers are perceived by the environment and regarded by the society), and consumption as game (between sellers and consumers as buyers).

In another study it is stated that, Commoditization and increased consumption are crossing the line between values and needs, production and creation, identity and capital accumulation, thus making people constantly expecting a payoff while engaging in social, cultural and economic transactions². Thus, Factors influencing the consumers' decision making process are numerous. These are: consumers' inherent characteristics³ (demographics, economic, psychological and social), cultural factors⁴, situational factors⁵. According to social learning theory, consumer behavior is not tailor-made, but instead consumption situations have the systematic effect on it⁶.

Despite the growth and development in the study of consumer behavior there is no universally accepted theoretical framework or model in this area (Foxall, 2005).

Some models emphasized on the importance of cognition (decision making) rather than social phenomena (reference groups). Many authors attributed consumer behavior as a process of thinking, evaluating and decision making. Other studies portray the significance of affect—mood and emotions—in buying behavior. A majority of the studies used consumer decision making process by cognitive information processing for comprehensive review of consumer behavior (Simonson et al., 2001; Howard and Seth, 1969).

Foxall (1990) explained five alternative approaches — economic man, psychodynamic, behaviorist, cognitive and humanistic — to predict human behavior as consumer. According to the economic man approach, humans are considered as economic beings that want to maximize utility in buying the product through collecting and evaluating information, deciding on the best alternative based on a complete rational analysis. The *'perfect rationality'* assumption is criticized an alternative *'satisficing'* term is used to mean *'optimality'* or *'bounded rationality'* in the actual course of action by Herbert Simon in 1997.

The Psychodynamic approach explains that instead of individual cognition or environmental stimuli, 'biological drives' or 'instinctive forces' are vital determinants of human behavior. Freud (1923) identified three systems of the psyche: id, ego and superego which explain how primitive and impulsive drives of basic physiological needs tend to immediate satisfaction. Ego serves as the internal monitor in fulfilling the needs created by the systems of id through the use of the individual's consciousness. Super-ego mediates between the id and ego by social norms, acceptability and justification for individual needs fulfillment. Thus, these three systems are closely linked to each other in the process of the individual's need satisfaction.

² www.rebs.ro/articles/pdfs/26.pdf

³ Robert Wilkes, (1995), "Household Life-Cycle Stages, Transitions and Product Expenditures," 22(1) *Journal of Consumer Research* 27; Charles M Schaninger and Donald Sciglimpaglia, (1981), "The Influence of Cognitive Personality Traits and Demographics on Consumer Information Acquisition," 8(2) *Journal of Consumer Research*, 208

⁴ Kotler P. (2001): Marketing management. grada, Praha, 10thedition; ISBN 80-247-0016-6.

⁵ Russell W. Belk, (1974), 'An Exploratory Assessment of Situational Effects in Buyer Behaviour' 11(2) *Journal of Marketing Research* 156.

⁶ Sha Yang, Modelling the Within-Person Variation in Brand Preferences (D Phil Thesis, Ohio State University, 2000).

The behaviorist approach posits that human behavior such as actions, thoughts and feelings is determined by external environmental factors. However, there is a debate regarding how environmental cues cause human behavior. Ivan Pavlov⁷ (1849 -1936) explained it through classical conditioning⁸ while Burrhus F. Skinner (1904-1990) developed the idea of operant or instrumental conditioning⁹.

The Cognitive approach explains the importance of intrapersonal cognition, i.e. complex mental processing of information in decision making. It suggests three stage model of consumer behavior: Stimulus→ Organism→ Response. The Individual, as an information processor, uses both ‘environmental inputs’ as information and ‘intrapersonal inputs’ such as experience, perception, learning, memory, thinking, emotion and motivation. Thus, the individual as an active organism influences the process of information and types of information to be sought. On the other hand, information processing can be attributed as both stimulus driven and concept driven (Peter and Olson, 2008; Moital, 2007).

In explaining the consumer decision making, cognitive models emphasized generic consumer behavior focusing on the rational analysis of the information. However, scholars explored the limitations of the cognitive approach and found the humanistic approach as the best option where the individual consumer is focused and ‘*emotions*’, ‘*volitions*’ — the gap between consumers’ stated purchase intentions and their actual purchase behavior — and ‘*altruism*’ — considering selflessness and philanthropic aspects — are highlighted (Natarajan & Bagozzi, 1999).

Input-Process-Output Model of Consumer Behavior

By considering the above literature review, factors influencing the consumer behavior as well as a consumer decision model that includes all the issues and forces influencing the process have been discussed in the following. Figure-1 shows consumer behavior as an input-process–output model. It is evident in the model that input factors are classified into three: internal stimuli, external stimuli and marketing stimuli. Both internal and external stimuli have influences on the marketing stimuli. That is, consumer’s recognition of the product needs are

⁷ dakota.fmpdata.net/PsychAI/PrintFiles/ClassCondOvrw.pdf, accessed on May 01, 2011 at 130 P.m.

⁸ According to classical conditioning human behavior is transactional and influenced by the reflexes, i.e. one stimulus leads to another stimulus (paired stimulus) is the cause of human behavior.

⁹ Instrumental conditioning identifies human behavior as reinforced i.e. human behavior is influenced by the outcome of previous behavior either positive or negative.

directly predisposed by the marketing stimuli conforming the market offerings, pricing, distribution and communication strategies which are influenced by the intra consumer influences (motivation, learning, experiences, memory, emotions, perceptions, attitudes, values, beliefs and personality) plus influences from the external environment (economic, technological and political environment; cultural factors, demographics and lifestyles, social class and reference groups, family members and opinion leaders, etc.).

The process stage of the model includes need recognition by consumers, the search of information and the evaluation of alternatives before the formation of attitudes towards specific offerings or brands. Then, in the output stage, attitudes are formed, consumer intention is aroused, and the consumer makes the decision to buy the products. Finally, in the post purchase situation, three states of satisfaction have been found relevant to three actions. Consumers may be satisfied, delighted or disappointed. Satisfied customers buy again, delighted customers spread positive word of mouth and disappointed customers decide not to buy any more. At the post purchase level the process is again energized through input at the second level of buying.

Factors Influencing Consumer Behavior

As it is stated in the model that internal, external and marketing stimulus factors have direct influence on the consumer behavior. The following section details out the individual factors in specific group or set of factors.

Consumer's Internal Stimuli

Motivation: The Marketing concept focuses on satisfaction of the consumer needs and, in turn, marketer's efforts aim to arouse those needs. Motivation includes the stimulating forces to cause behavior that satisfies the consumer needs. Motivation involves a chain of actions activities — unfulfilled needs and drives /desires→ tension→ behavior / action → goal attainment and need fulfillment.

Consumers have various types of needs including the following: biogenic needs, such as needs for food, water, and comfort are created from physiological states of tension. Psychological states of tension give rise to psychogenic needs, such as needs for affiliations, esteem, and achievement. Different theories exist to explain the motivational phenomena. Abraham Maslow¹⁰ explains human motivation is

¹⁰ Abraham Maslow, (1954), *Motivation and Personality*, New York: Harper and Row, pp. 80-106.

sequential i.e. unless the fulfillment of one need is attained, another will not arise. Therefore, needs are converted from most to least pressing — physiological, safety, social, esteem and self-actualization — needs.

Need hierarchy is often used in segmenting markets with specific advertising appeals to one or more need-segment levels. To find out an appropriate unoccupied niche, a “need hierarchy framework” can be used as a versatile positioning tool. According to Sigmund Freud’s assumptions, human behavior is largely driven by unconscious cues. Continuing with the Freudian interpretation motivation, researchers conduct consumer surveys to reveal deeper motives by using various projective techniques such as word association, sentence completion, picture interpretation and role playing methods, etc¹¹. Therefore, when formulating a marketing strategy marketers should focus on multiple motives of the consumer.

Learning and Experience: Learning is a process that changes human behavior as a result of observation and experience. Understanding consumer learning helps us to explain and predict buying behavior and perceiving the consumer decision process. Consumers learn from information sources used to obtain knowledge on the products and services, from criteria used for assessing alternatives, and the process of making the purchase decision. All learning is not purposeful, but instead learning is sometimes intentional or in some cases involuntary. There are two types of learning: behavioral learning and cognitive learning.

The process of obtaining an observable response from repetitive experiences influenced by external stimuli is defined as behavioral learning. In spite of having some debates, most of the intellectuals in the field agree that some basic elements of learning are the drive, cues, the response and the reinforcement. The drive forces an individual to do something i.e. action. Cue provides direction towards the action. Factors such as advertising, packaging, styling, and displays of the products serve as the stimulus or cue that gives direction to consumers to purchase. Drives and cues determine the consumer’s action which is defined as response. Reinforcement leads to the repetition of behavior if it is rewarding in the previous experience. Marketers should design advertisement through step wise instructions to generate consumers learning and interest towards the stimuli or cues.

Cognitive learning occurs when consumers face problems, observe solutions and use thinking and reasoning without direct experience. It takes place as a result of connecting two or more ideas and observing the outcomes of other’s behavior.

Thus, cognitive theory focuses on the importance of motivation and mental processing of information in producing expected response.

Memory: Traditionally, memory has been discussed in the discipline of philosophy. It comes into the forefronts of discussion in the cognitive psychology paradigm in the late nineteenth and early twentieth century. In recent years it has been recognized as the principal pillar of cognitive neuroscience. It has an interdisciplinary linkage between cognitive psychology and neuroscience. In The process of information, key stages of formation and retrieval of memory the followings are included: *encoding, storage and retrieval*.

Through encoding, information are received, processed and combined. It helps to select information to represent an object. Marketers provide information to the audience in the encoding stage to form an overall mental image of the brands to choose. An advertisement with visual illustrations is more effective compared to the verbal illustrations, but when both the illustrations are presented together for portraying different product attributes the process becomes more fruitful.

In the storage stage, information are recorded and kept. ‘Short-term’ or ‘working’ memory keeps information in the form of the image of sensory inputs for a moment. Transferring information from short to the long-term memory requires 2-10 seconds that retains afterwards. Many information processing specialists consider long-term memory as a network of concepts (nodes) having mutual links among them. An individual obtain more knowledge on a subject by using extended network of relationships and through searching sufficient meaningful information to activate their memory. Then, as a response to the needs, necessary information is recollected through the retrieval process from the long-term storage.

Consumers tend to remember product benefits rather than attributes. Therefore, in designing an advertisement, appropriate message should be communicated to consumers by integrating product benefits with the attributes sought.

Personality and Self-concept: Both personality and self-concept have influences on consumer behavior. Personality has been explained in various ways. The combination of dynamic organizations and psychological systems within an individual that determine unique adjustments to the environments is referred to as personality. It is described as enduring characteristics and consistent behaviors

¹¹ Earnes Ditcher, (1964) Handbook of Consumer Motivations, New York: McGraw-Hill.

that are exhibited in diverse situations and developed continuously overtime. Multiple factors such as heredity, environment and situation have influences on personality development. Some characteristics of personality can be elicited from its definition. These are: personality differs significantly based on the individual differences, it is consistent and developed overtime, and is changeable.

The set of characteristics corresponding to a brand is termed as brand personality. Consumers attribute different traits and characteristics to diverse brands in a wide variety of products. Their choice is filtered through the personality and product related attributes which tend to serve the utilitarian function and symbolic function of a brand. Thus, marketers need to reflect brand personality whenever they promote the brand. For example, Rolex is promoting excellence to their customer, Volvo is focusing on safety and BMW is extending performance in its advertisements.

Cross cultural analysis suggests that common people of a country or a society have distinct sets of personality characteristics which are reflected in their national character and revealed in an individual's '*self-concept*' or '*self-image*' (how the people see themselves). In the possession of a product consumers identify their distinct personality and tend to choose a brand consciously or unconsciously associated with their personality and self image. The Self-concept issue is explained through one or multiple selves and consumers act in different ways with different people in different circumstances. Various kinds of self-images have been recognized in consumer behavior literature, including:

- Ø **Private-self** - What I am and what I want to be are the evaluative question to explain private-self.
 - **Actual-self**: pragmatic evaluation of one's own quality that he or she possesses or does not possess. That is, what I am in the present.
 - **Ideal-self**: A person's expectation about what he or she wants to be. The relevant guiding statement is what I want to be.
- Ø **Social-self** – What I am as evaluated by others and how I like to be seen by others are social self concepts. This can also be categorized into **actual social self** and **ideal social self image**. The important issue is whose evaluation or expectation I am considering in shaping or reshaping my choice. Whether my choice is right or wrong should be grounded with other influencing factors.

- ∅ **Extended-self:** We possess different things. Our personal possessions help to form our identity, and every item has its '*psychic energy*' or '*psychic pluses*'. To what extent a product or possession is identified by us and how close to ourselves the product is, an important issue. That is, the external objects that constitute the part of us are attributed as the extended-self. The Extended self can be described in various levels of possessions, including the individual, family, community and group levels.
- ∅ **Virtual –self:** We can communicate with multi-personalities relating to our interest in different direction through using internet and online communication as an entertainment vehicle. With similar interest and orientation, online chat rooms provide immense opportunities to enhance the network and social relations, and to obtain a broad range of image and status throughout the world by using internet.

Therefore, using various social media, an individual can change himself / herself as 'online self', which provides not only a changed perception, but rather creates an unlimited set of opportunities in different directions through the enhancement of networks and knowledge sharing.

It is evident that every individual has a self concept, which is continuously changing through interactions with others and surroundings. We make every effort to maintain and augment our self concept and accordingly purchase or consume products, services and ideas to support self-improvement objectives. Our consumption patterns portray social symbols and convey social meanings. We wish to change ourselves, to become different and to improve our self-concepts, which alters our individual uniqueness and extends our self-image, which in turn corresponds to the achievement of *personal vanity*¹². Thus, marketers should consider the 360 degrees of the consumer's self-change process in formulating and implementing the marketing strategies keeping in view the continuous improvements of the market.

Perceptions: We do not react to the world as it is, rather we respond to the world as we perceive it. Reality is a personal phenomenon, which is shaped by the person's needs, wants, values, and personal experiences. Consumers' perceptions affect their actions, decisions, buying habits, leisure habits and other variables which are very much important to the marketers. *Perception is the process by which individuals select, organize and interpret information inputs and other stimuli in order to provide meaning to their surroundings.*

Customers directly respond to the stimuli (such as products, packages, brand names, color, advertisements and commercials) by using their *sensation*. Human organs that receive sensory inputs are defined as *sensory receptors*. Marketers aim to attract the attention of the customers by bringing changes into the sensory inputs by applying different innovative programs with the passage of time that give them the opportunities for sustainable competitive advantage in the market, with the exception that consumers become stabilized and accommodated to the existing level of stimulation.

As consumers operate in an ever-changing complex environment, they attempt to organize and interpret information through screening of exposure, comprehension and then retention. Interpretation of information consistent to one's attitudes and beliefs is defined as *selective comprehension*. While taking decisions, consumers consider the stimuli that are *consistent to their current needs, closer to their anticipation and bring just the noticeable difference between two similar stimuli*.

At the post purchase level consumers attitudes are formed towards a certain product and they tend to verify an existing offering based on these three yardsticks. Therefore, marketers try to promote their products to create just noticeable differences above the selective attention filters, reducing selective distorted attitudes through providing unambiguous positive information, retaining the image of the brand by conveying a message repetitively, engaging customers actively with their thought and subtle subconscious mental processes.

Values, Beliefs and Attitudes: Consumers take the decision based on their values, beliefs and attitudes. Attitudes are the evaluative statement, either positive or negative, regarding people, events or things. Attitudes are learned and formed by values and beliefs of an individual. Basic components of the attitudes are: *cognition, affect and behavior*. Emotions or feelings concerning a product, brand or things are attributed as the affective component of an attitude. Opinion or belief segment of the attitude obtained through knowledge, direct experience and other related information collected from various sources is defined as cognitive component. The likelihood or tendency to undertake a specific action or behave in a certain way is recognized as the behavioral component of the attitude. The example of behavioral component of the attitude is the intention to buy a certain product.

¹² Personal vanity is expressed through *physical vanity* – inflated view of one's own physical appearance and *achievement vanity* – inflated view of one's personal achievements.

Beliefs are the 'proposition' or 'subjective perception' regarding the world around us. It refers to the cognitive facts of a person. Personal experience, advertising and discussions with other people help to develop beliefs of an individual. Through belief we hold the view regarding different attributes and performance of a product or brand. Beliefs and personal values about product attributes are important as both of these contribute towards the creation of favorable or unfavorable attitude for certain products or services.

Values are long-lasting beliefs about what is 'desirable' or 'good' and what is 'undesirable' or 'bad' in diversified situations. It is the perception to guide selecting socially desirable goals and courses of actions to achieve those goals. **Instrumental values** assist in selecting the appropriate means and **terminal values** guide to select the end state of results. Arranging values into a hierarchy of preferences is defined as **value systems**. A unique value system is developed through the **socialization process** inculcated by parents, religious and other institutions, friends, personal experiences and the society where one lives. Values differ across the culture in various dimensions and practices.

Thus, it is essential to focus on values, beliefs and attitudes as an individual or as a group phenomenon while designing and implementing programs by marketers. Especially, in designing and developing new products and promoting them to specific market segment. Cross cultural value systems should also be considered when business is done internationally.

Marketing Stimuli

Satisfying consumer needs better than competitors is the key to success of a firm in the competitive market. For its survival firms need to select target markets based on the decisive criteria, evaluate their needs, formulate an effective marketing strategy and provide them superior value. Every facet of a marketing plan requires obtaining knowledge about the consumers and gathering, updating as well as integrating information into the successful marketing strategy. Formulating an effective marketing strategy formulation requires concentrating on the elements of the marketing mix: **market offerings, price, distribution and communication**. Marketing managers can control the elements in the marketing mix subject to the constraints in the internal and external environments.

Consumers purchase **products** to satisfy perceived needs. 'Fax machines' and 'internet' became the competitive products for 'overnight letter delivery system' of Federal Express, as the first two products are used as an alternative to meet the

needs of sending a letter in a faster, cheaper and more convenient way. To attain success the product must satisfy the needs of the consumer better than the competitors. Marketers should have continuous insight into the needs of the customers and transform them through offering products that best satisfy their needs. Consumers favor those products that offer the most quality, performance and innovative features in the wide range of offerings such as goods, services, experiences, events, persons, places, properties, organizations, information, ideas and so on. By considering the differences in specific demand of the markets multiple products with diversified attributes such as color, taste, size, variety of package and warranty should be offered to get the most confidence of the customers.

Price is the important strategic element in the marketing mix that produces revenue and affects decisions relating to the product features, channel decisions and promotion. It refers to the amount of money that customers pay to obtain the right to use a product. The right can be a possession of ownership or limited usage of a product such as a rent or a lease. Price sometimes indicates affordability of the customers and signifies quality of the products. A lower price of the same products results in volume of sales increase and sometimes it is the desirable feature of a product to some customers. Therefore, in determining price a thorough understanding of the symbolic meaning it conveys, must be performed carefully for the product or to its target market along with company objectives such as survival or market leadership. From the customer's viewpoints the price of a product includes a combination of some price as well as non price (service) elements such as insurance, maintenance, consideration of value of the pollution, etc. One of the important strategies of a firm is to provide maximum value to a customer through reducing non-price cost of owning or operating a product.

Another important element in marketing mix is **communication**, which represents the activities to inform existing and potential customers regarding a product and persuade them to buy that product. To generate positive customer response, information of the offerings should be communicated with a proper combination of the promotion mix tools: advertising, personal selling, sales promotion, and public relations. An enterprise should appropriately blend the communication programs for achieving its marketing objectives. Marketing communication decisions involve: a promotional strategy (push vs. pull), the combination of promotional tools, and the communication budget of a company. The following points should be kept in mind while designing an effective communication strategy:

- The target audience of the communication message: individual customers, channel members, influencers of the customers, etc.
- The effects we want to achieve from our target audience: learning, providing more information regarding a product or other kinds of results
- Deciding on the message to achieve desired effects on the audience: developing an effective message by the combination of the word, pictures, and symbols that convey desired meaning to the target audience.
- The means and media, such as personal selling, promoting information through right package, mass and social media to be used to reach to the target audience.
- Deciding on the timing of communication based on the knowledge of the decision process.

After manufacturing, packaging, pricing and promoting, the product must be available and accessible to the customers. **Distribution** as an element of the marketing mix includes channels of distribution and physical distribution. Individuals and organizations that facilitate the movement of products from manufacturers to the consumers are referred to as channel of distribution. To ensure smooth and flawless movement of products the presence of some facilitating activities such as transportation, warehousing, inventory control, order processing and insurance is inevitable. These activities are referred to as physical distribution. The important factors that have influences on the channel decisions are the nature of the products and markets, the availability of the middlemen and their service providing ability, the size and policy of the company, economic cycles, technological inventions and the competitive environment.

External Stimuli

External stimuli have influences on consumer behavior. Factors in the external stimuli involve culture and sub culture, demographics and lifestyles, family, opinion leaders, reference groups, social class, as well as the economic, political and technological environments.

Culture and Sub Culture: Every society has its different flavor expressed through the characteristics of that society including important factors such as

language, laws, religions, values and norms, practices, music, artifacts, rituals, technology, and patterns of non verbal communication among others. All these factors constitute the characteristics of a particular culture. Culture is the vital influencing factor of individual wants and behavior. Children start learning culture from family and other institutions at an early stage of their growth and continue to learn throughout the experiences in life. Achievement, integrity, hard work, respect to others, caring for elders, freedom and humanitarianism are the values indoctrinated through the culture. There are subgroups within a culture that exhibit behavioral characteristics to distinguish themselves from other groups of the society. That subculture provides specific identification and socialization for their members. Distinction of subcultures may be based on the nationalities, religions, racial identities, geographic regions, rural-urban classification, etc. Subculture plays an important role as it constitutes the significant part of the population for which a company needs to design specialized marketing programs. Populations of countries such as the United States of America and Canada are comprised by several ethnic and racial subcultures like European, African and Asian, and within these last group, Chinese, Japanese, Vietnamese, Korean, and Thai immigrants. These subcultures form different language, beliefs, customs and values that should be considered by a firm in formulating and implementing the marketing strategies.

Demographics and Lifestyles : Socio-demographic factors include: demographics, social trends and values – that have influences on lifestyle trends of a population offering enormous opportunities in consumer and durable goods, retailing, services, leisure, entertainment, housing and construction, etc. That is, demographic characteristics such as age, gender, family size, education, occupation, and income etc. determine the demand of different products and changes in demographics signal the rise of new markets. Demands of products like health insurance, medical services, drugs, education and housing vary with the demographic characteristics. Marketers need to identify different lifecycle stages, consumer decision patterns and corresponding buying behaviors when developing marketing programs. Education, income, and occupation also have significant impacts on the consumer behavior.

Opinion Leaders: Opinion leaders play the influential role in convincing others' attitudes and actions towards buying a particular product. Marketers need to locate opinion leaders and discover channels of influence through which they can influence the acceptance of products by others. However, characteristics of opinion leaders may vary with country, society and perspective. For example,

opinion leaders are usually older people in India and Korea while in Australia; the relatively young generations are usually referred to opinion leaders. Some developing countries like Bangladesh are now orienting towards the young leadership. Grameenphone, a mobile phone operator in Bangladesh offers a distinct package 'djuice' for the young generation which is different from regular users. At the initial phase of the product, the offer was made to friend circles among the youth community to become opinion leaders and then foster the use of the product by others.

Reference Group: Groups that serve as the point of comparison or reference in forming the values, attitudes and behavior of other groups are defined as reference groups. Reference group influence consumers in different ways as the exposing towards new behaviors and lifestyles, influencing attitudes and self concepts, and creating pressures for conformity that may influence product or brand choice. As consumer we maintain our direct communication continuously and informally to some groups like family, friends, neighbors while to others we maintain more formal, indirect and less continuous interaction such as religious, professional,, and trade union groups.

Social Class: Every society has some forms of social class by which they identify themselves through relatively enduring and structured divisions and share common values, interests and behaviors. Social class is generally formed by a combination of different factors such as occupation, income, education, wealth and other related variables. The role of a different social class is fixed in some societies while flexible in others. Marketers are concerned with specific social class, as it shows specific product and brand preferences in various consumptions such as clothing, home furnishing, leisure activity, and food habits.

Economic Environment: Personal income at the individual level and purchasing power of a nation at the macro level influence the buying behavior and product choice. Marketers need keep surveillance on the various economic indicators such as growth rate, individual disposable income, tax structure, propensity to save, expenditure patterns, interest rate and inflation to keep up with the right decision in designing, pricing and positioning of products. Marketers may charge a premium price or low price in the competitive market depending on the company strategy, where the economic environment at the individual and collective level

¹ http://www.marketingpower.com/_layouts/Dictionary.aspx?dLetter=C#consumer+behavior, Powered by the American Marketing Association, Copyright © 2011 MarketingPower, Inc.

may play an important role.

Technological Environment: Technology is shaping and changing our lives dramatically. It is making our lives simple, easy and comfortable. We are blessed by the technological wonders in different aspects of our lives from retail store to foods, restaurants, hospitals, tourism, banking and many other sectors. Technology is contributing in building knowledgeable and sophisticated customers who are very conscious not only about products and consumption but also about the pricing, distributions and promotional aspects of the offerings in tangible products and intangible services. Thus, to influence the consumers' behavior, marketing executives should focus on technology as a pertinent component in the strategy determination and operational implementations.

Political and Legal Environment: Politics and law are closely knitted as supportive or inhibitive stimuli for creating a favorable consumption environment at different levels. Legal procedures and political environments ensure balance among various groups, reduce discriminations, protect consumer rights, and provide an appropriate atmosphere to ensure the best possible satisfaction.

Process

The consumer buying decision is basically a psychological process. Organizations need to understand all the phases in consumer decision process such as need recognition, information search and evaluation of the alternatives. Consumers buying process is started before actual buying and continued even after the buying is completed. Consumers always do not follow the same process in buying all kinds of products. Rather it is influenced by the nature of the products, buying patterns, time of purchasing, previous experiences and other unintentional factors. Steps involved in a buying decision process are given below:

Need Recognition: In the initial process of buying decisions, consumers recognize a need or a problem which is generated by internal or external stimuli. Internal stimuli drive towards the arousal of needs at the inception stage such as hunger and thirst. Consumers' intention to buy a product is also influenced by the external stimuli. Marketers activate the buying intention through collecting consumer related information and then develop marketing strategies to attract them towards the particular products and show superiority of their products over competitors. Consumers may be influenced to buy a product by seeing others when the new one is with additive features.

Information Search: After recognition of the problems or needs, consumers

generally search for information which is started by internal search or personal experiences. In case of repetitive buying customers invest less effort for collecting information. Customers may also collect information from external sources such as commercial sources including advertising, web sites, sales person, dealers, displays, mass media and information published by the different government agencies. Consumers information searching may be attributed into different levels. At the mid level of search consumers become more receptive to product information. In the next level for more information consumer conduct advanced search of information by using external sources. Information sources play varying roles in the buying decision process depending on the nature and types of products, buyer's characteristics and importance of specific buying situations, etc. Normally commercial sources help to inform a customer regarding a product and personal sources assist in evaluating information.

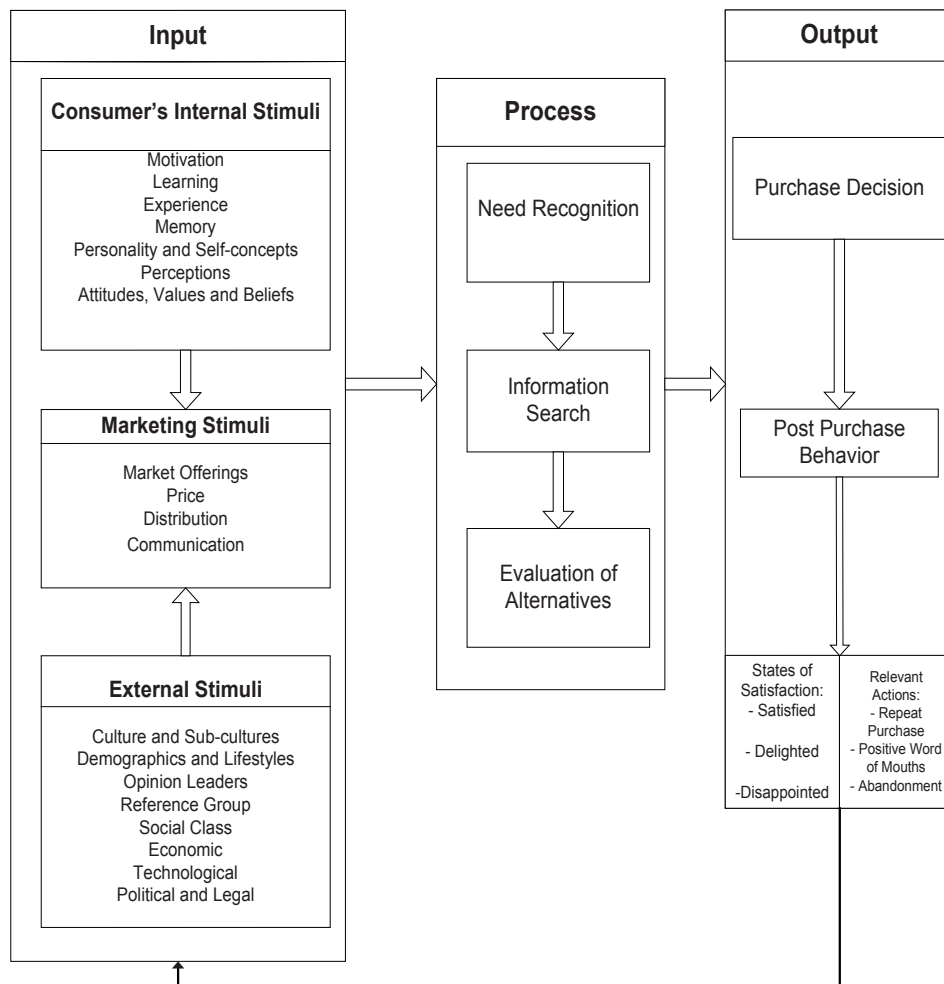
Evaluation of Alternatives: Customers analyze the collected information for evaluating alternatives before taking buying decisions. In evaluating purchase alternatives buyer's mental heuristics or rules serve as the decision mediators. Predisposition regarding a specific brand or environmental forces may play the stimulating or limiting role in determining the consumer choice. Strengths of the attitude towards available brands and process of learning by the consumers serve as the major influencers in shaping consumers attitudes towards purchase decisions. If consumers are familiar with existing products, it takes less time and efforts, for taking a purchase decision which is attributed as Limited Problems Solving (LPS) and it becomes a routine problem solving (RPS). In situations where customers do not have sufficient information or strong attitude towards a product, they tend to involve in extensive problem solving (EPS) through information seeking and prolonged deliberation for reducing information ambiguity in decision making (Foxall, 1990).

Purchase Decision: Consumers preferences are configured in the evaluation stage for available brands. After arousal of interest for buying a preferred product consumers take decisions regarding quantity, place, time and mode of payment for that particular product. Even after the formation of purchase intention the purchase decision may be influenced by some intervening factors such as attitude of others, motivation to comply with that attitude, dissemination of information by intermediaries regarding specific product and unanticipated situations.

Post Purchase Behavior: After purchase and consumption of the product, consumers may be satisfied and delighted and a positive attitude may be formed

regarding consumed brand. As a result repetitive purchase will be made and encourage others to buy the same through positive word of mouth. On the contrary, if customers are dissatisfied, a negative attitude will be formed; they will not buy the products and discourage other through negative word of mouth. So, marketers must continuously monitor post purchase situations and actions of the consumers, which will provide feedback and input in the rest of the purchase decision process.

Figure - 1: Consumer Behavior Model



Transformational Nature of the Consumer Behavior and Its Future Trends:

Marketing has been undergoing a remarkable shift from product orientation to consumer behavior, which is taking the new shape of human oriented and socially responsive approaches.

The relationship between companies and societies has been revolutionizing and transforming from a philanthropic orientation to preserving the mutual interest of all the stakeholders. With the changes of the business environment, practices of business have been changing from profit orientation towards maintaining the public goodwill and responsible business etiquettes not only in the developed countries but also in the emerging markets of the developing world. Now, multinational companies operating in the developing countries are reshaping their business strategies aiming to establish relationships with the state and civil society to gain a first mover advantage through operations. To get a foothold in the vast potentials of growing markets, companies need to establish sound business practices that address social and cultural concerns of the people in countries like India, China and other emerging countries of the world for tapping the growing supply of human expertise, rising manufacturing sectors and other unexplored opportunities. Consumers throughout the world are now speaking out vigorously against the firms who are running their business only with a profit goal and boycotting the products and services of the enterprises that are practicing negative corporate citizenship behaviors (Edenkaamp, 2002). Growing social needs of consumers are now taking new shape in the longstanding attitudes of the entrepreneurs in the value creation and exchange relationship. So, to provide deserving attention to the customers in the contemporary society, marketers should segment customers groups properly, evaluate their preferences and provide them superior products and services by valuing their expectations. In the value-driven era, consumer behavior should be dealt with fairly, based on the holistic concept of human beings and integrated needs for a social, economic and ecological balance. That is, the consumer as human being should be treated with their entire aspirations, values and spirit. Future problems of the consumers should be solved by keeping the importance of an enlarged landscape such as a creative and collaborative society and the globalization paradox in view (Kotler et. al., 2010). Therefore, in the new direction of consumer behavior, the extensions of following issues are noteworthy.

Sustainability and Consumer Behavior: Sustainable business practices are the key to survival and competitiveness of the future companies. Now it is established that sustainability is not only obligatory, but rather, it creates immense opportunities for the socially responsive enterprises. Internal drives for sustainable business practices by the enterprises ensure their survival, lead to lower costs and obtain profit in the competitive market. Organizations should emphasize on shared values, common interest for the enterprise and the environment with a view to attaining commercial benefits which should be embedded with the corporate strategies. In order to realize the full potential, the sustainability issue should be in the hearts, minds and efforts of the people under the purview of corporate plans, completed with comprehensive programs through balancing the three P's: People, Planet and Profit. To obtain profits business should be operated by keeping importance of the needs of the present generation without compromising the interest of the future generations. DuPont, a U.S. based company, changed its business model from pollutant to Greenest Corporation and integrated the sustainability issue both in the internal operations and the core business model. Consequently, it obtained 17.24 percent of its total revenue from sustainable products that were produced from environment-friendly sources and by energy saving inputs and methods. Therefore, a sustainable consumer behavior should aim to balance environmental, social and economic needs by employing energy-efficient strategies, replacing environmentally damaging products with environment friendly products and addressing socio-political issues like social inequality and poverty in the business decisions. To uphold a sustainable consumer behavior, enterprises should focus on social norms and expectations, government regulations, available technologies and infrastructures, promoting environmental awareness and skills among the organizational members, consumers and the general citizen of the society.

Consumer Behavior in the Technology Driven Environment: Technology is one of the key drivers of the modern society. The development of technology in the last few decades including information and communication technologies are contributing tremendously towards structuring the societies in a new way, reshaping individual and social behaviors in the new directions and ways of doing business in innovative dimensions. Technology is creating benefits in twofold ways. On the one direction it is generating new business opportunities through an innovative business model and solutions. Through technology based methods organizations are generating knowledge, skills, business processes and methods of

operations and thereby new business practices in the competitive market. On the other direction, there is the changing requirements of technological contents and utilities of the products leading towards changing the consumers' behavior and perspectives. Irrespective of the age structure and types, almost all the consumers are now using internet as a potent tool to collect information for supporting the buying decision process and facilitating the two way communications between the buyers and sellers. Improvement in the equipments, technologies and electronic environment create a dynamic consumer behavior and enhance self efficacy of the consumers. Therefore, in the contemporary states of a technological environment perspective, the business perspective and the consumer perspective should be linked to each other and integrated into the harmonious organizational strategies to be successful in the dynamics of environmental changes (Halttunen et. al., 2010). And marketers should be aware of technological changes, adapt them to the market needs and make equip consumers to make them knowledgeable so that it helps them to make decisions, using updated information through the utilization of technology.

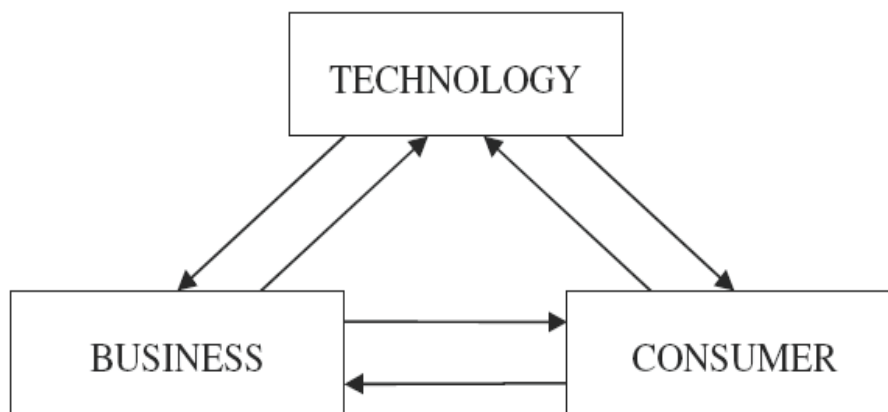


Figure: Relationship among technology, business and consumer, Source: Halttunen et. al., (2010),

Knowledge Management and Consumer Behavior: With the advent of the 21st century, the business horizon is changing rapidly; the competitive environment is getting more complex and unpredictable. It is the age of “knowledge society” where organizations’ success and survival are dependent on the ability to adapt to the dynamics of the business environment. Changes in the information technology are creating new opportunities and challenges for the firms in the competitive environment. Exploiting opportunities in the faces of challenges require using

technology, converting information into knowledge and applying that knowledge for value addition and competitive advantage. Knowledge management helps to realign technical capabilities of the organization with the knowledge creation objectives that push the firm to think outside the boundaries of current practices, products, services and structure that lead to innovation in multiple dimensions. Organizations use both explicit (physical object and document pertinent knowledge) and tacit (people's pertinent) knowledge in the form of collective expertise for integrating internal capability with the external environment. In an integrated knowledge management system, computer technology plays an important role by linking human pertinent and object pertinent knowledge for creating, capturing and refining, maintaining, upgrading, disseminating, and applying knowledge. People generate knowledge on different issues such as customer, product, finance, personnel practices and so on, for formulating and implementing strategies and policies to internalize as well as adopt them within culture and exchange across the stakeholders group for better performance and responses to a larger environment. In the integrated knowledge management systems, organization should focus on problem solving through cooperation and collaboration, assessing consumer with an innovative outlook, and using technology such as intranet, internet, local area network, data mining software and the like for managing and exchanging knowledge, evaluating, attracting, and sustaining customers for long-term survival in the competitive market¹³. Thus, along with other stakeholders consumer should be treated differently as a participant and partner in the knowledge management process by ensuring continuous involvement through 360° measures for generating, adopting and improving knowledge with demand of time.

Globalization, Economic Integration in SAARC countries and Exploiting Benefits by Bangladesh Insurance Sector from Changed Consumer Behavior:

In the interdependent global economy competition is characterized by networks of countries, institutions and people. Global competition provides global vision and sensitivity across the countries. Firms have been discovering foreign market opportunities, expanding their operations internationally and obtained employment generation, new product and service development and other forms of innovations. Foreign direct investment throughout the world has been creating manifold effects by transferring of natural, financial, technological, managerial and other kinds of resources. Nations are committed to the reduction of trade barriers and free flow of information, goods, services, and capital. Trade scenario is dominated by different economic blocs such as EU, NAFTA, ASEAN, SAFTA

etc. South Asian countries come together in 1985 for the formation of South Asian Association for Regional Cooperation (SAARC) to promote, develop and institutionalize regional cooperation and self reliance among the member countries. To enhance economic and trade relations South Asian Preferential Trading Arrangement (SAPTA) was signed in 1993 and subsequently with the expectation of moving towards an economic union South Asian Free Trade Area (SAFTA) was formed in January 2004. The association conducted research on trade, manufactures, services, environment, poverty alleviation and custom matters for improvement of the economic and trade relations among the member countries.

In the age of the economic integration and emerging market structure consumers should be treated with a new focus, make them educated continuously to expose their latent desires for innovating products, services and processes and involving them in the strategy formulation, implementation, research and development process of the organizations.

In the same line international financial transaction and international cashflows are considered as one of the important services in the process of economic integration and globalization where external restrictions are removed and different policy reforms are undertaken. Insurance as a risk mitigating instrument is not an exception. Liberalization through internal insurance deregulation and opening the sector to international and foreign players provides immense benefits through the globalization. In the meantime many countries have applied market-driven approach to insurance and financial sector development by removing state control and protectionism and obtained a stable, properly managed, and thriving industry through privatizing state-owned companies; and opening up markets to foreign companies. Through structural changes and greater competition insurance industry can bring efficiency by offering a wide variety of products and service strategies. Competition allows the customer to choose products at lower prices by increasing resource mobilization and reduction in premium costs with proper pricing policy. Under the regime of SAFTA liberalization of insurance offers a path towards enhancing international standards, technical, managerial and operational expertise, high standards of regulatory compliance, extra capital for local investment, transfer of experience and know how to compete effectively with the new entrants. A level playing competitive field should be developed by framing and

¹³ Awad, Elias M. and Ghaziri, Hassan M., Knowledge Management, 2007, Dorling Kinderseley (India) Pvt. Limited.

implementing appropriate legal and regulatory environment addressing all relevant aspects of insurers' operations such as reasonable solvency standards, regulations to protect consumer rights, controlling entry requirements and ensuring adequate systems of monitoring operations. Along with basic prudential regulations for consumer protection other regulatory measures like public complaints processing; consumer education and information; and adequate policy holders' protection due to moral hazards and other limitations should be outlined and implemented properly as a part of the enhanced protection plan of the consumers.

As a result of economic integration regulators across the borders share their experience and expertise and create more uniform regulatory policies that ultimately benefits consumers, individual firms and industry as a whole. International cooperation among regulatory agencies helps capacity building through free flow of managerial talents and by creating opportunities for global exchange of capital, products and expertise horizons of company and entire industry is widened. Thus, economic integration provides benefits to consumers, individual firms, industry and all stakeholders in multiple ways which are described throughout the article.

Conclusion:

In the contemporary business world, consumer behavior has been changing tremendously. Many diversified issues have emerged as a result of changing the nature of demand and patterns of consumption. The consumer decision making process is becoming complex continuously due to changes in the macro environmental factors and the internal evolutionary process of the organization. By considering its changing nature, a model in consisting input-transformation process-output has been developed for explaining the consumer behavior in the contemporary times. Other issues that have been identified are: sustainability, technological development, knowledge management and globalization which have the close nexus for changing the consumer behavior in the present world. It has been explored that how benefits can be exploited by Bangladesh Insurance sector as a result of globalization and economic integration in the SAARC countries (Habib, 2007). Institutional buying constitutes the significant portion of the overall buying. By considering different facets and dimensions, important strategic options have been discussed in this chapter for relationship management among various stakeholders and the management of institutional buyer behavior. New regime of consumer behavior and economic integration in SAARC countries

provide ample benefits in augmenting the insurance industry performance as a whole and creating benefits for all rounding stakeholders.

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Index-based Insurance as a Climate Risk Management Strategy: A Case Study in Bangladesh

Maimuna Akter & Shagufta Shaheen

ABSTRACT

The present study aims at investigating the prospect of index-based insurance to combat climate risk in Bangladesh. A large number of people in Bangladesh are financially vulnerable to adverse weather conditions and calamities. However, the traditional insurance market existing in the country fails to cover such risks due to high administrative cost, moral hazard, complexity, lengthy claim settlement, lack of expertise, limited budget etc. Moreover, government subsidy sometimes falls short to meet loss from ever increasing climate risks. Hence, index-based insurance can be a solution for both the insurer and policyholder in which compensation depends on weather-index and the amount of claim payment is fixed in advance. Although no index-based insurance is commercially launched in Bangladesh, couples of international organizations and insurance companies have conducted feasibility studies and piloting index-based insurance following the success in other countries. The present study has selected Flood Water Level Index Insurance of Oxfam and Weather Index-based Crop Insurance of Asian Development Bank (ADB) to depict the potentiality of index-based insurance to manage loss from climate risk in Bangladesh. Furthermore, customer satisfaction has been examined to analyze demand for index-based insurance through a survey conducted in Sirajganj where customers are found to be more satisfied with the service of such insurance mechanism but less satisfied with its premium and coverage. This study will provide guideline to the practitioners and scholars in case of developing required insurance based products for people who are exposed to climate risk.

Keywords: Index-based Insurance, Traditional Insurance, Climate Risk, Weather Index, Customer Satisfaction

**Maimuna Akter
&
Shagufta Shaheen**

1. Introduction

In Bangladesh, majority of the traditional insurance policies cover people with regular income flow of formal economy, whereas the economy of the country includes a large number of marginal people who are mostly vulnerable to risks related changes in weather such as changes in temperature and rainfall, flood, cyclone, drought etc. Their capacity to combat the risks is very poor and traditional insurance policies existing in the economy rarely cover those risks. Although there are few traditional insurance policies to cover climate risks such as earthquake insurance, flood insurance, cyclone insurance, they have not produced expected results due to high administrative cost, infeasible premium, adverse selection, lack of expertise in actual loss valuation etc. [1] Hence, the concept of index-based insurance has been introduced where compensation depends on variation on parameters rather than on actual loss valuation. The concept ensures better risk management and overcomes the limitations of loss based risk transfer mechanisms like traditional insurance system.

Index-based insurance works on the basis of weather parameters and the parameters are subject to change every year. Therefore, change in climate condition can easily be adopted. Premium is collected in advance before every monsoon period and the policyholders have the option to purchase the policies either individually or in-group. They can purchase for specific risk, period or area also. Moreover, compensation is triggered when actual conditions deviate from preset parameters. Thus, it offers lots of flexibility needed to cope up with changing weather conditions. The unique characteristics of index-based insurance may attract private insurers to offer policies of this kind. Compared to insurers of traditional insurance, insurers under this mechanism do not need to worry about policyholders' behavior because a policyholder cannot affect his/her payouts, and claim payments are quite simple. As compensation is made only when weather parameters deviate from the benchmark level and all policyholders receive equal payment in a certain area, an individual policyholder has less incentive to manipulate compensation for personal gain. The model of index-based insurance has been implemented successfully in many countries in a pilot basis. In 2003, such insurance was first piloted in Andhra Pradesh of India. Following the success, the Indian government has been piloting index-based insurance since 2007 under 'Weather Based Crop Insurance Scheme [2]. In addition many other developing countries such as Mexico, Kenya, and Mongolia are piloting several of forms index-based insurance.

Being a developing country, Bangladesh is also severely exposed to various kinds of natural disasters due to its geographical location, flat and low lying lands, tropical monsoon climate etc. Bangladesh is the largest delta in the world formed by the flow of three mighty rivers the Ganga, the Brahmaputra and the Meghna. The great Himalayan Mountains situated to the north of Bangladesh and the Bay of Bengal to the south. As a result a subtle change in weather creates disaster risks for Bangladesh. Although in Bangladesh, there are 46 general insurance companies operating no insurance company offer separate disaster insurance for flood, cyclone etc. [3] Insurance covers against these risks are provided in adjunct to fire policy only. However, the existing policies fail to attract mass people because of less publicity, lack of awareness, disagreements in terms of compensation, lengthy and nagging claim settlement process etc. Moreover, traditional insurance companies do not cover unusual risk with less frequency and high exposure, whereas studies suggest that people in Bangladesh are willing to buy insurance to cover such risks [4]. Although government funds most of these risks, in many cases, government fund is inadequate to cover the exposure of weather related risks. In addition, subsidizing the losses from such risks lessens the government budget available for other development sectors. Hence, introduction of index-based insurance in Bangladesh can be a good solution to these limitations. Although index-based insurance is theoretically sustainable in Bangladesh, the momentum is yet to grow. Government mostly subsidizes the policies under this concept and arguments exist that the subsidies sometimes outweigh the benefits. Moreover, lack of trust, inadequate insurance education, basis risk etc. is deterring the development of index-based insurance in Bangladesh. Therefore, the study of index-based insurance and the factors affecting the demand of such insurance is highly required for the economy of Bangladesh to address the gaps. The objective of the present study is to investigate the prospect of index-based insurance compared to traditional insurance in the economy of Bangladesh. The study also tries to give a concrete idea about the feasibility studies and pilot tests of index-based insurance conducted in Bangladesh through different international organizations and insurance companies. Moreover, it sheds light on evaluating the effectiveness of the pilot tests through measuring the satisfaction level of the people of Sirajganj where Oxfam has experimented its flood index insurance.

2. Literature Review

Insurance, as a risk transfer mechanism minimizes the risks of individual's property or liability involving a wide variety of risk sharing products. However, traditional economic theory suggests that insurance demand is determined by peoples' loss aversion behavior rather than their risk aversion behavior as insurance is more likely to be viewed as 'loss of wealth' if the stated incident does not occur. Hwang (2016) conducted an empirical study depending on individual level survey data and concluded that traditional risk aversion measures do not reflect individuals' likeliness to purchase insurance [5].

Browne and Hoyt (1999) found that income and price were the major determinants in case of flood insurance purchasing decision in the United States. Demand of such insurance fell due to various disaster relief programs as well as loss reduction measures sponsored by the government [6]. Moreover, insurers, consumers and regulators tend to emphasize on short term intuitive to make insurance decision regarding catastrophic risk [7]. The proposed model to cover the catastrophic risk is the Public Private Partnership Model as this model is expected to enhance investment in safeguarding measure prior to disaster whereby the policyholder will pay premium that is best reflected by his real risk. However, implementation of such a model requires emphasizing on risk selection issue so that higher probability of losses can be transferred to the public partners [8].

Identification, measurement and estimation of total disaster loss is challenging as statement of purpose is the prerequisite of cost assessment. Data insufficiency and methodological inappropriateness may create obstacle in forecasting the indirect disaster costs [9]. Furthermore, growth theory may draw biased interpretation resulting in negative impact of natural disaster on Gross Domestic Product (GDP). Empirical results show that growth is expected to reduce by atleast .45 percentage point at the 5% worst disasterous period. Underdeveloped countries are more likely to be affected by disasters that are meteorological and geophysical in nature [10].

Being initiated in 1985, Indian crop insurance has been replaced by a new scheme named Pradhan Mantri Fasal Bima Yojana (PMFBY) with a view to overcoming the loopholes of traditional insurance [11]. Again, Morocco mostly relies on rainfall for their agricultural activities due to the type of agricultural products. Studies have been conducted to find out the feasibility of drought insurance for Moroccan farmers. The results were optimistic showing a strong correlation between rainfall and revenue whereby certain amount is expected to accrue if there

is gap between actual rainfall and standard rainfall within a given period [12]. Moreover, as agricultural risk is systematic in nature, the loss incurred in a particular area is expected to be common. In such a context, Mahul and Stutley (2010) suggested the introduction of area-based insurance may facilitate the farmers with equal loss payment for specified crop in per land area [13].

Index-based insurance products have evidenced different impact of loss on individuals depending on gender. Research study in Bangladesh suggested that, in case of agricultural insurance, the willingness to purchase index-based insurance does not differ between heterogeneous sexes but the magnitude to purchase does. Men tend to purchase higher units and women's purchase magnitude depends on their level of wealth [4]. Another study conducted in Andhra Pradesh concluded that, households having alternate income sources other than agriculture are less likely to purchase rainfall insurance. Thus, the demand for index-based insurance is inversely related to solvency condition of households [14].

The impact of loss payments from index-based insurance was examined by Bertram-Huemmer & Kraehnert (2015) from the context of Mongolian livestock. The study evidenced that index-based policyholders were able to recover from pre loss condition quicker than others who had not purchased the insurance [15]. Moreover, in the presence of informal risk reduction techniques, such insurance may help the farmers cultivating high yielding yet less drought resistant crops [16].

3. Methodological Aspects

The present study is a descriptive type of research where the prospect of index-based insurance as climate risk management technique is analyzed. Both the primary sources and secondary sources of data have been used for the analysis. Respective personnels from different insurance companies and NGOs have been communicated through emails and phones. Moreover, structured and semi structured interviews have been conducted with personnel of ADB, Sadharan Bima Corporation (SBC), insurance companies, and people of Sirajganj to determine their knowledge, opinions, motivations, intentions and satisfaction regarding traditional and index insurance in Bangladesh. In addition, peer reviewed articles, newspaper articles, product brochures, books and reports from electronic and printed sources, feasibility study reports, piloting reports have been studied. Websites of different insurance companies, Insurance Development and Regulatory Authority (IDRA), SBC are also surfed to get in depth knowledge of insurance industry of Bangladesh.

As index-based insurance has been in operation in Bangladesh from 2013, the study period is limited from 2013 to 2016. Moreover, data of recent years have been used for other references throughout the study. On the other hand, a sample of 100 people has been surveyed to evaluate customer satisfaction of index-based insurance in Bangladesh. They are chosen based on convenient sampling techniques. Since index insurance client base is very small and confined in few districts, the sample size is fair enough to judge the overall condition. The agriculture labor and fishers comprised the sample mostly and their socio-economic attributes are summarized below:

Table 1: Respondents' Profile

Gender	(Percentage)
Male	96%
Female	4%
Age	
Below 30 years	14%
30-39 years	23%
40-49 years	45%
50 years and above	18%
Profession and Daily Income	
Day labor (BDT 200-250)	22%
Agriculture labor (BDT 300-350)	27%
Loom labor (BDT 400-500)	14%
Fishers (BDT 250-300)	26%
Others	11%

Data have been represented using tables, figures and graphs. Open-ended and close-ended questionnaire have been used to assess customer satisfaction through 5 points Likert scale. Satisfaction has been analyzed against premium, service quality, claim processing, damage recovery, and the weights of responses of each criteria are classified as strongly agree= 5, Agree= 4, Undecided= 3, Disagree= 2 and Strongly Disagree= 1. Finally, overall satisfaction has been measured through the scores of each criterion where the score is determined through multiplying weights with frequencies. The higher the score is, the higher the satisfaction level is.

4. Context of the Study

Index-based insurance is a recent innovation that has a huge implication in agricultural or crop insurance. Loss payments under index-based insurance are based on some index benchmarks. These benchmarks are set when the payments get started using historical correlation data along with weather parameters [17]. For example, index-based crop/agricultural insurance use historical correlation data of crop production with weather parameters to develop the index. Since index-based insurance mostly works on the basis of weather indices, the data used to develop such indices are collected from reliable sources on daily, weekly or monthly basis that should undergo regular screening, controlling, verifying etc. Moreover, there is a specific weather station called reference station that determines the weather dataset. The reference weather station must have some security requirements so that no party can alter and hamper the dataset. An alternate source of data is also set in case of any missing and loss in the main data source. Weather data should meet certain requirements: 1) historical weather data should be of at least 20 years, 2) there should be limited missing values and out-of-range values, 3) nearby station should be available for fallback verification purposes, 4) consistency should be present in observation techniques, 5) integrity should be present in data recording procedure, and 6) little potential can be allowed for index measurement tempering [18]. In index-based insurance, premium rate is calculated based on expected loss. It depends on ideal weather patterns of 25 to 100 years. The insurance covers parametric risks that can be measured from events such as rainfall, temperature, hailstorm etc. Claim payments are made when weather conditions deviate from benchmarked index data. Index-based insurance is mainly written for a group of people rather than for an individual that reduces the underwriting costs and other costs accordingly. Moreover, due to flexibility and lack of complications, claim payments are quite and easier. However, index-based insurance usually does not cover wide range of perils to which people, especially marginal people are exposed. Moreover, weather data often change and adjustments are often difficult in that case. Hence, if the parameters or indices are not correct, the index-based insurance will be ineffective [19]. There are a number of insurance policies that are possible using index.

Area yield index- based insurance: It was developed in Sweden, later implemented in India and in the USA. Here threshold is the realized average yield of a specific area. If the actual production is less than the threshold level, payment is made irrespective of actual production of a particular firm.

Crop weather index- based insurance: It was commercially launched in 2002. Under this insurance, at particular weather station, weather parameters are set before the cropping period. Payment is made when actual parameters deviate from set parameters. This deviation may be high or low. The variations may be insufficient rainfall/ excess rainfall/ due/ frost etc. Payment level varies on pre fixed sum assured for per unit of the index [2].

Satellite index-based insurance: Satellite images are used to develop Normalized Difference Vegetative Index (NDVI). Payment is made when there is negative deviation in the actual NDVI for the covered area from the average value within coverage period.

Index-based livestock insurance: It is not widely used. Mongolia is the first ever country to pilot test index-based livestock insurance product since 2005. Insurance payments are made on the basis of mortality forecast of livestock's in selective areas from January to May as predicted by the annual livestock census [15].

Flood index insurance: It is an innovative approach to develop effective payout schemes for low-income flood prone communities [6].

4.1 Gaps in Traditional Insurance and Introduction of Index-based Insurance

Bangladesh is one of those countries that are at vulnerable position to climate change. The symptoms have already been seen through very hot and long summer, prolonged rainy season, short-term spring etc. People of coastal areas, farmers, day labors and other poorer sections of the country are highly victim of this adverse situation. The government of the country has taken several actions but that have become inadequate with time. Traditional insurance companies have few policies but that are not in action. Moreover, the characteristics of traditional insurance may not always be enough to cover such situations. Therefore, the concept requires an innovative concept that is effective to solve such problems. Index-based insurance has proven to be a solution to this problem in many studies. Hence, in Bangladesh, the concept can be a good substitute of traditional insurance to protect the large number of vulnerable people. The present section will discuss about the gaps in traditional insurance companies and how does the index-based insurance address those gaps.

Limited coverage: Generally, private insurance companies in Bangladesh provide a narrow range of products. Currently, no insurance companies cover weather related risks exclusively. Although limited coverage for flood, cyclone and

earthquake are provided in exchange of additional premium, it is tied with fire insurance and applicable for residential or commercial property only. Therefore, index-based insurance can help to manage climate risk in an integrated and sustainable way because it insures against risks that traditional insurance companies fear [20]. Moreover, allowing index-based insurance, government may significantly lower the subsidy cost. Although the cost of relief, social safety net costs lies on government, part of them can be passed to people through index-based insurance.

Low predictability: Insurance is priced based on past loss experience. It is assumed that the loss experience will continue in same manner. But loss originated from adverse climate conditions it very unstable along with its frequency. As a result proper pricing is difficult using traditional insurance mechanism and the rate of under pricing is highly likely here. However, in index-based insurance, the index developed works as a proxy of actual loss. Historical weather data is considered to develop the index. So insurers can easily determine the loss without physical investigation or individual loss assessment.

Moral hazard: Traditional insurance policies fail to monitor moral hazards, which is one of the major causes of failure of insurance industry. In index-based insurance, insurance payment is completely dependent on weather data. Hence, the policyholders have no chance of data manipulation. Moreover, every policyholder of a single territory gets equal compensation. Therefore, index-based insurance is a great solution of moral hazard of traditional insurance.

Adverse selection: Traditional insurance system involves high likelihood of asymmetric information that creates costs to the insurers. Thus, it involves high probability of adverse selection [8]. In index-based insurance, it is possible to develop different index-based on climate condition for different areas. Wide range of insurance products can be designed that will commensurate with the risk profile of specific area. Premium rates and compensation will be differentiated.

Complex and conditional contract: Traditional insurance mechanism involves complexities, exclusions and conditions that sometimes discourage people to take policies. Moreover, the marginal people who are more vulnerable to disaster and climate change are mostly uneducated and less educated to understand these complexities[21]. Hence, index-based insurance is a good solution to them because it is simple and straightforward. The contract clearly specifies the time period of coverage, risks covered, premium, parameters and amount of compensation for each level of parameter.

Lengthy claim settlement process: In case of traditional insurance, the claim settlement process is complex and requires many documents to be submitted to prove a loss had been occurred. These delays or defaults are blamed on the delayed or erroneous survey reports, delays from SBC in settling reinsurance claims, funding shortfalls by the companies etc. However, in index-based insurance, compensation is paid when weather data crossed benchmark limit. Few documents are needed to settle claims and the policyholders do not need to notify the insurer.

4.1 Present Scenario of Index-based Insurance in Bangladesh

Although Bangladesh is an agricultural as well as disaster prone country, little attention had been given on the risk management for the farmers or low-income people. Index-based insurance can be of high demand for farmers to manage risks related to crops caused from deviation of weather condition. Traditional crop insurance has failed to meet the demand and cover the costs. However, yield based index- based insurance that covers weather events, is preferable to farmers along with group savings and endowment insurance. Such insurance is viable to mitigate loss from floods if it is implemented with Non-Government Organization (NGO)/ Microfinance Institutions (MFI) participation [6]. Designing uniform crop insurance product is not feasible in Bangladesh. Severity and frequency of losses from weather deviations and high cost and regulatory constraints are main causes of low supply of crop insurance and other disaster insurance, whereas low demand is due to low financial income generating resources of poor. In a study conducted by Department of Environment, Bangladesh Government mentions causes of failure of traditional micro-insurance in agriculture. It proposes a pro-forma weather index-based crop insurance model for farmers considering three major meteorological and geo-physical characteristics of the country: flood, drought and cyclone. It also addresses some of the issues related to implementation of weather index-based crop insurance. Although no index-based insurance has been commercially launched, couples of international organizations have either conducted feasibility studies or piloting index-based insurance in Bangladesh since 2013 [22].

4.3 Feasibility Studies Conducted by Different Organizations

- a) International Center for the Improvement of Maize and Wheat (CIMMYT) in February 2013, CIMMYT began the first phase of their Index-Based Insurance (IBI) project, which was to design and evaluate weather index-based insurance instruments that are responsive to the needs of maize farmers in the coastal

districts of Bangladesh. Since voluntary participation in these insurance programs tends to be much lower than anticipated.

- b) IFC has completed a scoping study on the technical and commercial feasibility of piloting index-based weather insurance (IBWI) for farmers in Bangladesh. Following the study, IFC hosted a round table discussion in May 2013 to investigate possible future actions to design and construct IBWI, its delivery channels and pricing. Currently, the IFC is reviewing two to three IBWI models that it intends to pilot. The focus for IFC is on partnering with private insurance companies and building their capacities.
- c) International Food Policy Research Institute (IFPRI) conducted an experimental study in Bogra, offering IBI against drought for the Aman rice crop. They collaborated with an NGO called Palli Karma-Sahayak Foundation (PKSF) to implement the pilot. The insurance coverage was from 14 July to 15 October 2013-the period that farmers are most susceptible to risk. In Bogra, most farmers have access to irrigation in order to counter the impacts of drought, but many are still willing to purchase insurance coverage as the premium paid out for drought will cover irrigation costs. The index used is based on a similar model developed for India by Daniel Clark from Oxford University. The extreme drought index is binary: it pays either zero or the full sum insured and has a claim payment with an estimated probability of 10 per cent (that is, 1-in-10-year events are covered by the index). To calculate the appropriate threshold, IFPRI uses the definition of a dry day typically adopted in India (that is, a dry day is a day with recorded rainfall of fewer than 2 millimeters, which usually evaporates before entering the soil). In Bogra, the total number of consecutive dry days for the Aman and Boro rice seasons does not exhibit a statistically significant trend. Thresholds are calculated by using historical consecutive dry day's data before determining the trigger threshold. Prior to implementing the pilot, IFPRI first conducted an experimental demand-elicitation exercise with more than 300 farmers in Bogra and Manikganj to find out about smallholder farmers' interest in formal insurance products. The study found that because farmers are subject to a variety of risks, they do not focus on only one type of insurance. Instead, they evenly split their endowment between life and disability insurance and agricultural insurance. In addition, group savings were found to be a particularly popular risk management tool, especially when decisions are made in groups.

- d) Oxfam did piloting an IBI project in late August 2013. The project aimed to design a commercially pragmatic catastrophic flood insurance scheme for the poor and vulnerable, targeted to sensitize meso-level investors who are working in pro-poor river basin flood prone areas. It will be a tool to improve calamity response of Community Based Organizations (CBOs), NGOs and government. The underlying principle of the scheme is that, if the Government, Local Government Elected bodies, Private Sectors and Development agencies transfer risk—especially catastrophic risk—to a formal risk carrier (Financial or Social Institution), then the Disaster Management and Risk Reduction efforts of the country will improve, along with the ability of the government and development agencies to invest more in Disaster Risk Reduction. Oxfam was working with the Center for Insurance & Risk Management (CIRM) to research, design and develop a Meso-level Catastrophic Flood Insurance Scheme in Bangladesh. The Institute of Water Modeling (IWM) Bangladesh has built the Flood Hazard Model used to generate flood data. Manab Mukti Sangstha (MMS) implemented the scheme in Sirajganj district. Sirajganj district was chosen for the pilot as it is centrally located and is not prone to flash and coastal floods. The scheme was piloted in fourteen villages, spread across four unions in Sirajganj Sadar and Chowhali upazilas of the district.
- e) Asian Development Bank (ADB) is piloting weather index-based crop insurance (WIBCI) for farm households to provide insurance cover against excess or inadequate rainfall during seed sowing/ harvesting season in three districts. Through this project ADB aims to develop capacity of agriculture research institutions, weather stations to develop historical weather data, to help insurance development and regulatory authority (IDRA) in drafting regulation for index-based insurance, educating 6000 farmers, training 400 staffs of IDRA, SBC and BMD etc. In this project, Bank and Financial Institutions Division (BFID), ministry of Finance is working as the executing agency, Sadharan Bima Corporation (SBC) and Bangladesh Meteorological Department (BMD) is the implementing agency. International Network of Alternative Financial Institutions (INAFI) is working as the distribution partner.

4.4 Index-based Insurance Policies in Operation

4.4.1 Oxfam's Flood Index Insurance(Flood Water Level Index Insurance)

Target clients: It is a meso (group) insurance policy where all the poor and extreme poor households under MMS in the 14 target villages who mostly live in char areas are insured.

Target area: Sirajganj district is highly exposed to floods. The people living in char areas are most vulnerable. Hence, Chouhali and Sadar Upazilla of Sirajganj district are chosen for piloting. The following table 1 shows the villages chosen and number of policyholders in each village.

Table 2: Villages Chosen and Number of Policyholders

SL	Name of Upazilla	Name of Union	Name of Village	Sex		Beneficiaries Status		Total
				Female	Male	Extreme Poor	Poor	
1	Chowhali	Sthal	Boro Chowhali	55	1	19	37	56
2	Chowhali	Sthal	Choto Chowhali	104	1	37	68	105
3	Chowhali	Ghorjan	Muradpur West	208	0	91	117	208
4	Chowhali	Ghorjan	Muradpur School Para	106	1	44	63	107
5	Chowhali	Ghorjan	Fuhara East	86	0	17	69	86
6	Chowhali	Ghorjan	Fulhara West	81	1	42	40	82
7	Chowhali	Ghorjan	Dhitpur	64	0	13	51	64
8	Shadar	Shoydabad	Kashboroshemul	85	13	25	73	98
9	Shadar	Shoydabad	Fulbari	70	49	35	84	119
10	Shadar	Shoydabad	Chakboyra	54	0	9	45	54
11	Shadar	Shoydabad	Ponchasona	272	62	47	287	334
12	Shadar	Masra	Hatpara	55	2	13	44	57
13	Shadar	Masra	Mollikpara West	128	15	26	117	143
14	Shadar	Masra	Aknadighi	148	0	11	137	148
Grand Total				1516	145	429	1232	1661

Source: OXFAM administrative data (2012)

Contract Period: 16th August, 2013 through 30th September, 2013.

Sum Insured: Tk. 8000 per household is fixed for compensation on the basis of tangible indirect loss. That is the loss resulted from disruption of economic activities such as loss of income or price hike.

Underwriting and Distribution: Pragati Insurance is the private insurance company that underwrites and distributes the index-based insurance in favor of MMS. MMS also acts as the intermediary for claims distribution.

Premium Payable: The premium is 10.3 % of sum insured.

Premium payment: Oxfam pays the premium on behalf of the beneficiary households. They transferred the pre-agreed premium amount to MMS, who was the lead insured for the pilot. MMS in turn transferred the premium to Pragati Insurance for the cover period mentioned before. Thus, the premium payment process has been completed for the first/pilot year of the project.

Compensation Payment: Compensation will be made if the flood level in any particular village exceeds the strike level/threshold for that village during the cover period. Table 2 shows the village specific water level trigger under each reference unit in meters.

Table 3: Village-wise Water Level Trigger

Village-wise Water Level Trigger Reference Area (r)	Water Level Trigger (WLT_r) (m)	Limit of Indemnity/ Sum Insured (SI_r) (BDT)
Fulbari	12.85	952,000
Aknadighi	14.35	1,184,000
BoroChouhali	11.35	448,000
ChotoChouhali	11.10	840,000
Chakbayra	12.70	432,000
Fulhara	11.00	1,344,000
Khasborosimul	12.80	784,000
Muradpur	10.90	3,032,000
Mollikpara	14.35	1,600,000
Phanchasona	12.75	2,672,000
Total		13,288,000

(Source: Desai, 2013)

Apart from thresholds, payouts are also based on duration. If the flood level > threshold in a village for 11 continuous days, a payout (per household) equal to 35% of sum assured will be made. If the flood persists for 21 days or 26 days, payouts equal to 55% or 100% respectively will be made. All payouts will be made at the end of the cover period. Pragati Insurance settles the claim at the end of the cover period and a cheque of amount equal to total claims is issued in favor of MMS. Pragati Insurance's responsibility ends once MMS acknowledges receipt of the claim amount. Finally, MMS distributes the claim amounts to the ultimate beneficiaries.

Reinsurance: Swiss Re is the reinsurer and covers 80% of the risk. Pragati insurance shares 20% of the risk.

4.4.2 ADB's Weather Index-based Crop Insurance (WIBCI)

Product features: ADB developed two index-based crop insurance products for piloting. One is for insufficient rainfall and the other is for disease. The first index covers Aman (Paddy) both rain fed and irrigated. The second index covers excess rainfall and disease of potato for two cultivating seasons. These products are primarily piloted in Rajshahi division. Compensation and premium is prefixed. Compensation will be given when index crosses the limit.

Underwriting and Distribution: If there is SBC's office in the piloting areas, it directly sells the weather index-based crop insurance. Otherwise NGO named "INAFI" sells on behalf of SBC. Since the project still is in pilot stage, the final distribution channel is yet to be designed.

i) Water Deficit (Drought) Index: This index is developed to pay coverage for Aman (paddy) cultivated if faces insufficient rainfall.

- **For rain fed Aman,** a 230 mm rainfall during whole cropping period is considered adequate (strike). A daily adequate rainfall is fixed for 70 mm. If the total amount of rainfalls exceeds 230 mm, no compensation will be made. The minimum (exit) rainfall is 30 mm at which full amount of compensation is given. But if the rainfall is in between strike and exist, compensation will be paid Tk. 35 for every mm of rainfall shortage. The sum insured is Tk. 7000/ Bigha and premium is Tk. 410.

- **For irrigated Aman,** compensation per mm of rainfall shortage is Tk. 8.30. The sum insured is Tk. 1667/ Bigha and premium is Tk. 100/Bigha.

- **Compensation determination formula:** (Strike – Exit)* Tk.35 per mm.

Table 4: Water deficit (Drought) index- For Aman (paddy)

Crop	AmanDhan – Rainfed	AmanDhan – Irrigated
Location	Rajshahi	
Data Provider	BMD	
Index	Aggregate of Rainfall during the cover period below strike	
Special Condition	Daily Rainfall Cap of 70 mm	
Date From	1-Sep	
Date to	15-Oct	
Threshold Strike(mm)	230	
Exit(mm)	30	
Notional (Tk / mm)	35	8.30
Sum Insured (Tk/Bigha)	7000	1667
Premium Tk/Bigha	410	100

Source: Product Brochure, Sadharan Bima Corporation

ii) Excess Rainfall and Disease Index: This index is developed to pay coverage for potato cultivated if faces excess rainfall and disease in two cultivating stages.

a. Excess Rainfall

First stage: The coverage period is 25th December 2015 to 31st January 2016. If cumulated rainfall for two consecutive days remains above the exit level that is 80 mm full compensation will be paid. The strike is 50 mm for which no compensation is paid. For rainfall above 50 mm, Tk. 111 is paid for per excess mm rainfall. Total sum insured for the first stage is Tk. 3300/ Bigha.

Second stage: This stage covers the time period from 1st February to 29th February of 2016. Cumulated rainfall to get full compensation is 60 mm while the strike is 20 mm. However payment per mm is Tk. 83 and total sum insured is Tk.3300.

Combined total coverage for two periods is Tk.6600/ Bigha.

Table 5: Excess rainfall index – For potato

Crop	Potato	
Location	Rajshahi	
Data Provider	Bangladesh Meteorological Department (BMD)	
Stage	Stage 1	Stage 2
Special Condition	Cumulative consecutive rainfall for 2 days remains above the exit.	
Date From	25 Dec,2015	1 Feb, 2016
Date to	31 Jan, 2016	29 Feb,2016
Threshold Strike(mm)	50	20
Exit(mm)	80	60
Notional (Tk/ mm)	111	83
Sum Insured (Tk/Bigha)	3300	3300
Total Compensation	6600	

Source: Product Brochure, SadharanBima Corporation

b. Disease Index

First stage: The coverage period is 15th December 2015 to 10th January 2016. Condition to get payment is that average humidity for three consecutive has to be above 80% and average temperature must be between 15 and 25 degree Celsius. The first four days are not considered for coverage. After then, for every 3 days, progressed compensation amount is pre fixed for every level. The sum insured for this stage is Tk. 6700/ Bigha and premium is Tk.500/Bigha.

Second stage: Second stage covers 11th January to 15th February 2016. The condition is same as above except for average humidity and temperature. Average humidity has to be above 85% and temperature in between 7.5 degree to 27 degree. Combined total coverage of this insurance for two periods is Tk.13400/ Bigha. Usually a farmer is expected to purchase insurance for the two-cultivation period. However a farmer can purchase for only one stage either. In that case total sum insured and premium payable both are reduced. Table 5 shows data on potato excess rainfall and disease index.

Table 6: Disease index – For potato

Disease Coverage		
Special Condition	Consecutive 3 days average humidity \geq 80% and average temperature > 15 Degree Celsius < 25 Degree Celsius.	Consecutive 3 days average humidity \geq 85% and average temperature > 7.5 Degree Celsius < 27 degree Celsius.
Date From	15 Dec,2015	11Jan,2016
Date to	10 Jan,2016	15 Feb, 2016
Index(consecutive Days)	Payoff	Payoff
4-7	500	500
8-11	1500	1500
12-14	4000	4000
15	6700	6700
Highest Insured Sum	6700	6700
Total Compensation	13400	
Total Insured Sum	20000	
Premium	1000	

Source: Product Brochure, Sadharan Bima Corporation

Premium payment: Premium can be paid either through cash or bank account. 50% of total premium is subsidized to encourage intake initially. The government subsidizes half of the 50 percent and ADB subsidizes the other half.

Claim settlement: Claim payment is contingent upon getting weather data from BMD for specific insured period. Maximum time required to pay claim is 90 days. Claim payment has no relation with crop yield, will be made solely depending on weather parameters. Approximately 365 farmers received compensation under the project.

Reinsurance: No reinsurance facility is available at present for the weather index-based crop insurance.

5. Customer Satisfaction of Index-based Insurance

This study has been conducted with the purpose of identifying the acceptability of index-based insurance in the context of Bangladesh. Although, customer satisfaction is a key issue in any service-oriented industry, such as insurance, the insurers often overlook this very significant issue. To come up with some understanding, a primary survey has been conducted in Sirajganj district following the convenient sampling technique. Both open and closed ended questionnaire have been used to assess client's perception regarding various aspects of flood index insurance introduced by the Oxfam. The outcomes regarding premium, service quality, claim processing, damage recovery and overall satisfaction using 5 points Likert scale are summarized below:

Table 7: Reasonable Premium rate

Options	Frequency	Score
Strongly Agree (5)	24	$24*5=120$
Agree (4)	15	$15*4= 60$
Undecided (3)	22	$22*3=66$
Disagree(2)	30	$30*2=60$
Strongly Disagree(1)	9	$9*1=9$
Total	100	315
Average	$315/100 =3.15$	

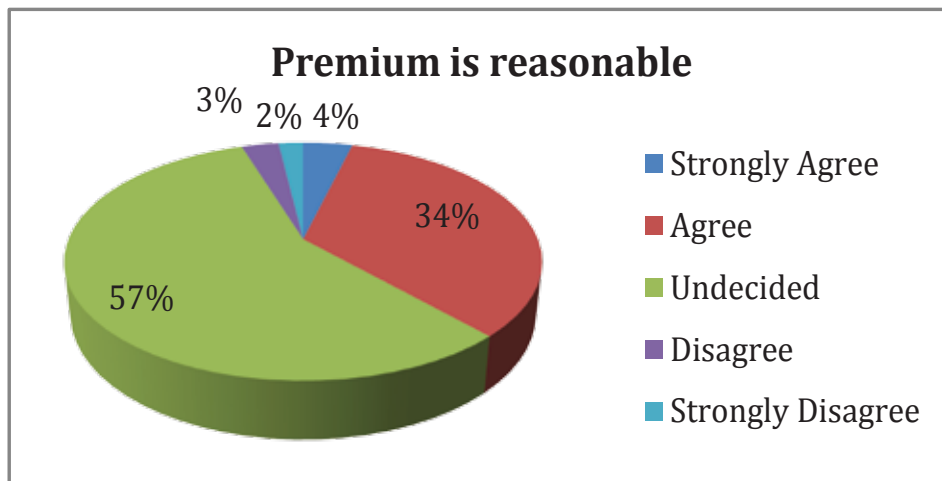


Figure 1: Reasonable premium rate

The above graph and table shows varied responses regarding premium rate. Among the respondents, highest 30 respondents said they disagree with the statement that premium is not high. Their response constitutes thirty percent of the insured. However, 24% respondents agreed that premium was affordable.

Table 8: Oxfam provides quality service

Options	Frequency	Score
Strongly Agree (5)	39	39*5=195
Agree (4)	32	32*4=128
Undecided (3)	26	26*3=78
Disagree(2)	2	2*2=4
Strongly Disagree(1)	1	1*1=1
Total	100	406
Average	406/100=4.06	

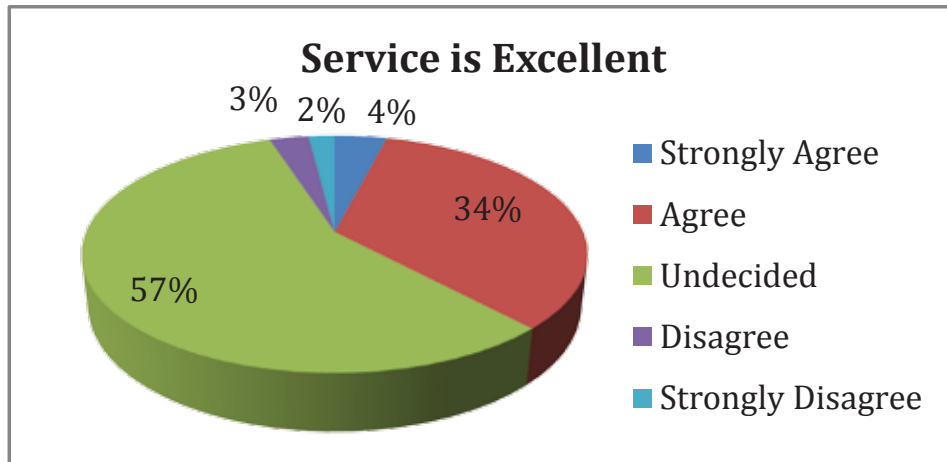


Figure 2: Oxfam provides quality service

39% of the insured respondents expressed high satisfaction regarding Oxfam's service quality as they strongly agreed with the statement. 32% respondents do also agree about service quality. Insured client's satisfaction with Oxfam's service is very important in our country perspective. Here, client's satisfaction is a complete anomaly, as the factors for service excellence are not covered in the survey. Further study is needed to identify these factors. It may help to develop insurance provider's service excellence that root level people will really value.

Table 9: Quick Claim processing

Options	Frequency	Score
Strongly Agree (5)	36	$36 \times 5 = 180$
Agree (4)	42	$42 \times 4 = 168$
Undecided (3)	19	$19 \times 3 = 57$
Disagree(2)	3	$3 \times 2 = 6$
Strongly Disagree(5)	0	0
Total	100	411
Average	$411/100 = 4.11$	

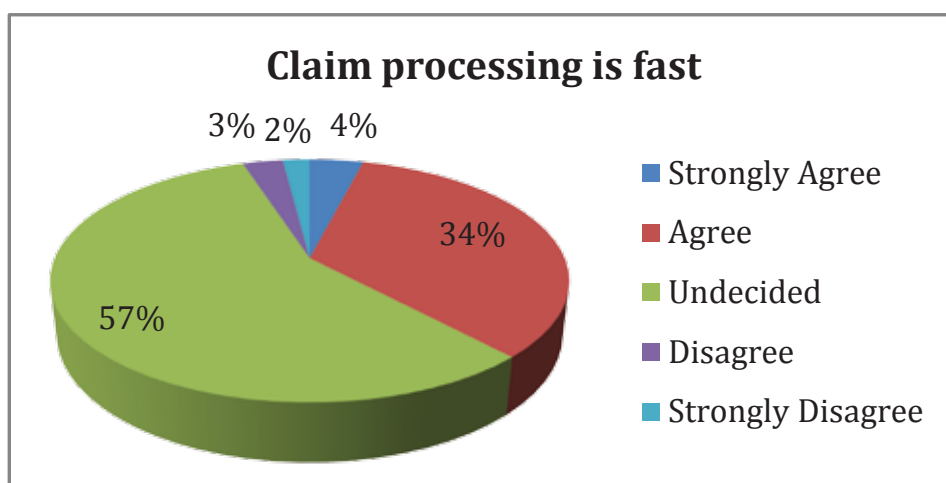


Figure 3: Quick Claim processing

The above graph shows clients attitude towards claim processing service of Oxfam. Majority clients agreed that claim processing is quick. The score on this point is 4.11. We may assume their cause of satisfaction in this regard because prompt claim settlement in our country is rare. So Oxfam's claim settlement through the NGO/CBO based model may be suitable for designing products for lower class people.

Table 10: Recovery need fulfillment

Options	Frequency	Score
Strongly Agree (5)	6	6*5=30
Agree (4)	11	11*4=44
Undecided (3)	28	28*3=84
Disagree(2)	31	31*2=64
Strongly Disagree(1)	24	24*1=24
Total	100	246
Average	246/100=2.46	

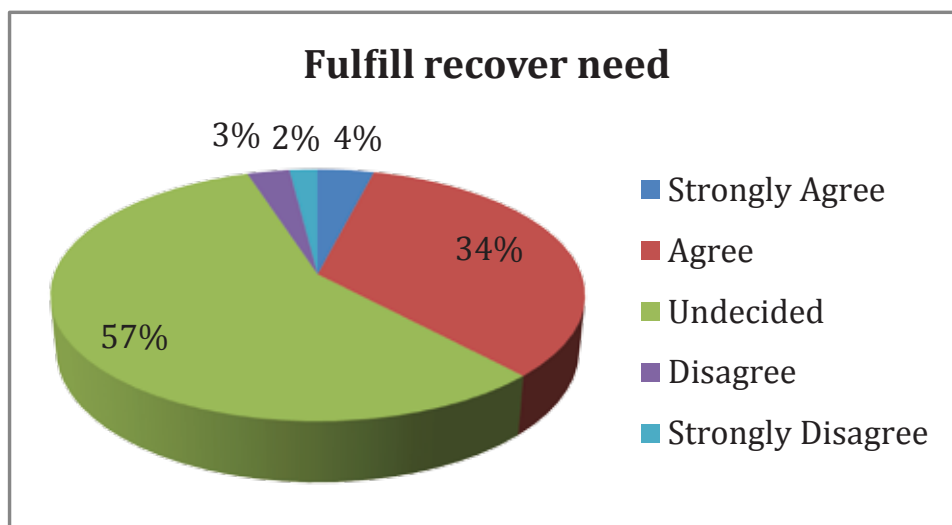


Figure 4: Recovery need fulfillment

It is the most important part that determines customer satisfaction in terms of loss. Regarding the damage recover need, only 6% clients have positive attitude. Here, only some respondents think the compensation amount is fairly enough to recover the damage. Most of the respondents expressed as the compensation amount not to be enough to cover the damage they incur during flood time. This finding could be considered in product design.

Table 11: Overall satisfaction regarding policy

Options	Frequency	Score
Strongly Agree (5)	4	$4*5=20$
Agree (4)	34	$34*4=136$
Undecided (3)	57	$57*3=171$
Disagree(2)	3	$3*2=6$
Strongly Disagree(1)	2	$2*1=2$
Total	100	335
Average	$335/10= 3.35$	

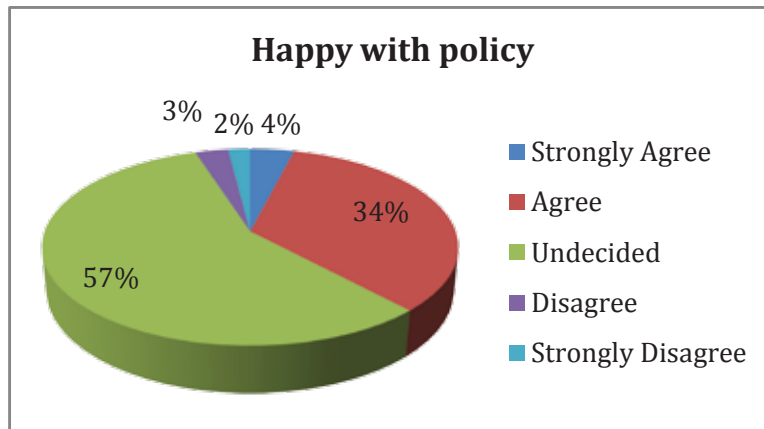


Figure 5: Overall satisfaction regarding policy

This graph describes overall happiness of clients with the insurance products. From the responses of the insured, we see only 4 respondents were strongly dissatisfied with policy. 57% respondents were undecided regarding the policy. However, the responses indicate that our country people are less aware about insurance.

Table 12: Ranking of the options

Options	Total Score	Average score
Quick claim processing	39	4.11
Oxfam provides quality service	41	4.06
Overall satisfaction regarding policy	31	3.35
Reasonable premium rate	28	3.15
Recovery need fulfillment	22	2.46

The above table shows the ranking of the customer choices on the five aspects of Oxfam's flood index insurance. The ranking is done considering the total score of each option along with average score. Here, higher score indicates customer's positive attitudes. On the basis of scores obtained we see fast claim processing of Oxfam is ranked first followed by service excellence. However customers are least satisfied with premium and compensation amount. These two options ranked fourth and fifth respectively.

Overall satisfaction level of flood index insurance is not bad. But for full-scale operation some fine tuning is needed. Clients' awareness is much important. Premium needs to be affordable and coverage amount should be extended. Reducing premium and extending coverage simultaneously may be difficult. For sustainability issue of flood index insurance, this problem may be of greatest concern.

6. Limitations

The validity of the study results may be limited due to inadequate number of sample respondents. Moreover, interviews were conducted in a single time-period, while interviews at different time-periods could offer better outcomes. The study is limited to Sirajgonj district only, which may not represent the overall scenario of Bangladesh.

7. Conclusions

As a form of financial guarantee, insurance plays a paramount role in managing risk against various financial losses. Besides the flood and cyclone insurance which is offered by traditional fire insurance, our countrymen need wide range of index-based insurance products as our economy is mostly dependent on agriculture. Referring to the success of such insurance in minimizing disaster and agricultural risks in India, ADB and Oxfam are piloting index-based insurance based on partner agent model. The study finds clients' response to be satisfactory despite of their limited knowledge regarding insurance. As a result, the findings may provide reasons to the practitioners to emphasize more on index-based insurance products in a disaster prone country like ours. To explore more about the significance of such insurance, future researches could be suggested with a comparatively large sample size and enhanced number of districts. However, it is imperative to increase awareness, reduce premium to affordable level and also increase the coverage amount. The government of Bangladesh has an indispensable responsibility to invest in infrastructure, human resources as well as develop the market for index-based insurance as a tool to combat the climate change risks.

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Operational Performance of Public (govt.) Non-life Insurance Sector in Bangladesh. (An Appraisal of Sadharan Bima Corporation)

_____ **Md. Ibrahim**

Abstract

The operational performance of Public (govt.) non-life insurance Corporation of Bangladesh, known as ‘Sadharan Bima Corporation’ is gradually improving since 2002. This article will present the performance of public non-life insurance sector in Bangladesh. The analysis is based on the 14 Year’s (2002-2015) statistical information relating to Annual insurance Premium, Investment of SBC, and Income from Investment, claim lodged and settled, Annual Profit and Profitability, Contribution to the Govt. etc. Operational performance of SBC will also be evaluated based on claim ratio, expenses ratio, combined ratio, underwriting result ratio, investment income ratio, net retention ratio, operating ratio, net earnings ratio, return on equity ratio and business per employee ratio etc. SBC is operating not only direct underwriting insurance business but also underwriting of re-insurable business of all private insurance companies in Bangladesh and Ceding in overseas market. It has also shifted its investment from lower income-generating (FDR) to higher generating (share, debenture) income. For this purpose, a subsidiary company of SBC already has formed, name as, SBC Securities and Investment Ltd. For development of Export of Bangladesh, Export Credit Guarantee (ECG) scheme is belonged to SBC’s portfolio. A new innovative project already has taken by SBC relating to crops insurance, which is name as WIBCI (Weather Index Based Crops Insurance) for protecting the greater interest of agric-based economy of our country. For further continuous growth of public non-life insurance sector should takes strategic steps like innovation in insurance

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operations, increasing marketing efforts, and initiative various investment scheme to utilize more proportion of total assets for generating higher income. Further through avoiding misrepresentation of policy features can establish more public confidence, positive attitude and ensure sustainable development.

Key words: Non-life Insurance, Public, PSB (public sector business) ROE (Return on Equity), Claim ratio, Expenses ratio, Investment income ratio, Growth rate.

Background

Insurance is a social device for reducing risk by combining a sufficient number of exposure units to make their individual losses collectively predictable. The predictable loss is then shared proportionately by all those in the combination. This definition implies both that uncertainty is reduced and that losses are shared. These are the important essentials of insurance.(Mehr & Commack,1957) .Insurance is defined as a co-operation device to spread the loss caused by a particular risk over a number of persons who are exposed to it and who agree to ensure themselves against that risk. Risk is the uncertainty of financial loss.(Mirsha,2009) Insurance is a system of spreading the risk of one on to the shoulder of many(Choudury,1981) As a result of globalization, deregulation and terrorist threats, the insurance industry has undergone a tremendous transformation over the past decade (Z.Mamun, 2011) Insurance in not a new idea or proposition to the people of Bangladesh.

After liberation of Bangladesh in 1972, the Insurance industry, which at that time comprised of 49 private insurance companies, was nationalized. Initially, 05 governments owned insurance corporations including one controlling corporation were set up. However, due to difficulties experienced in operation, the industry was further consolidated in 1973with the establishment of two Corporations- one for non-life and one for life. By virtue of the Insurance Corporation Act 1973 (Act VI of 1973),Sadharan Bima Corporation was thus established as the sole non-life insurer in Bangladesh. Next, for the development of Export in Bangladesh, the Export Credit Department (ECGD) was established by the order no-1E – 15/76-E11 (PT), dated 2nd April, 1977 of the Ministry of Commerce. In 1984 the Government amended the Insurance Corporations Act 1973 by order No L and LI of 1984 allowing in the private sector to under write insurance business only of the private sector. In 1990 the Insurance Corporation Act 1973 was further amended by the Insurance

Corporations (Amendment) Act 1990 wherein it was provided that fifty percent of all insurance business relating to any public property shall be placed with Sadharan Bima Corporation and the remaining fifty percent of such business may be placed either with Sadharan Bima or with any other insurers in Bangladesh. Thereafter, in pursuance of the decision of the government it was agreed that Sadharan Bima Corporation would underwrite 100% of the Public Properties Business and distribute fifty percent of all insurance business relating to any public property to the private Non-Life Insurance Companies on equal basis. SBC also acts as only Reinsurer in Bangladesh insurance Market. SBC Brokerage Division has transformed a separate company named as SBC Securities & Investment Ltd (A subsidiary company of Sadharan Bima Corporation) in 23rd September, 2010. It is registered in the Registrar of joint stock companies and firms. Its authorized capital is taka 50 (fifty) core and paid-up capital is taka 20 (Twenty) core only. As per order no-20.32.004.01.01.017.2013-24, dated-29-02-2014 of Planning Ministry, SBC has started a project relating to crops insurance which name is Weather Index Based Crops Insurance (WIBCI). Project period was July-2013 to June-2016, but further extended up to June-2017.

Global Perspective:

The Global Insurance Industry gained momentum in 2014. World Insurance Premium stood at US\$ 4,779 billion in 2014, out of which US\$ 2,655 billion is attributable to life insurance and US\$ 2,124 billion to non-life insurance. There was a return to positive growth in the life sector with premium up 4.3% to US\$ 2,655 billion after a 1.8% decline in 2013.

Bangladesh perspective:

The Economy of Bangladesh has rapidly been shifting from agriculture to service industry. Insurance being one of the ingredients of the financial services industry has a lot to play for the economy of Bangladesh. The growth of non-life insurance company's premium income in 2014 was 6%, same as in the previous year. Sadharan Bima Corporation and 45 private companies in the non-life sector earn taka 24,323 million in 2014.

Regulatory framework for insurance in Bangladesh.

After independence of Bangladesh, the Insurance Act, 1938 was adopted in Bangladesh. The Insurance Act, 1938 and the Insurance Rule, 1958 were

amended from time to time to regulate and promote orderly growth of the insurance business. In the year 2010, for further strengthening the regulatory framework and making the insurance industry operationally vibrant, parliament passed two insurance laws namely, Insurance Act 2010 and the Insurance Development and Regulatory Authority (IDRA) Act 2010. Within the preview of IDRA Act, 2010, the Government has set up the Insurance Development and Regulatory Authority (IDRA), which has replaced the office of the Chief Controller of Insurance. With an eye to boosting the insurance sector of Bangladesh; the new Insurance Act 2010 raised the paid-up capital of non-life and life insurance companies. Government has recently approved the Jatiyo Bima Niti 2014. The recommendation of said policy will surely improve the insurance market of Bangladesh as it has defined short term, medium term and long term goals.

Future Prospect of Non-life insurance in Bangladesh

Bangladesh Insurance market is in an upward trend despite of low penetration rate. Current penetration rate is 1.0%, which is .008% of world penetration rate. (Financial Express, 30 Dec-2013, Molla Nurul Islam) It has potentialities to growth and advancement as opined by the insurer expert from home and abroad. Although, Bangladesh non-life insurance market is rather small, considering that current penetration rate (non-life premium as % of country's GDP) is low at 0.2%, there is immense potential for future expansion. The future expansion of Bangladesh non-life insurance market and increase of insurance penetration in the country lies in tapping the hitherto untapped segments of the market –personal lines business in particular which has remained neglected so far. The growth of the country's economy, in line with the growth in South Asian countries will also provide a momentum to the insurance sector by creating new business opportunities.

Information Communication Technology & Computerization:

Information and Communication Technology (ICT) has become indispensable for insurance industry in ensuring smooth operations and providing efficient service. SBC has recognized this fact and the Management of SBC have adopted a comprehensive ICT policy for the Corporation. SBC has experienced and trained professionals working on maintaining and developing the Corporations IT infrastructure. The IT professionals are constantly innovating and producing in-house programs to meet the needs of the

Corporation. IT cell has planned to implement a Wide Area Network (WAN) to connect all of the branches in greater Dhaka and in Chittagong on real time basis, thereby providing connectivity and prompt customer services. In line with the vision of the government to build a digital Bangladesh, SBC has gone through a gigantic transformation. Head office functions of SBC and the main branches of SBC are now operated through extensive use of IT infrastructure. Investments have been made to make the necessary upgrading in hardware and software. A new website has also been launched to provide up to date information about SBC.

Corporate Governance:

Awareness of Corporate Governance has grown rapidly worldwide in recent years due to increased legislative and regulatory activities as well as evolving best practice recommendations. As a Government owned non-life Insurance Corporation in Bangladesh led by professional people. SBC is committed in adopting the highest governance standard and adjusting them as required in protecting the interest of policyholders and stakeholder. Good corporate governance system is vital for efficient and effective business operation to achieve the set goal. In line with the best practice, the corporate governance systems and practices in SBC are designed to ensure adequate internal control in operational process, transparency and accountability.

Issue

The public (govt.) non-life insurance sector of Bangladesh has passed four decade. The non-life insurance market is small in terms of non- acceptance of coverage for a large volume of insurable properties. The operational performances of the only public non-life insurance Corporation (SBC) consistently fluctuated from 1982 to 2001, but from 2002, the performances of SBC is gradually improving still study period i.e. up to 2015. It is needed to evaluate the performance of two periods of SBC to the view point of various parameters for findings the reasons.

Table: 01

Annual Profit and profitability of previous study
(1983 to 2001)

Taka. Amount in Million

Year	Net premium	Profit of SBC	Profit as a % of net premium	ROTA	TATO	Total Asset
1983	426.33	348.58	82%	18.7%	0.23	1862.32
1984	543.08	354.48	65%	15.0%	0.23	2366.02
1985	555.46	395.32	71%	14.2%	0.20	2777.11
1986	605.57	427.58	71%	13.3%	0.19	3208.47
1987	568.96	405.64	71%	13.3%	0.19	3048.93
1988	558.50	362.69	65%	11.4%	0.18	3180.33
1989	599.22	329.00	55%	10.2%	0.10	3240.35
1990	640.18	294.68	46%	7.0%	0.15	4219.72
1991	602.50	298.42	50%	5.7%	0.12	5223.63
1992	735.36	296.40	40%	6.5%	0.16	4586.05
1993	654.36	295.45	45%	6.3%	0.14	4726.39
1994	730.65	276.23	38%	5.6%	0.15	4903.64
1995	878.57	292.18	33%	5.9%	0.18	4962.15
1996	1024.38	329.40	32%	5.7%	0.18	5791.20
1997	1162.70	411.15	35%	7.1%	0.20	5824.21
1998	1275.07	412.12	32%	7.5%	0.23	5517.08
1999	1146.42	481.86	42%	9.0%	0.21	5354.00
2000	1216.00	474.72	39%	9.01%	0.23	5268.81
2001	1288.40	477.39	37%	8.4%	0.23	5676.45

Primary Source: Annual Report of SBC.

Secondary Source: Abhijit & Z..Mamun (2000 &2011)

Objectives of the Study:

The main objective is to know the operational performance of public sector in Bangladesh. More especially, the study attempts to achieve the following objectives.

- To know an overall idea about public non-life insurance sector in Bangladesh.
- To identify the growth rate of different parameters of SBC
- To evaluate the financial performance of different periods
- To find out the obstacles of public (govt.) non-life insurance sector.
- To recommend suggestions for the successful performance in SBC

Review of Related Literature

The discipline of insurance development through non-life insurance has been a fascinating hold of research for many scholars. A modest attempt has been adopted to search for related literature and studies of non-life insurance review. After a continuous search a brief summary of the major studies which are particularly relevant to the non-life insurance, is presented here.

Habibullah & Ghosh (1989)-_In their article ‘General insurance (non-life) business in Bangladesh’. An appraisal of the performance of Sadharan Bima Corporation which is only nationalized body in Bangladesh. Stated that the government nationalized the insurance business which in one of the major segments of service industry of a country with definite objectives. The society also has its own expectation out of the general insurance business. The SBC (Sadharan Bima Corporation) is under the policy control of the ministry of Finance of the government. The ministry as representative of the government appears to be inclined for treating the insurance business as a tool for promoting socio-economic development of the country.

Ahmed (1977) – ‘Insurance business in Bangladesh’ revealed that insurance industry in Bangladesh is still in a preliminary stage. With the liberation and with the nationalization of insurance business numerous problems cropped up and the

industry had to be reorganized through the trial and error methods. The industry is suffering from some problems. Under the circumstances it is essential to find out the problems by empirical study so that efforts can be made in the right direction to solve them and eventually put the industry to the path of progress and sustained growth.

Barua, Mamun & Islam (2000) - 'Performance of the nationalized general (non-life) insurance company of Bangladesh'. They say that the nationalized general insurance sector of Bangladesh is passing through a crucial phase. On one side there are complains of bureaucracy, inefficiency, lethargy and decrease in profitability. On the other hand there is strong lady supporting the need for the promotion of the nationalized sector pointing to its contribution to secured capital formation, investment and employment in addition to providing financial assistance to the insuring community, all these dichotomy led to a felt need for the performance evaluation of the nationalized general insurance sector. The nationalized corporation (SBC) should try to improve its performance by expanding its portfolio of investment and initiating new innovative investment scheme to utilized more proportion of total assets for generating income and revising the policy of direct insurance business enabling it to be as competitive as other private general insurance companies.

Shirazi, Mamun & Arefin (2004)-'_Performance of some selected non-government general (non-life) insurance companies of Bangladesh compared to government insurance company' that revealed that non-government general insurance are prompt responding to the market changes, product demand, and changes of overall social and business environment. More over taking the advantages of recent change in reinsurance policy non-government insurers have acquired a mentionable control over premium earning. In addition due to bureaucracy and inefficiency's of the SBC, private insurers are gradually earning trust of the business communities and effectively patronizing the development process of commerce and trade. However the non-government insurance is not totally free from its criticisms. It is often said that the sector is suffering from uneven sphere of competition and lack of discreet thinking in business operations. These entire dichotomies led to a felt need for the performance evaluation of selected private general insurers compared with the government sector.

Azam (2005)—'_Customer's attitude towards general (non-life) insurance service. Contrasting the public & private sector in Bangladesh'. He says that the growth of insurance industry and the economic development is interdependent. Economic

development of a country is partly depended on the development of insurance industry. At present, insurance has become very closer to peoples of very walks, without insurance nobody could go one step more. Thus, time demand to look into the development of the insurance industry in Bangladesh with due care. Insurance has become an important financial component in Bangladesh's economic development. Premium income of the country's insurance sector marked a robust growth in the preceding years. The measurement of attitude reveals that the customers have favorable attitude towards nationalized (SBC) company than private owned insurance organization. He differences of the attitudes are formed by the contribution or customers beliefs on different features attributes of the services.

Haq (2009) – ‘Thoughts on insurance, Bangladesh perspective’ he says that insurance in veritably plays a vital role in the society and the country. Possibly no country can attain economic development without development of insurance organizations on sound basis. General (non-life) insurance provides security against the loss of properties by fire, flood, cyclone or earthquake etc. Business interruption following loss of industries business, loss sustained during export-import of goods, accidental loss sustained by the motor vehicles. Without non-life insurance it would have been impossible to run the business safely, protect the industrial projects and enter-prices from the hazard of natural or manmade calamities. It is perhaps not necessary to highlight the benefits of insurance so loudly because it is already recognized all owner the world. In our country, the present position prevailing problems and how to make its role more effective in socio-economic arena so that, people can enjoy benefits of insurance.

Z Mamun (2011)- ‘Performance evaluation of general (non-life) insurance companies in Bangladesh’ stated that as a result of globalization, deregulation and terrorist threats, the insurance industry has under gone a tremendous transformation over the past decade. Globally insurance business was increasing at a low rate till 2007 and registered a growth of 3.3%. But in 2008, the industry contracted by 4.2% to reach gross written premium of 3,888.6 billion. In the industrialized countries, life insurance premium dropped by 53% in 2008 while non-life premiums witnessed a smaller decline of 1.9% unfortunately, the current condition of general insurance (non-life) market in Bangladesh is far from satisfactory. The operation of a large number of companies at present is certainly not commensurate with the size of the market. This has lead to aggressive competition and resulted in unhealthy practices which are detrimental to the industry as a whole. Thus

regulatory reforms are required to ensure strict enforcement and the adherence of all to-wards the rules is necessary to free the industry from the unwanted practices. Besides the absent of an assertive and efficient regulatory body imprudent taxation policy of the government acute shortage of professionally qualified manpower, weak corporate government, etc, are some common problems retarding the development of the whole insurance sector in Bangladesh.

Ali M.H (2008) – ‘Present scenario of general insurance (non-life) in Bangladesh’. State that the present legal position is that the 50% of public sector insurance business has been kept reserved for nationalized corporation (SBC) and the companies in the private sector are entitled to write the remaining 50% business of this sector. It is evident that the average growth of public sector premium was around 9.36% over the years under review while the rate of private sector was 14.00% only. As revealed from the statistics, the non-life insurance premium is the lowest amongst the counties of Asia under review. This situation can not be allowed to continue. It is most important to expand the areas of general (non-life) insurance business. As per law of the country, the private sector general insurance companies are required to place 50% of their reinsurance requirement with the state own corporation S.B.C, The remaining 50% may be placed with any reinsures at home or abroad. Inspire of this legal position, most of the private sector companies have been placing 100% re insurance with SBC.

Kamrul & Khanam (2013) have conducted an article on the topic of performance evaluation of public sector general insurance companies in Bangladesh, where they demonstrated the performance of Shadaran Bima Corporation (SBC). They suggest that for further continuous growth and development, SBC should take some strategic steps including with adoption of modern techniques for asset management, follow-up of modern marketing strategies, launching more research & development programs, develop HRD program, relaxing pricing rules and so on.

Methodology

The research made use of secondary data, using various financial parameters like Premium income, Investment; Income from investment, Claim intimated and settled, profit and overall profitability, Business per employee, Contribution to the Government etc. The data was collected for the years 2002-2015, a total of 14 years. The sources of these data include financial statement or annual reports of SBC, journal, Books, research papers etc.

Sometimes data has collected directly from concern department of SBC. The financial data collected is analyzed using financial measures like Annual average growth rate, percentage (%) of investment as total assets, Investment income as a percentage (%) of total investment, net claim charge as a percentage (%) of net premium, profit as a percentage (%) of net premium, Return on Total Asset (ROTA), Total Asset Turn Over (TATO), Contribution to the government as a percentage (%) of net premium etc. Besides for analyzing data, the technique of ratio analysis simple mathematical tools like percentage, average and statistical techniques like correlation analysis, multivariate regression analysis has been used. The 't' & 'f' has been applied at the appropriate places. The IBM SPSS (version -20) statistical software has been used for the purpose of data analysis.

Operational Performance and Research Findings

Premium Income

SBC's premium income comes from the direct underwriting and re-insurance business. SBC earns premium from four (4) major areas of non-life insurance sector like, marine, fire, Motor, and Miscellaneous insurance. The Corporation mainly earns premium from public sector business (PSB) as per insurance corporation (Amendment) Act 1990 and Memorandum of Agreement (MOA) with all private insurance companies. According to this Act & MOA 100% of public sector business will underwrite SBC, then keeping 50% of that business, rest of the 50% will be distributed on an equal basis among 45 private companies, after deducting 7.5% service charge (including re-insurance expenses). However, it has been handling 100% re-insurance business of private insurance companies. Anyway, Direct underwriting premium, re-insurance premium, total premium, re-insurance ceded have been shown in

Table – 02
Annual Insurance Premium

Amount in core Tk.

Year	D.U/W Premium	Re-insurance Premium	Total Premium	Re-insurance ceded	Net Premium
2002	81.86	191.18	273.04	137.57	135.47
2003	76.66	229.05	305.71	185.79	119.92
2004	77.86	232.62	309.90	143.59	166.30
2005	88.61	267.66	356.27	161.27	195.00
2006	104.45	291.40	395.85	185.95	209.00
2007	126.58	329.16	455.74	198.05	257.69
2008	141.90	359.44	501.34	219.08	282.26
2009	161.35	379.27	540.62	221.85	318.77
2010	165.99	408.53	574.52	256.32	318.20
2011	197.48	404.53	601.73	258.29	343.44
2012	218.92	581.60	800.52	288.27	512.25
2013	190.96	605.07	796.03	316.21	479.83
2014	176.11	624.78	800.89	273.41	527.48
2015	207.30	654.14	861.44	313.32	548.12
Average	144.00	397.00	541.00	225.63	315.26
AAGR	7.98%	10.53%	18.51%	7.45%	12.46%

Source: SBC Annual Report (2002-2015)

Direct under writing premium & Re-insurance Premium

Direct underwriting premium is the main revenue source of SBC. During the 14 years under review (2002 to 2015) Direct under writing premium has gradually increased except in 2013 & 2014 and increasing trend whole over the years which is mentioned in table -1. In this case, AAGR (Average Annual Growth Rate) is 7.98%. Re-insurance premium has also gradually increased except in 2011 In this case AAGR is 10.53%. For risks protection , after keeping own retain premium, SBC cede premium with overseas re- insurer. In this case AAGR is 7.45%. SBC has been underwriting the 100% of re-insurable business of all private insurance companies of Bangladesh. Although, as per the provision of Insurance corporation (Amendment) Act-1990, Private insurance companies have to re-insure 50% of re-insurable business with SBC and the rest of 50% with any insurer in or out side Bangladesh, But reality for some reason they are underwriting all with SBC. If we see table-1, Re-insurance premium is also gradually increased during the studied period. In this respect, AAGR is 7.65%. There is a relationship between direct underwriting business & re-insurance business when SBC at first underwrites 100% public business, after keeping 50% for it, rest of the 50% is distributed among 45 private companies. But private companies further re-insured their share of 50% of public business with SBC. As a result, when direct underwriting premium is increased simultaneously re-insurance premium is also increased a cyclic order

Net Premium

Net Premium is calculated by deducting the re-insurance amount ceded from the sum of total premium. During the studied period, the AAGR (Average Annual Growth Rate) was 12.46%. As because; Net premium is gradually increased during the concern period except in 2003, 2010 and 2013.

Value of Present Year – Value of Past Year

$$\text{Growth Rate} = \frac{\text{Value of Present Year} - \text{Value of Past Year}}{\text{Value of Past Year}} * 100$$

Total Investment and Assets of SBC

The main source of capital formation by SBC is premium collection from insured. One of the main functions of insurance business is capital formation

and investment of the accumulated fund to productive channel through which it generates revenues. So, performance of SBC depends not only on volume of business in terms of premiums but also on efficient portfolio consisting of profitable investments. So, SBC's investment portfolio of the period under review is shown in bellow.

Table-03, Investment and Assets

Amount in core Tk.

Year	Investment other than Deposit and Loan	Investment bearing Deposit	Loan	Total Investment, Loan and Deposit	Total Assets	% of Investment as Total Assets
2002	65.75	266.35	14.53	346.63	566.33	61%
2003	68.91	261.65	14.65	345.20	594.20	58%
2004	68.44	293.35	14.20	375.99	635.97	59%
2005	79.78	316.36	11.41	407.75	605.19	67%
2006	102.90	318.80	10.79	432.50	666.61	64%
2007	114.09	333.97	10.61	458.68	776.81	59%
2008	125.90	349.59	11.15	486.65	962.38	50%
2009	145.91	390.87	10.63	547.42	994.23	55%
2010	183.45	443.24	12.70	630.40	1219.27	51%
2011	240.51	439.03	16.24	695.79	1338.37	52%
2012	277.31	523.43	17.21	717.95	1500.41	48%
2013	280.49	633.35	17.92	931.76	1766.34	53%
2014	399.28	657.03	17.99	1074.30	2052.86	52%
2015	406.07	787.05	17.59	1210.71	2383.47	51%
Average	182.77	429.58	14.12	626.47	1147.32	56%
AAGR				10.31%	12.29%	

Source: SBC Annual Report (2002-2015)

As per above table, total investment has been categorized into investment other than deposit & loan, investment bearing, deposit and loan depending on the usual rate of return. Investment (other than deposit & loan) consists of statutory investments, investment in bonds, share and house properties. This is the highest income generating category of investment. Management can reflect its talent by maximizing the proportion of this category and efficiently managing the portfolio. Newly invested a subsidiary investment company limited for generating higher income.

The category of investment of SBC was 61% of total assets in 2002, which has gradually decreased to 52% and 51% in 2014 and 2015 except in 2005 and 2006. Here, noticeable total investment of SBC was Tk. 346.63 core in 2002, which was gradually increased to 1210.71 cores in 2015. On the other hand, Total Assets of SBC was Tk. 566.33 crore in 2002 which was gradually increased to 2383.47 core in 2015. There is a co-relation between total investment and total assets ie when total assets has increased, simultaneously total investment also has increased, but, there is a proportionate difference between two, which has shown in table-03 as percentage (%).AAGR of total investment is 10.31% and AAGR of total asset is 12.29%

Table-04, Income from Investment

Amount in crore Tk.

Year	Income from investment	Other Income	Investment Income & Miscellaneous	Total Investment	Investment income as a percentage (%) of total Investment
2002	25.82	7.19	33.01	346.63	9.52%
2003	25.38	1.04	26.42	345.20	7.65%
2004	26.66	1.80	28.46	375.99	7.56%
2005	25.60	1.56	27.16	407.75	6.66%
2006	26.13	3.57	29.70	432.50	6.86%

Year	Income from investment	Other Income	Investment Income & Miscellaneous	Total Investment	Investment income as a percentage (%) of total Investment
2007	32.67	5.44	38.11	458.68	8.30%
2008	35.09	5.38	40.47	486.65	8.31%
2009	40.91	3.41	44.32	547.42	8.09%
2010	46.58	16.94	63.52	630.40	10.07%
2011	63.77	3.44	67.21	395.79	9.65%
2012	82.65	3.13	85.78	717.95	11.94%
2013	88.97	1.93	90.90	931.76	9.75%
2014	135.27	1.21	136.48	1074.30	12.70%
2015	124.45	1.49	125.94	1210.71	10.40%

Source: SBC Annual Report (2002-2015)

Source: SBC Annual Report (2002-2015)

In the Table-04, Investment income as a percentage (%) was 9.52% in 2002, which was gradually fluctuated to 8.09% up to in 2009, and then this percentage was increased to 10.07 in 2010 and then again decreased to 9.65% in 2011 and again increased to 11.94% in 2012, again decreased to 9.75% in 2013, again increased to 12.70% in 2014 and again decreased to 10.40% in 2015. However, Return on Investment (ROI) overall has not improved. This is due to the gradual shifting of relatively higher income generating investment (share, debenture) to lower income generating investments (deposits/FDR). Although, overall investment increased our study period.

Claim intimated and settled of SBC

Total claims lodged/intimated and settle are consisted with two categories. First one is Direct under writing claim & 2nd things is re-insurance claim. The study shows that number of claims lodged and settled gradually decreased during the studied period. In 2011 the percentage (%) 33% reduced of 2003.

(Table-05) However, the amount out of claims lodged ad net charges on the claims settled in each year has increased. (Table-4)

Impact of the net charges of claims on the profitability depends on the ratio of net charges to net premium. During the study period of overview, the average proportion of net charge as a percentage of net premium was 40% and almost every year the actual net charge proportion was close to the average percentage, except 2004, 2009 ,2011and 2012.

Table-05: Scenario of claims of SBC (2002 to 2015)

Year	No. of Claim intimated	Claim settled & Repudiated	Claim Outstanding	Net charge for settled Claim	Net charge as a % of net premium
2002	3679	2295	1384	51.89	38.30%
2003	2435	1288	1147	48.89	40.76%
2004	1229	82	1147	52.77	31.73%
2005	1750	524	1226	86.29	44.25%
2006	1338	250	1080	102.54	48.85%
2007	1534	645	889	133.19	51.68%
2008	1686	930	756	134.03	47.48%
2009	1466	491	975	134.22	14.47%
2010	1535	404	1131	151.34	47.56%
2011	1794	621	1173	112.58	32.78%
2012	1494	155	1339	164.11	32.03%
2013	1570	305	1265	210.84	43.94%
2014	1497	234	1263	224.98	42.65%
2015	1584	348	1236	201.94	36.84%

Source: SBC Annual Report (2002-2015)

Overall Profitability of SBC

Overall Profitability is consisted of Annual Profit and Profitability. Profitability of SBC can be analyzed through time series analysis to the reflect trend of Profit with the elapse of time. The data reveals (Table-06) that the annual profit magnitude of SBC gradually increases throughout the total studied period. Further analysis is made to measure the overall profitability through the concept of Net Margin and Return on Total Assets (ROTA). During the period reviewed, all these measures of profitability showed consistent increasing trends. Under writing Income and Net Profit as percentage of net premiums both increased to 64% and 52% in 2015 from 50% and 24% respectively in 2002. Similarly, ROTA also gradually increased to 13.08% in 2011 from 5.80% of 2002, but then few decreased from 2012 to 2015

(Table-06)

Annual Profit and Profitability

Amount in core Tk PNP

Year	Net Premium	Profit of SBC	U/W Income as a % of net premium	Profit as a % of net Premium	ROTA	Total Asset Turnover	Total Assets
2002	135.47	32.87	50%	24%	5.80%	0.23	566.33
2003	119.92	33.34	39%	28%	5.61%	0.20	594.20
2004	166.30	34.84	54%	21%	5.47%	0.26	635.97
2005	195.00	36.38	55%	19%	6.01%	0.32	605.19
2006	209.00	42.04	53%	20%	6.30%	0.31	666.62
2007	257.69	60.60	57%	24%	7.80%	0.33	776.81
2008	282.26	77.37	56%	27%	8.03%	0.29	962.38
2009	318.77	101.50	59%	32%	10.20%	0.32	994.23
2010	318.20	125.52	55%	39%	10.29%	0.26	121.98
2011	343.44	175.19	57%	51%	13.08%	0.25	1338.38
2012	512.25	180.37	64%	35%	12.02%	0.34	1500.41

Year	Net Premium	Profit of SBC	U/W Income as a % of net premium	Profit as a % of net Premium	ROTA	Total Asset Turnover	Total Assets
2013	479.83	218.40	60%	45%	12.36%	0.27	1766.34
2014	527.48	247.07	66%	47%	12.02%	0.25	2058.86
2015	548.12	283.26	64%	52%	11.88%	0.23	2383.47

Source: SBC Annual Report (2002-2015)

ROTA= ----- x 100 , TATO = ----- x 100

TA

TA

On the other hand, total asset turnover ratio has also increased from .23 in 2002 to .33 in 2007 but from 2008 to 2015, it was fluctuating trend. However, overall, it is seen that, Although, TATO has fluctuated, but starting point 2002 to ending point 2015, it can be said increasing trend ie .23 to .23. Besides, due to this fluctuation of TATO, there is no any negative impact on ROTA. It has been improved. This gradual increased in overall profitability, was due to the increase of net premium income, reducing operating expenses and net charges on claims, increase in rate of return from investment and increase in performing assets, (i.e.-car parking, House property Rent, share etc).

Table-07

Contribution to the Government fund

Amount in core Tk.

Year	Net Premium	Contributed Amount	Contribution as a % of Net Premium
2002	135.47	29.43	21.72%
2003	119.92	30.94	25.80%
2004	166.30	32.22	19.37%
2005	195.00	33.76	17.31%
2006	209.00	38.04	18.20%

Year	Net Premium	Contributed Amount	Contribution as a % of Net Premium
2008	282.26	40.65	14.40%
2009	318.77	47.75	14.97%
2010	318.20	47.42	14.90%
2011	343.44	200.00	58.23%
2012	512.25	119.19	23.27%
2013	479.83	114.51	23.86%
2014	527.48	132.90	25.20%
2015	548.12	140.02	25.55%
2007	257.69	35.61	13.85%

Source: SBC Annual Report (2002-2015)

As per above schedule / Table-6, it is noticed that SBC is continuously contributing a huge amount to the Govt. fund from the source of VAT, TAX, profit etc. This contribution has gradually increased from 2002 to 2015. In the year 2011 that contribution was Tk. 200 core. It is may be seemed a dramatically change, but not like that rather, during the year 2011, stock market became to much deteriorated, for that reason, in order to improve the stock market, SBC contributed Tk. 100 crore to the Bangladesh Mutual Fund like other financial institutions (ICB, Agrani, Sonali, Janata, Rupali Bank). Average 23% (app) of net premium has contributed to the Government Fund during the study period. So, there is no any doubt that, SBC is playing a better performance.

Table – 08

Statement of different parameters of Sadharan Bima Corporation (SBC)

Amount in core Tk

Year	Gross Premium	Net Premium	Claim Charge	Management Expenses	Unexpired Risks Reserve	Investment Income	Profit before Taxes	Profit After Taxes	Net Worth	Total no of Employees
2003	305.71	119.92	48.89	28.78	8.85	26.42	33.34	22.40	594.20	1470
2004	309.90	166.30	52.77	33.98	-	28.46	34.84	22.62	635.97	1437
2005	356.27	195.00	86.29	35.12	14.40	27.16	36.37	22.62	605.19	1347
2006	395.85	209.00	102.54	30.29	8.76	29.70	42.04	24.00	666.62	1275
2007	455.74	257.69	133.19	27.85	23.22	38.11	60.60	44.00	776.81	1213
2008	501.34	282.26	134.03	28.93	13.11	40.47	77.37	56.73	962.38	1129
2009	540.61	318.77	132.22	30.03	21.81	44.32	101.50	73.75	994.62	1041
2010	574.52	318.20	151.34	37.25	5.16	63.52	125.52	98.10	1121.11	970
2011	601.73	343.44	112.58	39.24	10.56	67.21	175.19	126.46	1338.38	908
2012	800.52	512.25	164.11	38.47	96.56	85.78	180.37	139.37	1500.41	1050
2013	796.03	479.83	210.84	41.48	26.56	90.90	218.40	162.56	1766.34	1027
2014	800.89	527.48	224.98	46.99	23.61	136.48	247.07	176.60	2058.86	901
Mean	536.59	310.84	129.48	34.86	11.09	56.54	111.05	79.10	1085.07	1147

On the basis of above Parameters the following measures will be calculated and used to evaluate the performance Sadharan Bima Corporation ,which is only one public non-life Insurance firm in Bangladesh.

1. Claim Ratio (Net claim incurred to net written premium).
2. Expense Ratio (Expenses of management to net written premium).
3. Combined Ratio (Net incurred claim plus expenses to net written premium).
4. Underwriting Results Ratio (Net written premium minus claim, expenses

and increase in unexpired risk reserve to net written premium).

5. Investment Income Ratio (Investment income to net written premium).
6. Net Retention Ratio (Net written premium to gross-direct premium).
7. Operating Ratio (Profit before tax to net written premium).
8. Net Earnings Ratio (Profit after tax to net written premium).
9. Return on Equity Ratio (Profit after tax to net worth).
10. Business per employee Ratio (Net premium to total no of employees)

Table – 09

Ratio Analysis of different parameters of Sadharan Bima Corporation (SBC)

In Percentage (%)

Year	Claim Ratio	Expenses Ratio	Combined Ratio	Underwriting Result Ratio	Investment Income Ratio	Net Retention Ratio	Operating Ratio	Net Earnings Ratio	Return on Equity Ratio	Business per Employee Ratio
2003	41	24	65	28	22	39	28	19	4	8
2004	32	20	52	48	17	54	21	14	4	12
2005	44	18	62	30	14	55	19	12	4	14
2006	49	15	64	32	14	53	20	11	4	16
2007	52	11	63	29	15	57	24	17	6	21
2008	47	10	57	38	14	56	27	20	6	25
2009	41	09	50	42	14	59	32	23	7	31
2010	48	12	60	39	20	55	39	31	9	33
2011	33	11	44	53	20	57	51	37	9	38
2012	32	08	40	42	17	64	35	27	9	49
2013	44	09	53	42	19	60	46	34	9	47
2014	43	09	52	44	26	66	47	33	9	59
Mean	42	13	55	39	18	56	32	23	7	29

Ratio Analysis

In Table -08, a statement of different financial ratios of public sector non-life Insurance Corporation has been presented.

Claim Ratio (CR)

Claim Ratio is expressed as a percentage of total net claims incurred to net premium underwritten. A lower claim ratio signifies the efficiency of the risk underwriting team and also a better claims management mechanism. A higher claims ratio signifies an inefficient claim management and risk underwriting team.

It is evident from every year under study that the CR has fluctuated from 2003 to 2014. In 2003, CR was 41% and decreased in 2004, which was 32% but it was an increasing trend up to 2010, then again decreased up to 2012 and again increased up to 2014. In average, CR was 42%. This signifies that, there was a moderate claim management and risk underwriting team at that tenure.

Expenses Ratio (ER)

Expenses of Management are generally operating expenses which include employee's remuneration and benefits, office and administrative expenses; etc Expenses ratio is calculated as a percentage of net premiums which reflects the percentage of revenue which is being utilized on account of commission and management expenses. This ratio is a pointer of the cost effectiveness and productivity. A higher ratio reflects financial instability of the business as a decrease in revenue may result in losses, whereas lower ratio is an indicator of better operational performance.

The study shows the expenses ratio of SBC is a declining trend from 24% in 2003 to 09% in 2014. This implies a better operational performance.

Combined Ratio (CbnR)

Combined Ratio is the most acceptable measure of underwriting profitability. Financial analysts rely on it for comparing the profitability of insurance of different companies and for comparing different lines of business. This ratio reflects the combined effect of net commission expenses, expenses of management and claim incurred.

Claim Ratio of SBC is a fluctuated trend but in 2003, it was 41% and in 2014, it was 43% and average is 42%. Expenses Ratio of SBC is downward trend .In 2003, it was 24%, In 2008, it was 10% and subsequently in 2014, it was only 09%. So this trend shows a cost minimization performance.

Underwriting Result Ratio (URR)

Underwriting results indicate the performance of an insurance company from core insurance business. To ascertain the underwriting performance, first net underwritten premium is adjusted with the increase/decrease in unexpired risk reserve to arrive at net premium (earned). Thereafter, underwriting profit /loss of a general insurer is ascertained after deducting the commission expenses, claim incurred and management expenses from net premium (earned). The underwriting results ratio is calculated by dividing underwriting results by net underwritten premium.

It is seen that in every years under study period ,SBC is able to record profit from underwriting activities. URR is an increasing trend .In 2003, it was 28%. In 2008, it was 38% and in 2014, it was 44%. This trend indicates an efficient risk management and claim settlement performance.

Investment Income Ratio (IIR)

Income from investment creates a significant impact on profitability of an insurance firm. Insurer collects huge amount of money as premium and invest it efficiently to maximize its return. The investment income ratio is determined by investment income to net premium written. This ratio indicates the effectiveness and efficiency of investment decisions.

The IIR of SBC remains increasing trend in every years commencing from 2003 to 2014. (22% to 26%). This signifies that return on investment in relation to net premium collection is high. It also indicates to the huge amount of return on investments which is evolving out from a substantially large volume of investment portfolio maintained by SBC over years.

Net Retention Ratio:

The net retention ratio has been calculated by dividing net premium to Gross Premium. Net retention ratio signifies an insurer's ability to bear risk. It is expressed as a percentage of business retained (net of reinsurance ceded) in relation to gross direct premium. As per Insurance Corporation Act –1973, it

mandatory for SBC to cede business to the overseas market after keeping its own retention.

The retention ratio of SBC is increasing day by day. In 2003, retention ratio was 39%, in 2008, it was 56% and in 2014, it was 66 %. This implies a better capability of SBC to bear risk.

Operating Ratio:

The operating ratio has been calculated by dividing the profit before taxes to net premium underwritten. The operation of an insurer encompasses both the underwriting and investing activities. The fund of an insurer comprises of net premium collected from underwriting activities & income generated from investments. This fund is disseminated to meet operating expenses including claims and a major part is invested in various areas of investment. The net result is reflected on profit before tax. This ratio is an acceptable measure of profitability of the insurance business.

In every year under study, the operating ratio was an increasing trend except in the year 2004, 2005 and 2012. Overall, it was an increasing trend during the study period. In 2004, the operating ratio of SBC was 28% and in 2014, it was 47%. This implies a better operational performance.

Net Earnings Ratio

The Net Earnings Ratio has been calculated by dividing net profit after tax to net premium underwritten. This ratio is also an acceptable measure of profitability of the insurance business. This ratio discloses the net result of the underwriting and investment activities.

As the provision for taxation is adjusted with operating profit before tax to arrive at net profit after tax; therefore the net ratio of SBC is less than operating ratio. The average of the net earnings ratios under the study period was 23%, whereas, the operating ratios was 32%.

Return on Equity (ROE)

Return on Equity is the most popular measure of profitability of a business concern irrespective of its nature of business. It measures the return available for accruing to owner's capital. It is calculated by dividing net profit after tax to Net Worth.

The Return on Equity of SBC was an increasing trend during the study period. In the year of 2003, it was 4%, in 2009 it was 7% and in 2014 it was 9%. This increasing trend of ROE shows a better performance of SBC.

Business Per-Employee Ratio

The Business per Employee has been calculated by dividing net premium to total no of employees. This ratio basically depends on the number of employees. In the table no-08, it is observed that this ratio is a increasing trend which indicates a better contribution of employees. In the year 2003, this ratio was 8% ,in 2008 it was 25% and in 2014 it was 59%.

Regression Analysis

In the Table 10 & 11, an attempt has been made to examine the combine impact of some selected factors on the profitability of the public sectors of non-life insurance industry. Accordingly, multiple correlation and multiple regression techniques have been applied to study the joint influence of the selected ratios, namely investment income ratio, net earnings ratio, net retention ratio. Regression formula is

$$Y = a + B_1X_1 + B_2X_2 + B_3X_3 + E$$

ROE= Constant + B_1x (investment income ratio) + B_2x (Net earnings ratio) + B_3x (net retention ratio) + Error.

We know the actual multiple regression equation is ($Y = a + B_1X_1 + B_2X_2 + B_3X_3 + E$), where, a denotes constant B_1 is the slope or coefficient of X_1 (investment income ratio), B_2 is the slope or co-efficient of X_2 (Net earnings ratio), B_3 is the slope or co-efficient of X_3 (net retention ratio) + E is the error which accounts for the variability in Y that cannot be explained by the linear effect of the three independent variables.

Co-efficient of multiple correlations(R)

Co-efficient of multiple correlation measures the strength of the linear relationship between variables. In this model the value of $R = .978$ express that there is a high degree of positive relationship between dependent variable Y

(ROE) and the independent variables express as X1,X2 and X3 respectively for IR, ER ,and RR.

Co-efficient of Determination (R₂)

Co-efficient of Determination measures the percent of variation in the dependent variable, explained by the set of independent variables. Here, in three independent variables (X₁,X₂ and X₃),the R₂ is 0.957, which is very high. It means that independent variables (investment income ratio, Net earnings ratio and net retention ratio) can influence the dependent variable ROE by 95.7%.

Adjusted Co-efficient of Determination (R²adj)

The adjusted R square compensates for the number of independent variables in his model.

Multiple Standard Error of estimate (Sy)

Standard error of estimate expresses the total amount of error or variability in the dependent variable that cannot be explained by the linear effect of the three independent variables in the multiple regression equation. Here sy is .55282.

The result provides the following regression equation;

$$ROE=-2.448-.068(IR) +.092(ER) +.221(RR)$$

Table- 10.

Model Summery

Model	R	R square	Adjusted R square	Std. Error Est
1	.978 ^a	.957	.941	55282

a. Predictors (constant), Net Earnings ratio, Net Retention Ratio, Investment Income Ratio

Table- 11

Co-efficient

Model	<u>Unstandardi</u>	<u>Coefficient</u>	<u>Unstandardize</u>	<u>t</u>	<u>sig</u>
	<u>zed</u>		<u>d co-efficient</u>		
	<u>B</u>	<u>Std.error</u>	<u>Beta</u>		
1 constant	-2.448	1.893		-1.293	.232
Investment income ratio	-.068	.061	-.115	-1.108	.300
Net Retention Ratio	.092	.030	.272	3.048	.016
Net Earnings Ratio	.221	.029	.884	7.581	.000

Hypothesis test is also possible from this equation .If the b of each independent variable is same; the null hypothesis is accepted which means the independent variables have no effect on dependent variable. But, if the independent variables impact or influence on dependent variable can be find out then it can be said that null hypothesis is rejected and automatically alternative hypothesis is accepted.

In this ANOVA model, the hypothesis for the ‘F’ Test involves the parameters of multiple regression models.

Step-01

Ho = $B_1=B_2=B_3=0$

H1 =Not all the B’s are 0.

Step- 02: level of significance is 0.05

Step-03: Degree of freedom for numerator K=3

Step -04: Degree of freedom for denominator, $n-(k+1) = 12-(3+1) = 12-4 = 8$

From appendix table we get the critical value 8.8452

Decision Rule: Reject Ho, if (F is greater than 8.8452), calculated value of F is greater than 8.8452

ANOVA^a

Model	Sum of Square	df	Mean square	F	Sig
1					
Regression	54.222	3	18.074		
Residual	2.445	8	.306	59.140	.000 ^b
Total	56.667	11			

Step-05: Reject Ho because, the calculated value of F is 59.140, which is greater than the table value of 8.8452. So we can conclude that there is a significant relationship between dependent variable (ROE) and independent variables (IR, ER and RR of SBC).

Problems in SBC

Although, from very inception of nationalization, SBC is a profitable concern and financially sound organization. Nevertheless, there are few problems to the view point of contemporary technological/digital concept. These are given below:

- i) Lack of technical/professional manpower.
- ii) Lack of computerized working environment.
- iii) Lack of overall manpower.
- iv) Lack of awareness about citizen charter of SBC.
- v) Lack of providing human research department (HRD).
- vi) Lack of adequate marketing force.
- vii) Lack of mass media advertisement.
- viii) Lack of lunching research and development activities
- ix) Implementation of Insurance Corporation Act -1990, relating to the public sector business

Recommendations

Non-life insurance sector in Bangladesh is contributing to the growth and development process of the business and property by protecting all variety of assets from the financial losses. After the banking sector, the insurance sector has become (basically Non-life insurance) the second most important Providers of financial services in Bangladesh. The non-life insurance industry of Bangladesh has consequently become a prominent sector of the economy and this was designed to find out how the SBC has been performing over the year (2002-2015) by comparing previous over the year (1983 to 2001).

The analysis of the performance of SBC based on certain selected indicators (Premium income, investments, claims, overall profitability and contribution to the government fund, various ratios like claim ratio, expenses ratio, investment income ratio, business per employee ratio etc.) reveals that operating performance has consistently increased throughout the 14 years under review (2002-2015). The net premium income of SBC increased gradually throughout the 14 years with an annual average growth of 12.46%. Main contributors to this growth in net premium income are both Direct-underwriting business and re-insurance business. As per insurance Act 1990 and later which was 100% of public property related business is underwritten by SBC then keeping 50% for SBC, rest 50% will be distributed on equal co-insurance basis. On the other hands, SBC has been under writing the 100% of re-insurable business all private insurance companies of Bangladesh. Besides, income from investment as a percentage of total investment average 9.10% in 2002 to 2015. the improvement of this scenario of investment income has changed due to the gradual shifting of relatively lower income generating to (Deposit) to higher income generating investment (share, debenture) and overall increase total investment. In our study period, the SBC's profit earning trend is upward from 2002 to 2015. However, relative measures of profitability show a shining picture of overall profitability, indicating gradual increase in profitability in all respects during our study period (2002-2015), except in 2015. During the period reviewed ROTA (Return of total asset) of SBC increased to 13.08% in 2011 from 5.8% in 2002 and then few decreasing to average 12% up to in 2015. Direct under writing income and annual profit as percentage on net premium have increased significantly from 50% to 77% and

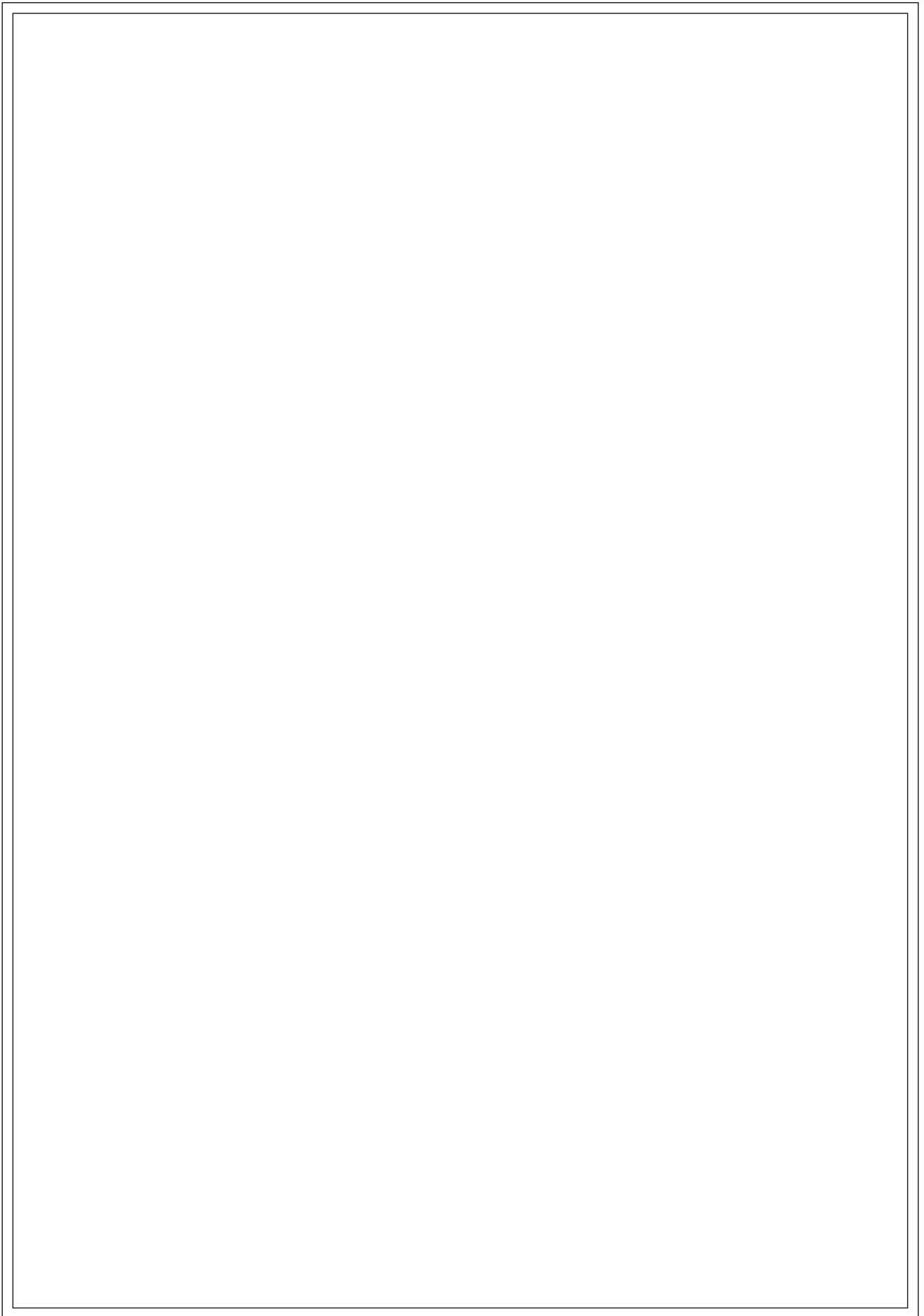
from 24.20% to 51% respectively during the study period. The reason behind the overall improvement in the performance of SBC during the 2002 to 2011 was a high competent management, Government policy, emphasized on power sector, and overall positive environment and positive role of Union & Officer Association. After introduction of private insurance in 1984 and further liberalization in 1990, SBC took some measures like right sizing the organization, increasing marketing efforts and efficient portfolio-management. As per previous chronological success encouraged to the efficient-management of our concern study period. Nevertheless, state own organization has some barriers like, lack of challenging attitude, resistance to change, Unionism. Although, our Union is very much co-operative with management, etc. If we compare between the period of (1983 to 2001) and (2002 to 2015), it is observed that SBC has a better performance in the period of (from 2002 to 2015). It will be clear if we see the Table 01 for the period of (1983 to 2001) and table -06 & 09 for the period of (2002 to 2015).

However, SBC can achieve more success and can improve global oriented performance by expanding and diversification its product, like crops insurance under WIBCI project, health insurance for government employees, long term home insurance and new innovative investment scheme to utilize more proportion of total assets for generating income and revising the policy of direct insurance business. If SBC wants to continue its current image of better performance, it should be provided a computerized net working environment, improvement of professionalism, to introduce the concept of “one man for one computer”, marketing efforts improvement, grow a positive attitude of clients; improve quality services, proper utilization of assets, training on innovation and implementation of global concept etc. Therefore, with the more improvement of SBC’s performance, it will be able to play a more significant role not only in our local area but also in the international premises.

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