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Editorial Note

Dear Readers,

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The first issue of the journal has already been indexing in Nepal Journal online which is a part of the Ubiquity Press Network. We are trying to index the journal to the wide and internationally reputed platform in the coming days. We have received manuscripts from Asia, Europe and North America while articles are welcomed across the globe and throughout the year.

Now, the second issue of Nepalese Journal of Insurance and Social Security is in your hand. First of all, I would like to thank all contributors for their valuable papers and time. The editorial board is grateful to reviewers and advisory board for the valuable suggestions, comments and time to enhance the quality of the journal. Current issue includes seven articles from different area viz. social health insurance, commercial insurance, actuarial issue on social security and bancassurance. Articles are received from fresh researchers, practitioners and seasoned academicians.

We request to the researchers and practitioners to contribute in the thematic area of the journal. We look forward to work with all of you as we continue to make the journal at the height of success, and we welcome your submission as well as feedback as authors, readers and reviewers of the journal.

Prof. Fatta Bahadur KC, PhD Editor in Chief NJISS

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Illness, Healthcare, and Health Insurance: Socio-economic Perspective in Nepalese Context

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Abstract

The Government of Nepal has introduced a health insurance programme since 2016. The main essence of the program is to reduce the gap in the utilization of health services between poor and rich, to reduce the out-of-pocket expenditure while receiving the healthcare services, and to protect the family from poverty due to catastrophic healthcare expenditure. Researchers review the policy, programme and existing practice Data from Health Insurance Board shows that the programme appears not so effective in many districts but it looks successful in some districts where private healthcare providers are existing as a referral hospital. It is still unanswered whether the HIP is going to boost industrialists in the name of basic rights, health equity and social justice. The paper studies socio-economic and political perspectives of healthcare and health insurance with reference to Nepal and concludes that the healthcare system needs to reform for real welfare, social justice, and citizens' access and right to healthcare.

Keywords: Disease and Illness, Health Inequality, Health Insurance, Seller of Illness and Healthcare

1. Introduction

The welfare states should provide basic health services to its people free of cost since the state has a responsibility to provide it. The Constitution of Nepal [CoN] 2015 has assured basic health service as one of the fundamental rights of the citizens. Article 35 of CoN has guaranteed basic health services as the basic right of people and the state has a responsibility to assure it (Nepal Law Commission, 2015). Being a member state of the United Nations, the Government of Nepal [GoN] is one of the signatory members and was committed to assure 'Health for All' by 2000, achieve Millennium Developments Goals by 2015 and later Sustainable Development Goals [SDG] by 2030 especially Universal Health Coverage [UHC] (Government of Nepal National Planning Commission, 2015). GoN has declared basic health services at free of cost from its local-level health institutions [health posts and primary health centres] since Mid-January of 2008 (Development Resource Centre, 2012).

Despite the international commitments and constitutional provision of health, the reality is so far from the targets. Most of the local level health institutions remain stock out of essential medicines, still vacant the position of sanctioned posts of human resources for health, and poorly equipped in terms of the physical infrastructure of health facilities (Subedi, 2015). On the other hand, the GoN has allocated less than three (2.75)

and less than four (3.67) percent of the total national budget for the health sector in the fiscal years 2017/18 and 2019/20 respectively which is said to be insufficient to meet the targets of the SDGs, and the GoN's commitments in relation to the mandatory provision of the CoN (Department of Health Services, 2019; Ministry of Finance, 2019a). Consequently, nearly one fifth (19%) of the total population is still living below the poverty line and cannot pay for healthcare which may be the problem of access to health services (Ministry of Finance, 2019b).

As per the agenda of the UHC which is targeted as no-one left behind the mainstream of health services. In 2005, the member states of the World Health Organization were also committed to developing the health financing system aiming to access health services and should not suffer financial hardship while receiving the health services as per world health assembly resolution 58.33 (Binnendijk, 2014). An alone effort by the GoN is not enough to assure the commitments since just 3-4 percent of the total budget has been allocated for the health sector (Department of Health Services, 2019). So, an alternative mechanism is needed for sustainable health financing to make health for all, and all for health (Health Insurance Board, 2019). People's participation and contributions seem compulsion to assure their commitments. Considering these facts, the GoN has initiated the so-called health insurance programme [actually treatment support programme] initially as social health security since 2016 in three districts and committed to expanding throughout the country by end of this fiscal year (Health Insurance Board, 2019). The paper aims to discuss the socio-political perspective of healthcare and health insurance in the context of Nepal.

2. Literature Review

2.1 Marxism: social class and conflict

Society consists of specific links between characteristics of mode of production and attitudes and behaviours of individuals live in the capitalist society (Thomson, 1983). According to Marxist, there are two classes in the society: Bourgeoisie and Proletariat (Koseoglu, 2017; Kruger, 2015). Bourgeoisie are known as employers, capitalists, rich, owner, dominating people or boss who hold state power even courts, police, law, and orders protect them since they can influence politics and the overall systems of state including media, and even state's economy whereas, proletarians are employee, worker, poor, dominated people or servant who work for bourgeoisie (Edlund & Lindh, 2015; Neesham & Dibben, 2016). Since the upper class or elite groups influence the overall system of the state, the state provides special treatment and privileges to protect them and their property. The overall system of the state safeguards the bourgeoisie even they are in a minority. Whereas the majority of people who are proletarians work for these elite groups and they cannot control institutions, politics and state's governing systems even they are in the majority (Edlund & Lindh, 2015). So, the state generally does not hear them in capitalist structure. If the working groups work against the bourgeoisie then the police, judge, court punish them to protect the capitalism, elite group who can earn without working considering that they are the backbone of the state's economy. Obviously, the state protects capitalists. In this way, the social and political system runs. The basic assumption of Marxism is the human and all arrangements of life are administrated by commodity in capitalism (Kellner, 1988) and how the transformation of politics and practices influences in healthcare (Soares, Maria, Campos, & Yonekura, 2013).

The working group [lower class] [WG] demands equality where the owner group [upper class] [OG] demands economic freedom and rights (Edlund & Lindh, 2015). The upper class influences the mass media to advocate in favour of them and control the overall system of governance and political system even the social and governmental institutions support them in the name of 'rule of law and order'. The WGs demand for teamwork, capital sharing, and a high wage for their work and state's control over the property whereas, the OGs demand for individualism, business freedom, should have right to control over the WG, and low wages to employee for more profit in their business (Neesham & Dibben, 2016). In this way, class conflicts exist in the society. Therefore, the political and economic system of the capitalist society makes the rich richer and poor into poorer that makes various forms of disparities in the society. The OG believes that money creates power and it can control everything. So they are motivated to earn more money by using the WG at lower wages (Edlund & Lindh, 2015). There are both criticisms as well as a commendation of Marxism. Some idealists comment that Marxism creates tension with its own objectivity, engagement, and imagination (Burawoy, 2000) that it could not be possible to create a classless society.

2.2 Producers and consumers of illness

Most of the health reform plans and policies prioritize financing and medical care than to preventive aspects in relation to diseases (Godwin, 1871; Navarro, 1994). Healthcare industries are more benefited to produce healthcare products than create preventive measures in the community. Most of the patients have been blamed that they got ill because of their own unhealthy behaviours rather than a socio-political imbalance (Bierlich, 1999). Physicians use to counsel patients as the disease appeared to them because of their own unhealthy behaviour and advise them not to do so however the reality is far from the observation (Wyk, 1996). The disease presents with patients is not only due to their own behaviour rather it presents from entire unhealthy products that they consume the foods or goods produced by industrialists [the bourgeoisie]. In this sense, the OG produces unhealthy products and the WG consumes it so the OG is the illness producer and the WG is the consumer. The OG produces various health-damaging products [unhealthy products], disseminates creamy, and attractive messages to consume their products from mass media. Then, the WG consumes the products since they are influenced by advertisements and even they need it (Bierlich, 1999; Wyk, 1996).

Figure 1: Producers and consumers of illness



The bourgeoisie and or industrialists produce different types of products that might harm health but their concern is profit rather than people's health. On the other side, the state protects and recognizes them as

respectful taxpayers, considers them that they should be protected, and treats them accordingly (Bierlich, 1999). Whereas people are buying illness through the means of their products and goods which tend to consume by WGs since they are attracted by the creamy advertisement and messages. Gradually, the health condition of the people is going to decrease and disease starts to manifest (Wyk, 1996).

2.3 Producers and consumers of healthcare

Figure 2: Producers and consumers of healthcare



Proletarians believe in the mass media, and accept the socio-political system that the bourgeoisie are providing the healthcare to them. But in the real sense, the bourgeoisie is benefited when the proletarians become ill by selling their products of healthcare (Edlund & Lindh, 2015). Sometimes, the bourgeoisie influence the total healthcare system to purchase their healthcare products to people claiming that the state has provided the healthcare and services at free of cost, for example, mass immunization, mass treatment like deworming, vitamin A distribution, Iodine and Iron tablets distribution. Actually, the bourgeoisie has already been paid by the state or from any other mechanism for their healthcare products (Bierlich, 1999).

2.4 The social and biomedical perspective of health and illness

Physicians or medical officers see the patients from a biomedical point of view whereas, sociologists view them from the socio-political and environmental perspective (Edlund & Lindh, 2015). Physicians see bacteria and or viruses in the patients having STDs whereas; sociologists observe poverty, the social disparities and inequalities. Physicians treat the patients in an individual approach to fix the problems but sociologists see the problems in the social structure so the entire political and economic system is responsible for diseases or illness. Therefore, they want to treat the illness accordingly.

Physicians are said to be an agent for direct marketing of drugs. It is claimed that medicine often causes bad than good and millions of people are affected by unnecessary prescription of antibiotics (Null, Dean, Feldman, & Rasio, 2005). Generally, it is considered that they have a high level of knowledge and skills concerning medicine and health so they should have power. Therefore, they can make a final decision about medication to overcome the illness. They are often awarded if they recommend more medical tests, more medicines, and more days to stay in the hospital so that the patient might pay more and more in the name of quality healthcare. Besides these, healthcare industries provide an incentive for those who prescribe their products even the patients. However, diseases do not need to consume the products [medicine] for being healthy or treat the disease (Edlund & Lindh, 2015). The sociological and biomedical perspective of the illness and health care

has been presented in the Figure 3.

Figure 3: Sociological and biomedical perspective on disease



3. Methodology

The article is based on published and unpublished literature related to healthcare, health insurance, and socioeconomic and political perspectives. Published online articles were searched from PubMed, HINARI, ReserchGate, Academia, and Google Scholar. Whereas, unpublished article and data were collected from the Health Insurance Board [HIB], Department of Health Services, Teku, Kathmandu. Some documents were obtained from Tribhuvan University Central Library. The opinion is presented as per the qualitative and quantitative data available from the literature published till 2019.

4. Findings and Discussion

Government of Nepal has formulated the Health Insurance Board [HIB] to administrate so-called 'health insurance' throughout the country to achieve the basic targets of the UHC since 2018. Before its establishment, the Social Health Security Development Committee had operated the programme as the social health security since 2016 (Health Insurance Board, 2019). The Member of Parliament endorsed Health Insurance Act in 2017. According to health insurance regulations 2019, there is a mandatory provision to enroll for those who are engaged in the formal employee system i.e. civil servants, teachers and other workers who receive a salary from governmental budgeting system that also includes the informal sectors (Office of the Prime Minister and Council of Ministers (OPMCM), 2019). As per the provision, a certain amount of employee's salary is deducted for health insurance that is the range of 3,500 to 10,000 Nepali Rupees as per the position and income that formal sector workers received. The coverage amount is equivalent to Rs. 100,000 per year with maximum ceiling of Rs. 200,000. The programme has covered more than half of districts throughout the country and committed to expanding to all districts of the country by the end of this fiscal year (Health Insurance Board, 2019; Office of the Prime Minister and Council of Ministers (OPMCM), 2019).

The term 'health insurance' is not actually fit as per its working nature and practices. Health Insurance [HI] should try to reduce the health-damaging behaviours such as smoking, alcoholic, sedentary lifestyles. There should not be an equal premium [contribution amount] to all and should not be a ceiling of the same coverage amount in real HI practices. There is a debate on the fundamental issue that individuals who care less about their health should be fined more than those who care about their health in terms of food intake, proper exercise, regular check-up, and other health concerning behaviour. HI is a kind of co-operation too. When insured do not get ill, their contribution amount is paid for others who get sick and paid vice-versa. The question may arise that why you should pay for those who do not care for their own health since you are more cautious about your own health and do health-protecting behaviours to promote and maintain my health (Edlund & Lindh, 2015).

On the other hand, there is a provision of free health services for basic health care though it has not been effectively implemented due to the shortage of medical professionals, stock-out of drugs, and poorly managed infrastructure (Development Resource Centre, 2012; Transparency International Nepal, 2016). Besides these, patients with critical (life-threatening) diseases such as Cancer, Heart Diseases, Kidney Diseases, Sickle-cell Anaemia, Head and Spinal injury, Alzheimer's disease, Parkinson's disease can receive some financial support [up to Rs. 400,000] during transplant/post-transplant and treatment in special terms and conditions which is not included in insurance coverage (Ministry of Health and Population, 2018). Civil servants, police staff, army staff, teachers and other employees engaged in formal and informal sectors can receive treatment support, treatment subsidy and or amount for healthcare. Ex-employees other than in Nepal have also received medical care facilities. These types of treatment support are not included in the mainstream of so-called health insurance.

Various private insurance, banking, and financing companies have also been providing treatment support for critical care in special terms and conditions. These companies are only for profit-making may or not sustain in the future. The governmental service delivery system seems weak compared to private ones. The process of receiving service from governmental health facilities is lengthy, time-consuming, and procedure based than result-oriented. So, private healthcare industries may attract people by disseminating attractive and creamy message for health care. In such a case, all these social and political systems may support the elite group in the name of protecting the deprived community.

The HIB shows that the health insurance programme seems more successful where the private and community type hospitals are listed as service providers, for example, Palpa, Chitwan, Kaski Districts where private medical colleges are listed as service provider [referral hospital] of the programme (Health Insurance Board, 2019). The HIB is ultimately boosting the private sectors. Actually, private sectors are being more benefited from the programme since they are the seller of healthcare products [services and goods] in the name of universal health coverage, rights of citizens, and or sustainable development goals. Therefore, there is a nexus between the government and elite industrialists.

The political forces influence the healthcare system (Muntaner, 2013). So the main issues of health need to be addressed by the mainstream of politics. The national healthcare system should be reformed since the system firstly boosts the elite industrialists and second it does not cure the patients rather leads to the problems of drug resistance due to unnecessary application of antibiotics (Null et al., 2005) which makes of people dependable to healthcare products that are produced by elite industrialists. Another dark side of the programme is the

programme could not able to justice the people who live in a remote area such as people who live in Kathmandu and Karnali have an equal medical coverage whereas, the people from Karnali have to pay nearly the same amount in transportation cost while receiving the tertiary level health services. Therefore, it is unfair and illogical in terms of social justice and equity for healthcare.

5. Conclusion

The healthcare system needs to reform since it could not reduce the gap of health-related disparities created by socio-political and economic system. Healthcare is not only the issue of the hospital and the doctors but it should also be considered in a holistic approach and addressed from the mainstream of the political system. Positive discrimination is needed for needy persons and places, and should not be treated equally throughout the country.

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Using Expected Geometric Values to Calculate the Cost of Interest in Hyper-inflationary Environments: the Case of Venezuela

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Abstract

It is of vital importance to explore the relationship between pensions and inflationary levels because this forms a link between social policy and economic development in the context of Venezuela's challenging economy and its impact on the development of pension systems. With such rampant inflation, companies must adjust the rates of salary increases to avoid a significant decrease in the purchasing power of income from defined benefit plans. Our research seeks to find the possibility of using an average geometric rate of future interest rates expressed as an expected value to discount obligations. Consequently, the cost of interest associated with the actuarial liability of the Benefit plans increases substantially in the next fiscal period to the actuarial valuation, sometimes compromising its sustainability over time. In order to minimize this problem, two scenarios for calculating the interest rate are proposed to smooth out this volatile effect; both are based on a geometric average with the expectation of working life or with the duration of the obligations. We are careful to use a reasonable interest rate that is not so high as to compromise the cash flow, resulting in skewed annual results of the companies. Our research seeks to find the possibility of using an average geometric rate of future interest rates expressed as an expected value to discount obligations. We formulate and actuarially evaluate two different scenarios, based on job expectations and Macaulay's duration, of the obligations that allow the sustainability of the plan in an environment of extremely high inflation. To illustrate the impact of the basic annual expenditure of the period, the results of an actuarial valuation of an actual Venezuelan company were utilized. Despite some companies adjusting their book reserves increasingly through a geometric progression, the amounts associated with the costs of interest would be huge in any such adjustment pattern. Therefore, we suggest adoption of one of the alternatives described in the research.

Keywords: Actuarial liabilities, Social security, Projected benefit, Macaulay duration

1. Introduction

Hyperinflation is a very high rate of inflation.¹ It is often caused by a government printing enormous amounts of new money to pay for its expenses. Subsequently, this out-of-control increase in prices causes the country's currency to rapidly decrease in value, resulting in shortages of necessary goods. Under this scenario, the citizens characteristically begin hoarding goods, creating a vicious circle in which they become even more expensive and scarce, money practically becomes worthless, and a domino effect of financial institutions going bankrupt begins, ultimately causing the collapse of the country's economy.

Despite being home to the world's largest oil reserves, Venezuela is facing a situation such as that described above. The average inflation rate in Venezuela amounted to about 493.6 percent in 2017. Since 2017, runaway inflation has hampered efforts to estimate the true rate of price increases in the country.

The economic catastrophe began with a combination of plummeting oil prices and government price controls, causing state-run oil companies to go broke. The government responded by printing new money, causing (non-oil) prices to rise rapidly, accompanied by an increase in unemployment rates, and a breakdown in Gross Domestic Product. Under today's scenario, many Venezuelans are emigrating to find employment and vital supplies, and the population of the South American country is at the lowest level in a decade. The trend of inflation has been exhibited more clearly in Figure 1.



Fig. 1: Venezuela: Inflation rate 2004- 2024 (compared to previous year)

¹ IAS 29 states that an economy is hyperinflationary if (inter alia) "the cumulative inflation rate over three years is approaching, or exceeds, 100%" (IASB 2011, p. A938).

Source: International Monetary Fund, Statistica, 2019

A hyperinflationary setting provides a unique environment with respect to pension plan projections. In an examination of the value relevance of inflation-adjusted (IA) and historical cost (HC) amounts in a hyperinflationary economy, Chamisa et al. (2018) use a unique dataset drawn from annual reports of firms listed on the Zimbabwe Stock Exchange from 2000 to 2005. They find that both sets of amounts are value relevant, but HC amounts are superior to IA amounts. In highly inflationary environments, companies must adjust the rates of salary increases to avoid a drastic fall in the purchasing power of income from defined benefit plans. Consequently, the cost of interest associated with the actuarial liability of the Benefit plans increases substantially in the next fiscal period to the actuarial valuation, sometimes compromising its sustainability over time. In order to minimize this problem, two scenarios for calculating the interest rate are proposed to smooth out this volatile effect; both are based on a geometric average with the expectation of working life or with the duration of the obligations. In Venezuela, pension plans and social benefits are suffering from this impact and we demonstrate the effectiveness of applying actuarial principles to two scenarios that are presented below.

Obviously, we need to use a reasonable interest rate that is not so high that it will compromise the cash flow, resulting in skewed annual results of the companies. Our research seeks to find the possibility of using an average geometric rate of future interest rates expressed as an expected value to discount obligations. We formulate and actuarially evaluate two different scenarios, based on job expectations and Macaulay's duration, of the obligations that allow the sustainability of the plan in an environment of extremely high inflation.

1.1 Determining the Proper Level of Interest Rates

In hyperinflationary environments such as found in Venezuela, actuarial liabilities derived from defined benefit plans such as social benefits, require substantially higher nominal salary increase rates. Although real rates are used in the order of (4% - 8%) of salary adjustment, according to Fisher, inflation generates nominal discount rates even higher than that of salary adjustments (Levi and Makin, 1979). This results in a high annual expense for the company's contribution for next year.

An equivalent interest rate understood as a function of the future and present value of the obligations, depending on the demographics of the plan, would still remain high unless the vast majority of the employees covered by the plan were young, and the turnover rates of staff were relatively low.

This raises the need to use a reasonable interest rate that is not so high so as not too compromise the cash flow and skew annual results of the companies. In this sense, this paper seeks to find the possibility of using an average geometric rate of future interest rates expressed as an expected value to discount obligations. According to the Actuarial Standards Board (2013), "The economic assumptions selected should reflect the actuary's knowledge as of the measurement date. However, the actuary may learn of an event occurring after the measurement date that

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would have changed the actuary's selection of an economic assumption. If appropriate, the actuary may reflect this change as of the measurement date."

This expected value is generally based on the future forecast of nominal interest rates that have an exponentially approximate decline in future years; (all of them adjusted or derived from the real discount rate used on wages). Another option would be to use Macaulay's duration of obligations, to minimize the impact mentioned above.

The objective of this research is to formulate and actuarially evaluate two scenarios, based on job expectations and Macaulay's duration, of the obligations that allow the sustainability of the plan in an environment of extremely high inflation. The General Accountability Office (2014) examined numerous countries that apply a variety of approaches to discounting. Canada requires determination of multiple measures of plan obligations, based on both assumed returns and high-quality bond rates and annuity prices. The Netherlands requires that plan obligations be measured based on market interest rates but allows the use of assumed returns for determining plan contributions or developing recovery plans. In the United Kingdom, discount rates are determined on a plan-specific basis and can include some allowance for assumed returns in excess of high-quality bond rates, depending on plan characteristics and the strength of the sponsor. The next section describes the mathematical formulation of the model, followed by a description and characteristics of the sample corporation used in the study. An actuarial assessment of the hypotheses follows, and sections on paper conclusions and recommendations round out the research.

1.2 Mathematical Formulation of the Model Under International Standard IAS-19 $(PBO)_{t+1}$

Under IAS19,² the method used to determine the actuarial liability commitment is that of the projected unit credit

benefit (Project Benefit Unit Credit). The above raises the following between (t, t + 1).

$$PBO_{t+1} = PBO_t + CS_t + CI_t + B_{(t,t+1)} \pm G/P_{(t,t+1)}$$

Where:

PBOt: Actuarial liabilities in t

 CS_t : Cost of service in t

- $\mathsf{CI}_t\colon \mathsf{Cost}\ of\ interest\ in\ t$
- B_(t, t + 1): Benefits paid between (t, t + 1)
- G/P: Actuarial gains / losses for the period (t, t + 1)

² IAS 19 or International Accounting Standard Nineteen rule concerning employee benefits under the IFRS rules set by the International Accounting Standards Board. In this case, "employee benefits" includes wages and salaries as well as pensions, life insurance, and other perquisites. The rules in IAS 19 explains the accounting for longer term employee benefits and post-employment plans such as defined benefit retirement plans.

Experience indicates that the problem generated in hyper-inflationary environments is not at the level of the liability as such $(PBO)_{t+1}$ but of the expense that will be generated in the company's contribution. At the end of the period the actuarial liability (PBO) is conditioned to the ratio of the rates under a function of the type:

$$f(s, i) = \left[\frac{(1+s)}{(1+i)}\right]^t = \left(\frac{1}{(1+r)}\right)^t$$
 siendo $i = (1+s)(1+r) - 1$

The function compensates for high salary rates with those of nominal interest and in terms of liabilities the orders of magnitude are reasonable.

However, in nominal terms the interest and service cost component increase substantially for the period (t + 1) when adjusting the (PBO)_t by the nominal rate of the year of the valuation.

Generally, future rates of increase in wages and interest exhibit a geometry in Table 1 under a scenario of gradual improvement of the economy. Then it is adjusted for the real discount rate.

		Interest		Geometric		
Year	Salary Rate	Rate	Time	Average		Inflation
2019	283705.08%	295057.28%	1	2,951.572832	2,951.57	545579%
2020	50000.00%	52004.00%	2	521.040000	1,537,887.51	100000%
2021	25000.00%	26004.00%	3	261.040000	401,450,155.19	50000%
2022	10000.00%	10404.00%	4	105.040000	42,168,324,301.04	10000%
2023	5000.00%	5204.00%	5	53.040000	2,236,607,920,927.23	3000%
2024	1000.00%	1044.00%	6	11.440000	25,586,794,615,407.60	500%
2025	250.00%	264.00%	7	3.640000	93,135,932,400,083.60	100%
2026	50.00%	56.00%	8	1.560000	145,292,054,544,130.00	20%
2027	40.00%	45.60%	9	1.456000	211,545,231,416,254.00	20%
2028	25.00%	30.00%	10	1.300000	275,008,800,841,130.00	20%
2029	15.00%	19.60%	11	1.196000	328,910,525,805,991.00	20%
2030	15.00%	19.60%	12	1.196000	393,376,988,863,966.00	20%
2031	15.00%	19.60%	13	1.196000	470,478,878,681,303.00	20%
2032	15.00%	19.60%	14	1.196000	562,692,738,902,838.00	20%
2033	15.00%	19.60%	15	1.196000	672,980,515,727,795.00	20%
2034	15.00%	19.60%	16	1.196000	804,884,696,810,442.00	20%
2035	15.00%	19.60%	17	1.196000	962,642,097,385,289.00	20%
Geome	tric Average				Final Geometric Rate	45215%

Table 1a: Future rates of increase in wages and interest

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Veer	Interest	Inflation	Geometric	Veer	Interest	Inflation	Geometric
Year	Rate	Inflation	Average	Year	Rate	Inflation	Average
2019	295057.28%	545579%	45215%	2028	30.00%	20%	45215%
2020	52004.00%	100000%	45215%	2029	19.60%	20%	45215%
2021	26004.00%	50000%	45215%	2030	19.60%	20%	45215%
2022	10404.00%	10000%	45215%	2031	19.60%	20%	45215%
2023	5204.00%	3000%	45215%	2032	19.60%	20%	45215%
2024	1044.00%	500%	45215%	2033	19.60%	20%	45215%
2025	264.00%	100%	45215%	2034	19.60%	20%	45215%
2026	56.00%	20%	45215%	2035	19.60%	20%	45215%
2027	45.60%	20%	45215%				

Fig. 2: Interest rate, inflation and geometric average



It is clear in the graph that different scenarios of nominal interest rate declines will generate different geometric averages. (VE₁, VE₂, VE₃).

a) The alternative life expectancy could be useful in determining the terms of the decline in future nominal interest rates. Experience indicates that given the economic dynamics of the country, the projected salary increases granted by companies often end up being substantially smaller than those hypothesized. The latter is what generates an additional problem in that in most cases the contribution actually made by the company does not fit the one derived from the hypothesis; and consequently, adjustments must be made in the Cost of Service (CS) and Cost of Interest (CI) of the period.

If $_{t}$ Px represents the probability of surviving in employment since (x, x + t) and the maximum age allowed 70 years in some cases then the life expectancy would be

$$e_x = \sum_{t=1}^{n-1} P_x$$

with *n* being the maximum age and e_x the working life expectancy of an employee of age x in t. Additionally, if the company has N employees, then the average expectation for the entire company will be given by:

$$(\sum_{t=1}^N e_{xi})~(N^{-1}) = \bar{e}_x$$

The expected geometric average of the estimated nominal interest rates for future years is determined as follows:

$$E_g(i) = \left[(1+i_1)(1+i_2) \dots (1+i_{\bar{e}_x}]^{(\bar{e}_x)^{-1}} - 1 \right]$$

Thus, instead of calculating the cost of interest using *i* we would instead be using (k%) E_g (i) as a proxy to what the company would actually grant as salary increase. Where k% is an adjustment factor to eventually recognize a fraction of the total geometric expected value k [0,1]; that is, it would represent that value that eventually moderates the actuarial gain or loss of the period. The desired goal is to minimize the actuarial gain or loss of the year. b) Macaulay duration. The other way to adjust this is to determine the Macaulay duration of the obligations and take an equivalent number of terms for the geometric expected value of the nominal interest rates.

The duration is calculated as follows:

 $PBO_t = f (t, i)$ Base Liability $PBO_t = f (t, i + 1\%)$ Liabilities with i + 1% $PBO_t = f (t, i-1\%)$ Liabilities with i-1%

D: Duration in years

$$D = \frac{PBO_{(t,i-1)} - PBO_{(t,t+1)}}{(\Delta i)PBO_t}$$

Sensitivity of the obligation to a change of +/-1% so that the E_g(i) in this case would be calculated with:

$$E_g(i) = \left(\prod_{t=1}^{D} (1+i_t)\right)^{D^{-1}}$$

Depending on the demographics of the company, that is, the distributions associated with age, sex, years of service and integral salary, the value of the

$$D \leq \overline{e}_x$$

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In general, in most cases the duration of the obligations is shorter in time than the average labor expectation, but it will depend, as stated earlier, on the demographic makeup of the company.

3. Methodology

3.1 Characteristics of Sample

To illustrate the impact of the basic annual expenditure (Cost of Service + Cost of Interest) of the period, the results of an actuarial valuation of an actual Venezuelan company were utilized. The variables used are:

- a) The number of employees (N)
- b) The average comprehensive salary (SI)
- c) The average cumulative service (S)
- d) Total social benefits payable (PS)
- e) Actuarial liabilities (PBO)
- f) Total annual expenditure (GAT)
- Cost of service (CS)
- Cost of interest (CI)

Characteristics of this company are as follows:

- This case involves a Venezuelan company in the financial sector with a total of 364 employees 119 (Female) and 245 (Male)¹
- The current weighted average service in years of service is 7.50 years.
- The average integral salary for the entire population 1,101,579.43 Bs. (1,10 MMBs)²
- The average age is 41.58 years.

¹All demographic data was supplied by the company on 9/30/2019

²That a geometric average of nominal interest was used in the order of 1539.81%

3.2 Results of the Actuarial Assessment as of 9/30/2019 actual assumptions and hypothesis of the year 2018 for the estimate of 2019

(2019 Hypothesis)

(a) Salary increase rate: 272,789.50%

(b) Real wage increase rate: 32,877%

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(c) Actual rate used: 4%

(d) Hypothesis nominal discount rate. 283,705.0%

(e) Declining curve of the nominal interest rate for 2019 forecast in 2018.

(f) Average Rotation Rates by ages vary from 22.12% at 18 years of age to 0% at 61 and older.

(g) Mortality rates were modeled with a Group Annuity Mortality Table (GAM-83)

- PBO (Actuarial Liabilities) (MMBs): 2074.12
- P (Nominal Social) (MMBs): 3,434.56
- (Service Cost) (MMBs): 426.04
- (Cost of Interest) (MMBs): 2779.32

When comparing the starting PBO liability as of 9/30/2018 with that updated as of 9/30/2019, the following is observed:

 \rightarrow (Represents the starting PBO 15.4 times given the assumptions.

	MMBs
Initial PBO	6.9
Interest cost	106.35
service cost	11.76
Paid Benefits	-32.18
Actuarial Gain/loss	1981.28

If the hypothesized nominal rate and validated by the company of 272,788.50% had been used, for the salary increase, the corresponding nominal discount rate would be 283,705.0% which would be equivalent to multiplying the initial liability PBO_t 2838.05%, that is to say:

	Hypothesis (Case I) Nominal Interest Rate (Full)	Geometric Average (Case II) Adjusted Geometric Average
PBO _t	6.90	6.90
CI_{tt+1}	19.582,54	2000.00
PBO_{t+1}	2074,12	2074.12

In the first case the actuarial gains that would result from recognizing the nominal interest rate would be enormous and without much practical economic sense in a highly inflationary environment. On the contrary, the use of a geometric expected value would be closer to the reality of real increases in salaries granted by the company. The

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difference between 19,582.54 MMBs and 2074.12 MMBs would be a gross estimate of the actuarial gain derived from the use of the hypothesis. The actuarial gain would be greater than or equal to 17508.42 MMBs, which obviously is a huge amount compared to the actuarial liability at the end of the year PBO $_{(t+1)}$ which obviously would not make much economic sense to the company. Conversely, if the path of the geometric average is used, the actuarial gain, if it exists, would be in the order of 74.12, which is more consistent with the levels of PBO $_{(t+1)}$.

Obviously, there will always be an actuarial gain or loss since the average final salary increase that was actually granted is an ex-post variable that is only known at the end of the fiscal year with any estimate and/or forecast made at the beginning of the period. Generally, the beginning of the respective fiscal year will be the time frame for an estimate, which should be unbiased and of greater likelihood. However, in this unique environmental setting, inflation necessarily runs on the one hand and salary increases on the other.

In Venezuela and as a result of the experience of more than 200 companies from different industrial sectors, the levels of real wage increase are well below inflation, although they are still relatively high, especially in the last two years 2018-2019.

5. Conclusions

Based on the results of the valuation, the cost per interest and the associated part of the service cost that are the components of the annual expenditure are high. One could even categorize them as prohibitively high, which can seriously affect the ongoing operations of the company in terms of cash flow and/or results of operating earnings.

Despite some companies adjusting their book reserves increasingly through a geometric progression, in line with the generation of the companies' incomes and not uniformly at a monthly rate, the amounts associated with the costs of interest would be huge in any such adjustment pattern; therefore, we suggest adoption of one of the alternatives described above.

PG: Geometric Progression of contributions

CT: Total Annual Cost Contribution

Co: Initial contribution

 Δ : Growth rate

$$\sum PG = CT \text{ annual}$$

$$CT = C_o + C_o(1 + \Delta) + C_o(1 + \Delta)^2 + C_o(1 + \Delta)^{12}$$

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Fig. 3: UNIFORM AMORTIZATION

Fig. 4: INCREASING AMORTIZATION



6. Recommendations

Based on the foregoing calculations, we recommend that instead of using the nominal interest rate (i%), the geometric average of the nominal rates that are in the future evolution curve be used in a case either for the time of permanence and/or expectation of working life or for the duration of Macaulay's obligations.

Practice indicates that although companies initially assume relatively high rates in their primary estimates of salary increases given inflation forecasts end up adjusting downwards and grant a much lower wage increase than previously set. Adopting any of the two options of the geometric average would moderate the problem enormously and avoid a surplus in actuarial gain and a lower contribution by annual expenditure of the companies, thus optimizing the financial aspects of the plan avoiding "remeasurement" at any time to adjust the expense and their respective actuarial gains.

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Factors Affecting Share Price of Nepalese Non-Life Insurance Companies

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Abstract

This study examines the factors affecting the share price of Nepalese non-life insurance companies. This study is based on secondary data of 15 non-life insurance companies with 105 observations for the period from the fiscal year 2011/12 to 2017/18. The result shows that firm size is positively related to market price of share and price earnings ratio. It indicates that larger firm size leads to increase in market price of share and price earnings ratio. However, the study shows that inflation is negatively related to market price of share and price earnings ratio. The study also shows that dividend per share and return on assets are negatively related to the market price of share and price earnings ratio. The study also in the study concludes that the increase in return on assets and earnings per shares do not explain the variation in stock price in Nepalese non-life insurance companies. Nepal is one of the emerging economy; the determinants identified will provide knowledge to the potential investors about the key factors affecting share prices in the country and accordingly assist them in optimizing their investment strategy. The knowledge of the factors and their possible impact on share prices is highly appreciable as it would help investors make wise investment decisions and enable firms to enhance their market value.

Keywords: Dividend per share, firm's size, market price, price earnings ratio, return on assets,

1. Introduction

Investors invest in companies that have a good performance in order to receive higher return. The main purpose of the investment is to gain profit (Ittner & Larcker, 2003). Investors use various ways to obtain the expected return, whether through their own analysis of the behavior of stock market and by utilizing advice provided by the capital market analysts such as brokers, dealers, investment managers and others. Stock market provides avenue for investment and capital formation and can act as an indicator or predictor of overall economic condition. Stock market provides a platform to individuals, governments, firms and organizations to trade and invest in savings through the purchase of shares. The market price of a share is a key factor that influences investment decision of stock market investors. The share price is one of the most important indicators available to the investors for their decision to invest in or not in a particular share (Gill *et al.*, 2012).

Srinivasan (2013) revealed that understanding the impact of various fundamental variables on stock price is very much helpful to investors as it will help them in taking profitable investment decisions. On the other hand, Shiller (1981) found that stock prices are not stable and fluctuate excessively in relation to the news about fundamentals (as dividends) primarily due to market irrationality. The stock price in the market is not static rather it changes every day. According to Gompers *et al.* (2003), stock price can be significantly influenced by a number of micro environmental factors such as dividend per share, book value (asset value) of the firm, earnings per share, price

earnings ratio, dividend ratio, etc. Macroeconomic factors include politics, general economic conditions i.e., how the economy is performing, government regulations, legal, and social factors.

2. Review of Literature

Balkrishna (1984) showed that dividend per share, earning per share, book value and yield have significant impact on the share price of general engineering and cotton textile industries. Brennan et al. (1998) found that share price changes are associated with changes in fundamental variables that are relevant for share valuation like book value per share, dividend coverage ratio, dividend per share, earnings per share, dividend payout ratio, price-earnings ratio, and firm size. Guo (2002) stated that the volatility of share price is the systemic risk faced by investors who possess ordinary shares investment. Callao et al. (2007) found that both earning and book value to equity are the major determinants of share price. Somoye et al. (2009) revealed that dividend per share and earnings per share exert a positive correlation with stock prices. The study on the size related anomalies and stock returns seasonality found that smaller firms earn higher returns than the larger firms (Benz & Reinganum, 1981). The role of stock market is widely recognized in the global economy as an indicator of economic growth. The choice of company specific and macroeconomic factors is premised on the fact that investors believe that the movement of stock prices is greatly determined by monetary policy and macroeconomic events (Nisa & Nishat, 2011). Uwuigbe et al. (2012) stated that the failure to understand the issues surrounding share price and its determinants has been the bane of the financial disposition of numerous corporations today. Book to market (B/M) ratio is an important predictor of stock returns. Similarly, the study also showed that there is a positive relationship with stock price and there is positive relationship observed between the payout ratio and the stock price in U.S. (Profilet & Bacon, 2013).

Kim and Maddala (1992) concluded that there is positive relationship between dividend per share and firm performance. Similarly, Kothari and Shanken (1997) found a negative association between stock returns and book to market ratio.

Umar and Musa (2013) found that there is an insignificant relationship between price earnings ratio and stock prices of the firms in Nigeria. Moreover, Liolen (2007) examined the predictability of stock returns using financial ratios including dividend yield, the book value to the market value, and profit to sales. The result showed that dividend yield has more power to predict stock returns than other variables. However, Wang and Xu (2004) argued that there is a negative association between book to market ratio and stock returns. Amidu (2007) found that dividend per share has negative impact on return on equity. Furthermore, the rise in GDP, dividend and P/E ratio leads to rise in share prices, whereas B/M ratio and interest rate are negatively related to share prices (Khan and Amanullah, 2012). Similarly, Manao and Nur (2001) showed that PE ratio and EPS have significant influence on stock return. Farrukh*et al.* (2017) established a positive impact of dividend policy on shareholders' wealth and firm performance in Pakistan between 2006 and 2015. This study supported dividend relevance theory, signaling effect theory, bird in hand theory and clientele-effect theory. Jensen *et al.* (1992) also asserted a positive link between dividends and current profitability that can be measured by the ratio of operating income to total equity. Furthermore, Agyei and Yiadom (2011) showed that dividend policies have a positive and significant impact on the performance of banks. Rehman (2012) found that the last year dividend significantly affects the current period payout positively.

According to Shafana*et al.* (2010), book-to-market equity has a significant negative role in expected stock returns. Similarly, Akdeniz*et al.* (2000) found that there is a negative association between earning price ratio and stock returns. However, Keim (1990) revealed that earning price ratio has a positive relationship with stock returns. Macharia and Gatuhi (2013) concluded that there is positive and significant relationship between company size and market share price. In addition, size has a positive significant relationship with stock returns (Ramzan and Naveed, 2013).Khalayleh (2001) showed that return on equity and return on assets have positive and significant impact on market price of share. Similarly, Chaudhary and Mohammed (2002) revealed that leverage and dividend yields are the most significant factors which affect stock price. However, Barrows and Naka (1994) found that accounting variables other than profit have a high value in determining the value of the stock share. Likewise, Sundaram and Rajesh (2016) found that firm's earnings per share, price earnings ratio and dividend per share have a significant and positive association with stock price. However, Chowdhury and Chowdhury (2010) found that long-term debt to total asset has positive but insignificant impact on the share price.

In the context of Nepal, Pradhan (1993) found a positive relation between stock return and size whereas inverse relation between stocks returns and market-to-book value. The study also revealed that there is a positive relationship between dividends and stock prices. Manandhar (1998) found that dividend per share and returns on equity have positive impact on market capitalization. However, earnings per share, price earnings ratio and dividend yield have negative impact on stock price. Furthermore, dividend per share is positively related to market price per share and other variables such as earning per share, profitability and size found to have positive relationship with market price of share (Shrestha, 2015). Bhattarai (2014) examined the impact of dividend policy and firm specific variables on market price of share of Nepalese commercial banks. The study found that dividend per share is positively related to market price of share of share which indicates that the firm continuously making the higher dividend payment will create confidence in investor's attitude while buying the shares and that increase the demand of the share and ultimately increases the market price of share. The above discussion reveals that there is no consistency in the findings of various studies concerning the determinants of stock price.

The major purpose of this study is to analyze the determinants of share price of Nepalese non-life insurance companies. Specifically, it examines the structure, pattern and relationship of return on assets, earnings per share, inflation, dividend per share and firm size with the stock price of Nepalese non-life insurance companies.

3. Methodology

3.1 Population and Sample: There are 20 nonlife insurance companies among them three companies were recently established and have not listed in Nepal stock exchange (NEPSE), two companies are the branch of Indian companies which are also not registered in NEPSE. So that only 15 companies are eligibile for the study All eligible insurance companies were selected as samples (Table 1).

S.N.	Name of insurance Companies	S.N.	Name of insurance Companies
1	Everest Insurance Company Limited (EIC)	9	Premier Insurance Company Limited (PICLN)
2	Himalayan General Insurance Company Limited (HGI)	10	Prudential Insurance Company Limited (PICL)
3	IME General Insurance Limited (IGI)	11	Rastriya Beema Company Limited (RBCL)
4	Lumbini General Insurance Company Limited (LGIL)	12	Sagarmatha Insurance Company Limited (SIC)
5	Neco Insurance Company Limited (NIL)	13	Shikhar Insurance Company Limited (SICL)
6	Nepal Insurance Company Limited (NICL)	14	Siddhartha Insurance Limited (SIL)
7	NLG Insurance Company Limited (NLG)	15	United Insurance Company (Nepal) Limited (UIC)
8	Prabhu Insurance Limited (PRIN)		

Table 1: Number of non-life insurance companies selected for the study

Source: bsib.org.np

3.2 Data Collection and Analysis Tools: The study is based on the secondary data which were gathered from the annual report of respective companies for seven fiscal years (FY 2011/12 to 2017/18), annual report of NEPSE and Beema Samiti. Total number of observation is 105. Following data have been collected for the study.

3.2.1 Dividend per share : Dividends per share are the amount of dividend that a publicly-traded company pays per share of common stock, over their reporting period that they have issued. If dividends per share go up, it is often a signal that the firm is performing well financially (Stein, 1989). Similarly, Kothari and Shanken (1997) showed a positive relationship of book to market ratio and dividend per share with stock price. Rashid and Rahman (2008) found that there is a significant positive relationship between the dividend and share price. Based on it, this study develops the following hypothesis:

*H*₁: There is a positive relationship between dividend per share and share price.

3.2.2 Return on assets: Return on assets depicts the efficiency of company's management in utilizing all resources or assets of the firm to procure earnings (Ambreen and Aftab, 2016). Kabajeh *et al.* (2012) revealed a significant positive relationship between the return on assets with share prices of Jordanian insurance public companies. Similarly,

Anwaar (2016) investigated the impact of firm performance on stock returns, evidence from the firms listed on FTSE-100 Index, London Stock Exchange over the period 2005 to 2014. The results showed that net profit margin and return on assets have significant positive impact on stock returns, while earnings per share has insignificant negative impact on stock returns. Based on it, this study develops the following hypothesis:

H_2 : There is a positive relationship between return on assets and share price.

3.2.3 Firm size: Dickens *et al.* (2002) found that the temptation to buy shares of large companies lead to increase its market price, with access to capital, better credit rating, and more customers, which will enhance their profitability and ability to pay higher dividends. This results in increase in share price of the large companies. Penrose (1960) stated that larger firms enjoys economics of scale and economics of scope and this has the tendency to impact its profitability, larger firms can also increase their market power and this will have an impact on its profitability and market performance. Based on it, this study develops the following hypothesis:

H_3 : There is a positive relationship between firm size and share price.

3.2.4 Inflation: Inflation means a sustained increase in the aggregate or general price level in economy. Inflation reflects a reduction in the purchasing power per unit of money, a loss of real value in the medium of exchange and unit of account within the economy. Fama (1981) and Gallagher and Taylor (2002) empirically found that the stock returns are negatively affected by both expected and unexpected inflation. Inflation rate has a significant negative impact on stock price movement in Nigeria (Orji *et al.*, 2013). Based on it, this study develops the following hypothesis:

H_4 : There is a negative relationship between inflation and share price.

3.2.5 Earnings per share: Jatoi *et al.* (2014) analyzed the effect of earning per share on market share price of 13 cement firms listed on Karachi stock exchange for the period of 2009 to 2013. The study showed that earning per share (EPS) has positive and significant impact on the market value of share. According to Modigliani and Miller (1961), firms share price is based upon its earnings and firm's value is unrelated to dividend policy. The study on the determinants of market price of share showed that the dividend per share is positively related to market price of share. Similarly, other variables such as earning per share, profitability and size have positive relationship with market price of share (Shrestha, 2015). Based on it, this study develops the following hypothesis:

H_5 : There is a positive relationship between earnings per share and share price.

3.3 The models: The models employed in this study intend to analyze the factors influencing share price of Nepalese non-life insurance companies. The models used in this study assume that share price of non-insurance companies depends on different firm specific and macro-economic variables. The dependent variables are market price of share and price earnings ratio. The selected independent variables are return on assets, earnings per share, inflation, dividend per share and firm size. Therefore, the following models equation are designed to test the hypothesis. MPS = $\alpha + \beta_1 DPS_{it} + \beta_2 EPS_{it} + \beta_3 SZ_{it} + \beta_4 ROA_{it} + \beta_5 INF_{it} + e_{it}$

 $PE = \alpha + \beta_1 DPS_{it} + \beta_2 EPS_{it} + \beta_3 SZ_{it} + \beta_4 ROA_{it} + \beta_5 INF_{it} + e_{it} \dots Eqn. (2)$

Where,

- MPS : Market price of share is measured as average of beginning and ending year market price of share, in Rupees.
- PE : Price earnings ratio is the ratio of market price of share to earnings per share in percentage.
- DPS :Dividend per share is the ratio of total amount of dividend paid to number of outstanding equity shareholders, in Rupees.
- EPS : Earnings per share is measured as average number of shares at the beginning of the earning period and the average number of shares at the end of the period in Rupees.
- SZ : Firm size is measured as the total assets of the non-life insurance companies, Rupees in millions.
- ROA : Return on assets is measured as net income to total assets, in percentage.
- INF : Inflation is the annual inflation rate measured by the consumer price index method, in percentage.

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4. Results and Discussion

4.1 Descriptive Analysis: Table 2 presents the descriptive statistics of selected dependent and independent variables during the period 2011/12 to 2017/18.

Variables	Minimum	Maximum	Mean	Std. Deviation
MPS (Nrs.)	68.00	13300.00	1248.55	1908.65
PE Ratio (percentage)	1.02	5166.67	117.54	540.89
DPS (Nrs.)	0.00	129.62	14.15	21.01
EPS (Nrs.)	0.18	106.39	35.52	17.40
ROA (percentage)	0.00	14.51	7.09	3.39
SZ (Nrs. in million)	130.91	9514.64	1686.44	1767.66
INF (percentage)	3.60	9.50	8.07	1.90

Table 2: Descript	tive statistics of non-life	insurance companies of Ne	pal: FY2012-2018
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The descriptive statistic show that there is huge variation on MPS, PE ratio, EPS, DPS and size of firm among the companies under study but less variation on ROA and inflation.

4.2 Pearson's Correlation Coefficients Matrix: Pearson's correlation coefficients are computed and the results are presented in Table 3. More specifically, it shows the correlation coefficients of dependent and independent variables for selected Nepalese non-life insurance companies.

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Variables	MPS	PE	DPS	EPS	ROA	SZ	INF		
MPS	1								
PE	0.173	1							
DPS	-0.034	-0.074	1						
EPS	-0.194*	-0.308**	0.070	1					
ROA	-0.247*	-0.323**	-0.036	0.795**	1				
SZ	0.197^{*}	0.075	-0.116	-0.330**	-0.184	1			
INF	-0.130	-0.059	0.094	-0.056	-0.006	-0.054	1		

** significant at 1 percent and *significant at 5 percent level

Table 3 shows that there is negative relationship of market price of share with return on assets which indicates that higher the return on assets, lower would be the market price of share. Similarly, there is positive relationship between market price of share and firm size which reveals that larger the firm size, higher would be the market price of share. Likewise, there is negative relationship between earnings per share and market price of share which indicates that increase in earnings per share leads to decrease in market price of share. Similarly, there is negative relationship between dividend per share and market price of share but not significant. It indicates that higher the dividend per share, lower would be the market price of share.

The result also shows that there is a negative relationship between inflation and price earnings ratio which indicates that increase in inflation in the country leads to decrease in price earnings ratio. Similarly, the result shows that there is a negative relationship of price earnings ratio with return on assets which indicates that higher the return on assets, lower would be the price earnings ratio. Similarly, there is positive relationship between price earnings ratio and firm size which reveals that larger the firm size, higher would be the price earnings ratio. Likewise, there is negative relationship between earnings per share and price earnings ratio which indicates that increase in earnings per share leads to decrease in price earnings ratio. Similarly, there is negative relationship between dividend per

share and price earnings ratio which indicates that higher the dividend per share, lower would be the price earnings ratio.

4.3 Regression Results on Price of Share: The regression analysis has been computed and results are presented in the Table 4. More specifically, it shows the regression results of return on assets, earnings per share, dividend per share, inflation and firm size on market price of share of Nepalese non-life insurance companies.

Table 4: Estimated regression results of return on assets, earnings per share, dividend per share, inflation and firm size on market price of share

Models	Intercept	Regression coefficients of					Adj.	SEE	F-value
	-	DBC	500	804	67		R_bar ²		
· · · · · ·		DPS	EPS	RUA	52	INF			
1	1291.904	-3.063					0.009	1916.804	0.117
	(5.720)**	(0.343)							
2	2005.844		-21.320				0.128	1881.311	4.045
	(4.788)**		(2.011)*						
3	2232.064			-138.68			0.152	1858.610	6.676
	(5.294)**			(2.584)*					
	. ,			*					
4	890.311				0.212		0.129	1880.414	4.147
	(3.502)**				(2.036)*				
5	2298.546					-130.088	0.007	1901.717	1.760
	(2.827)**					(1.327)			
6	1831.919			-122.488	0.169		0.167	1843.982	4.711
	(3.774)**			(2.261)*	(1.625)				
7	2848.365			-123.634	0.162	-123.347	0.073	1837.786	3.725
	(3.097)**			(2.289)*	(1.555)	(1.300)			
8	2728.862		7.592	-153.160	0.176	-119.036	0.065	1845.331	2.815
	(2.824)**		(0.419)	(1.724)	(1.602)	(1.242)			
9	2740.651	-1.750	8.111	-155.807	0.174	-117.065	0.056	1854.261	2.238
	(2.817)**	(0.198)	(0.441)	(1.725)	(1.577)	(1.209)			

Figures in parenthesis are t-values.

** significant at 1 percent and *significant at 5 percent level

Market price of share is the dependent variable.

Table 4 shows that the beta coefficients for return on assets are negative with market price of share. It indicates that return on assets has negative impact on market price of share. This finding contradicts with the findings of Anwaar (2016). Similarly, the result reveals that the beta coefficients for dividend per share are negative with market price of share. This reveals that dividend per share has negative impact on market price of share. This finding contradicts with market price of share. This reveals that dividend per share has negative impact on market price of share. This finding contradicts with the Kothari and Shanken (1997). Likewise, the beta coefficients for earnings per ratio are negative with market price of share. It indicates that the earnings per ratio has negative impact on market price of share. This finding contradicts with the findings of Jatoi *et al.* (2014). Similarly, the result reveals that the beta coefficients for firm size are positive with market price of share. This reveals that firm size has positive impact on market price of share. This finding is consistent with the findings of Dickens *et al.* (2002).

4.4 Regression Results on Price Earnings Ratio: Table 5 shows the regression results of return on assets, earnings per share, dividend per share, inflation and firm size on price earnings ratio of Nepalese non-life insurance companies.

Table 5: Estimated regression results of return on assets, earnings per share, dividend per share, inflation and firm size on price earnings ratio

Models	Intercept	Regression coefficients of					Adj.	SEE	F-value
		DPS	EPS	ROA	SZ	INF	R_bar ²		
1	144.346	-1.894					0.004	542.038	0.561
	(2.260)**	(0.074)							
2	458.025		-9.586				0.186	517.019	10.826
	(3.978)**		(3.290)**						
3	482.641			-51.487			0.196	514.347	12.012
	(4.136)**			(3.466)**					
4	78.602				0.023		0.004	541.962	0.590
	(1.073)				(0.768)				
5	253.222					-16.810	0.006	542.562	0.361
	(1.092)					(0.601)			
6	517.195	-2.196		-51.977			0.094	514.758	6.414
	(4.213)**	(0.914)		(3.494)**					
7	537.174	-1.890	-3.738	-36.682			0.091	515.788	4.457
	(4.273)**	(0.774)	(0.770)	(1.477)					
8	678.345	-1.715	-4.064	-35.385		-17.512	0.085	517.268	3.429
	(2.702)**	(0.697)	(0.830)	(1.416)		(0.650)			
9	701.513	-1.754	-4.407	-34.652	0.007	-17.988	0.077	519.743	2.727
	(2.572)**	(0.707)	(0.855)	(1.369)	(0.223)	(0.663)			

Notes: Figures in parenthesis are t-values. ** significant at 1 percent and *significant at 5 percent level, Price earnings ratio is the dependent variable.

Table 5 exhibits that the beta coefficients for return on assets are negative with price earnings ratio. It indicates that return on assets has negative impact on price earnings ratio. This finding contradicts with the findings of Kabajeh *et al.* (2012). Similarly, the result reveals that the beta coefficients for dividend per share are negative with price earnings ratio. This reveals that dividend per share has negative impact on price earnings ratio. This finding contradicts with the Rashid and Rahman (2008). Likewise, the beta coefficients for earnings per ratio are negative with price earnings ratio. It indicates that the earnings per ratio has negative impact on price earnings ratio. This finding contradicts with the findings of Shrestha (2015). Similarly, the result reveals that the beta coefficients for firm size are positive with price earnings ratio. This reveals that firm size has positive impact on price earnings ratio. This finding sof Shrestha (2015).

After the entire analysis of the data, it can be concluded that the first hypothesis (H_1 : There is a positive relationship between dividend per share and share price) has been rejected for Nepalese nonlife insurance companies. The second hypothesis (H_2 : There is a positive relationship between return on assets and share price) has been rejected. The third hypothesis (H_3 : There is a positive relationship between firm size and share price) has been accepted. Likewise, the fourth hypothesis (H_4 : There is a negative relationship between inflation and share price) has accepted. The fifth hypothesis (H_5 : There is a positive relationship between earnings per share and share price) has been rejected.

5. Conclusion

With the increasing global competition, companies are focusing their efforts on creating shareholders value in order to survive the intense competition. In view of this, it is becoming important for companies to measure the value they create for their shareholders. Keeping track of the value created year-on-year enables companies to evaluate past decisions and make decisions that will improve shareholder value. The study shows that return on assets, dividend per share, earning per share, firm size and inflation have negative impact on market price of share of Nepalese non-life insurance companies. However, firm size has a positive impact on market price of share. Similarly, return on assets, dividend per share, earning per share, firm size and inflation have negative impact on price earnings ratio. The study concludes that share price of the non-life insurance companies doesn't depends only on one factor rather it is influenced by different bank specific and macro-economic variables. The study also concludes that the most dominant factor to influence the share price is return on assets followed by earnings per share in Nepalese non-life insurance companies.

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Relationship between trading volume, stock return and return volatility: A case of Nepalese insurance companies

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Abstract

This study examines the relationship of trading volume with stock return and return volatility in the context of Nepalese insurance companies. The study is based on secondary data of 19insurance companies with 114 observations for the period from 2013/14 to 2018/19. The result shows that trading volume and past trading volume have positive impact on stock return. It indicates that increase in trading volume and past trading volume leads to increase in stock return. Similarly, the result reveals that the market capitalization and firm size have positive impact on stock return. On the contrary, book values per share and turnover rate have positive impact on the return volatility. Similarly, past trading volume has a negative impact on return volatility. It indicates that increase in past trading volume leads to decrease in return volatility. The study concludes that trading volume and past trading volume and past trading volume have significant impact on the stock return and return volatility of insurance companies. The study also concludes that past trading volume followed by turnover rate is the most dominant factor that explains the changes in stock return in the context of Nepalese insurance companies. This study would enable the present investors to settle on informed choices since they would almost certainly foresee the patterns in share price movements just as profits of the organizations. This would include considering the trading volume and the stock return to improve the investor wisdom to invest in NEPSE.

Keywords: Stock return, trading volume, past trading volume, volatility, turnover rate, market capitalization, firm size and book value per share.

1. Introduction

One of the contentious issue in the market microstructure has been the volatility and stock expected returns. This issue has received considerable attention both in developed and developing countries due to important implication for investors' portfolio positioning and liquidity of their investment portfolio (Ahmed *et al.*, 2005). There is substantial interest in how trading volume is related to price movements in the stock market. Clearly, positive trading volume is needed to generate observed market prices. A naive view of the market is that the greater the level of volume, the greater the price movement. However, instances can be found where a low level of volume is associated with large price movements and conversely, a high level of volume is associated with no change in price (Bessembinder and Seguin, 1992).

According to Tripathy (2010), pricing of securities depends on volatility of each asset. Therefore, price changes indicate the average reaction of investors to news. The arrival of new information makes investors to adapt their expectations and this is the main cause for price and return changes. Trading volume and volatility are indicators of the current stock market activity on one hand and a potential source of information for the future behavior of stock market on the other hand. Deeper understanding of the role of trading volume and volatility in the dynamics of stock prices may help investors to identify future patterns of the stock market which can be exploited in their investment decisions (Andersen, 1996).

Most of the past studies have affirmed the presence of positive relationship between trading volume and stock returns. Most of studies have confirmed contemporaneous and causal connection between trading volume and stock returns. In developed stock markets, an enormous number of studies have appeared contemporaneous and causal relationship between stock returns and trading volume. They additionally featured that Volume has predictive power to stock return volatility, paying little mind to the measure of volatility utilized. The relationship

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between trading volume and stock return is asymmetrical. The market volatility was negatively related to stock returns and positively related to trading volume. Despite the fact that there has been broad examination into the exact and hypothetical parts of the stock return-volume relationship in developed markets, not many has been looked so far into emerging stock markets, similar to that of Nepal. The vast majority of the past studies were worried about developed markets particularly US, Japan, and UK. Not enough consideration was given on the relationship among trading volume, stock price volatility and stock returns in emerging capital markets. Moreover, the studies led on developing markets have given different outcomes. Given the blended experimental outcomes among price and trading volume in developing markets setting, progressively observational research from other rising financial markets is expected to more readily comprehend the price-volume relationship.

2. Review of literature

Ying (1966) suggested that there are positive relations between the absolute value of daily price changes and daily volume for both market indices and individual stocks. Likewise, Smirlock and Starks (1988) found a strong positive lagged relationship between volume and absolute price changes using individual stock data. Fama (1991) revealed that past security prices cannot be used to predict the future price changes and hence, technical analysis tools have no value. Similarly, Jegadeesh and Titman (1993) revealed that stock returns are positively related to the contemporary change in trading volume. Similarly, the study also found that past trading volume change and stock returns are negatively correlated. Saatcioglu and Starks (1998) found that volume led stock prices changes in four out of the six emerging markets.

Chan *et al.* (2000) found that trading volume for foreign stocks is strongly associated with NYSE opening price volatility. In addition to this, Lee and Swaminathan (2000) used monthly returns and daily trading volume of all the firms listed on NYSE and American Exchange (AMEX). The study revealed that momentum and trading volume appear to predict subsequent returns in the US equity market. Moreover, Bekaert and Wu (2000) not only support this finding, but also suggested that negative shocks generate a greater response in volatility than positive shocks of an equal magnitude. Omran and McKenzie (2000) analyzed the relationship between total trading volume and volatility persistence for 50 UK stocks. Even though the results are consistent with Lamoureux and Lastrapes (1990), diagnostic tests show that the generalized autoregressive conditional heteroskedasticity (GARCH) model cannot fully capture the volatility persistence. Likewise, Gervais *et al.* (2001) found that individual stocks, whose trading volumes are usually large over period of a day or a week, tend to experience large returns over the subsequent month.

Similarly, Miyakoshi (2002) investigated the effects of total trading volume on conditional volatility persistence for both individual stocks and the market index of the Tokyo Stock Exchange. The results showed that trading volume reduces the GARCH effect, both for individual stocks and the market index. The results are consistent with the view that total trading volume is a good proxy for information flow. Chordia*et al.* (2002) examined the dynamic relationship between trading volume, volatility, and stock returns in the international stock markets. The study found no evidence of the trading volume affecting the serial correlation of stock market returns. Likewise, Bohl and Henke (2003) assessed the relationship for 20 Polish stocks between 1999 and 2000. The study observed a decline in conditional volatility persistence after including total trading volume in the model. The study also argued that the results are consistent with the previous studies done in developed stock markets. In addition to this, Wang *et al.* (2005) examined the relationship between total trading volume and volatility for both Chinese individual stocks and the stock market index. The study found that trading volume can be a proxy for information flow for individual stocks, but not for the market indices.

Wagner and Marsh (2005) analyzed the relationship by using seven major stock market indices (those of France, Germany, Holland, Hong Kong, Japan, the UK, and US) over the period between 1988 and 1997. The study found that there is a significant positive relationship between surprise trading volume and conditional volatility. Moreover, the study observed that there is an asymmetric relationship between surprise volume and conditional volatility. It means that compared to negative surprise volume, positive surprise volume has a significantly greater effect on conditional volatility. However, Arago and Nieto (2005) investigated the changes in conditional volatility persistence by using seven major stock market indices (those of France, Germany, the UK, the US, Italy, Japan, Spain, and Switzerland) between 1995 and 2000. However, the findings contradict with the findings of Wagner and Marsh (2005). The inclusion of neither total volume nor its predictable and unpredictable components leads to a considerable reduction in volatility persistence. Likewise, De Medeiros and Doornik (2006) assessed the empirical relationship between stock returns, return volatility and trading volume using data

from the Brazilian stock market. The study found out there is a contemporaneous and dynamic relationship between return volatility and trading volume and return volatility contains information about upcoming trading volumes. Furthermore, Griffin *et al.* (2006) investigated the dynamic relation between market-wide trading activity and returns in 46 markets. The study reported strong positive relationship between turnover and past returns.

Atmeh and Dobbs (2006) investigated the performance of moving average trading rules in the Jordanian stock market and found that technical trading rules can help to predict market movements. Moreover, Al-Khouri and Ajlouni (2007) reported that the price-limit technique was effective in reducing the volatility in the Amman stock exchange. In addition, Floros and Vougas (2007) used GARCH and GMM method to investigate the relationship between trading volume and returns in Greek stock index futures market. The study found that trading volume was used as the indicator of prices. Hussainey *et al.* (2010) indicated that change in stock price was explained by firm's growth rate, debt level and size.

In Nepalese context, stock market has positive impact on economic development of Nepal (Joshi, 2010). The organization information, absence of profitability of the organization, market operation framework and government arrangement with respect to speculation are gave off an impression of being the significant reasons for insufficiency in the Nepalese stock market (Pradhan and Upadhyay, 2004). Late advancements in the Nepalese stock market have demonstrated that investors' involvement towards stock market can increase whenever definite information about proficient financial market is accessible. The small and medium investors can be driven to spare and invest resources into the stock market just if their stocks in the market are priced well. The vast majority of the investors lose their earnings capacity in a number of situations. Hence, estimating the effect of the relationship between trading volume, stock return and return volatility in NEPSE has been a fascinating question (Bhattarai and Joshi, 2007). Dhaugoda et al. (2016) found a positive impact of earning yield, dividend yield and price earnings ratio on stock return, whereas a negative impact of book to market ratio on stock returns. Similarly, Bhattrai (2014) found that earnings per share and price earnings ratios have significant positive association with share price, while dividend yield has significant inverse association with share price. In addition, the study also revealed that dividend yields, earnings per share and price earnings ratio are the most influencing factors in determining share price in Nepalese commercial banks. Pradhan (1993) examined the stock market and concluded larger stocks have larger price earnings ratio and large market value to book value. The above discussion reveals that there is no consistency in the findings of various studies concerning the trading volume and its relationship with stock return and return volatility.

The major purpose of this study is to analyze the relationship of trading volumes with stock return and return volatility in Nepalese insurance companies. More specifically, it examines the impact oftrading volume, market capitalization, book to market ratio, firm size, turnover rate and book value per share on stock return and return volatility in Nepalese insurance companies.

3. Hypothesis

Trading volume

Chordia and Swaminathan (2000) examined the predictability of short term stock returns based on trading volume. The study concluded that high volume stocks respond promptly to market wide information. Likewise, Pathirawasam(2011) found a contemporary trading volume change is positively related to the stock returns. Similarly, Medeiros and Doornik (2008) investigated the empirical relationship between stock returns, return volatility and trading volume using data from the Brazilian stock market. The study found that there is a contemporaneous and dynamic relationship between return volatility and trading volume. Based on it, this study develops the following hypothesis:

*H*₁: *There is a positive relationship of trading volume with stock return and volatility.*

Past trading volume

Past trading volume is one of the important indicators which helps determine the future stock prices (Jegadeesh and Titman, 1993). Woodruff and Sencha(2009) revealed that stock returns are positively related to the contemporary change in trading volume. Smirlock and Starks (1985) indicated that the learning of past trading volume improves transient figures of present and future developments in stock prices and stock volatility is

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determined by past trading volume. According to Huang and Heian (2010), portfolios with high trading volume tended to be followed by high returns and vice versa. Based on it, this study develops the following hypothesis:

*H*₂: There is a positive relationship of past trading volume with stock return and volatility.

Book to market ratio

Chaoprichaet al. (2007) indicated that stock return has a positive relationship with book to market ratio. Chinese stock markets. Similarly, Fama and French (2008) found that higher the book to market ratio, higher would be the stock return and vice-versa. Likewise, Kothari and Shanken (1997) showed that there is a positive relationship between book-to-market ratio and stock return. In addition, Auret and Sinclaire (2006) concluded that there is a positive and significant impact of book to market ratio on the stock performance. Based on it, this study develops the following hypothesis:

H₃: There is a positive relationship of book to market ratio with stock return and volatility.

Market capitalization

Manandhar (1998) found a positive significant relationship between stock return and market capitalization. In addition, Amihud(2002) revealed that there is a significant positive relationship between stock return and market capitalization. Choand Pucik(2005) concluded that there is a significant positive relationship of profitability and market capitalization with stock return.Furthermore, Rouwenhorst (1999) showed that stocks with little market capitalization have higher normal turnover and volatility than stocks with huge market capitalization. Based on it, this study develops the following hypothesis:

*H*₄: There is a positive relationship of market capitalization with stock return and volatility.

Firm size

Martaniet al. (2009) indicated that there is a significant positive relationship between firm size and stock price volatility. Similarly, Hussaineyet al. (2010) indicated that change in stock price was explained by firm's growth rate, debt level and size. Likewise, Zakariaet al. (2012) found that leverage, growth, size and dividend yield have positive impact on share price volatility. Based on it, this study develops the following hypothesis:

 H_5 : There is a positive relationship of firm size with stock return and volatility.

Book value per share

Sharma (2011) showed that there is a significant positive relationship of dividend per share, earnings per share and book value per share with stock price. Similarly, Omran and McKenzie (2000) concluded a positive and significant association between dividend per share, price earnings ratio, firm size, stock return and book value per share. Geetha and Swaaminathan (2015) found that firm's book value per share and earnings per share have a significant positive impact on market price of share. Based on it, this study develops the following hypothesis:

*H*₆: There is a positive relationship of book value per share with stock return and volatility.

Turnover ratio

Griffin *et al.* (2006) demonstrated a positive effect of turnover ratio on the returns of stocks. Similarly, Chordia and Swaminathan (2000) indicated that the returns on high-volume portfolios modify quicker to market wide information than the returns on low-volume portfolios. Likewise, Ying (1966) concluded that there is positive relationship between stock return and turnover ratio. Based on it, this study develops the following hypothesis:

*H*₇: There is a positive relationship of turnover ratio with stock return and volatility.

4. Methodology

The study is based on the secondary data which were gathered from 19 insurance companies in Nepal from 2013/14 to 2018/19, leading to a total of 114 observations. Out of 30 insurance companies, 19 insurance companies were selected as samples. The study used stratified sampling method to select the samples. The main sources of data include Insurance Statistics published by Nepal Beema Samiti and annual reports of the

selected insurance companies. This is study is based on descriptive and causal comparative research designs. Table 1 shows the number of insurance companies selected for the study along with the study period and number of observations.

S.N.	Name of Insurance Company	Study Period	Observations				
1	Asian Life Insurance Company Limited	2013/14 to 2018/19	6				
2	Gurans Life Insurance Company Limited	2013/14 to 2018/19	6				
3	Life Insurance Corporation Nepal Limited	2013/14 to 2018/19	6				
4	National Life Insurance Company Limited	2013/14 to 2018/19	6				
5	Nepal Life Insurance Company Limited	2013/14 to 2018/19	6				
6	Prime Life Insurance Company Limited	2013/14 to 2018/19	6				
7	Surya Life Insurance Company Limited	2013/14 to 2018/19	6				
8	Everest Insurance Company Limited	2013/14 to 2018/19	6				
9	Himalayan General Insurance Company	2013/14 to 2018/19	6				
10	Lumbini General Insurance Limited	2013/14 to 2018/19	6				
11	NECO Insurance Company Limited	2013/14 to 2018/19	6				
12	Nepal Insurance Company Limited	2013/14 to 2018/19	6				
13	NLG Insurance Company Limited	2013/14 to 2018/19	6				
14	Premier Insurance Company Limited	2013/14 to 2018/19	6				
15	Prudential Insurance Company Limited	2013/14 to 2018/19	6				
16	Sagarmatha Insurance Company Limited	2013/14 to 2018/19	6				
17	Shikhar Insurance Company Limited	2013/14 to 2018/19	6				
18	Siddhartha Insurance Limited	2013/14 to 2018/19	6				
19	United Insurance Company (Nepal) Limited	2013/14 to 2018/19	6				
Total r	Total number of observations						

Table 1: List of insurance companies selected for the study along with the study period and number of
observations

Thus, the study is based on 114 observations.

The model

The model used in this study assumes that return volatility and stock return depend on different factors. The selected independent variables in this study are trading volume, book value per share, book to market ratio, firm size, market capitalization, past trading volume and turnover rate. Therefore, the model takes the following forms:

Stock market= f (TV, PTV, BTM, BVPS, MCAP, FS, TR)

More specifically,

 $SR_{it} = \beta_0 + \beta_1 TV_{it} + \beta_2 MCAP_{it} + \beta_3 PTV_{it} + \beta_4 BTM_{it} + \beta_5 FS_{it} + \beta_5 BVP_{it} + \beta_5 TR_{it} + e_{it}$

 $VTY_{it} = \beta_0 + \beta_1 TV_{it} + \beta_2 MCAP_{it} + \beta_3 PTV_{it} + \beta_4 BTM_{it} + \beta_5 FS_{it} + \beta_5 BVP_{it} + \beta_5 TR_{it} + e_{it}$

Where,

SR = Stock return is defined as sum of dividend yield and capital yield, in percentage.

VTY = Return volatility is the percentage of change in the stock return, in percentage.

TV = Trading volume is defined as number of shares transacted every year.

MCAP = Market capitalization of the company at the end of the year, Rs in billion.

PTV = Past trading volume is defined as number of shares transacted last year.

BTM = Book to market ratio is the ratio of book value to market value of the company, in percentage.

FS = Firm size is measured by the total assets of the bank, Rs in billion.

BVPS = Book value per share represents the minimum value of the equity of a company, in Rupees.

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TR = Turnover ratio is the ratio of the number of shares traded to the number of shares outstanding, in percentage.

3. Results and discussion

Table 2 presents the descriptive statistics of selected dependent and independent variables during the period 2013/14 to 2018/19.

	Table 2: Descriptive statistics for selected Nepalese insurancecompanies										
Variables	Minimum	Maximum	Mean	Std. Deviation							
τν	0.15	28.65	9.48	6.11							
ΡΤν	0.12	27.64	8.17	6.09							
MCAP	0.60	2.93	1.74	0.46							
BVPS	76	327	186	53							
BTM	2.85	68.40	21.48	12.12							
FS	0.39	2.84	1.31	0.63							
TR	1.28	74.92	18.13	15.35							
SR	-6.08	0.80	-0.64	1.54							
VTY	20.48	86.93	59.62	16.71							

Having indicated the descriptive statistics, Pearson's correlation coefficients are computed and the results are presented in Table 3. More specifically, it shows the correlation coefficients of dependent and independent variables for selected Nepalese insurancecompanies.

Table 3: Pearson's correlation coefficients matrix	Table 3:	Pearson's	s correlat	ion coefficient	cients matrix
----------------------------------------------------	----------	-----------	------------	-----------------	---------------

Variables	TV	PTV	MCAP	BVPS	BTM	FS	TR	SR	VTY
TV	1.0								
ΡΤν	0.55**	1.00							
MCAP	0.45**	0.31**	1						
BVPS	-0.10	-0.14	-0.23*	1					
BTM	-0.27**	0.03	-0.68**	0.20*	1				
FS	0.33**	0.37**	0.84**	-0.43**	-0.43**	1			
TR	0.44**	-0.03	-0.21*	0.31**	-0.19*	-0.42**	1		
SR	0.09	0.56**	0.16	-0.09	0.28**	0.31**	-0.34**	1	
VTY	0.17	-0.31**	-0.14	0.11	-0.30*	-0.33**	0.41**	-0.62**	1

Notes: The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent levels respectively.

The result shows that past trading volume has a positive relationship with stock return. It reveals that increase in past trading volume leads to increase in stock return. Similarly, market capitalization has a positive relationship with stock return. It indicates that higher the market capitalization value, higher would be the stock return. Similarly, book to market ratio has a positive relationship with stock return. It indicates that higher the market capitalization value, higher would be the stock return. Similarly, book to market ratio has a positive relationship with stock return. It indicates that higher the book to market ratio, higher would be the stock return. Furthermore, firm size have a positive relationship with stock return. It indicates that the larger the firm size, higher would be the stock return. However, book value per share has a negative relationship with stock return. It reveals that the higher the value of book value per share, lower would be the value of stock return. Likewise, turnover ratio also has a negative relationship with stock return. It indicates that increase in turnover ratio leads to decrease in stock return.

Similarly, the result also shows that trading volume has a positive relationship with return volatility. It indicates that higher the trading volume ratio, higher would be the return volatility. Similarly, book value per share and turnover ratio have a positive relationship with return volatility. It indicates that higher the book value per share and turnover ratio, higher would be the return volatility. However, past trading volume has a negative relationship with return volatility. Likewise, market capitalization has a negative relationship with return volatility. Likewise, market capitalization has a negative relationship with return volatility. It indicates that increase in market capitalization leads to decrease in return volatility. Similarly, book to market ratio and stock

return have a negative relationship with return volatility. It reveals that higher the book to market ratio and stock return, lower would be the return volatility.

Having indicated the Pearson's correlation coefficients, the regression analysis has been computed and the results are presented in Table 4. More specifically, it shows the regression results of trading volume, past trading volume, market capitalization, book value per share, book to market ratio, firm size and turnover ratio on stock return.

Madal	Intercent		Regression coefficients of							C.E.E.	F-
woder	Intercept	TV	ΡΤν	MCAP	BVPS	BTM	FS	TR	R_bar ²	SEE	value
1	-0.64	0.01							0.01	1 55	0.02
T	(2.41)*	(0.02)							0.01	1.55	0.02
2	-1.79		0.14						0 30	1 28	51 23
2	(8.91)**		(7.15)**						0.50	1.20	51.25
З	-1.59			0.54					0.01	1 5 2	3 05
5	(2.82)**			(1.74)					0.01	1.52	5.05
4	-0.14				-0.26				0.02	1 54	0 94
-	-0.26				(0.97)				0.02	1.54	0.54
5	-1.40					0.36			0.07	4.48	9.65
5	(4.95)**					(3.10)**			0.07		5.05
6	-1.63						0.76		0.08	1.47	12.06
U U	(5.13)**						(3.47)**		0.00	,	
7	-0.02							-0. 34	0.10	1.45	14.60
	-0.09							(3.82)**			
8	-1.26	0.01			-0.26				0.09	1.54	0.47
-	-0.20	(0.05)			(0.97)						••••
9	-1.62		0.14	0.05	-0.04				0.29	1.29	16.80
-	(2.21)*		(6.75)**	(0.18)	(0.20)					-	
10	-1.04		0.14				0.10	-0.41	0.40	1.18	26.5
	(2.88)**		(7.15)**				(0.50)	(4.22)**			
11	-7.00	0.05		2.88	-0.39	0.11		-0.01	0.31	1.21	11.16
	(5.11)**	(1.62)		(4.51)**	(1.44)	(5.57)**		(0.99)			
12	-6.92	0.18	0.17	2.62	-0.37	0.09	0.09	-0.03	0.58	0.99	23.34
12	(6.35)**	(5.72)**	(8.30)**	(3.84)**	(1.57)	(5.63)**	(0.26)	(2.89)**			

Table 4: Estimated regression results of trading volume, past trading volume, market capitalization, book value per share, book to market ratio, firm size and turnover ratio on stock return

Notes:

i. Figures in parenthesis are t-values.

ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent levels respectively.

iii. Stock return is the dependent variable.

Table 4 shows that beta coefficients for trading volume are positive with stock return. It indicates that trading volume has a positive impact on stock return. This finding is similar to the findings of Pathirawasam (2011). Similarly, the result reveals that the beta coefficients for past trading volume are positive with stock return. This reveals that past trading volume has a positive impact on stock return. This finding is similar to the findings of Smirlock and Starks (1985). Likewise, the beta coefficients are positive for market capitalization with stock return. It indicates that market capitalization has a positive impact on stock return. This finding is consistent with the findings of Amihud (2002). However, the result reveals that the beta coefficients for book value per share are negative with stock return. It indicates that book value per share has a negative impact on stock return. This finding contradicts with the findings of Geetha and Swaaminathan (2015).

The estimated regression results of trading volume, past trading volume, market capitalization, book value per share, book to market ratio, firm size and turnover ratio on stock volatility in the context of Nepalese insurance companies are presented in Table 5.

Madal	Intercent	Regression coefficients of							Adj.	CEE	F-
woder	intercept	TV	ΡΤν	MCAP	BVPS	BTM	FS	TR	R_bar ²	SEE	value
1	57.57	0.21							0.02		
Ŧ	19.84)**	(0.83)							0.02	16.73	0.69
2	66.77		-0.87								
L	(26.71)**		(3.56)**						0.19	15.90	12.72
3	68.67			-5.21							
5	(11.21)**			(1.529)					0.01	16.61	2.33
4	53.71				3.178						
•	(9.33)**				(1.067)				0.01	16.70	1.13
5	68.49					-0.41					
0	(22.36)**					(3.32)**			0.18	16.01	11.03
-							-8.98		0.21		
6	/1.41						(3.81)**			15.79	14.57
	(20.84)							0.45		45.20	22.40
7	51.44							0.45	0.26	15.28	23.18
	(23.16)**				1 70			(4.81)**			
8	63.25		-0.85		1.79						
	(10.27)**		(3.43)**		(0.62)				0.08	15.95	6.52
٥	61.22		-0.76				-2.06	0.40			
9	(13.86)**		(3.14)**				(0.79)	(4.11)**	0.25	14.46	13.59
10	122.66	0.73		-29.68	4.01	-1.134		0.08			
10	(8.40)	(1.91)		(4.36)**	(1.36)	(5.40)**		(0.51)	0.33	13.63	12.34
11	105.20	0.88	-0.73	-11.56	0.12	-0.76	-8.46				
11	(9.63)**	(3.29)**	(2.77)**	(1.50)	(0.04)	(4.75)**	(1.79)		0.40	12.94	13.54
10	117.13	1.30	-0.80	-17.44	1.59	-0.94	-9.01	0.21			
ΤZ	(8.31)**	(3.15)**	(2.97)**	(1.97)*	(0.52)	(4.55)**	(1.90)	(1.33)	0.44	12.90	11.94

 Table 5: Estimated regression results of trading volume, past trading volume, market capitalization, book value per share, book to market ratio, firm size and turnover ratio on return volatility

Notes:

i. Figures in parenthesis are t-values.

ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent levels respectively.

iii. Stock volatility is the dependent variable.

Table 5 shows that beta coefficients for trading volume are positive with return volatility. It indicates that trading volume has positive impact on return volatility. This finding is similar to the findings of Medeiros and Doornik (2008). The result also reveals that the beta coefficients for firm sizearenegative with return volatility. It indicates that firm size has a negative impact on return volatility. This finding is similar to the findings ofOmran and McKenzie (2000). Likewise, the beta coefficients are negative for book to market ratio with return volatility. It indicates that book to market ratio has a negative impact on return volatility. This finding is consistent with the findings ofAtmeh and Dobbs (2006). However, the result reveals that the beta coefficients for market capitalization are negative with return volatility. It indicates that market capitalization has a negative impact on return volatility. This finding is a negative impact on return volatility. This finding is consistent with the findings ofAtmeh and Dobbs (2006). However, the result reveals that the beta coefficients for market capitalization has a negative impact on return volatility. This finding contradicts with the findings ofArago and Nieto (2005).

4. Summary and conclusion

Pricing of securities depends on volatility of each asset. Therefore, price changes indicate the average reaction of investors to news. The arrival of new information makes investors to adapt their expectations and this is the main cause for price and return changes. Trading volume and volatility are indicators of the current stock market activity on one hand and a potential source of information for the future behavior of stock market on the other

hand. Return on stock prices and trading volume are two prime indicators of trading activities in a stock market. These factors are jointly determined by the same market dynamics and may contain valuable information about a security.

This study attempts to examine the relationship of trading volume with stock return and stock volatility in Nepalese insurance companies. This study is based on secondary data of 19 insurance companies with 114 observations for the period from 2013/14 to 2017/19.

Trading volume has some impact on stock return and return volatility of Nepalese insurance companies. Higher volumes have been seen in practice whenever the stock market gains popularity, where it goes bearish or bullish. As an investor, it is important to know whether volume creates positive or negative returns. The study revealed that there is positive impact of trading volume and past trading volume on stock return of insurance companies under this study. Similarly, positive impacts of book to market ratio and firm size on stock return have been seen. Conversely, the findings of this study suggest a negative impact of turnover rate on stock return of Nepalese insurance companies. Furthermore, the study found positive impact of turnover rate on stock volatility, whereas negative impact of past trading volume, book to market ratio and firm size on stock volatility of Nepalese insurance companies. The study concludes that firm size followed by market capitalization is the most influencing factor that explains the changes in stock return. The study also concludes that the most dominant factor to influence stock volatility is firm size followed by market capitalization in Nepalese insurance companies.

This study will empower the investors to reveal whether the price-volume connection in the NEPSE displays various attributes from those in created markets. Truth be told, the various qualities of the NEPSE concerning information streams and institutional structure can give new understanding into the price volume connection. With regards to Nepal, however the stock market is rising, anyway the quantity of looks into in this field is exceptionally less. Accordingly, the investors are putting resources into stock market without having satisfactory learning, market examiners are unfit to do suitable expectation of stock return, strategy producers are unfit to detail legitimate approaches and so forth. Thus, this sort of study will be extremely advantageous.

5. Scope for future research

The study is entirely based on secondary data and does not include the preference of different investors and other stake holders. Therefore, future studies can be based on using primary data or both primary and secondary data. There are other macroeconomic variables like GDP, inflation, foreign direct investments, interest rates, etc. that may have impact on stock return. Thus, the future studies can include these variables that will give a new insight to the study. Finally, future studies can use some advance statistical tools. For example, the future studies can use non-linear statistical tools and bidirectional causality tools.

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Determinants affecting the buying of Life Insurance: A case of Kapilvastu District

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Abstract

This paper aims to investigate the determinants that affect the buying of life insurance in Kapilvastu district of Nepal. Primary data have been collected through structured questionnaire out of 384 life insurance policy holders resident of Kapilvastu district of Nepal. Sample was selected by purposive sampling method. The study concludes that life insurance demand in terms of premium paid is significantly associate with gender, level of education, occupation, economic class, family size and monthly income of respondents whereas life insurance demand is not significantly associated with age, religion and marital status. The study further suggests to the life insurance companies to emphasize selling of life insurance policies to the people having more income, more family members, and educated people.

Keywords: life insurance demand, socio-demographic determinants, Kapilvastu district

1. Introduction

1.1 General Background

Insurance is a not a new concept since its development is deep rooted with the development human being. The first life insurance company was started in 1908 by the Canadian, called the Great Eastern Life Assurance Company Limited (Chua & Lim, 2000). Exceptional clauses such as suicide clause that renders the policy null and void in case the policyholder commits suicide during the period of operation of the contract are enshrined in the agreement. Any falsification by the buyer on the application is also a ground for nullification. The face value of the policy is usually the amount paid when the policy matures, even though contracts may offer bigger or smaller sums. There is no obligation on Life insurance companies in the underwriting process or providing life insurance coverage for anyone. Payment of accumulated cash value of life policies is made as a lump sum or on monthly instalment basis and when the company is able to confirm death of the insured, claims are then paid (Mahdzan & Victorian, 2013).

Risk and uncertainty are inevitable in life. Calamities of one kind or the other have befallen man since creation. Thus, we can say, human life is inherently risky so as the society we live in. But the life can be easily collapsed through unexpected demise, sickness or disabilities caused by accidents. Even if such misfortunes may not occur, death is sure to come though none knows when, where, how and at what timing it would come in human life. No one is economically active for his/her entire life. So, s/he may want to save some money for the upcoming days. The situation becomes even worst when it is the demise or (physical) damage of the breadwinner of the family. This may not only create emotional pain but also brings economic imbalance to the lives of dependent members. Therefore, life insurance works as a medium to transfer this uncertain situation to certain one and provide financial assistance to the insured if s/he is alive till maturity of policy and financial protection to insured's dependent family if s/he dies or get badly injured before policy expires. Life insurance is a protection against financial loss arising on the happening of an unexpected event to the breadwinner of the family (Sarkodie & Yusif, 2015).

In another way, life insurance as a business is an arrangement that redistributes the cost of unexpected losses, that is, the collection of a small premium payment from all exposed and distribution to those suffering losses. Thus, it is a contractual arrangement of risk transfer whereby one party agrees to compensate another party for contingent losses and misfortunes (Agarwal, 2017). Life insurance is different from general insurance in the sense that the subject matter of insurance is life of human being. This insurance provides protection to the family at the premature death. People; especially the policy-holders or insured are the main party of insurance. So, the insurers should give due importance to the policy-holders while discharging their services (Gurung, 2016). With the growing awareness among the people about insurance, various services provided by the companies and availability of insurance facilities across the globe, the insurance sector is emerging very rapidly and there is a need to identify the main factors that affect the customer's demand for life insurance. Insurance industry plays important role for development of both developed and developing economies (Ofoghi & Farsangi, 2013).The most common motive for the demand for life insurance product is safeguarding the economic interest of the insured when he/she dies. The accumulated cash value is used to cover funeral and other expenses. It is also invested to offer return in replacement of the lost earnings (Hakansson, 1969), therefore the breadwinner in the family purchase the life insurance for the better future of his family members.

Developing countries are not only consumers but also suppliers of insurance services. The life insurance sector is small in many developing countries because life insurance may be considered irrelevant or inappropriate for ideological, cultural, or religious reasons, or because economic security is provided through the family (Outreville, 1996). Therefore the demand of life insurance is determined by ideological, cultural, religious and economic factors in developing countries.

Various endeavors to promote the life insurance industry may be undertaken from either the demand or supply side of the market. From the demand side, increased financial literacy may increase society's awareness regarding the benefits of life insurance. From the supply side, increased understanding of consumers' motivations of purchasing life insurance would improve financial services' marketing efforts of increasing life insurance penetration. Despite numerous researches on the issue of life insurance, there are still gaps in the body of knowledge especially in terms of understanding the association between socio-demographic variables of respondents and life insurance demand. This issue is explored in the context of Kapilvastu district where the underlying association between socio-demographic variables of respondents and life insurance demand is investigated.

The main objective of the study is to find out socio demographic determinants that affect the life insurance demand. Rest of the paper is divided in four sections. Second section related to literature review followed by methodology and results and discussion. Final section concludes with major findings and conclusions.

2. Literature Review

Demand for life insurance has usually been explained through the life cycle model (Yaari, 1965) where households or individuals maximize their expected utility of lifetime consumption. It was posited that the demand for life insurance is a function of wealth, expected income over a person's lifetime, interest rates, the cost of life insurance policies and the assumed subjective discount on current over future consumption. According to the Yaari's lifecycle model, an individual having unpredicted life expectancy buys life insurance to boost his/her anticipated utility. Therefore, the demand for life insurance is attributed to a person's desire to bequeath funds for the dependents and provide income for retirement.

Modern empirical research that have investigated the consumption of life insurance demand is based on theoretical work of (Yaari, 1965), (Modigliani & Ando, 1963), (Friedman, 1957) and many other theoretical framework and have represented the upgraded version for the investigation of factors of life insurance demand. Mahdzan and Victorian (2013) found that demographic factors and saving motives have a significant impact on

the life insurance demand whereas financial literacy has insignificant impact in determining life insurance demand. Redzuan (2014) asserted that the level of income, number of dependents and level of education are significant determinants of life insurance demand. Similarly, Hammond, Houston and Melander (1967) found that income, marital status, family size and education positively influence insurance purchase. Ganfoldi and Miners (1996) found that income, age, education, homeownership and family size have impact on consumption of life insurance.

Celik and Kayali (2009) found that income is positively related with life insurance demand whereas education level and inflation affect life insurance consumption in negative way. Sarkodie and Yusif (2015) concluded that higher education positively influences the odds of taking life insurance. Moreover, the empirical studies revealed that different researchers found different factors that determine the demand for life insurance. Redzuan (2014) found that the level of income, number of dependents and level of education are significant determinants of life insurance demand. Mahdzan and Victorian (2013) found that demographic factors and saving motives have a significant impact on life insurance demand whereas financial literacy has insignificant impact on life insurance demand.

Ganfoldi and Miners (1996) studied the relationship between macroeconomic functions and the general outlook of life insurance in the US in the year 1984. Income was found to be the most important bellwether of life insurance consumption. Age, education, home ownership and family size were also found to have impact on consumption of life insurance.

Yakob and Zaidi (2000) evaluated the life insurance demand for a period of twenty-six years beginning 1971 through to 1997; using the quantity of policies an individual has a dependent variable and a number of macroeconomic indicators as independent variables. The findings showed a direct relation between income and life insurance demand whereas statistically positive relationship existed between inflation and the consumption of life insurance.

Beck and Webb (2003) investigated the causes of disparities in life insurance demand from the period of 1961-2000. The study used the variable of consumption, economic demographic and institutional factors. The findings indicated nations that have larger per capita income, relatively steady financial segment development as well as lesser inflation utilizes more life insurance products. Again life insurance demand was revealed as having direct relationships with individual savings along with interest rate. Demographic variables such as education, life expectancy, young and old dependency ratio had no strong effect on life insurance demand.

Furthermore, Celik and Kayali (2009) investigated the determinants of demand for life insurance on cross section of 31 European countries. The authors found that income is the most important variable which affects consumption of life insurance.

Sarkodie and Yusuf (2015) used logistic regression modelling technique and relied their study purely on cross sectional and primary data collected from 256 inhabitants chosen through simple random sampling from the Ayeduase-Kumasi community at Ghana. The findings of this article indicate that life insurance demand increases if people have better perception about insurance firms. Age had a negative relationship with the odds of taking life insurance while number of dependents had positive relationship with the odd of taking life insurance.

Ondruska, Pastorakova and Brokesova (2016) identified that demographic indicators such as age, education and economic indicators savings and employment status are the most robust predictors of the life insurance consumption in Slovak Republic. Suneja and Sharma (2009) found five factors namely promotional activities, image of company, customer convenience, financial and non-financial facilities and premium and procedural formalities that determine the customer's demand for life insurance policies.

Theil (2011) analysed the demographic variables and the appraisal of insurance with a case analysis, pertaining to assistance products. A consumer survey was conducted to find the demographic characteristics and the related assistance products. It also analysed the consumer's judgment towards new class of insurance products. The study revealed that variables used in the survey are different and there is a weak relationship between consumer's judgment and class of products. As demographic variables are not performing as expected it seems advisable to focus on alternative factors.

In this paper the following hypothesis has been set:

H₀: There is no any association between socio-demographic variables of the respondents and life insurance demand.

3. Methodology

3.1 Population and sample: The population for this study is comprised of life insurance policyholders in Kapilvastu district. Kapilvastu district lies in mid southern part of Nepal and is one of the districts of Province no. 5 of Nepal. The district has six municipalities and four rural municipalities, has population almost 0.6 million population (Central Bureau of Statistics, 2011). The total number of policyholders of Kapilvastu district is difficult to find out so that it is assumed that the population of the study is infinite. According to Krejice and Morgan (1970) 384 samples have been determined and selected using the purposive sampling technique.

3.2 Tools for Data Collection and analysis: Structured questionnaire was used to collect the primary data. The questionnaire consists of two sections: first section investigates demographic information such as gender, age group, education level, main occupation, permanent residency, marital status, economic class and approximate monthly income of the respondents whereas second section includes the questions that explore the different aspects of life insurance. Questionnaire was pre-tested, revised and administered in the field.

The primary data obtained in quantitative form are analysed using the descriptive and inferential statistic.

3.3 Conceptual Framework: The conceptual framework of the study designed as follows. The study tries to explore the association between independent variables like gender, age group, education level, main occupation, permanent residency, marital status, economic class and approximate monthly income of the respondents and dependent variable i.e. annual premium amount paid for the life insurance.

Figure 1: Conceptual Framework



4. Result and Discussion

4.1. Life Insurance Demand and Demographic Characteristics of Respondents

The association between gender, age group, level of education, marital status, religion, occupation, and annual income and life insurance demand in terms of premium has been presented in cross tables. The association between gender and demand also has been tested using the chi square test and the value has been presented in table 1 to 9. Gender and life insurance demand (annual premium in Rs.) has been exhibited in table 1.

Table1: Gender and life insurance demand

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Gender	Below 10,000	10,000- 14,999	15,000- 19,999	20,000- 24,999	25,000 and above	Тс	otal
Male	39	41	29	34	137	280	73%
Female	22	27	14	8	33	104	27%
Total	61	68	43	42	170	384	

p value of chi square test: 0.005

Table 1 shows that majority of the respondents are male paying the annual premium above Rs. 25,000 every year. The table also shows that there is association between gender and life insurance demand because p-value is 0.005 which is less than 0.05. The result can also be interpreted as the demand of life insurance is associated with the gender of respondents because in country like ours the breadwinner of the family is mostly male so their demand for life insurance is higher than female.

Table 2 exhibits association between the premium paid and age group of the respondents.

Table 2: Age and life insurance demand

Premium (Rs.)									
Age group (years)	Below 10,000	10,000- 14,999	15,000- 19999	20,000- 24,999	25,000 and above	Total			
Below 25	14	16	11	6	32	79 (21%)			
25-29	17	12	7	17	42	95 (25%)			
30-34	17	11	7	6	33	74 (19%)			
35-39	7	18	7	5	28	65 (17%)			
40 and above	6	11	11	8	35	71 (18%)			
Total	61	68	43	42	170	384 (100%)			
	(16%)	(18%)	(11%)	(11%)	(44%)	100%			

p value of chi square test: 0.138

Table 2 explains that highest number of respondents (25%) belongs to age group 25-29 and highest number of respondents (44%) pay premium Rs. 25,000 and above. The table also shows that there is no association between age group and life insurance demand because p-value is 0.138 which is greater than 0.05 which concludes that age does not matter for the amount of premium to pay for insurance.

The association between insurance premium and level of education has been shown in table 3.

Table 3: Level of education and life insurance demand

	Premium (Rs.)							
Level of education	Below 10,000	10,000- 14,999	15,000- 19,999	20,000- 24,999	25,000 and above	Tot	al	
Primary	38	40	18	12	45	153	-40%	
Secondary	15	16	12	19	50	112	-29%	
Higher Secondary	5	6	5	3	38	57	-15%	
Bachelor	2	5	5	7	30	49	-13%	
Masters	1	1	3	1	7	13	-3%	
Total	61	68	43	42	170	384		
	-16%	-18%	-11%	-11%	-44%	-100%		

p value of chi square test: 0.001

Table 3 illustrates that highest number (40%) of the respondent's educational level is primary which shows most of the insurance clients have basic education. The association between level of education and premium in range

has been found significant since the p-value is less than 0.05. The study concludes that education of respondents and amount of premium has association.

Similarly, the association betwee	n marital status and insu	urance premium has b	een presented in table 4
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Marital		Total					
status	Below 10,000	10,000- 14,999	15,000-19,999	20,000- 24,999	25,000 and above	_	
Married	49	57	28	32	133	288	75%
Unmarried	11	9	11	10	33	74	19%
Widow	1	2	3	0	5	22	6%
Total	61	68	43	42	170	384	100%

Table 4: Marital status and life insurance demand

p value of chi square test: 0.17

Table 4 presents that married respondent's demand for life insurance is higher (75%) than unmarried (19%) and least are widow (6%) respondents. The p-value of chi square test is 0.17 which is greater than 0.05 indicates that the association between marital status and life insurance demand is not significant.

The association between religion and premium amount has been presented in table 5.

Table 5: Religion and life insurance demand

Religion		Total				
	Below 10,000	10,000- 14,999	15,000- 20,000	20,001- 24,999	25,000 and above	
Hindu	59	55	32	39	142	327 (85%)
Muslim	2	13	11	3	28	57 (15%)
Total	61	68	43	42	170	384

p value of chi square test: 0.08

Table 5 exhibits that more than four fifth respondents (85%) follows Hinduism. The p value of the test shows that there is no association between religion and life insurance demand because p-value is 0.080 which is greater than 0.05.

The cross tabulation between occupation and range of insurance premium paid has been presented in Table 6. **Table 6: Occupation and Life insurance demand**

Occupation							
	Below 10,000	10,000- 14,999	15,000- 19,999	20,000- 24,999	25,000 and above	Total	
Agriculture	52	47	21	11	53	184	48%
Business	5	9	10	16	44	84	22%
Govt. Job	1	1	3	4	22	31	8%
Private Job	3	5	4	4	30	46	12%
Developmental Organisation	0	2	1	2	6	11	3%
Other	0	4	4	5	15	28	7%
Total	61	68	43	42	170	384	

p value of chi square test: 0.001

Out of 384 respondents, almost fifty percent (48%) respondents engaged in agriculture, followed by business, private job, government job, other jobs and jobs in developmental organisation. It has been found that there is

association between occupation and premium paid for life insurance as the p value is 0.001 which is less than 0.05. The finding concludes that jobholders pay more premium than agriculture-based policyholders. Economic class of family and life insurance premium has been presented in cross table 7.

Economic class							
	Below 10,000	10,000- 14999	15,000-19999	20,000- 24999	25,000 and above	Total	
High	0	2	3	1	45	51	13%
Average	15	24	29	32	98	198	52%
Low	46	42	11	9	27	135	35%
Total	61	68	43	42	170	384	100%

Table 7: Economic class and life insurance demand

p value of chi square test: 0.001

Table 7 shows that majority of the respondents belong to average economic class followed by low and high economic class respectively. The table also shows that there is association between economic class and life insurance demand because p-value is 0.001 which is less than 0.05. The association between the number of dependent family and amount of premium paid has been exhibited in table 8.

Dependent	Premium (Rs.)							
family members	Below 10,000	10,000- 14999	15,000-19999	20,000-24999	25,000 and above			
One	8	11	12	4	14	49	13%	
Two	7	7	3	7	12	36	9%	
Three	18	12	6	8	26	70	18%	
Four	18	15	10	12	37	92	24%	
Five	6	19	9	6	34	74	19%	
Six and above	4	4	3	5	47	63	16%	
Total	61	68	43	42	170	384		

Table 8: Number of dependent family members and life insurance demand

p value of chi square test: 0.001

Table 8 exhibits that almost one fourth (24%) of the respondents had four dependents in their family followed by five, three, six or above, zero and two dependents respectively. The p value of chi square testis less than 5% (i.e. 0.001) shows that there is association between number of dependents and life insurance demand because p-value is which is less than 0.05. The association between the monthly income and demand of life insurance (premium) has been illustrated in table 9.

Monthly income (in Rs)		Premium (Rs.)					Total	
	Below 10,000	10,000- 14999	15,000- 19999	20,000- 24999	25,000 and above			
Below 20,000	46	39	9	6	16	116	30%	
20,000-29,999	10	22	13	16	58	119	31%	
30,000-39,999	1	4	14	10	20	49	13%	
40,000-49,999	3	1	5	7	35	51	13%	
50,000 and above	1	2	2	3	41	49	13%	
Total	61	68	43	42	170	384		

Table 9: Monthly income and life insurance demand

p value of chi square test: 0.001

Table 9 shows that highest number of respondents earned monthly income between Rs. 20,000-29,999. The p value of chi square test is 0.001 which means there is significant association between the income and premium paid. This result implied that those who have higher earnings demanded higher amount of life insurance. The study concludes that life insurance demand in terms of premium paid is significantly associate with gender, level of education, occupation, economic class, family size and monthly income of respondents whereas life insurance demand is not significantly associated with age, religion and marital status.

5. Conclusions

The study analysed the association between socio-demographic determinants and demand for life insurance in Kapilvastu district. The study includes socio-demographic variables such as gender, age group, level of education, marital status, religion, occupation, economic class, number of dependents (family size) and approximate monthly income and their association with life insurance demand. The findings revealed that gender, level of education, occupation, economic classes, number of dependents and monthly income have association with life insurance demand. Gender has positive relationship with life insurance demand is found by Gandolfi and Miners (1996) similar to the result of the researcher. Similarly, level of education and life insurance demand has relationship(association) was found by (Truett & Truett, 1990).In the same regard life insurance has association with occupation and family size (number of dependents) was found by (Hammond, Houston, & Melander, 1967). Hakansson (1969) found relationship between life insurance demand and monthly income. Economic class and life insurance demand has association is found by (Spencer & Heppen, 1969).

However, age group, marital status and religion have no any association with life insurance demand is found by the researchers. Vince and Shotick (1994) also found no any association between age group and life insurance demand. In the same way Anderson and Nevin (1975) found no relation between life insurance and marital status. Outreville (1996) also found no any association between religion and life insurance demand. However, readers should bear in mind that this research study has some limitations.

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Social Health Security Program in Nepal: Opportunities and Challenges

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Abstract

The study aims to assess the opportunities and challenges of the health insurance program carried out by Health Insurance Board as a social insurance program by Government of Nepal. Data have been collected through indepth interview with 21 persons including the social health insurance policyholders, and non-policyholders who are inhabitants of Rantanagar Municipality- 6, and Bharatapur Metropolitan City- 10 of Chitwan district. Besides, experts in insurance and senior managers of insurance companies were also interviewed. It has followed the interpretive-naturalistic approach with the method of interviewing. As per the opinion of respondents HIP is effective in cost reduction of rich, and access to health service for poor. In government hospitals policyholders suffer from prolonging waiting, lack of facilities and experts and in private hospitals there is undue expenditure and discrimination in expert service. Even though the objective of the social health program is established social justice, cash-payer and insurance-payers are discriminated; corroborating the nature of neoliberal society. There are still uninsured persons because of ignorance, lack of premium, and distrust of HI service. The study suggests that HI service should be delivered through non-profit hospitals, the highest quality without discrimination of cashpayer and insurance-payer, and prolonged waiting.

Keywords: Health Insurance Board, Premium, Social justice, Social health insurance

1. Introduction

Social Health Insurance (previously known as Social Health Security Program) began in 2016. The program is implemented by Health Insurance Board (HIB). SHS program is a flagship insurance program ever supported by the government. It is contributory program where per family need to contribute minimum NRs. 3,500 (\$ 29) per year for a family of up to 5 members and NRs. 700 (\$ 6) for every additional family member. The HIB has the provision to provide subsidy for the poor and vulnerable to get enrolled into the scheme (100% subsidy for ultra-poor families, elderly population, Female community health volunteers, and patients with HIV/AIDS, MDR-TB, Leprosy, Null-Disability). The benefits package consists of services from primary health care centres, hospitals, and public and private referral hospitals including outpatient, inpatient, and emergency care. The maximum amount of

benefit is NRs. 100,000 per year per family of up to 5 members, with additional NRs. 20,000 for each additional member and maximum benefits for a family does not exceed NRs. 200,000).

According to the Health Insurance Board (2018) opportunities of HI specially with respect to targeted population are: a) the health insurance scheme will be able to better negotiated prices than the patient would be able to secure as an individual, b) private health care providers have been contracted into the scheme with their strong commitments to provide services in the given prices as per benefit packages, c) gradual increase in access and outrage of people in health services with the improving quality of health services along-with infrastructure, d) increasing people's awareness towards health insurance and services. Similarly, Board mentioned some challenges viz. a) HIB is unable to provide free of cost services to poor families due to the absence of poverty card to the poor families, b) there is a problem in supply-side i.e. the availability of drugs, diagnostic services and doctors are significant drivers of enrolment and service utilization, c) there is still a lack of enroll all the targeted population due to lack of awareness.

The above-mentioned opportunities and challenges were generated logically based on national data of official records. An empirical, in-depth, and qualitative study has been realized to carry out to assess the health insurance program from the perspective of identifying the availability- access gap.

The best opportunities are reducing health service cost to the people who can afford and access to the poor, otherwise, they would never get. The most challenging aspects are: getting expert service without discrimination and waiting in a long queue for getting service in terms of policy buyers. Still, there are challenges to include all people in quality service without prolonging waiting.

Knowledge from this study contributes to the HIB and signatory hospitals in terms of quality service, and the board for including all people in the HIP. This study lacks observation, solely relied on interview, therefore, this study indicates for and filed-based study on how the HI clients are treated in government and private hospitals.

The study aims to assess the opportunities and challenges of the health insurance program carried out by Health Insurance Board as a social insurance program by Government of Nepal. Remaining text is divided in four sections as review of literature discusses in second section followed by methodology and result and discussion in third and fourth section respectively. Final section concludes the paper.

2. Review of Literature

The concept of health insurance policy widespread from Alma Ata declaration of 1978. Primary health care "based on practical, scientifically sound and socially acceptable methods and technology made universally accessible through people's full participation and at a cost that the community and country can afford" was to be the key to delivering health for all by the year which emphasized the provision of community-oriented preventive, promotional and curative health service and evident by the establishment of a network of primary health care facilities and development of community health workers to provide essential health service at the community level (Gillam, 2008, p. 536). Constitution of Nepal, 2015 has the provisions of social security as a fundamental right and social security matters are included under article 51. Under these policies, the state has the responsibility to ensure easy, convenient, and equal access of all citizens to quality health services; provide health insurance to all citizens; guarantee social security. The Social Health Security Program-2015 is not a free policy started by the government of Nepal though it does not cost the senior citizen above 70 years old and people below the poverty line. The concept of social security is not fixed and has evolved over a period of time (Garcia & Gruat, 2003). Beveridge Committee Report (1942) defined where social security is as "freedom from want" (Majumdar & Borbora, 2013). The Universal Declaration of Human Rights (1948) stipulates a right to social security. Article 22 established that "Everyone, as a member of society, has the rights to social security and is entitled to realization, though nation effort and international co-operation and by the organization and resources of each state, of economic, social and cultural rights indispensable for his dignity and the free development of his personality.

In 1952, the International Labor Organization (ILO) adopted a comprehensive convention No or no. 102 on social security, where the term social security refers to medical care, sickness benefit, employment injury benefit, family, and maternity benefits (SECSOC, 2006). The concept of social security has been further widened to include the provisions for housing, safe drinking water, sanitation, health, educational, minimum wage, cultural facilities which can guarantee workers' a descent's life (Matto, 2000). The right to social security and social insurance, in particular, has been discussed on several international human rights conventions (e.g. Revised European Social Charter, 1996/1999; Protocol of Salvador, 1988/1999).

There are, of course, other forms of social protection; pure welfare measures in the form of employment benefits or social security for indigents are offered in many countries, on the assumption that the state has its primary responsibility to look after the poor citizens. Free or subsidized healthcare is another way the state fulfills its responsibility in a majority of countries, especially in the developing world (Gupta & Trivedi, 2005).

None of the African or Asian countries have a 'pure' form of health insurance model; all national insurance plans are mixed, or 'hybrid' schemes combining elements of Social Health and Publicly-financed National Health Insurance (UNICEF, 2012). In India, the government provides free public health care system but it does not work because of shrinking budgetary support to the public health services, poor management, low-quality service, and lack of responsiveness to patients' needs and demands. A case study of community-based health insurance It was found an appropriate way of reaching the poor in comparison to the market mediated or government-provided insurance. The private health insurance policies were pretty much inclined toward those who can afford to buy the insurance and those poor who can't afford must suffer until and unless if there is no public subsidy provided by the government. CBHI full form was found effective and good because of its features such as the voluntary participation of people, not for profit, objective scheme management by the community itself, and some degree of risk pooling. Two types of CBHI schemes were found in India: Non-Governmental Organization (NGO) base where it works as an intermediary between a formal insurance provider and the insured community, for example, SEWA in Ahmedabad, ACCORD in the Nilgiris and the second one is NGO itself who is providing insurance to the targeted community for example Sewagram Hospital (Ahuja, 2004).

Social democratic countries like Sweden and Netherland had approached privatization in a significantly different way. Now in Sweden, some private providers came to participate in the delivery of medical service; the Netherlands has taken even more dramatic steps toward privatization. Until 2006, the Dutch health care system had near-universal coverage with generous public financing. Unlike Sweden, however, it also includes some private insurance and private provision of care. In a dramatic move, the Health Insurance Act of 2005 abolished public health insurance and introduced a system of managed competition among private insurers. Under the new Dutch plan everyone is required to purchase a basic health insurance package (individual mandate), with government subsidies provided for lower-income families based on a sliding scale. Premiums must be community-rated and insurers must accept all applicants (guaranteed issue) with no pre-existing condition exclusions, to discourage cherry-picking. The government's role is limited to protecting consumers and making insurers compete solely on price and quality (Rosenau & Lako, 2008)

3. Methodology

As the study aims to assess the opportunities and challenges to the health insurance program from the empirical and in depths, qualitative perspective, the subjects were selected through accidental sampling those are readily available and convenient for a qualitative interview, and purposeful to my research in terms of data-rich (Etikan & Bala, 2017). A total of 21 were selected who were the inhabitants of Ratnanagar Municipality- 6, and Bharatapur Metropolitan City- 10 of Chitwan district. Among them 8 had bought HI policy in 2018 and renewed in 2019, 5 had purchased last year (2018) but did not renew this year (2019), and 8 are never enrolled in HI policy.

As per the research aim, the study was guided by naturalist or constructivist paradigm assuming that knowledge is established through the meanings attached to the phenomena studied; researchers interact with the subjects of study to obtain data; inquiry changes both researcher and subject; and knowledge is context and time-dependent (Krauss, 2005). With this relativist ontology, the knowledge has been constructed inter subjectively through the meanings and understandings developed socially and experientially. Therefore, it has followed the interpretive-naturalistic approach with the method of interviewing. There are adequate dialogs between the researchers and interviewees with whom meanings are collaboratively constructed. Meanings are emergent from the research process, and mostly analysed the 'interview vignette' (Jenkins, et al., 2010, p. 7). analysis on the one hand was inductive but aimed to identify the different aspects of opportunities and challenges mentioned in HIB.

For the authenticity of the study as triangulation information was generated through a qualitative interview from the other two stances too- a scholar of insurance and managers of insurance companies.

4. Information Analyses and Findings

The information generated from the qualitative interviewees was transcribed. After reading and re-reading, the 'half-baked information' (Kouritzin, 2002) against the opportunities and challenges mentioned above from HIB, the following themes have been generated.

4.1. Opportunities

The HIP has been interpreted as a good opportunity because on the one hand, it reduces the health cost of even rich people and on the other provides access to the costly health facilities for poor otherwise, they would never get these facilities.

Reduces the Out of Pocket Expenses

Among 21, 8 has the experiences of the HIP, for two years 2018 and 2019. They have realized that the benefits of health services of many more cost that they invested by HIP in general. The respondent seems quite satisfied with the HI scheme. In the absence of the scheme, it would have been problematic for him to manage the household expense and to run the business. It was helpful to him otherwise it would have cost more than 60 to 80 thousand rupees to get operation in the government hospital itself. Private hospitals are even expensive. The provided scheme gave relief to the middle income and poor family to reduce out of the pocket expenditure.

In order to validate this truth vignettes of some of the subjects are presented here. The interviews were conducted from 2018 June to July. A housewife of age 46:

"I am very happy and satisfied with the HI scheme. I already took 50,000 rupees' facilities from the hospital and renewing the HI scheme annually. My elder son had a motorbike accident. The hospital authority provided operation and medicine facilities within the offered price. In the absence of the HI scheme, it would have been a big burden for me to run the restaurant, home, and day-to-day household expenses including the treatment cost of my son. Now, I have had realized that I did a good thing at the right time.

Similarly, another respondent age 40 responded that,

"HI program is not expensive, it is affordable. I am an auto-rickshaw driver. This is my job. I have to look after my family from this driving occupation. It is a challenging job to feed five family members and to facilitate other expenses like education, clothing, and entertainment including mobile phone expenses for the family members. Getting ill or accidental injuries are an unpredictable expenditure. I am very lucky to participate in the HI program. I, including my family members, are taking services from the hospital and saving unnecessary expenses. This became possible through the HI program otherwise it would have been a big headache for me".

The mentioned respondent represents the characteristic of a poor family. He is facing challenges to maintain a family's hand to mouth problem and not able to manage proper income and saving for the time of need.

Accessibility of Poor and Marginalizes Groups

People are found happy with the HI program. Moreover, the hospitals are easily accessible by public vehicles too. They can have a day to visit, take hospital facilities, be assure even in simple health problems.

A male respondent age 49 said,

"My family members are visiting the hospital to treat general fever. The hospital is 10 minutes away from my home. For me, this service is very good because I am visiting the nearest hospital and having treatment facilities within the offered price of the HI program".

A female of age 50:

"HI scheme is not very expensive. I became a member of the HI scheme on 14 of Chaitra, 2074. I have already renewed the service for further facilities and I found it is very good for poor families".

A female of Ratnanagar said- I have had renewed the policy and frequently visiting the hospital for treatment and found the HI program is very much effective and not expensive.

4.2. Challenges: despite the above mentioned two opportunities of HIP serving people there are three challenges too. These are:

Service for the HIP is Time Consuming

The government of Nepal aimed to incorporate all the population of Nepal into HIP but It is found challenging to incorporate all citizens into the HI Program. Few respondents were those who already enrolled in the HI scheme but they dropped the scheme. The reason behind the dropping are (a) the government hospitals who are offering HI service are not patient-friendly, and (b) the process for treatment is very lengthy, complicated and discriminatory, (c) People felt difficulties to participate in government health insurance program because improper infrastructure and negligence of hospital authority like doctors, nurses and supporting staffs including pharmacy people.

A male of age 33 said,

"We are only two, husband and wife, we did not purchase HI premium because we don't have enough time to stay in line for the treatment in the hospital. I prefer to go to a private hospital because it is very easy and fast".

A female of age 28 said,

"I know the HI scheme is very good and cheap. I want to take HI premium but I have not enough time to follow it. I am a very busy person and running a business so, it is very difficult for me to go to the government hospital and be in line for the turn".

He replied that it is a very good scheme but have not time to follow the process. To easily access the process, the policy provider must provide an online registration system and pay system so those who have no enough time can have the policy through the online system. The technology is in advance stage, so the HI provider must rethink upon the easy access to the process and make the program effective and reachable to all people.

Respondent had replied that it is a very good scheme but have not time to follow the process. To easy access the process, the policy provider must provide the online registration system and pay system so those who have no enough time can have the policy through the online system. The technology is in advance stage, so the HI provider must rethink upon the easy access to the process and make the program effective and reachable to all people. A male of age 52 said-

"I have no time to go for checkup. It is hard to get leave from school". It will be better if the government accept the HI card on holidays also. The offered HI scheme is very good; it is affordable but complicated to manage time for a jobholder.

A man of age 32, from the Ratnanagar said- "*The vision of HI Program is very good but in practical level it is very poor. It takes hours to reach in doctor though queue.* A man age 32, teacher by profession, said- I am not planning to buy HI premium because of limited time. He further added that, if HI program available in private hospital and flexible time then only he will have HI policy.

Cheating Policy Buyers with the Motive of Money making

Some respondents reported- HI related pharmacies are cheating the patient. The costs of medicines were high in comparison to market prices.

A man of age 61- "No, I have heard that hospital authority and pharmacy people are selling expensive medicine to HI cardholders to meet their target of 50,000 as early as possible. The cost of every medicine for the HI cardholder is expensive in comparison to those who are not participating in the scheme. This is big discrimination". In CMC, I had gone to test thyroid, but the doctor demanded other different tests of cost 21,000. I asked- is it essential? He said- why to worry, your money is not gone".

We want to manage the money for the whole year and family but hospitals want to snatch all the money immediately. Private profit-making hospitals compel patients for unnecessary tests and checkups to make money. the patient gets a little benefit- only save form time loss, despite the loss of sate fund.

Low Service Quality

While inquiring on the topic of Hospital's Infrastructures, Treatment Facilities and Service, a male of age 61 said-"There are no good infrastructures in the government hospital to meet the demand of the patient. It will be better if the government organized a moving hospital campaign in each ward and Tole with HI facilities. It will stop the flow of people toward the hospital." A male of age 33 said- "Government must be vigilant and strict to the rules and regulation. More corruption is going on in the nation, and the hospital is among one". A female of age40- "Hospital staffs are rude and not polite. It will be better to educate them on how to deal with the patient and to extend this service in a private hospital as well because people of the private hospital are somehow polite than the staff of government hospitals". A female of age 38- " The environment of government hospital is not patient-friendly. The service is very poor so, I did not renew the program".
Insured patients are discriminated

The reputation or credibility of the HI Program is somehow not good amid the general public because of government hospital staff's negligence. The service provider needs to be serious in their responsible duties otherwise the government will not achieve the targeted goal. The hospital staff must train to be social and polite while dealing with patients.

It was declared that poor citizens will get free treatment facilities under the HI scheme but no poor have been identified till the date so it is challenging to fulfill the projection. The provided service hour for the HI program is 10 to 5 pm which is indirectly discriminating against the policyholders and non-policy holders. Those who are having HI policy are positive with the government initiation but not satisfied with the service providers like nurses, doctors, pharmacy staff, and other supporting staff of the hospital. Those who are having HI policy are regarded as second-class citizens. The HI policyholder does not fall in the priority of the doctor's list. In the government hospitals, HIP patients are kept in a separate queue which is many times longer than cash-payers. Due to the long waiting, some insured seem frustrated with the system so they did not renew the policy for the next time.

Lacking in Information and Support

Eight people never enrolled in the HIP. among the, 5 are ignorant about it. No agent informed them about the importance of HIP, persuade them, or help to find the government support to buy a policy. It is a challenge for the government could be an insufficient financial capacity to incorporate all the demands of the population like good infrastructures, treatment equipment, quality service, and administrative cost. The government had made the HI scheme compulsory to all citizens of Nepal where this program has been already launched though people are not enrolling in the scheme. To know the challenges, I have categories this section into (1) Incorporation of all the population and (2) Quality Health Care. The HI program should be compulsory and improves access to quality health services and increase accessibility to, and equity in, the provision of health care services by removing financial barriers to the use of health care services, focusing on the poor and marginalized.

A female of age 27:

"I am an economically poor family group. My daughter age 6 had right hand fractured while playing with other kids. My works in foreign employees even-though I have no enough money in hand to enroll in the HI scheme. My daughter had an accident. I have already paid Rs. 3,000 to hospitals and pharmacies for the medicine. Hospital is still asking money to put plaster in the fractured hand of my daughter. I have no money to pay additional hospital fees".

She had known about the HI scheme but she had no cash in hand at the time of purchasing the premium. It shows that most of the people are aware of the HI scheme but they are not able to have the service because they have no cash in hand when they supposed to enroll. To handles such issues, it will be better if each government hospital offers a compulsory HI scheme to the patient before they proceed for a checkup. Those who are identified as poor or below the poverty line and marginalized group should be recognized on time and provided the identity card on time so they can have provided facilities at the time of need.

Incorporation of all the population

Two cases hope including poor and excluding rich so that the government will be free from unnecessary burdens. A male of age 33 said- "I am still young. I can earn and do my treatment if it requires it. I don't want to be a burden to the government of Nepal. Yes, I will have a HI premium when I become old. Now, I can earn and I am capable to look after myself and family". A different type of message recorded during the interview- "the youth of the nation must work, earn and pay for their treatment, at the list until the age of 40. If corruption stop, everything becomes good."

To find the ways of incorporation of all the population, opinions of experts have been collected.

The experts opined that It is a time to evaluate the implementation process and impact study of the HIP. Rabindra Ghimire, a scholar on insurance opined that- *"It should be compulsory. Its benefit needs to be increased and the premium should be fixed based on affordability. The service quality of the health / medical / hospital needs to be increased. Priority should be given to the patient having a health insurance policy and all medicine and a surgical treatment needs to be provided".* Ghimire said- "The scheme is ambitious but required to all people. There is a lack of qualified human resources in the Health Insurance Board. The structure delivery system is not sufficient. Government-owned hospitals are far from villages so that people are not interested to go there. Private hospitals are not included in the schemes. A medical professional working in the private sector also should be included in this sector". Krishna Bahadur Basnet, former CEO of Sagarmatha Insurance Company opined that "Universally, the social health insurance policy has some common features. It is contributed by the government, there is no meanstested, adverse selection is not applied, it is for all disregarding the economic status, caste, gender, education, profession. The amount of benefits is equal. These all features are compiled by the Nepalese health insurance schemes. There is a subsidy to policyholders in Nepal".

The HI seekers are facing difficulties to arrive in the hospital. The road to the hospital is not a motorway in rural areas. The available hospitals are also far away from the villages. Private sector hospitals are not included in the scheme. Private hospitals can play a big role to mitigate the gap.

Remesh Kumar Bhattarai, CEO of United Insurance Company said- "The constraints of the health insurance schemes are: awareness towards the health insurance, lack of technology, limited health service providers, limited medicines and services. Private health facilities providers are not included in the program".

5. Conclusion

As the study aimed to assess the opportunities and challenges of the HIP, concerning intend and practice, arrive to identify both. From the opinion collection of 21 persons, reported that HIP is effective in cost reduction of rich, and access to health service for poor. But, getting, services is very difficult; (a) if go to government hospitals, suffer from prolonging waiting, lack of facilities and experts; (b) if go private hospitals, in Chitwan two medical colleges are allowed for those who enrolled since 2018, a victim from undue expenditure and discrimination in expert service. HIP, drag the insured in prolonging, low quality, discrimination the cost of saving money. Social Health

Insurance Program is for social justice and creating equal society, ironically, cash-payer and insurance-payers are discriminated; corroborating the nature of neoliberal society.

There are still uninsured persons because of ignorance, lack of premium, and distrust of HI service. The study suggests that HI service should be delivered through non-profit hospitals, the highest quality without discrimination of cash-payer and insurance-payer, and prolonged waiting.

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Perception among the Employees of Bank towards the Bancassurance in Nepal

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Abstract

The study aims to explore the perception of employees working in banking industry and investigates the problems and prospects of bancassurance in Nepal. Quantitative data have been collected from 100 employees working in 20 commercial banks using structured questionnaire. Product design, customer awareness, brand name, distribution channel and awareness of retail banks are considered as independent variables whereas present status of bancassurance is taken as dependent variable in the study. Both descriptive and inferential statistical tools have been applied to analyse the data. The result reveals that there is a positive relation between product design and brand name with present status of bancassurance in Nepal. This means that better the products lead to success of Bancassurance. The results also reveal negative relationship between present status of Bancassurance and consumer awareness, awareness of retail banks and distribution channel. The study concludes that product design and brand name are the major factors affecting current bancassurance status whereas consumer awareness, awareness of retail banks and distribution channel do not affect on current status of bancassurance.

Keyword: Bancassurance, customer awareness, distribution channel

1. Introduction

Bancassurance concept is the selling of insurance and banking products through the same channel, most commonly through bank branches. Selling insurance means distribution of insurance through Bank, Bancassurance concept originated in France and soon became a success story even in other European countries (Lockettet et al, 2002).

The strategy for using the established, entrenched distribution network for one product to market other new products has long existed in the consumer sector. The basic premise for this kind of cross selling is the fact that companies keep diversifying their products portfolios, using established 'incumbent' networks to promote and distribute new product lines. Banks also adopted this strategy in the recent past worldwide. Banks have moved away from the classical model of deposit taking and credit disbursal through their branch networks and have began to offer a wide range of products and services like security broking facilities and mutual funds (Penda and Bande, 2019). In some countries, bancassurance is still largely prohibited, but it was recently legalized in

countries like USA when the Glass Steagall Act was repealed after the passage of the Gramn leach Billey Act (Staikouras, 2006).

The evolution of bancassurance products is divided into three periods. In the first period, prior to 1980, banks sold insurance guarantees that were a direct extension of their banking activities, but were not associated with life insurance. For example, credit insurance was regarded as bancassurance. After 1980, saving products that benefited from advantages tax regimes associated with life insurance flourished in the banking markets. Around 1990, the supply of insurance products by banks became much more diversified in both life and general insurance categories (Genetay & Molyneux, 1998).

Bancassurance has been a successful model in the European countries contributing 35% of premium income in the European life insurance market. It contributes over 65% of the life insurance premium income in Spain, 60% in France, 50% in Belgium and Italy (Nurullah, 2000). In the US, the banks were earlier not allowed to sell insurance due to the restriction imposed by Glass-Stegall Act of 1993, which acted as a Chinese wall between banking and insurance (Marijorie & Berangere, 2005).

The introduction of Bancassurance in Nepal appears logical as the insurance regulatory body i.e. Beema Samiti claims to be following international trends in insurance industry. Bancassurance simply refers distribution of insurance product through banks and is successful business strategy in Europe, Singapore, and Taiwan, in particular. In Nepal, both awareness and penetration of the insurance industry remains dreadfully low.

There is a huge untapped insurance market in Nepal. Many experts point out that there is immense scope for the insurance sector in Nepal. Since major challenge today is to be on a constant lookout for niche markets, Bancassurance seem as to be lucrative area. Bancassurance can implement effectively if entire bank and financial institution jointly move ahead with strategic decisions.

The objective of the study is to explore the perception of the bank employees towards the bancassurance practices in Nepal. Remaining of the paper has been divided in four chapters. Second chapter review the previous studies while third chapter discusses about the methodology of the study. Fourth chapter includes data analysis and major findings and final chapter concludes the study.

2. Literature Review

Popli and Rao (2009) argued that opportunities exists for banks to cross-sell insurance, these opportunities are based on customer's high usage rate of insurance, the low penetration of banks to insurance programs and customer's willingness to buy insurance from bank and the identification of specific insurance products and certain customer segments enhance the bank's efforts to cross-sell insurance product.

Lee and Marlowe (2003) investigated that the most important criterion that consumers use in selecting a financial institution is convenience in terms of location of office and/or other convenience features. Retail fees are the second most frequent reported decision-making criterion followed by the range of services offered and the existing personal relationships. Boyed et al. (1994) found that factors such as reputation, interest charged

on loans and interest paid for saving accounts were critical, while less important were friendliness of employees and the modern facilities.

Karunagaran (2006) found that success of bancassurance greatly hinges on banks ensuring excellent customers relationship; therefore, banks need to strive towards that direction. Black et al. (2002) analysed that consumer confidence, lifestyle factors, motivation and emotional responses influence the customer's choice, while product, channel and organizational factors such as image and reputations are also significant. Chen et al. (2008) found that size of the national banking industry, the level of financial deregulation within a country, and the national inflation rate play significant role as determinants of Bancassurance.

Artikis et al. (2008) had identified profit potential, product expansion, wider customer base, lower distribution costs, stronger brand names, improved products and services, automated and simplified financial transactions affect the bank-insurance interface. Wever (2002) found that banks need expertise in product design, underwriting, administration and claims, Banks should use customer's data bases that could use demographic and financial information to generate warn leads for insurance sale, resulting in significant distribution efficiency.

Hwang and Goa (2005) analyzed life insurance companies operating in the Irish market, measuring cost efficiency with a stochastic frontier approach. The efficiency scores obtained are then regressed on a set of covariates in order to detect the main driver of performance. The authors concluded that size, market share and dummy indicating bancassurance companies are positively related to cost efficiency in a statistically significant way. The adopted operational definition of bancassurance in "the distribution of insurance product by banks" consequently bancassurance firms are those centered on selling insurance through the established distribution channels of their associated banks. The criterion used appears to be related only to the distribution system, while banks presence in the ownership structure of insurance companies is not explicitly considered.

Kumaraswamy (2012) analysed that insurance fulfills the requirements of banks like asset management, investment skills distribution and capital adequacy, competitive edge over competitors, greater life cycle management, diversification and growth of revenue, diversification of risks by tapping another area of profitability. And customers by the delivery of all financial services at the doorstep, advisory services under one roof, relief from efforts from search for person or service/products, benefits of choosing multiple products at one place, satisfaction of brand strength of banks , better value and cheaper premiums, reduced premium charges, high quality products and trust on banks.

Ghimire (2013) highlighted that there is huge network of banking industry in Nepal. Thus, banks can play effective role to promote the insurance industry market in future, if the regulatory and economic environment creates the conducive milieu and comfortable workable situation.

Bancassurance is the simplest way of distribution of insurance products through the bank distribution channel. It is process of selling insurance products and services by leveraging vast customer base of a bank and fulfills the banking and insurance needs of the customers at the same time (Chowdhary, 2006). Due to merging of global financial markets, development of new technologies, universalization of banking industries and with expansion of non-banking activities, the insurance industry has globally brought in new channels of distribution into existence (Alavudee & Rosa, 2015).

3. Methodology

3.1 Study design: This study has employed descriptive and causal comparative research designs to deal with the fundamental issues associated with various factors contributing problems and prospects of Bancassurance in Nepal and established cause and effect relationship between different variables influencing Bancassurance and its impact on success of Bancassurance model in Nepal.

3.2 Population and sample: There are 27 commercial banks in Nepal including public and private ownership. Out of 27, two third banks (18) have been selected for the study. Purposive sampling method has been used to select the employees from each bank. Total 100 respondents were selected from 18 banks ranges from minimum two to maximum 18 employees with the non-probability sampling method. The study is carried out only inside the Kathmandu valley.

Table 1 shows the number of commercial banks selected for the study along with number of observations.

Name of Bank	No	Name of Bank	No
Bank of Kathmandu Ltd.	2		
Century Commercial Bank Ltd.	5	NIC Asia Ltd.	5
Citizen Bank International Ltd.	5	NMB Bank Ltd.	3
Global IME Bank Ltd.	5	Prabhu Bank Ltd.	18
Himalayan Bank Ltd.	2	Prime Commercial Bank Ltd.	5
Laxmi Bank Ltd.	3	Rastriya Banijya Bank Ltd.	2
Lumbini Bank Ltd.	5	Sanima Bank Ltd.	10
Nabil Bank Ltd.	5	Siddhartha Bank Ltd	5
Nepal Investment Bank Ltd.	5	Standard Chartered Bank Nepal Ltd.	10
Nepal SBI Bank Ltd.	5	Total	100

Table 1: List of commercial banks and number of respondents from each bank

Source: www.nrb.org.np, 2018

3.3 Data Collection Tool: Primary data have been collected using structured questionnaire. Printed questionnaire were distributed to some respondents while some preferred the online questionnaire so that online questionnaire were also prepared and sent via their email.

3.4 Data Analysis Tool: The responses were received in varieties of scale while the perception and opinion toward the Bancassurance were received on five points likert scale. Descriptive as well as inferential statistic (Correlation, regression) have been applied while analysing the data.

For the regression analysis, following model has been assumed and tested with multiple regression. It shows the theoretical relationship of factors influencing Bancassurance.

$BA = \beta_0 + \beta_1 DC + \beta_2 CA + \beta_3 PD + \beta_4 BN + \beta_5 AR + e \dots Eq.(1)$ Where,

- BA = Present status of bancassurance
- DC = Distribution channel
- CA= Consumer awareness
- PD= Product design
- BN= Brand name
- AR= Awareness of retail bank
- e= error

 β 0, β 1, β 2, β 3, β 4, β 5 are the beta coefficient of the explanatory variable to be estimated.

Following hypothesis has been formulated for this study:

H1: There is positive relationship between distribution channel (DC), consumer awareness (CA), product design

(PD), brand name (BN), awareness of retail bank regarding the Bancassurance (AR) and present status of

Bancassurance (BA) in Nepal

4. Results and Discussion

4.1 Profile of the Respondents

The demographic characteristics of respondents has been presented in Table 1.

Percentage	Variables	Percentage
53	Academic Qualification	
47	Up to SLC	1
	Intermediate	4
3	Bachelors	21
37	Masters and above	74
45	Annual Income (NRs.)	
13	Up to 0.4 million	35
2	Above 0.4 to 0.6 million	27
	Above 0.6 to 0.8 million	25
50	Above 0.8 million	13
50	Total	100
	Percentage 53 47 3 3 37 45 13 2 2 50 50	PercentageVariables53Academic Qualification47Up to SLCIntermediateIntermediate3Bachelors37Masters and above45Annual Income (NRs.)13Up to 0.4 million2Above 0.4 to 0.6 million50Above 0.8 million50Total

Table 1: Demographic Characteristics of Respondents

Source: Field Survey, 2018

Table 1 shows that majority of the respondents of this study are male (53 percent), while equally number of respondents in terms of marital status, and highest number of respondents (45%) have age between 31-40 year. Almost three fourth respondents have master and above degree. The annual income of highest respondents (35%) is up to 0.4 million.

4.2 Opinion towards the Bancassurance

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Opinion of respondents towards the bancassurance has been categorized under awareness on bancassurance, appropriate tool to make aware about Bancassurance, most contributing factor on success of bancassurance in Nepal and types of insurance products mostly purchased from banks.

4.2.1 Awareness towards the Bancassurance: Among 100 respondents, 18% respondents are completely, 46% mostly and 30% partially aware about Bancassurance while few (6%) are not aware about Bancassurance.

4.2.2 Appropriate tool to make aware on Bancassurance: Majority of respondents (51%) argued that electronic media is appropriate tool to inform about Bancassurance while 28% respondents opined that bank branches is suitable for while 11% respondents believe that friend and colleagues and 7% said that bank employees are appropriate means for the communicating about the Bancassurance. Very few (3%) agreed on that direct mail is appropriate tool to inform about Bancassurance.

4.2.3 *Types of insurance products mostly sold by banks*: According to the survey, most of the respondents (38%) suggested that property and casualty related policy are most suitable to sell through banks followed by life insurance (35%), fire (18%), and health insurance (6%). travel insurance (2%). Least number of respondents (1%) argued that motor insurance is most suitable to sell by banks.

4.2.4 Most contributing factor on success of Bancassurance in Nepal: Among five contributing factors to make success the Bancassurance, least preference is given to "consumer awareness" (i.e. mean = 2.12) while mean score 2.35 is obtained by "product design" "Distribution channel" (2.68), and "brand name" (3.6) and "awareness of retail banks" (4.25) are ranked third, second and first respectively. Therefore, it can be concluded that consumer awareness is most important factor contributing success of Bancassurance in Nepal and awareness of retail banks is least important.

4.1 Correlation analysis

The research has total six variables with one dependent and five independent variables which are determining their effect on the customer satisfaction. The dependent variable is present status of Bancassurance in Nepal and independent variables are distribution channel (DC), awareness of retail banks (AR), customer awareness (CA), product design (PD) and brand name (BN). The correlations are shown on table 2.

	Mean	BA	DC	AR	CA	PD	BN
BA	3.44	1					
DC	3.51	0.045	1				
AR	3.28	0.023	0.067	1			
CA	3.43	-0.052	0.073	0.07	1		
PD	3.9	0.014	0.077	0.26	0.071	1	
BN	3.92	0.006	0.14	0.272	0.052	0.241	1

Table 2:	Pearson	correlation	coefficient

Table 2 reveals the correlation coefficients among independent and dependent variables which illustrates both positively and negatively significant relationship between dependent and independent variables that is present status of Bancassurance as dependent variable with other independent variables. By looking at the correlation

matrix between the variables, i.e. product design and brand name are positively correlated with the Bancassurance in Nepal whereas consumer awareness, awareness of retail banks and distribution channel are negatively correlated with customer satisfaction. It means that the product design and brand name are well established in Nepal i.e. they are positively influencing Bancassurance success in Nepal whereas there is lack of consumer awareness and retail banks awareness regarding Bancassurance. Similarly, the distribution channel for the insurance policy is not effectively regulated so that Bancassurance is not being success in Nepal.

4.2 Regression Analysis

Following 11 regression models have been estimated using regression equation and presented in Table 3. **Table 3: Regression of dependent variables and independent variables**

Model	Constant	DC	AR	СА	PD	BN	Adj- R_sqr	s.e	F
1	4.644***	(-0.21)					0.001	1.21793	1.09
	6.593	(-1.044)							
2	4.796***		(-0.258)				0.006	1.21491	1.582
	6.784		(-1.258)						
3	4.368***			0.137)			(-0.007)	1.22303	0.266
	4.973			(-0.515)					
4	3.817***				0.03		(-0.01)	1.22457	0.018
	4.954				0.135				
F	3.874***					0.01	(-0.01)	1.22466	0.004
5	5.275					0.06			
6	5.242***	(-0.164)	(-0.215)				0.002	1.21717	1.107
	5.81	(-0.798)	(-1.059)						
7	4.952***	(-0.167)	-0.242		0.114		(-0.006)	1.22192	0.814
	4.594	(-0.806)	-1.146		0.497				
8	5.545***	(-0.16)	-0.211	(-0.102)			(-0.007)	1.22256	0.78
	4.611	(-0.077)	-1.031	(-0.383)					
9	4.845***	(-0.207)	-0.122		0.055		(-0.017)	1.22893	0.441
	3.806	(-1.015)	-0.454		0.245				
10	4.412***	(-0.218)			0.039	0.03	(-0.019)	1.23008	0.381
	3.951	(-1.06)			0.171	0.16			
11	5.101***	(-0.169)	(-0.256)	(-0.112)	0.101	0.08	(-0.023)	1.23266	0.547
	3.676	(-0.806)	(-1.179)	(-0.415)	0.431	0.41			

*** significant in 1% level

Table 3 shows beta coefficients for distribution channel is negative. This indicates that the distribution channel is not significantly related with present status of Bancassurance. Similarly, beta coefficients are negative for awareness of retail banks. This indicates that retail banks are not significantly aware about Bancassurance. Likewise, negative beta coefficients for consumers are not significantly aware about Bancassurance. Similarly, positive beta coefficient for product design indicates that product design is significantly related with present status of Bancassurance. Likewise, study found that beta coefficient for brand name is positive, indicates brand name and present status of Bancassurance are positively correlated. Beta coefficients are significant at 1% level of significance.

5. Conclusion

Findings of the study concluded that success of bancassurance in Nepal is positively correlated to distribution channel, awareness of retail banks, product design and brand name, which indicates that the distribution channel, awareness of retail banks, product design and brand name are positively correlated with success of bancassurance in Nepal. However, awareness of consumer is negatively correlated with success of bancassurance. The beta coefficient for dependent variable (success of bancassurance) is positive with the independent variables (product design and brand name), which indicates that impact of product design and brand name is high on the success of bancassurance in Nepal. The beta coefficient for the dependent variable (success of bancassurance) is negative with independent variables (awareness of retail banks, consumer awareness and distribution channel) which indicates that impact of awareness of retail banks, consumer awareness and distribution channel on success of bancassurance is negative.

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