

**INVESTORS' DECISION MAKING BEHAVIOR ON INITIAL
PUBLIC OFFERINGS OF HYDROPOWER DEVELOPERS**

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Recommendation

Certification

Declaration of Authenticity

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ABBREVIATIONS

AGM	Annual General Meeting
ANOVA	Analysis of Variance
BE	Bandwagon effect
BOOT	Build Own Operate Transfer
CAPM	Capital Assets Pricing Model
CG	Corporate Governance
EPS	Earnings per Share
ER	Expected Return
FY	Fiscal Year
IPO	Initial Public Offering
IPP	Independent Power Producer
IR	Idiosyncratic Risk
MW	Mega Watt
NEA	Nepal Electricity Authority
NEPSE	Nepal Stock Exchange
OLS	Ordinary Least Squares
PE/VC	Private Equity/Venture Capital
PF	Pre-Issue Financial Health
PPA	Power Purchase Agreement
PPP	Public Private Partnership
ROR	Run of River
SEBON	Securities Board of Nepal
SEOs	Seasoned Equity Offers
SP	Sectoral Performance
SPSS	Statistical Package for Social Sciences

EXECUTIVE SUMMARY

The main objective of this research is to explore the underlying reasons behind strengthening response from investors towards previously neglected sector i.e. IPOs of hydropower developers. This research used descriptive research design to meet the objective. It studied about the relationship between pre-issue financial health, idiosyncratic risk, expected return, sectoral performance, corporate governance and bandwagon effect with investors' decision making behavior on IPOs of hydropower developers. On the other part, it studied about the differences between socio-demographic variables and investors' decision making behavior on IPOs of hydropower developers. The sample size of 385 has been taken with necessary variation on investor's demographics. For reaching the sample size, convenient sampling method has been used.

The study found that idiosyncratic risk, expected return, sectoral performance and bandwagon effect have significant impact on investors' decision making behavior on IPOs of hydropower developers. The most influencing factors affecting investors' decision making behavior on IPOs of hydropower developers is sectoral performance followed by bandwagon effect. Moreover, investors' decision making behavior on IPOs of hydropower has significant difference across gender, education, occupation and investment objectives.

Based on the findings of this research, different results can be implicated. First of all, it is necessary for the investors to analyze the investable securities on their own without being influenced by the actions of the mass while investing in IPOs of hydropower. Hydropower developers should focus on investor protection mechanism, firm transparency and minimization of project associated risks. Similarly, rather than looking only in to the bullish sentiment in the hydropower sector, investors should also measure the growth potential of the sector. Finally, while looking in the expected return investors should also look at the risk-reward ratio before making investment in IPOs of hydropower developers.

CHAPTER I

INTRODUCTION

1.1 Background of the study

Capital market has a significant contribution towards the economic development of any country. It facilitates the deficit sector to mobilize funds from the surplus sector of the economy. Though secondary market's major function is to provide liquidity to the investors and the stock issuing company does not get any funds but primary market provides mechanism for the smaller and younger firm to raise the much needed capital for growth. A going public method or initial public offering allows the company to collect funds from diversified investors in exchange of its securities. But the success of every IPO depends on the adequacy of the planning and timing. Securities issuing company attempt to time the bullish market and good historical financial performance of the company (Szyszka, 2014). A proper synchronization among market timing, corporate timing and going public decision allows the firm to collect the sufficient funds from public.

For the hydropower development in Nepal, different policy reforms have been made to facilitate the involvement of private sector, public sector and foreign sector in building the hydropower projects (Gurung, 2017). After restoration of democracy, hydropower development policy 1992 was formulated. This policy has opened the door for private and foreign sectors for development of hydropower. With the clearly defined policies, the private and foreign sectors have been allowed to build the hydropower projects by following the BOOT (Build, Own, Operate and Transfer) model of PPP. Similarly, Hydropower policy 2001 fostered on benefiting the project affected locals and mobilizing the internal capital market for investment in the power sector.

Similarly, a provision regarding initial public offering of hydropower developers has also been made. The IPPs are allowed to issue IPO during the construction phase. Securities Registration and Issuance Regulation (2008) states that hydropower companies must float shares for the locals before they open the share issue for general public. Gurung (2017) stated that the company has to float a minimum of 30 percent

of paid up capital to the public. Out of the 30 %, 5 % for the company's staff, 10 % for the locals and 15 % share to be floated to the general public.

For the upcoming decades, it requires even more investment from the general public to achieve the hydropower development targets of Nepal's water the people investment schemes, fifteenth periodic plan and sustainable development goals. In the current scenario, the subscription ratio on initial public offerings of hydropower developers is gradually improving. From 0.215 times subscription of IPO of Shiva Shree Hydropower Company, the subscription times has increased to 39.06 times in Tehrathum Power Company Limited. This trend should be consistent in the upcoming years to facilitate the hydropower development. But, the investors' decision making behavior is not predictable, it may change due to changes in circumstances.

In this scenario, it is necessary to explore the underlying reasons behind strengthening investors' confidence in the IPOs of hydropower develop and the ways forward to sustain investors' confidence. For the retail investor, making the investment decision is very important. It can provide them high profit or huge losses. There can be numerous factors affecting the investor's decision-making. Investors keep in mind about economic factors like expected earnings, condition of financial statements of firms/companies, recent price movements, risk, returns, etc. before investing but their psychological biasedness is also involved (Sarwar & Afaf, 2016). Similarly, investors always look to invest in the company which has strong governance mechanism. There exists relationship between corporate governance and investor's appetite for IPOs (Bell, 2014). Another interesting fact is that investors exit from the market when they achieve their targeted returns. The safety, liquidity and capital appreciation play major influencing role in investor decision (Srinivas & Rao, 2017). Thus, investors' decision on initial public offering is the combined effects of multiple factors.

1.2 Statement of the problem

In the past, the IPOs of hydropower sector became the most neglected sector due to the lack of investor confidence in the sector. From 91.5 times IPO subscription of Ridi Hydropower Company, the subscription rate of IPO of Shiva Shree Hydropower Company shrunk to 21.51% of the total issue (SEBON, 2021). However, the investors are regaining confidence in the IPO of hydropower developers. Recent IPOs of

hydropower namely Mailung Khola Hydropower Company and Tehrathum Power Company limited were oversubscribed by more than 39 times. This trend of public participation and confidence in the hydropower sector has to be sustained to facilitate the long term development of hydropower projects, achieve the targets of five-year plan and meet the national level objectives of becoming developing nation by 2026. So, this situation has created many research issues to be investigated. For instance, what factors led the IPOs of hydropower equally attractive as compared to IPOs of other sectors in recent times? Why investors are showing attraction towards IPOs of hydropower developers? Are the investors in IPOs of hydropower rational or mass ignorant? Can this trend be continued in upcoming issues or restored to the previous level? This has become the core subject for study.

As multiple factors can be attributed to the behavior of an investors on IPOs. An empirical evidences can be taken from the previous studies. Deb and Marisetty (2010) established the positive relationship between pre-issue financial health and investors's decision to subscribe IPOs. Another study by (Beaulieu & Bouden, 2015) established negative impact of idiosyncratic risk on investors' decision on IPOs. Similarly, a study by (Joshi, 2018) established the positive relationship between expected return and investors' decision to subscribe the Initial Public Offerings. Contrary to this view, Rahman and Cheyahya (2019) states that rather than looking for the immediate returns, investors should look at growth opportunities of firms that influences the initial aftermarket and long-term aftermarket performance. Ramkrishnan (2018) found that, sectoral performance or profit potential in the sector positively influences the investors' investment making behavior. Another study by (Qeisari & Ahmadi, 2019) depicted that corporate governance practices reflects true value of the firm and influences the investors' decision. Wang et al. (2017) states that people's tendency to hop on bandwagon influences their responses to the Initial Public Offerings. Considering these factors, these variables need to be tested in the context of investors' decision making behavior on IPOs of hydropower developers. Therefore, this GRP deals with finding the underlying reasons for improved response from investors towards IPOs of hydropower developers. It takes the perspective from general public. This study is concerned with the following issues or research questions:

- Why the investors are regaining confidence in IPOs of hydropower developers?

- Which factor affect the most to investors' decision making behavior on IPOs of hydropower developers?
- Does the investors' decision on IPOs significantly differ across socio-demographic variables?

1.3 Objectives of the study

The major objective of this research is to explore the underlying reasons behind strengthening response from investors towards previously neglected sector i.e. IPOs of hydropower developers. Therefore, to accomplish the principal objective, the following specific objectives are covered:

- To examine the factors affecting investors' decision making behavior towards IPOs of hydropower developers.
- To measure the relationship between socio-demographic factors and investors' decision making behavior on IPOs of hydropower developers.

1.4 Hypotheses

This study aims to investigate the impact of pre-issue financial health, idiosyncratic risk, expected return, sectoral performance, corporate governance and bandwagon effect on investors' decision making behavior on IPOs of hydropower developers. Deb and Marisetty (2010) established the positive relationship between pre-issue financial health and investors's decision to subscribe IPOs. Another study by (Beaulieu & Bouden, 2015) established negative impact of idiosyncratic risk on investors' decision on IPOs. Similarly, a study by (Joshi, 2018) established the positive relationship between expected return and investors' decision to subscribe the Initial Public Offerings. Contrary to this view, Rahman and Cheyahya (2019) states that rather than looking for the immediate returns, investors should look at growth opportunities of firms that influences the initial aftermarket and long-term aftermarket performance. Ramkrishnan (2018) found that, sectoral performance or profit potential in the sector positively influences the investors' investment making behavior. Another study by (Qeisari & Ahmadi, 2019) depicted that corporate governance practices reflects true value of the firm and influences the investors' decision. Wang et al. (2017) states that people's tendency to hop on bandwagon influences their responses

to the Initial Public Offerings. Thus, this study focuses on testing of following alternative hypotheses:

- H1:** Pre-issue financial health of issuer significantly predicts investors' decision making behavior on IPOs of hydropower developers.
- H2:** Idiosyncratic risk of issuer significantly predicts investors' decision making behavior on IPOs of hydropower developers.
- H3:** Expected return from hydropower shares significantly predicts investors' decision making behavior on IPOs of hydropower developers.
- H4:** Sectoral performance of hydropower in secondary market significantly predicts investors' decision making behavior on IPOs of hydropower developers.
- H5:** Corporate governance of hydropower developers significantly predicts investors' decision making behavior on IPOs of hydropower developers.
- H6:** Bandwagon effect significantly predicts investors' decision making behavior on IPOs of hydropower developers.
- H7a:** There is a significant difference of investors' decision making behavior on IPOs of hydropower across gender.
- H7b:** There is a significant difference of investors' decision making behavior on IPOs of hydropower across age group.
- H7c:** There is a significant difference of investors' decision making behavior on IPOs of hydropower across education.
- H7d:** There is a significant difference of investors' decision making behavior on IPOs of hydropower across occupation.
- H7e:** There is a significant difference of investors' decision making behavior on IPOs of hydropower across investor objectives.

1.5 Rationale of the study

In the current scenario, IPOs of ordinary shares get overwhelming response from the general public in Nepal. Because of imperfect market, developing nature of the economy, Nepal has very few investment opportunities. For investors, the primary market of the ordinary shares has become the attractive investment sectors. As a result, initial public offerings which is mainly dominated by ordinary shares used to be oversubscribed (Gurung, 2017).

As this research is focused on exploring factors affecting investors' decision making behavior on IPOs of hydropower, it adds value to the different parties. First of all, investors know about major factors influencing their decision on IPOs of hydropower developers, either it can be firm value or market level factors or behavioral factors. Similarly, the institutional investors also know about the why IPOs of the hydropower companies get the overwhelming response from the general public. It helps them to determine either they should aggressively hold the new issues of hydropower or they should change the current portfolio altogether.

Apart from these, the current study contributes to the different companies. Through this study, future IPO issuing hydropower companies can focus on investor protection measures, proper disclosure and transparency to attract more general public. This study can also help SEBON to make new rules, regulation and policies especially for the hydropower companies. They can also rethink and become more detail oriented about the particular companies before they approve the new issues. The IPO rating agencies can also benefit from this study as they may make the thorough analysis of the financial estimates, risks involved, management team and come to much more realistic grading. The IPO grading is very important for the investors in primary market as the grading is made by independent rating agencies.

1.6 Limitations of the study

Every research has its limitations. As this research is based on primary source of data, the followings are the limitation of this study:

- Due to the limited sample size, the generalization of the result is difficult.

- As this research focuses on studying the response of the general public only, while it ignores the opinion and perception of the institutional investors and locals.
- Other variables such as lock up period, management team, internal use of capital etc. have not been included in this research.
- The study covers the limited reviews of the related articles.
- The collected information is solely based on structured questionnaire. So, the research instrument could not collect information besides the questions asked in the research instruments.
- Because of resource and time constraint, extensive research in the given problem could not be conducted.

1.7 Structure

This GRP report consists of three major sections: preliminary materials, body of the report and supplementary materials. The preliminary part includes title page, certification, declaration of authenticity, acknowledgements, table of contents, list of tables, list of figures, abbreviations used in the report and executive summary. The body part of the report includes five sections: Introduction, Related Literature & Theoretical Framework, Research Methods, Analysis and Results, and Discussion, Conclusions & Implications.

The introduction section of the report consists of background of the study, statement of the problem, objective of the study, hypotheses, rationale of the study and limitations. In the second chapter, the report consists past literature reviews related to investors' decision making behavior on IPOs. It reviews the past established relationship between pre-issue financial health, idiosyncratic risk, expected return, sectoral performance, corporate governance, bandwagon effect and investors' decision making behavior on IPOs. Similarly, the literature available in the context of Nepal and hydropower development has been thoroughly reviewed. This chapter further consists of theoretical framework which explains the relationship between dependent, independent, and moderating variables.

The third chapter consists of the outline of methodology used for the study. It includes descriptions about the research design, sample and population of the study, nature and

sources of data, instruments and procedures used for the study and a brief introduction of the data analysis techniques. The fourth chapter includes data analysis and results. The collected data are analyzed through descriptive analysis and inferential analysis. The fifth chapter discusses about findings of the study and creates link with previous studies. On the basis of the research objectives, the findings are compared and concluded. Moreover, implications of the study have also been highlighted in this chapter. The final supplementary part includes bibliography and appendices related to study.

CHAPTER II

RELATED LITERATURE AND THEORETICAL FRAMEWORK

2.1 Literature related to IPO

Initial public offering is the process through which a private limited company becomes public by sale of its stocks to the public. Firms go public to raise equity capital (Pagano et al., 1998). Besides this financing goal, there might be both direct and indirect objectives behind going public. The former may be related to fund company growth, capital expenditure, pay off existing debt and obtain an exit strategy. The latter concern the listing advantages with greater visibility, stronger legitimacy and higher market value than private companies (Brau et al., 2003). IPOs therefore provide firms not only with access to fresh capital but also with a stamp of approval from financial markets.

Regardless of the advantages of IPOs, the shift from managing private firms to listed companies brings new challenges, especially for top level executives (Beckman and Burton, 2008). IPO is therefore a strategic change characterized with high levels of uncertainty (Certo 2003). During an IPO, the top management including the Chief Executive Officer faces new expectations, increased transparency and additional requests from regulatory bodies and the financial community (Ibbotson et al., 1988). The roles of the board of directors are even more critical when looking at IPO effectiveness. Thus, this GRP focuses on review of the factors at the firm level, market level and investor level that influences investor behavior on IPO.

2.2 Theory of IPO underpricing

The dissimilarity of the perceived value of equity between the issuer and the investors results in IPO underpricing. This is guided through different endogenous and exogenous factors either in mitigating or accentuating the difference in the perception. Among the various factors information asymmetry between issuer and investors, signaling theory and market timing theory are used to rationalize the phenomenon of IPO underpricing.

The degree of underpricing occurred due to information asymmetry are studied from ex-ante uncertainty, book building and winner curse. Beatty and Ritter (1986)

emphasized that there is positive relationship between underpricing of IPO firms and ex-ante uncertainty related to the issuing firm. Jenkinson and Ljungqvist (2001) reveals that ex-ante uncertainty encompasses the matters related to the age, size, use of IPO proceeds, and type of IPO firm. They also found that younger business firms create more ex-ante uncertainty about company value; in turn, investors demand higher underpricing for younger companies. Ritter (1984) found that the degree of ex-ante uncertainty is a decreasing function of the age of the IPO firm. Beatty and Ritter (1986) employed IPO size to proxy for ex-ante uncertainty, where they empirically documented that larger offerings are normally offered by well-known firms, while smaller offerings are offered by speculative firms, naming this phenomenon empirical regularity. Beatty and Ritter (1986) argued that information related to the use of IPO proceeds is useful in reducing ex-ante uncertainty because investors would be better informed about a firm's reasons for going public. Thus, the ex-ante uncertainty only captures the problem of information asymmetry between IPO issuers and investors.

The book-building theories of Benveniste and Spindt (1989) argued for the presence of asymmetric information between IPO issuers and institutional investors, assuming that institutional investors possess superior information than both underwriters and issuing firms. Hence, the book-building process disclose valuable information about an issuer by institutional investors. Loughran and Ritter (2002) assist the functionality of the book-building theory for divulging valuation information about the issuer, but argue that the book-building theory only explains a small percentage of IPO discounts. It does not explain the enormous underpricing that occurs in other markets, including developing markets.

The winner's curse hypothesis introduced by (Rock, 1986) in response to asymmetric information between uninformed and informed investors, asserting that neither the issuer nor the underwriter are well informed in comparison to institutional investors, who are communicated about the true value of an IPO firm. The author argued that institutional investors are indeed informed investors because they can employ their sophisticated financial knowledge to bid only for underpriced IPOs while uninformed investors employ their limited financial knowledge by bidding indiscriminately for underpriced and overpriced IPOs. The gap in information between informed and

uninformed investors allows the latter to accept full allocations in overpriced offerings and create an adverse selection problem.

On the other hand, signaling theory was also developed to explain the degree of IPO underpricing. This theory perceives that issuer would like to leave good taste in investors' mouth to ensure the success of future equity offerings by inducing the degree of IPO underpricing. Welch (1989) identified the argument of signaling theory explaining that firms underprice the issue intentionally to guarantee the favorable response to raise the funds through seasoned equity offerings in the future. According to the model, he stated that the high quality firms bring about the degree of underpricing to signal their firm quality. The cost of signaling for high quality firm is lower as compared to low quality firm. If low quality firm tries to adopt the similar strategy, then they have to incur high imitation cost in the process of imitating the high quality firm. This is risky because market will be able to assess the true quality of a firm over a period of time.

Finally, Market timing theory justify the decision of issuer based on market timing by considering different market parameters such as volatility, number of IPOs belonging to the same industry and IPO volume in the market. Ritter (1984) differentiated market timing of IPO into hot and cold market period. When market shows positive movement, large number of firms issue IPOs. The author found the high degree of IPO underpricing during the hot market period. Lucas and McDonald (1990) found same logic and argued that adverse macroeconomic or industry related conditions can lead to undervaluation of firm.

2.3 Review of previous studies

In this section, prior studies related to the study variables are reviewed in depth. Their empirical evidences on the relationship with the investor decision making behavior on IPOs are also covered.

2.3.1 Pre-issue financial health and investors' decision on IPO

The pre-issue financial health refers to the financial condition, revenue growth opportunity, bankability and overall efficiency of the firm. Pre-issue financial health of IPO issuing firms shows the future direction and long term performance. Marshall

(1998) analyzed the relationship between the financial characteristics of 500 IPOs and underpricing at the time of the issue. The results revealed that healthier firms experience greater underpricing at the time of issue of securities. Similarly, author provided initial evidence that long-term performance of initial public offerings can also be explained by looking at the actual financial health of the firm at the time of issue. Perhaps, the most important contribution of this study is underpricing and underperformance of IPOs are attributable to different subsets of firms. Thus, investors choose an IPO of healthier firm rather than firms with poorer financial characteristics at the time of the IPO issue.

The one of the major indicator of financial health of an issuing company is IPO grading. It indicates the overall efficiency of the issuing firm and influences the investors' decision. Deb and Marisetty (2010) investigated on the information contents of IPO using the sample of 160 Indian IPOs. The results found the significant positive relationship among between IPO grading and demand of the retail investors. Author stated that IPO grading successfully captures firm size, business group affiliation, firm's asset quality and management efficiency.

Similarly, another study by Shivaprasad and Kallanagouda (2013) examined the relationship between IPO grading and performance of IPO. The sample size consisted of 131 IPO's issued and listed from the period 2008 to 2012. They found that IPO grading has an important influence while considering investment alternative and it is found that IPOs having good fundamentals generated higher initial return at the time of listing and also good long term performance in the secondary market. Importantly, an IPO firm's credit model score embeds information helpful in predicting future earnings streams and such fundamentals eases to realize longer term buy-and-hold returns (Cai et al., 2018). Whereas IPOs with poor fundamentals performs very poor in generating initial return and there was also more volatility in the prices. It can be implied that IPO grading is the indicator of the firm quality.

The role of the firm is to signal the IPO quality that contributes towards the market welfare. A rational investor always analyzes the fundamentals of the company before making investment. Khatri (2017) investigated the factors influencing investor's investment in initial public offerings. In fact, fundamentals of the organization are another important factor investors considers while investment in IPO. Srinivas and

Rao (2017) found from the analysis of the data from 182 respondents depicted that the most important factor that influence the investors were company philosophy, future prediction and projection, and financial performance.

Analyzing the financial ratios of the company provides clear picture of fundamentals of the company. In fact, profitability and debt ratios are the major ratios that most of the investors look at before making investment. Bakar and Rosbi (2019) studied on impact of financial ratio on the short term performance (underpricing) of Initial public offerings for sharia-compliant companies. Linear regression analysis was implemented to evaluate the association between underpricing with independent variables namely gross margin, earnings before interest, taxes, depreciation and amortization (EBITDA), operating margin, pre-tax margin and net margin. While, the linear regression analysis indicated that the EBT margin and net margin were statistically significant on the level of IPO underpricing. Although, the profitability ratios positively influence the investor's behavior on IPOs, the debt ratio has negative impact. Banerjee and Rangamani (2015) found that with high debt to equity ratio companies are considered to be risky investment option as it has negative impact on the earning available to the equity shareholders.

Apart from the present financial health of the issuing company investor also look at the growth potential of the company. The multi bagger stocks are determined by the growth potential of the company. Rahman and Cheyahya (2019) examined the influence of growth opportunities of firms on initial aftermarket and long-term aftermarket performance. By using a sample of 403 IPOs listed on Main Market and ACE Market of Bursa Malaysia from the period of January 2000 to December 2014, this study proved a significant influence of growth opportunities on initial return and long term return. Meaning that, growth opportunity of issuing firms does matter in determining the initial and long-term aftermarket performance. In other words, the investors depend on information on the use of proceeds before they make decision to leave their money in IPO firms.

The earlier studies showed that pre-issue financial health of the company in terms of financial ratio, IPO grading, financial projections, revenue growth opportunities and company philosophy significantly influences the investor behavior on initial public offerings.

2.3.2 Idiosyncratic risk and investors' decision on IPO

In finance literature, Capital Asset Pricing Model (CAPM) includes only systematic risk in equilibrium price and excludes firm specific (idiosyncratic) risk which can be eliminated by diversification. However, in real world, investors who are unable to diversify their portfolios, should take idiosyncratic risk in to an account beside of systematic risk in prediction of expected return. Thus, idiosyncratic risk does matter for the investors who does not have well diversified portfolio. Fazil and Ipek (2013) investigated by analyzing the real market conditions in Istanbul stock exchange from the period of 2007-2010, found that idiosyncratic risk is the biggest component in the total volatility. They also found that idiosyncratic risk is not a predictor of the future return. Thus, firms with higher idiosyncratic risk is not a good investment option for the investors who invest in the limited stocks.

Apart from the systematic risks, the firm specific and sector specific risk are equally vulnerable to the investors of initial public offerings. The idiosyncratic risk is directly associated with the success or failure of the company. Mousa, Bierly and Wales (2013) studied on all US high-tech ventures that went public between 2001 and 2001. Author proposed that external risk factors including market risks, legal risks, and regulations risks have more negative effect on investor optimism while internal risk factors including management risks, operational risks, and technical risks have a more negative effect on long-term firm survival of IPO. The finding of the study revealed that both external risk factors and internal risk factors are positively associated with probability of firm failure.

The study conducted by Beaulieu and Bouden (2015) focused on the firm specific risks and IPO market cycle. Their sample consisted of 1001 IPOs in the US market between January 2000 and December 2009. For each IPO, they estimated the IPO systematic and idiosyncratic risk components based on the Fama and French model during the first month of IPO trading. Their research was motivated by whether the risk of issuers is important for the IPO cycle. They highlighted the impact of risk on the IPO cycle in terms of both initial return and IPO volume. The result of the study showed that high level of issuing firm idiosyncratic risk could reflect high information asymmetry and consequently low expected returns for IPO candidates, discouraging them from entering the market. Similarly, they found that, unlike idiosyncratic risk,

the systematic risk of previous issues plays a role in predicting IPO volume in the subsequent month.

The high level of idiosyncratic volatility discourages the individuals in making investment as they have to bear extra risks during holding period. Hur and Luma (2017) found that idiosyncratic volatility is inversely associated with unrealized gains of stock. Moreover, they showed that this negative relationship is even stronger for stocks with high holdings of individual investors. Authors also found that idiosyncratic risk is driven by capital gains overhang through dynamic loss aversion. Previous study by Barberis and Huang (2001) stated that investors account for stocks on an individual stock basis and show a behavior they call dynamic loss aversion. That is, when a stock they hold depreciates, they become more risk averse towards that stock and increase the discount rate. This then causes stock prices to fall even more resulting in excess volatility.

As the firm specific risks are major determinants of investors in new issues, the issuing firm should provide the effective risk disclosures. The one of the methods of risk disclosure is the prospectus of issuing firm. Wasiuzzaman, Yong, Sundarasan and Othman (2018) conducted study to understand the impact of risk disclosures on IPO initial returns of Malaysian firms. Using OLS regression, the study found that the overall risk disclosure in an IPO prospectus and disclosure of investment risks have significant positive impacts on IPO initial returns. Unlike previous studies (Mousa et al., 2013), other risk factors such as internal risk and external risk are not significant in influencing IPO initial returns. This depicted that, especially when investing in IPOs, Malaysian investors focus mainly about the investment risks disclosed by the firms. It also seemed to indicate that the risk profile of internal and external factors seemed to be generic in nature, providing little or no significant information to the investors while evaluating the risk of the IPO.

After reviewing the literature related to idiosyncratic risk and investor behavior on IPO, there is empirical evidences of negative relationship between them. Thus, firms with high level of idiosyncratic risk discourages investors to invest as idiosyncratic risks are not provided with risk premium.

2.3.3 Expected return and investors' decision on IPO

Expected return is instrumental in investor decision making. Investors want returns in terms of capital gains and periodic returns after they commit funds in stocks. The demand for the initial public offerings is influenced by investor's expectations on the return. Eng and Aw (2000) analyzed the impact of fundamentals on initial public offering firms on two categories of investor's i.e. large investors and small investors in Singapore. They found that investor's demand for the initial public offering is positively associated with the earnings yield and expected stock returns.

Not only expected return is dominant for the investors, but investors also give equal importance to their experience with the historical returns of the similar type of stocks. Kaustia and Knupfer (2008) investigated the link between individual investors' decision to subscribe to initial public offerings and the returns on past IPOs. The results have implications for the IPO and asset pricing literature, particularly concerning investor sentiment. They are also related to a more general question about the role of reinforcement learning in investment decisions. Based on 183,000 individual investors in 57 IPOs over 1995–2000, they found that returns that an investor earns on past IPO investments has a positive impact on this investor's willingness to participate in future IPOs. Simply, the individual repeats behavior that has produced outcomes in the past and avoids behavior that has produced negative outcomes. Importantly, the individual gives more weight to personal experience. It can be inferred from this study that investors' participation to their first IPOs shows that initial experience has both immediate and long term impact on investor propensity to invest in the similar financial product in the future.

Although investors can get good returns of IPOs in short run, the long term return is determined by multiple factors. Mumtaz et al. (2016) analyzed the robust predictors of long-run performance of initial public offerings listed in Karachi stock exchange. The findings of the study reported the following: (i) financial firms seem to produce better returns as compared against nonfinancial firms in the long run, (ii) firms that use more leverage seem to generate better performance when compared against firms that use less leverage, (iii) there is a negative relationship between the short-term return and longer-term performance, (iv) IPOs issued during high-activity periods seem to

generate lower returns in long-run, and (v) when the promoters hold a higher proportion of the shares, this adds value to the firms.

Every investor makes decisions to invest in that stock which provides capital gain and dividend. Higher annual returns motivate investors towards investment in IPO. Srinivas and Rao (2017) made a study with an attempt to find out the factors influencing investment decision in IPO among retail individual investors. It clearly showed that capital appreciation and safety in investment are the driving forces of the investment. Most of the respondents were investing their funds for very short period of time i.e. less than 3 months. They were subscribing shares in primary market through IPO and selling it in secondary market for higher return. Previous study by Sharma, Singh and Awasti (2017) also found that expected gains is dominant component in investment decision. Investors considers accounting Information which includes factors such as dividend paid, insider's information and expected capital increased while investing in stocks.

However, the capacity of the new firms to provide good returns for investors depends on the multiple factors. Dhamija and Arora (2017) revealed that IPOs by government-owned companies, IPOs backed by reputed lead managers, IPOs made during positive market sentiments, IPOs with a higher premium, IPOs with large issue size, larger level of oversubscription and larger level of promoter holding have performed relatively better. These factors contribute to the aftermarket survival and returns to the investors. Thus, the investment demand of the IPOs of different firms varies.

Earlier studies revealed that expected return is the functions of different factors. The rational investors make the investment decision on the basis of the expected return. They demand returns on the stock as well as period return in the form of dividends.

2.3.4 Sectoral performance and investors' decision on IPO

Investor's sentiment towards the stocks of particular sector affects the stock return, which in turn have impact on investor's holding of stocks. The performance of sectoral stocks or sectoral indices influences the investor decision in primary market. Mauer and Senbet (1992) investigated the role of secondary market in pricing of initial public offerings by using the simple random sampling consisting of 1008 investors. Authors found that price differential reflects the primary market risk

premium due to low demand from the investors and risk in terms of imperfect substitutability of IPO in the secondary market. Thus the smaller price differential means high demand of the stock from the investor side and degree to which the sectoral stocks perform in the secondary market. Furthermore, authors found that IPO industry classification determines the significant portion of variability in the underpricing and demand of the investors.

Among the different companies of distinct sectors listed in stock exchange, the demand of the stocks by investors vary across the sectors. In fact, the profit potential of the sectors and overall sectoral sentiments play a crucial role in investor decision. Neupane, Paudyal, and Thapa (2014) studied on firm quality or market sentiments: what matters more for IPO investors. They used sample of 172 investors in Bombay Stock Exchange. The empirical results showed that retail investors give greater weight to market sentiment as compared to the quality of the firm. Retail investors' participation is positively correlated with institutional investor participation. These findings challenge the view that retail investors decide on sentiment because of the lack of information on firm quality.

In fact, overall industry and the market level factors have strong relationship with the long term performance of IPOs. Khan and Ramkrishnan (2018) examined the IPO's long-run performance and its determinants in Pakistan at firm, industry and market level. The long-run returns were measured by using the Buy-and-hold adjusted returns (BHAR) based on both equally-weighted and value weighted. The regression analysis showed that in Pakistan the long-run performance is significantly influenced by; initial returns, underwriter reputation, over subscription ratio at firm-level; munificence, and dynamism at industry level; and market condition, and market sentiment at country level. Thus, the investors will first observe the market whether it is a suitable time for them to enter the market and invest in the IPOs. Rahman and Cheyahya (2019) revealed that only market return significantly influences long term return. Otherwise, investors make an investment in selective sectors only.

The review of the earlier studies depicts that the sectoral performance of IPO issuing firm and investor sentiments towards a particular sector and overall market sentiments has significant influence on their demand of IPO.

2.3.5 Corporate governance and investors' decision on IPO

Corporate governance is the predictor of firm value. A company with good governance system provides attractive investment opportunity for investors. Chang and Wei (2011) examined the impact of governance strength on individual investors' decisions and investor's perceptions on credibility of financial reporting through the experimental setting of 113 individual investors. It also analyzed whether the investment experience of investors influences their perceptions and decisions. The experimental results showed that governance strength increases the price that investors are willing to pay, along with the perceived firm reporting credibility. Furthermore, the authors found that the associations are moderated by the investment experience of individual investors, denoting that more-experienced individual investors are better able to consider governance strength into their judgment than less-experienced individual investors.

Regardless of the age of the firm, the credibility of firm is key for investors' decision. Investors choose to invest in the firm that follows good governance mechanism due to the fact that good governed firms deliver superior long term value. Darani (2012) empirically analyzed the relationship between corporate governance and after market performance of Malaysian IPOs during the years 2007 to 2010. The examination of the Malaysian listed companies showed that corporate governance has positive and significant impact on IPO returns.

A rational investor observes the governance mechanisms of firms in terms of investors' protection methods, disclosure and transparency. In case of the new firms issuing shares, the corporate governance mechanism is even more important for the investors as its practices and governance mechanisms are unknown to the investors. Sundarasan, Goel, and Zulaini (2017) investigated the roles of the institutional factors of investor protection, transparency level and legal origin on IPOs' initial returns by using the 4100 IPOs of 28 OECD countries. The multiple regression analysis was used for hypothesis testing. In general, the positive relationship indicated that high investor protection increases investors' confidence as they are being well compensated for the risk and uncertainty assumed in an IPO investment. Another study by Baluja (2019) stated that firms with higher quality governance are more likely to survive even in challenging economic circumstances. The prominent factors

such as board of directors, board independence, ownership concentration, financial disclosure have significant impact on IPO survival.

In order to provide better value for the investors the firm should have internal control and risk management at internal level and disclosure and transparency in external level. Qeisari and Ahmadi (2019) studied the relationship between corporate governance and firm value in companies listed on Tehran Stock Exchange (TSE). Tobin Q ratio was used to analyze the firm value. Data were collected from 62 companies listed on TSE from 2009 to 2013. Corporate governance was measured through a checklist of internal and external governance components. Internal elements of corporate governance such as all features board of directors and other preventive factors were used in internal governance checklist. The external elements of corporate governance such as all shareholders and other preventive factors were included in the external governance checklist. The results indicated that internal and external elements of corporate governance had positive and significant relationship with firm value. The increased firm value subsequently maximizes value to the shareholders.

The earlier studies showed that understanding the significant corporate governance factors that influence the likelihood of IPO survival assist investors while making investment decision as investors could assess the returns/risks more properly.

2.3.6 Bandwagon effect and investors' decision on IPO

The tendency to follow the actions, beliefs, ideas of others can occur because individuals prefer to conform. The ultimate result is bandwagon effect regardless of underlying evidences. Thus, investors sometimes make the irrational decision while investing in the IPOs rather than making thorough analysis of the issuing firm. Bikhchandani and Sharma (2001) stated that in the developing markets where, as the evidence suggests, there is a greater tendency to herd. In these markets, because of weak reporting requirements, lower accounting standards, lax enforcement of regulations, and costly information acquisition, information cascades and reputational herding are more likely to arise. Also, because information is likely to be revealed more slowly, momentum investment strategies could be potentially more profitable.

As a result of bandwagon effect, the uninformed investor follows the action of others. Yong (2011) studied on winner's curse hypothesis and the bandwagon effect in initial

public offerings, by using IPO data from January 2001 to December 2009 in Malaysia. The average initial return for the 160 Malaysian private placement IPOs was 18.51 percent as opposed to the average initial return of 28.84 percent for the 210 non-private placement IPOs. It gave support to the winner's curse hypothesis, where uninformed investors (using non-private placement IPOs as the proxy) require a higher initial return in the absence of informed investors (using private placement IPOs as the proxy). The study also found that when there are large number of informed investors in IPO as compared to uninformed investors, it brings with the bandwagon effect, in that particular stock, which provides higher initial return.

Similarly, the subscription status of the new issues is also related with herding behavior. By seeing the huge demand of investors on the IPO, individual investor prefers to conform to the mass. Wang, Tang, and Chen (2017) investigated on effect of IPO subscription on herd behavior in Taiwan's initial public offerings (IPOs). Authors stated that the Taiwan Stock Exchange discloses subscription demand information, and individual investors request the highest subscribed shares; this can lead to herding. The empirical results of this study showed that investors show increased interest toward IPOs with extremely high demand from investors. The herd behavior in Taiwan's IPO market was found to be associated with the winner's curse theory. Additionally, investors overreacted to subscription demand information in the short run, which leads to negative long-term returns.

In the market, only few investors have the perfect information about new issues. The demand of the low quality IPOs is determined by how well the firm convince these groups of investors. Because, the uninformed investors tend to follow the action of others. Doherty (2018) reviewed and synthesized the existing literature, methodologies and evidence on informational cascades in financial market. Author found that the pricing of an IPO is focused at convincing earlier investors and often manipulated in order to induce early investors to pay no attention their private information. The findings focused on the simple path dependence model which assumes perfect communication only from early to late investors and implies that each market participant observes only his signal and the privately held information of early approached investors. In that situation, investors base their investment decisions on previously high or low demand. This situation predicts success for underpriced IPOs

and failure for the overpriced IPOs as potential investors are numerous and a small group of them jointly can easily determine the correct value of an IPO.

The review of above articles shows that in the information cascades and bandwagon effect affect the investor decision while making investment. The degree of the influence is even greater in the developing countries where market is not efficient and sophisticated.

2.4 Article review in context of Nepal

The common stock is most popular form of financial instrument in Nepal. Due to the limited investment opportunities, investors have very limited options. Among them, IPOs provide investment opportunities for the mass people. As the primary market transfers capital from surplus sectors to productive investment, it should be systematic, well managed and safeguard the investor's money. However, primary market is still unsystematic, vulnerable and even small in size in the context of Nepal (Gurung, 2017). The Nepalese investors trust only few sectors while making investment. The banking and finance sector are the most popular investment sector for the Nepalese investors (Kadariya, 2012).

2.4.1 Literature related to Nepalese investors' decision making behavior

In Nepalese context, few research studies have been conducted in exploring the investor behavior, their decision in the securities of primary market as well as secondary market. Adhikari (2010) studied on investment behavior of Nepalese investors by using the sample size of 60 investors. Author found that Nepalese investors invest in shares for both financial and non-financial reasons. Author also found that behavioral factors including heuristic, herding and overconfidence have an important influence in Nepalese investors' investment decision making process.

From the behavioral finance perspective, there is a tendency among Nepalese investors to conform to others while making investment decision. Similarly, Nepalese investors overestimate the precision of their information. Kadariya (2012) investigated on important factors affecting investor's decision by using sample size of 185 investors. The simple descriptive analysis was conducted and the findings indicated that the limited investors use their own skills and analytical power in

investment decision. The most influencing factors for decision making are media and friends. There is a tendency of investors believing on their ability when they earn and blaming for market when they incur losses. The tangible components such as capital gains, dividends, earnings, and book value and the intangible component like market noise are considered the most important factors for investment decisions.

As every investor around the world invests for capital appreciation and periodic income, this investment objective is similar to Nepalese investors. Pokharel (2018) stated that the reasons for investing in shares are mostly liquidity and high rate of earning. In the secondary market, the investor's decision is influenced by advice of brokers and then movement of indices. Most motivating factor for investment for investors are capital gains, liquidity and dividend.

For Nepalese investors, their investment decision is influenced by the combination of financial factors and behavioral factors. Joshi (2018) studied on stock market growth and investment decision by using the sample of 200 investors. Author found that majority of stockholders have knowledge and information about the company and therefore their investment decision is strongly affected by their opinion. Similarly, their investment decisions are also strongly influenced by their family and friends' opinion. Investors not only invest to earn higher return but also invest to minimize the risk. The investment decisions are not solely based on position of financial statement and most of times their decisions depend on the firm's reputation, opinion of majority of stakeholder and status of the firm.

From the analysis of general IPO factors, there is empirical relationship of number of factors with investor's decision and initial return. Pradhan and Shrestha (2016) stated that firm size, reputation of issue manager, market condition and subscription rate have positive and significant relationship with initial return in Nepalese stock market. Whereas, issue size has negative and significant relationship with initial return.

In sum, Nepalese investors have some knowledge about financial diversification and fundamental analysis but it is affected by their level of education. The Nepalese assume themselves to be a rational investor but it is affected by their age and experience.

2.4.2 Literature related to hydropower development

The hydropower projects development by independent power producer has been possible due to public private partnership model. Due to huge potential of hydropower development in Nepal, it has grabbed the attention of private sector. On the other hand, long gestation period, requirement of huge capital investment and long recovery period have made it difficult for hydropower developers for accessing long term source of capital.

Subedi (2018) examined the current status and availability of financing to hydro power companies in Nepal. The study used pooled cross sectional data of listed companies in NEPSE. A regression equation was employed to determine the effect of financing constraints on investment decisions of hydro companies. The study results confirmed that internal cash flows and financial leverage are the major determinants of financing new projects in Nepalese hydro companies. This relationship strongly supported hypothesis that capital market frictions as the major obstacle of hydro investment in Nepal. Although the hydropower companies have access to financial institution and foreign capital, still the financing gaps is huge and they use their internal cash flows for investment. Additionally, the volatility of cash flows and sales, long gestation period create significant credit risk to banks and lending institutions that hinder them to flow the credit as per demand.

Similarly, Dolma Development Fund (2014) studied on private sector opportunities on renewable energy sector. After the policy review and primary research with the hydropower development companies, they come with the lots of finding. First, listing of a hydropower company in the construction stage is attractive for the promoters but has some risks for the equity investors. Any delay in the construction of the hydropower project can have serious effect on its future cash flows and hence the associated benefits with it for shareholders such as dividends. Second, Valuation of Hydropower enterprises in Nepal is challenging due to limited historical financial data and lack of adequate industry benchmarks lack of data. Third, Estimated hurdle rate for hydropower sector in Nepal ranges from 13% to 16% for small and medium size projects. Thus hydropower projects with internal rate of return (IRR) of 16% or less, does not create significant value for the investors.

Apart from the financial constraints, hydropower development in Nepal suffers from other different challenges. There are some infrastructural and regulatory challenges such as inadequate infrastructure and high T&D losses in transmission and distribution landscape, seasonality challenges for ROR hydropower projects, access to finance and role of PE/VC investors, overvaluation of the enterprises by the promoters, social challenges, over dependency on NEA as a single buyer, policy and regulatory challenges and challenges in currency fluctuation (Dolma Development Fund, 2014). Furthermore, (Shahi, 2014) stated that social objection, high corruption rate, and unavailability of technology and technical manpower are also major obstacles for hydropower development in Nepal

Nevertheless, there is big investment opportunity for investors with development of cost effective small and medium-sized projects. But it requires supporting policies and favorable environment in investment in terms of power trade agreement, restructuring of the power sector and transmission network expansion, improving the efficiency of transmission and distribution system, electricity price reform, power purchase agreement and political and policy stability (Shrestha, 2014). Moreover, Shahi (2014) stressed on encouragement of private sectors investment in hydropower development, attracting investment from community and private entrepreneurs, safety and sector specific policies and regulatory mechanism for well-functioning of capital markets allows efficient flows of funds either in the form of equity or debt.

In the conclusion of the literature review part, Table 2.1 depicts the empirical evidences on the impact of pre-issue financial health, idiosyncratic risk, expected return, sectoral performance, corporate governance and bandwagon effect on investors' decision making behavior on IPOs.

Table 2.1

Review of literature

Author	Variable	Methodology	Sample	Major findings
Deb and Marisetty (2010)	Pre-issue financial health	Regression analysis	160	Firm's asset quality, management efficiency and IPO grading affects the investment decision.
Shivaprasad and Kallanagouda (2013)	Pre-issue financial health	Ordinary least square regression	131	The study found that IPO grading has an important influence while considering investment alternative and it is found that IPOs having good fundamentals generated higher initial return at the time of listing and also good long-term performance in the secondary market.
Khatri (2017)	Pre-issue financial health	Factor analysis and regression analysis	182	Results depicted that the most important factor that influence the investors were company philosophy, future prediction and projection, and financial performance. In fact, fundamentals of the organization are another important factor investors considers while investment in IPO.
Bakar and Rosbi (2019)	Pre-issue financial health	Linear regression analysis	205	They studied on impact of financial ratio on the short term performance (underpricing) of Initial public offerings for sharia-compliant companies. The study found that profitability and debt ratios are the major ratios that most of the investors look at before making investment.
Mousa, Bierly and Wales (2013)	Idiosyncratic risk	Trend analysis and linear regression	All new listed US high tech	Author proposed that external risk factors including market risks, legal risks, and regulations risks

		analysis	venture in the period 2001-2011	have more negative effect on investor optimism while internal risk factors including management risks, operational risks, and technical risks have a more negative effect on long-term firm survival of IPO.
Beaulieu and Bouden (2015)	Idiosyncratic risk	French and Fama	101	The study stressed that higher idiosyncratic risk reflect high information asymmetry and low expected returns for IPO candidates, discouraging them from entering the market.
Hur and Luma (2017)	Idiosyncratic risk	Descriptive analysis	230	The result found that idiosyncratic volatility is inversely associated with unrealized gains of stock. Moreover, they showed that this negative relationship is even stronger for stocks with high holdings of individual investors.
Eng and Aw (2000)	Expected return	Analysis	820	They found that investor's demand for the initial public offering is positively associated with the earnings yield and expected stock returns.
Kaustia and Knupfer (2008)	Expected return	Linear regression analysis	183,000 individual investors of 57 IPOs	They found that returns that an investor earns on past IPO investments has a positive impact on this investor's willingness to participate in future IPOs. Simply, the individual repeats behavior that has produced outcomes in the past and avoids behavior that has produced negative outcomes.
Srinivas and Rao (2017)	Expected return	Descriptive statistics	270	The results depicted that investors' demand for the initial public offering is positively

Mauer and Senbet (1992)	Sectoral performance	Correlation and regression analysis	260	associated with the earnings yield and expected stock returns. The study proposed that industry classification and profit potential of sector significantly affects the IPO demand of investors.
Neupane, Paudyal, and Thapa (2014)	Sectoral performance	Linear regression analysis	172	The empirical results showed that retail investors give greater weight to market sentiment as compared to the quality of the firm.
Khan and Ramkrishnan (2018)	Sectoral performance	Regression analysis based on Buy-and-Hold Adjusted Returns (BHAR)	243	The regression analysis showed that investor's decision to apply for IPOs is significantly influenced by; initial returns, underwriter reputation, over subscription ratio at firm-level; munificence, and dynamism at industry level; and market condition, and market sentiment at country level.
Chang and Wei (2011)	Corporate governance	Experimental analysis	113	The experimental results showed that governance strength increases the price that investors are willing to pay, along with the perceived firm reporting credibility. Furthermore, the authors found that the associations are moderated by the investment experience of individual investors, denoting that more-experienced individual investors are better able to consider governance strength into their judgment than less-experienced individual investors.
Sundarasan, Goel, and Zulaini (2017)	Corporate governance	Multiple regression analysis	4100 IPOs of 28 OECD	The positive relationship indicated that high investor protection increases investors' confidence as

				countries	they are being well compensated for the risk and uncertainty assumed in an IPO investment.
Qeisari and Ahmadi (2019)	Corporate governance	Tobin Q ratio	62		The study found that elements of corporate governance significantly affects firm value and investors' decision.
Yong (2011)	Bandwagon effect	Regression analysis	160		The study depicted that uninformed individual investor prefers to conform to the mass.
Wang, Tang, and Chen (2017)	Bandwagon effect	Regression analysis	312		The empirical results of this study showed that investors show increased interest toward IPOs with extremely high demand from investors.
Doherty (2018)	Bandwagon effect	Synthesized the existing literature, methodologies and evidence on informational cascades in financial market	-		Author found that the pricing of an IPO is focused at convincing earlier investors and often manipulated in order to induce early investors to pay no attention their private information. The findings focused on the simple path dependence model which assumes perfect communication only from early to late investors and implies that each market participant observes only his signal and the privately held information of early approached investors.

2.5 Research gap

There has been numerous research done worldwide covering different aspects of securities market, stock trading mechanism, behavioral finance, determinants of IPO subscription etc. In Nepal, very few research has been made on the status of primary market response and factors determining the investment decision towards IPOs. After

reviewing plenty of research papers, most of the research study is concentrated in banking and financial sectors and its performance only. As Nepalese securities market is dominated by the securities of the financial sectors, most of the studies have been done covering the factors affecting the investment behavior in the banking and financial sectors. However, there are various sectors under which different companies are listed in the Nepal stock exchange. These sectors are untouched in terms of research studies. After the failure of the Shiva Shree Hydropower company to get positive public response towards its issued shares, it provided researcher the new research problem to study in detail. Now, there is increasing level of investors' confidence in the IPOs of hydropower developers. To answer the research questions, this study has considered the personal characteristics of investors, firm level variables and market level variables.

2.6 Theoretical framework

This study focuses on the variables that affect the investors' decision making behavior on IPOs of hydropower developers. This study will try to explore the major factors that influence the behavior of Nepalese Investors towards the initial public offerings of hydropower developed by independent power producers. Major variables i.e. pre-issue financial health, idiosyncratic risk, expected return, sectoral performance, corporate governance and bandwagon effect have been undertaken through the findings of the literature review.

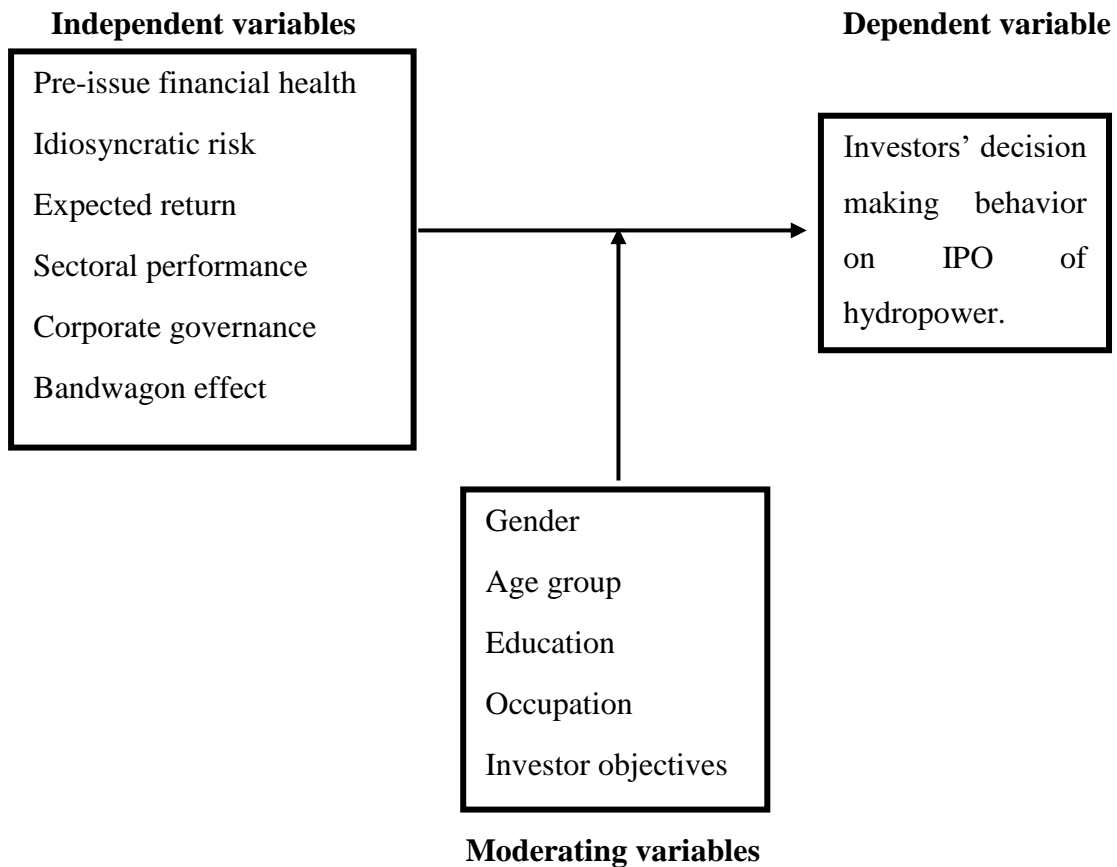


Figure 2.1: *Theoretical framework*

Source: Boubaker and Mezhoud (2012).

2.6.1 Specification of variables

This section deals with the specification of variables and assumptions that are used for the current study. The explanations have been made for the dependent variable, independent variables and moderating variables as follows:

Dependent variable

This study has analyzed the predictors of investors' decision making behavior on IPOs of hydropower developers. Investors' decision making behavior in IPOs means willingness of investors to participate in the IPOs issued by the different sectors. It also includes the investor satisfaction with the past investment in IPOs of hydropower developers. Similarly, investors' willingness to recommend IPOs to others are also the signs of recurring level of investment. Since the IPOs of hydropower has oversubscription in the latest issue, this study focuses on in-depth analysis on what are

the underlying reasons for oversubscription of IPOs of previously neglected sector i.e. hydropower.

Independent variables

An independent variable affects the dependent variable. This paper has identified the following independent variables that are under the study:

Pre-issue financial health

When investing in the IPOs issue offered by the companies, investors consider the financial statement and key useful ratios such as EPS, Debt to Equity ratio, profitability ratio etc. In the context of Nepal, the information provided in the form of prospectus of the issuing company plays the important role to grab the attention of the general public. The information such as IPO rating, estimated future earnings, net worth per share, bankability, financial position etc. are the key information investors search before they make the investment (Khatri, 2017).

Idiosyncratic risk

The idiosyncratic risk is similar to the unsystematic risk. This type of risk is applicable to the small number of stocks. They are particular to the specific firms and sometimes to the specific sector. The potential risks for the hydropower companies are long payback period, project time and cost overrun, lack of the transmission lines, volatility in electricity generation due to ROR type of projects and uncertainty about the future position of investors (Shrestha, 2014).

Expected return

Return on the investment is one of the major factors that influence the investment decision. Expected return includes both the capital gain and dividend yield (Singh & Awasti, 2017). The investors want capital gain in the shares of the issuing companies after it is listed in the secondary market and they also want regular dividend paying companies to appreciate the value of their investment. Besides that, initial return is very important for the investors who are looking for immediate profit (Mumtaz et al., 2016).

Sectoral performance

Current market performance of the companies in the same sector determines the intensity of investors' decision towards IPOs of a company. If the current market performance of similar company is satisfactory then the response is expected to be positive. Neupane et al., (2014) used the sectoral sub-indices, total market capitalization of sector in stock market and investor sentiment to measure the variable of sectoral performance.

Corporate governance

The corporate governance of the issuing company affects the investment decision. Not only that the corporate governance of the similar companies in the similar sector also affects the investor's behavior to the subsequent IPOs. The investors want regular corporate disclosure, good internal control mechanism, AGM in the stipulated time, financial statement certified by the independent auditors and in the standard format (Qeisari & Ahmadi, 2019). Similarly, investors always look for the independency of the board of directors and strict supervision and regulation of the companies by the regulator.

Bandwagon effect

Various research has found that market hearsay people tendency to align their behavior with collective belief have significant impact on the investment decision of the investors. In the IPO, people may tend to participate in those IPOs on the basis what other people are doing. Thus, the coverage of the IPO subscription rate per day, experience of the other investors in the same sector and recommendation of friends, family and relatives drive the investment decision (Adhikari, 2010). In the country like Nepal, there are many unaware investors and they make investment solely on the basis of what is going in the market rather than proper study and analysis.

CHAPTER III

RESEARCH METHODS

The research methods refer to the specific procedures or techniques that have been used to gather, process, analyze the information and draw the conclusion. This chapter pictures the blueprint of how this study has been conducted. The different methods such as research design, population and sample size, data collection procedures, instrumentation, validity and reliability and data analysis tools are briefed in the following section.

3.1 Research design

The research design serves as framework for the study, guiding the data collection and analysis, research instruments to be used and conclusions to be drawn from the data analysis tools. It guides to the collection and analysis of the data and finally test specific hypothesis in order to examine the relationship between influential factors and investors' behavior towards IPOs of hydropower.

To fulfill the research objective, descriptive research design has been applied to deal with the factors influencing individual investor's decision making behavior towards IPOs of hydropower. The descriptive research design helps for fact finding, searching adequate information about factors affecting investor's investment decisions and describing the characteristics of the variables used. This design has been employed in order to assess the opinions, perception, preferences and characteristics of the investors. Inferential testing has been used to find the impact and relationship between pre-issue financial health, idiosyncratic risk, expected return, sectoral performance, bandwagon effect, and corporate governance on investor's decision-making behavior towards IPOs of hydropower.

3.2 Population and sample size

The recent trend in the IPOs of hydropower companies is not quite different from the rest of the non-financial sectors and financial sector. As for the research objective, the individual investors investing in shares of hydropower is taken in to consideration as population. Since, the population is infinite, it was difficult to include whole population for the study.

A survey was conducted among 385 respondents (n=385) to collect their responses. Sekaran (2003) suggested that, in multivariate research, the sample size should be several times preferably 10 times or more as large as the number of variables in the study. Thus, sample size 385 is justified. The non-probability sampling method i.e. convenience sampling has been used to distribute the questionnaires to different individual investors who made investment in IPOs of hydropower. The sample consisted of variation in gender, age, education, occupation and investor's objective.

3.3 Nature and sources of data

Primary data has been used for the study. Primary data has been collected through survey method using structured questionnaire. Sekaran (2003) stated that in quantitative research, the closed ended questions are suitable for coming into the conclusion. Questionnaire consisted of three sections. The first section includes questions related to investors' socio-demographic characteristics like gender, age, education, and occupation and investment objectives. The second section includes the question related to independent variables. The last section includes the questions related to dependent variable.

3.4 Data collection procedures

For the purpose of the study, only the primary data has been collected, processed and analyzed. However, the secondary data helped in the construction of theoretical framework, questionnaire and sampling design. Primary data has been collected through self-administered questionnaire. A questionnaire survey was conducted both through the online method and physical distribution. Out of 385 questionnaires, 260 questionnaires were collected online and 125 questionnaires were collected from physical distribution. The responses on the designed questionnaire has been collected in three phases. On first phase, the responses from the different investors in IPOs of hydropower were collected from the investors' forum in social media. On second phase, the responses were collected from the student and employee categories. On third phase the remaining responses were collected.

3.5 Instrumentation

As earlier stated, questionnaire is the only source of data for this study; much attention has been paid to designing of the questionnaire. For this study, closed-ended questions or structured questions with given alternative choices has been designed primarily in order to call for responses. The questionnaire consisted of three parts. The first part is explanatory part and it provides the basic information of the research, assurance of confidentiality and responding guidelines. The second part is classification part and it is designed to gather investor's characteristics such as age, gender, education and occupation and investment objectives. The third part has been designed to fulfill the research objectives. This part consists of Likert scale questions.

The dependent variable of the study "Investors' decision making behavior on IPOs of hydropower" is measured by asking respondents to provide an opinion. Example of construct included in Investors' decision making behavior on IPOs of hydropower is "I am ready to invest in the IPOs of hydropower developers". The response was coded on the five-point Likert scale as 1 = "Strongly disagree", 2 = "Disagree", 3 = "Neutral", 4 = "Agree", 5 = "Strongly agree".

The independent variables are between pre-issue financial health, idiosyncratic risk, expected return, sectoral performance, bandwagon effect, and corporate governance. Different constructs from the previous studies has been used to measure these variables. The responses were coded on the five-point Likert scale as 1 = "Strongly disagree", 2 = "Disagree", 3 = "Neutral", 4 = "Agree", 5 = "Strongly agree".

Furthermore, investor's characteristics are based on the separate coding according to the number of categories included in the question. Gender was measured as (Male = 1 and Female = 2). Age was measured in years using three categories: 1 = 18-28 years, 2 = 29-45 years, 3 = above 45 years. Education level was measured using three categories: 1 = High school, 2 = Bachelor and 3 = Masters and above. Occupation was measured using four categories: 1 = Self-employed, 2 = Employee, 3 = Student, 4 = others. Finally, investors' objective on IPO investment was measured using three categories: 1 = Initial returns, 2 = Medium term gains and 3 = Long term appreciation.

3.6 Validity and reliability of data

For the validity and reliability, review of literature was done from various sources. In order to make data true and reliable, pilot testing was applied. Five percent of the sample size (5% of 385 = 20 respondents) was taken for the pilot study. This provided researcher areas to revise the questionnaire and necessary corrections was made before making questionnaire survey to the final respondents.

Statistically, Cronbach's alpha has been used to test reliability and validity of the primary data. Cronbach's alpha allowed researcher to measure the reliability of the different categories. It consisted of estimates of how much variation in scores of different variables is attributable to chance or random errors. As a general rule, a coefficient greater than or equal to 0.7 is considered acceptable and a good indication of construct validity. Furthermore, the advice of the expert and supervisor has been taken into account for increasing the validity and reliability of data.

The values of Cronbach alpha have been recorded more than 0.7 levels for each variable taken of the study. Thus, it can be concluded that data collected have been consistent and reliable for the test.

Table 3.1

Reliability statistics

Variables	Number of items	Cronbach alpha
Pre-issue financial health	5	0.867
Idiosyncratic risk	5	0.835
Expected returns	4	0.794
Sectoral performance	4	0.782
Corporate governance	4	0.866
Bandwagon effect	4	0.807

3.7 Data analysis plan

The responses of the respondents in the questionnaire was given unique numerical code. After that, the data was entered systematically and logically into the spreadsheet and SPSS software for the purpose of enabling numeric calculations. Each of the questions was given the scale based on the nature of the question. The required

editing has also been done after entering the data into the spreadsheet and SPSS. Then, the numerical data was classified, tabulated and processed after which the process of analysis was done. The descriptive statistics such as frequency, percentage, mean and standard deviation has been used to describe the variables. Similarly, the second part has been testing of the hypotheses through inferential statistics such as correlation, regression, t- test, and ANOVA. These tests allowed researcher to make the inferences about the population from the sample size of 385 investors. The proposed regression model for the study is given in equation (i).

This model depicts the causal model. It explains the impact of pre-issue financial health, idiosyncratic risk, expected return, sectoral performance, corporate governance and bandwagon effect on investors' decision making behavior on IPOs of hydropower developers. The proposed regression equation is as follows;

$$ID = \beta_0 + \beta_1PF + \beta_2IR + \beta_3ER + \beta_4SP + \beta_5CG + \beta_6BE + B_7Gen+ B_8Age+ B_9Edu+ B_{10}Occ+ B_{11}Io + \varepsilon \dots \dots \dots (i)$$

Where, ID = Investors' decision making behavior on IPOs of hydropower developers, β_0 = Estimated intercept, β_1 - β_{11} = Regression coefficients, PF = Pre-issue financial health, IR = Idiosyncratic risk, ER = Expected return, SP = Sectoral performance, CG = Corporate governance, BE = Bandwagon effect, Gen = Gender, Age = Age, Edu = Education, Occ = Occupation, Io = Investor's objectives & ε = Standard error.

Table 3.2

Expected Signs

Variables	Expected signs	Past literature
Pre-issue financial health	Positive	Deb and Marisetty (2010); Khatri (2017)
Idiosyncratic risk	Negative	Beaulieu and Bouden (2015); Hur and Luma (2017)
Expected return	Positive	Eng and Aw (2000); Srinivas and Rao (2017)
Sectoral performance	Positive	Mauer and Senbet (1992); Neupane, Paudyal, and Thapa (2014)
Corporate governance	Insignificant	Chang and Wei (2011); Qeisari and Ahmadi (2019)
Bandwagon effect	Positive	Yong (2011); Doherty (2018)

CHAPTER IV

ANALYSIS AND RESULTS

This chapter presents the analysis of data and interpretation of results of the study. The data collected were analyzed and presented in tabular form. It includes the demographic profile of respondents, correlation, regression, analysis of variances as well as independent samples t-test and their interpretations. It further intends to answer the research questions, fulfill the objectives and test the hypotheses.

4.1 Demographic profile of respondents

In this study, the demographic profile of respondents describes the characteristics of respondents according to variables such as gender, age group, education, occupation and type of investment objective. Table 4.1 depicts the socio-demographic characteristics of respondents. Out of 385 respondents, 58.4% were male and 41.6% were female. It shows the domination of male investors in the market. Similarly, 54.3% respondents were under age group of 18-28 years, 24.7% respondents were in the age group of 29-45 years, 21% respondents were in the age group of above 45 years. This results depicted that the young investors represent large portion of total investors in the market. Likewise, respondents with education qualification of high school, bachelor and masters and above were 22.6%, 41% and 36.4% respectively. Moreover, 18.4% respondents were self-employed, 34.3% respondents were employee, 34% respondents were student and 13% respondents were engaged in other profession. Furthermore, 27% respondents had the primary investment objectives of initial returns, 32.5% respondents had the primary investment objective of medium term gains and 40.5% respondents had the primary investment objectives of long term appreciation. It clearly shows that majority of Nepalese investors invest for short to medium term returns. From the analysis of the socio-demographic variables of the respondents, it has been observed that there is enough variation in the socio-demographic characteristics of the respondents. In other words, investors from different socio-demographic background have been included in the sample size, which is useful for sufficient heterogeneity in the data.

Table 4.1
Respondents' socio-demographic characteristics

Variables	Frequency	Percentage
Gender		
Male	225	58.4
Female	160	41.6
Total	385	100.0
Age Group		
18-28 years	209	54.3
29-45 years	95	24.7
Above 45 years	81	21.0
Total	385	100.0
Education		
High school	87	22.5
Bachelor	158	41.0
Masters and above	140	36.4
Total	385	100.0
Occupation		
Self employed	71	18.4
Employee	132	34.3
Student	131	34.0
Others	51	13.0
Total	385	100.0
Investment objective		
Initial returns	104	27.0
Medium term gains	125	32.5
Long term appreciation	156	40.5
Total	385	100.0

4.2 Descriptive statistics

In the descriptive statistics section, descriptive statistics of the variables under study are presented and analyzed. Mean, standard deviation and ranges are used to describe the variables. Based on rating given by 385 respondents on Likert scale statements, the descriptive statistics has been presented and analyzed.

4.2.1 Pre-issue financial health

Using the construct of pre-issue financial health, respondents were given five statements that intended to measure pre-issue financial health. They rated the statements from 1 to 5 (1 =Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly agree). Based on respondents' rating from 1 to 5, descriptive statistics of pre-issue financial health has been presented in Table 4.2.

Table 4.2

Descriptive statistics of pre-issue financial health

Particulars	Min	Max	Mean	S.D.
A. IPO grading of most of hydropower developers is above average.	1	5	2.860	1.051
B. The net worth per share of hydropower developers is satisfactory.	1	5	2.839	1.028
C. The financial position of hydropower developers at the time of IPO issue is satisfactory.	1	5	2.914	0.990
D. Hydropower developers have easy access to long term financing.	1	5	3.086	1.046
E. Hydropower developers have realistic earnings and cash flow forecasts for next three years.	1	5	2.883	1.020
Pre-issue financial health	1	5	2.916	0.831

In statement, investors were asked about IPO grading of most of hydropower developers is above average. The mean of the same is 2.860 with standard deviation of 1.051 which means they find IPO grading of hydropower below the average rating.

In second statement, they were asked about the net worth of hydropower developers at the time of issue. And, the mean is 2.839 with standard deviation of 1.028 which means they find the net worth of hydropower developers unsatisfactory.

In third statement, they were asked about the financial position of hydropower developers at the time of issue. And, the mean is 2.914 with standard deviation of 0.99 which means they find the financial position of hydropower developers unsatisfactory.

In fourth statement, they were asked about bankability of hydropower developers at the time of issue, they rated that factor from 1 to 5 i.e. from strongly disagree to strongly agree. And, the mean is 3.086 with standard deviation of 1.046 which means they find the hydropower developers have low access to long term financing.

Finally, when they were given statement on hydropower developers have realistic earnings and cash flow forecast. And, the mean is 2.883 with standard deviation of 1.02 which means they find earnings and cash flow forecast less realistic. Overall, investors gave below average rating to the pre-issue financial health of hydropower developers.

4.2.2 Idiosyncratic risk

Using the construct of idiosyncratic risk, respondents were given five statements that intended to measure idiosyncratic risk. They rated the statements from 1 to 5 (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly agree). Based on respondents' rating from 1 to 5, descriptive statistics of idiosyncratic risk has been presented in Table 4.3.

Table 4.3

Descriptive statistics of idiosyncratic risk

Particulars	Min	Max	Mean	S.D.
A. Hydropower projects suffer from cost and time overrun.	1	5	3.704	0.944
B. There is volatility in power generation and sales for hydropower companies due to run of river projects.	1	5	3.629	0.963
C. Hydropower projects have long payback period.	1	5	3.756	1.032
D. Hydropower developers suffers from insufficient rural electrification and transmission lines after completing project.	1	5	3.662	0.995
E. I am uncertain about the position of investors after the project is handed over to government.	1	5	3.610	0.984
Idiosyncratic risk	1	5	3.672	0.764

In first statement, investors were asked about hydropower projects suffer from cost and time overrun, they rated that factor from 1 to 5 i.e. from strongly disagree to strongly agree. Also, the mean of the same is 3.704 with standard deviation of 0.944 which means they find cost and time overrun of hydropower projects.

In second statement, they were asked about volatility in power generation and sales for hydropower companies due to run of river projects. Based on their rating the mean is 3.629 with standard deviation of 0.963 which means they find volatile power generation and sales of hydropower developers due to run of river projects.

In third statement, they were asked about hydropower projects have long payback period. Based on their responses, the mean is 3.756 with standard deviation of 1.032 which means they find hydropower projects have long payback period.

In fourth statement, they were asked about insufficient rural electrification and transmission line. The mean is 3.662 with standard deviation of 0.995 which means they find hydropower developers suffers from insufficient rural electrification and transmission line after completion of project.

In final statement, they were asked about uncertainty about the position of investors in future. And, the mean is 3.661 with standard deviation of 0.984 which means they are uncertain about the position after the hydropower project is transferred to government. Overall, investors believe that there is existence of high level of idiosyncratic risk in hydropower sector.

4.2.3 Expected return

Using the construct of expected return, respondents were given four statements that intended to measure expected return. They rated the statements from 1 to 5 (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly agree). Based on respondents' rating from 1 to 5, descriptive statistics of expected return has been presented in Table 4.4.

Table 4.4
Descriptive statistics of expected return

Particulars	Min	Max	Mean	S.D.
A. I get appropriate return by selling hydropower share immediately after listing.	1	5	3.431	1.073
B. I will get capital gains by holding the shares of hydropower developers.	1	5	3.423	0.990
C. Hydropower developers provides adequate dividend.	1	5	3.057	1.004
D. I believe investment in shares of hydropower provide me lucrative returns.	1	5	3.384	0.980
Expected return	1	5	3.324	0.796

In first statement, investors were asked about getting appropriate initial returns from IPOs of hydropower developers, they rated that factor from 1 to 5 i.e. from strongly disagree to strongly agree. Also, the mean of the same is 3.431 with standard deviation of 1.073 which means they perceive that they get appropriate initial returns from IPOs of hydropower developers.

In second statement, they were asked about getting capital gains from hydropower shares. Based on their rating, the mean is 3.423 with standard deviation of 0.99 which means they are able to get capital gains from hydropower shares.

In third statement, they were asked about hydropower developers provides adequate dividend. And, the mean is 3.057 with standard deviation of 1.004 which means they are not satisfied with the dividend from hydropower developers.

Finally, when they were asked about investment in shares of hydropower developers provide them lucrative returns. Based on their rating, the mean is 3.384 with standard deviation of 0.98 which means they find hydropower sector investment provide them lucrative returns. Overall, it is found that investors are fairly satisfied with the return from the hydropower stocks.

4.2.4 Sectoral performance

Table 4.5 shows the responses given by the respondents regarding the sectoral performance of shares of hydropower developers in Nepal stock exchange. They rated the statements from 1 to 5 (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly agree).

Table 4.5

Descriptive statistics of sectoral performance

Particulars	Min	Max	Mean	S.D.
A. I find the shares of hydropower developers as attractive as other companies from different sectors.	1	5	3.314	1.047
B. Hydropower sub-indices indicate the bullish trend in the sector.	1	5	3.491	0.990
C. The hydropower shares have domination in the market in terms of trading quantity and market capitalization.	1	5	3.218	1.040
D. The performance of hydropower companies in secondary market is satisfactory.	1	5	3.520	1.013
Sectoral performance	1	5	3.386	0.795

In first statement, investors were asked about shares of hydropower developers as attractive as other companies from different sectors, they rated that factor from 1 to 5 i.e. from strongly disagree to strongly agree. Also, the mean of the same is 3.314 with standard deviation of 1.047 which means investors find shares of hydropower attractive as compared to other companies of different sectors.

In second statement, they were asked about hydropower sub-indices indicate the bullish trend in the sector. Based on their rating, the mean is 3.491 with standard deviation of 0.99 which mean they believe hydropower sub-indices indicate the bullish trend.

In third statement, they were asked about domination of hydropower shares in the market in terms of trading quantity and market capitalization. And, the mean is 3.218 with standard deviation of 1.04 which means investors believe that hydropower

companies do not have domination in the market in terms of trading quantity and market capitalization yet.

In final statement, when they were asked about whether the performance of hydropower companies in secondary market is satisfactory. And, the mean is 3.52 with standard deviation of 1.013 which means investors are satisfied with performance of hydropower companies in secondary market. Overall, investors have positive sentiments on sectoral performance of hydropower in the market.

4.2.5 Corporate governance

Table 4.6 shows the responses given by the respondents regarding the corporate governance of hydropower developers. They rated the statements from 1 to 5 (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly agree).

Table 4.6

Descriptive statistics of corporate governance

Particulars	Min	Max	Mean	S.D.
A. The promoters of hydropower companies show transparency while estimating project cost.	1	5	2.662	1.041
B. Hydropower companies are accountable to the shareholders.	1	5	2.769	1.073
C. There is presence of strong regulatory body in hydropower sector.	1	5	2.704	1.095
D. I believe that hydropower developers have strong internal control mechanism.	1	5	2.810	1.069
Corporate governance	1	5	2.736	0.904

In first statement, investors were asked about the transparency in estimating project cost by the promoters of hydropower companies, they rated that factor from 1 to 5 i.e. from strongly disagree to strongly agree. Also, the mean of the same is 2.662 with standard deviation of 1.041 which means investors do not find transparency in estimating project cost by the promoters of hydropower companies.

In second statement, they were asked about hydropower companies are accountable to the shareholders. Based on their rating, the mean is 2.769 with standard deviation of

1.073 which means they do not find hydropower companies accountable to shareholders.

In third statement, they were asked about presence of strong regulatory body in hydropower sector. And, the mean is 2.704 with standard deviation of 1.095 which means investors find lack of strong regulatory body in hydropower sector.

In final statement, when they were asked about internal control mechanism of hydropower developers, they rated that factor from 1 to 5 i.e. from strongly disagree to strongly agree. And, the mean is 2.81 with standard deviation of 1.069 which means investors doubt on the internal control mechanism of hydropower companies. Overall, investors want improvement in the corporate governance mechanism of hydropower companies.

4.2.6 Bandwagon effect

Using the construct of bandwagon effect, respondents were given four statements that intended to measure bandwagon effect. They rated the statements from 1 to 5 (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly agree). Based on respondents' rating from 1 to 5, descriptive statistics of bandwagon effect has been presented in Table 4.7.

Table 4.7

Descriptive statistics of bandwagon effect

Particulars	Min	Max	Mean	S.D.
A. I am influenced by what other people do in the market.	1	5	3.229	1.053
B. I consider the suggestion of friends and families while making investment.	1	5	3.488	1.013
C. I wait for the news about IPO subscription status before investment.	1	5	3.517	1.005
D. I normally make investment in the hot stocks.	1	5	3.413	1.030
Bandwagon effect	1	5	3.412	0.816

In first statement, investors were asked about influence of what other people do in the market, they rated that factor from 1 to 5 i.e. from strongly disagree to strongly agree.

Also, the mean of the same is 3.229 with standard deviation of 1.053 which means investors are somehow influenced by what other investors do in the market.

In second statement, they were asked about taking the suggestions of friends and families while making investment. And, the mean is 3.488 with standard deviation of 1.013 which means investors take the suggestions of friends and families.

In third statement, they were asked about wait for the news about IPO subscription status before investment. Based on their rating, the mean is 3.517 with standard deviation of 1.005 which means investors conform their investment decision to what the mass investors do.

In final statement, when they were asked about making investment in hot stocks, they rated that factor from 1 to 5 i.e. from strongly disagree to strongly agree. And, the mean is 3.413 with standard deviation of 1.03 which means investors are attracted towards hot IPO issue or IPO which has high demand from the general investors. Overall, investors do hop on the bandwagon while making their investment in IPOs.

4.2.7 Investors' decision making behavior on IPOs of hydropower

Using the construct of investment decision, respondents were given four statements that intended to measure investor's decision making behavior on IPOs of hydropower developers. They rated the statements from 1 to 5 (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly agree). Based on respondents' rating from 1 to 5, descriptive statistics of investors' decision on IPOs of hydropower has been presented in Table 4.8.

Table 4.8

Descriptive statistics of investors' decision on IPOs of hydropower

Particulars	Min	Max	Mean	S.D.
A. I am satisfied with my investment in IPOs of hydropower developers.	1	5	3.514	0.924
B. I have been able to achieve my investment objectives due to investment in IPOs of hydropower.	1	5	3.413	0.926
C. I am ready to invest in the IPOs of hydropower developers.	1	5	3.639	0.873
D. I will recommend others to invest in the IPOs of hydropower developers.	1	5	3.600	0.966
Investors' decision on IPOs of hydropower	1	5	3.542	0.762

In first statement, investors were asked about whether they are satisfied with investment in IPOs of hydropower or not, they rated that factor from strongly disagree to strongly agree. Also, the mean of the same is 3.514 with standard deviation of 0.924 which means investors are satisfied with investment in IPOs of hydropower developers.

In second statement, they were asked about achieving investment objectives due to investment in IPOs of hydropower. Based on their rating, the mean is 3.413 with standard deviation of 0.926 which mean investors believe that they have been able to achieve investment objectives due to investment in IPOs of hydropower.

In third statement, they were asked about willing of investors to invest in upcoming IPOs of hydropower, they rated that factor from 1 to 5 i.e. from strongly agree to strongly disagree. And, the mean is 3.639 with standard deviation of 0.873 which means investors are willing to investment in upcoming IPOs of hydropower.

In final statement, when they were asked about recommending IPOs of hydropower developers to others. And, the mean is 3.60 with standard deviation of 0.966 which means investors are willing to recommend IPOs of hydropower to others. Overall, investors are willing to invest in the IPOs of hydropower developers because they are satisfied with the returns.

4.3 Inferential statistics

Under this section, the actual testing of the research hypotheses has been done. The different inferential statistics such as correlation, multiple regression analysis, ANOVA, and independent sample t-test has been used.

4.3.1 Correlation matrix

The correlation matrix reports the level of association among the variables and the direction of the relationship. All the correlation coefficients of study variables are below 0.7. So, there is no chance of multi-collinearity. It was explained by Bryman and Cramer (1997) as the value of Pearson's r between each pair of independent variables should be below 0.8. Otherwise, the independent variables with the association at or in excess of 0.80 may be suggesting case of multi-collinearity.

Table 4.9

Correlation between independent variables, socio-demographic variables and dependent variable

	IB	Gen	Age	Edu	Occu	IO	PF	IR	ER	SP	CG	BE
IB	1											
Gen	.054	1										
Age	.108*	.008	1									
Edu	-.075	-.112*	-.370**	1								
Occu	.093	.184**	.021	-.148**	1							
IO	-.088	.035	.013	.169**	-.017	1						
PF	.252**	.013	-.157**	.110*	.045	.071	1					
IR	-.124*	.017	.038	.029	-.064	-.017	-.235**	1				
ER	.503**	.039	.266**	-.059	.054	-.125*	.148**	.052	1			
SP	.643**	.085	.141**	-.082	-.001	-.075	.194**	-.026	.453**	1		
CG	.225**	.078	-.121*	.026	.055	.120*	.577**	-.165**	.142**	.203**	1	
BE	.517**	.116*	.098	-.131*	.054	-.106*	.168**	.061	.381**	.439**	.139**	1

**Significant at the 0.01 level (2-tailed) and *Significant at the 0.05 level (2-tailed). The table reports the correlation between the independent variables, socio-demographic variables and dependent variable. These associations are based upon the sample of 385 investors, where Gen, Age, Edu, Occu, IO, PF, IR, , ER, SP, CG BE and ID represent Gender, Age group, Education, Occupation, Investor's objectives, Pre-issue financial health, Idiosyncratic risk, Expected return, Sectoral performance, Corporate governance and Bandwagon effect and Investors' decision making behavior on IPOs of hydropower developers.

Table 4.9 depicts the correlation between independent variables, socio-demographic and dependent variable. The correlation between gender and investors' decision making behavior on IPOs of hydropower developers is $r = 0.054$, $p > 0.05$, between age group and investors' decision making behavior on IPOs of hydropower developers is $r = 0.108$, $p < 0.05$, between education and investors' decision making behavior on IPOs of hydropower developers is $r = -0.075$, $p > 0.05$, between occupation and investors' decision making behavior on IPOs of hydropower developers is $r = 0.093$, $p > 0.05$, between investors' objective and investors' decision making behavior on IPOs of hydropower developers is $r = -0.088$, $p > 0.05$, pre-issue financial health and investors' decision making behavior on IPOs of hydropower developers is $r = 0.252$, $p < 0.01$, between idiosyncratic risk and investors' decision making behavior on IPOs of hydropower developers is $r = -0.124$, $p < 0.05$, between expected return and investors' decision making behavior on IPOs of hydropower developers is $r = 0.503$, $p < 0.01$, between sectoral performance and investors' decision making behavior on IPOs of hydropower developers is $r = 0.643$, $p < 0.01$, between corporate governance and investors' decision making behavior on IPO of hydropower developers is $r = 0.225$, $p < 0.01$ and finally between bandwagon effect and investors' decision making behavior on IPO of hydropower developers is $r = 0.517$, $p < 0.01$. A correlation coefficient is considered significant if $p < 0.05$.

4.3.2 Multiple regression analysis

Table 4.10 reveals the results of multiple regression analysis. From the results, it is found that $R^2 = 0.538$, which means that the independent (study) variables explains 53.8% of variation in investors' decision making behavior on IPO of hydropower developers (dependent variable). Similarly, the p value of model is 0.000, which is less than 0.05 indicating that model is statistically significant.

According to the model of the study, pre-issue financial health, idiosyncratic risk, expected return, sectoral performance, corporate governance and bandwagon effect are independent variables whereas investor's decision making behavior on IPOs of hydropower developers is dependent variable. To analyze the regression equation, beta value and p value are used. Beta shows the per unit change in dependent variable due to per unit change in independent variable. And the p value is compared with the significance level of 0.05 to test significant relationship.

Table 4.10

Multiple regression analysis

	Beta	T-value	P-value	VIF
(Constant)	0.959	4.446	0.000	
PF	0.057	1.296	0.196	1.578
IR	-0.122	-3.359	0.001	1.078
ER	0.214	5.296	0.000	1.338
SP	0.419	10.001	0.000	1.437
CG	0.022	0.518	0.605	1.524
BE	0.246	6.115	0.000	1.324
R ²	0.538			
F	73.475			
P-value	0.000			

The results showed that idiosyncratic risk negatively influences the investors' decision making behavior on IPOs of hydropower developers ($\beta = -0.122$, $p < 0.05$). This finding is in line with the findings of Wasiuzzaman et al. (2018); Beaulieu and Bouden (2015) and Fazil and Ipek (2013). Similarly, expected return significantly predicted the investors' decision making behavior on IPOs of hydropower developers ($\beta = 0.214$, $p < 0.05$). This result is similar to the findings by Joshi (2018) and Srinivas and Rao (2017). Likewise, sectoral performance of hydropower shares significantly predicted the investors' decision making behavior on IPOs of hydropower developers ($\beta = 0.419$, $p < 0.05$). This result is in line with the findings by Ramkrishnan (2018) and Mauer and Senbet (1992). Furthermore, bandwagon effect significantly predicted the investors' decision making behavior on IPOs of hydropower developers ($\beta = 0.246$, $p < 0.05$). This result is in line with the findings by Wang et al. (2017) and Adhikari (2010). However, pre-issue financial health and corporate governance did not significantly predict the investors' decision making behavior on IPOs of hydropower developers. From these results, it can be inferred that sectoral performance of hydropower in secondary market is the highest influential factor as compared to other independent variables for investor's decision making behavior on IPOs of hydropower.

4.3.3 Independent samples t-test

For the relationship between the investors' decision making behavior on IPOs of hydropower developers and gender, independent samples t-test has been used. Table 4-11 shows the analysis of relationship between investors' decision on IPOs of hydropower developers and gender.

Table 4.11

Comparison of investors' decision on IPOs of hydropower by gender

Investor's decision on IPOs of hydropower	Min	Max	Mean	S.D.
Male	1.00	5.00	3.507	0.804
Female	1.25	5.00	3.591	0.699
Total	1.00	5.00	3.542	0.762
T value	-1.134			
P value	0.288			

Table 4.11 shows the comparison of investors' decision on IPOs of hydropower by gender. The mean value of male is 3.507 with standard deviation of 0.804. Similarly, the mean value of female is 3.591 with standard deviation of 0.699.

The corresponding p-value is 0.288 which is greater than level of significance (α) = 0.05. It indicates that there is no significant relationship between investors' decision on IPOs of hydropower and gender. That means investors' decision on IPOs of hydropower does not significantly differ across gender.

4.3.4 Analysis of variance

For the relationship between the investors' decision on IPOs of hydropower developers and demographic variables (Age, Education, Occupation and Investment objectives), ANOVA has been used. Table 4-12, Table 4-13, Table 4-14 and Table 4-15 shows the analysis of relationship between investors' decision on IPOs of hydropower developers and these demographic variables.

Table 4.12

Comparison of investors' decision on IPOs of hydropower by age

Investor's decision on IPOs of hydropower	Min	Max	Mean	S.D.
18-28	1.00	5.00	3.482	0.815
29-45	1.00	5.00	3.537	0.774
Above 45	1.75	5.00	3.701	0.566
Total	1.00	5.00	3.542	0.762
F value	2.419			
P value	0.09			

Table 4.12 shows the comparison of investors' decision on IPOs of hydropower by age group. The mean value of 18-28 age group is 3.482 with standard deviation of 0.815. Similarly, mean value of 29-45 age group is 3.537 with standard deviation of 0.774. Again, mean value of above 45 age group is 3.701 with standard deviation of 0.566.

The corresponding p-value is 0.09 which is more than level of significance (α) = 0.05. It indicates that there is no significant relationship between investors' decision on IPOs of hydropower and age group of investors. That means investors' decision on IPOs of hydropower does not significantly differ across age.

Table 4.13

Comparison of investors' decision on IPOs of hydropower by education

Investors' decision on IPOs of hydropower	Min	Max	Mean	S.D.
High school	2.00	5.00	3.750	0.659
Bachelor	1.00	5.00	3.417	0.809
Masters and above	1.25	5.00	3.552	0.744
Total	1.00	5.00	3.542	0.762
F value	5.473			
P value	0.005			

Table 4.13 shows the comparison of investors' decision on IPOs of hydropower by education. The mean value of high school level is 3.750 with standard deviation of 0.659. Similarly, mean value of bachelor is 3.417 with standard deviation of 0.809. Finally, mean value of masters and above group is 3.552 with standard deviation of 0.744.

The corresponding p-value is 0.005 which is less than level of significance (α) = 0.05. It indicates that there is significant relationship between investors' decision on IPO of hydropower and education of investors. That means investors' decision on IPOs of hydropower significantly differ across education level.

Table 4.14

Comparison of investors' decision on hydropower IPOs by occupation

Investors' decision on IPOs of hydropower	Min	Max	Mean	S.D.
Self employed	1.50	5.00	3.486	0.695
Employee	1.00	5.00	3.539	0.729
Student	1.00	5.00	3.441	0.849
Others	2.75	5.00	3.882	0.607
Total	1.00	5.00	3.542	0.542
F value	4.399			
P value	0.001			

Table 4.14 shows the comparison of investors' decision on IPOs of hydropower by occupation. The mean value of self-employed group is 3.486 with standard deviation of 0.695. Similarly, mean value of employee group is 3.539 with standard deviation of 0.729. Again, mean value of student group is 3.441 with standard deviation of 0.849. Finally, mean value of other group is 3.882 with standard deviation of 0.607.

The corresponding p-value is 0.001 which is less than level of significance (α) = 0.05. It indicates that there is significant relationship between investors' decision on IPOs of hydropower and investor's occupation. That means investors' decision on IPOs of hydropower significantly differ across occupation group.

Table 4.15

Comparison of investors' decision on hydropower IPOs by investor objectives

Investors' decision on IPOs of hydropower	Min	Max	Mean	S.D.
Initial returns	2.00	5.00	3.819	0.652
Medium term gains	1.00	5.00	3.246	0.806
Long term appreciation	1.00	5.00	3.592	0.716
Total	1.00	5.00	3.542	0.762
F value	18.158			
P value	0.000			

Table 4.15 shows the comparison of investors' decision on IPOs of hydropower by primary objective of investors. The mean value of investors with investment objective of initial return is 3.819 with standard deviation of 0.652. Similarly, mean value of investors with objective of medium terms gain is 3.246 with standard deviation of 0.806. Finally, mean value of investors with objectives of long term appreciation is 3.542 with standard deviation of 0.716.

The corresponding p-value is 0.000 which is less than level of significance (α) = 0.05. It indicates that there is significant relationship between investors' behavior on IPOs of hydropower and objectives of investors. That means investors' behavior on IPOs of hydropower significantly differ across investors with different investment objectives.

4.4 Summary of hypotheses

The research hypotheses have been tested with the use of various statistical tools. After analysis of the inferential statistics, some hypotheses are rejected and some are accepted. The following section provides summary of research hypotheses:

Table 4.16: *Summary of results of hypothesis testing*

Hypothesis	P-value	Remarks
H1: Pre-issue financial health of issuer significantly predicts investors' decision making behavior on IPOs of hydropower developers.	0.196	Reject
H2: Idiosyncratic risk of issuer significantly predicts investors' decision making behavior on IPOs of hydropower developers.	0.001	Accept
H3: Expected return from hydropower shares significantly predicts investors' decision making behavior on IPOs of hydropower developers.	0.000	Accept
H4: Sectoral performance in secondary market significantly predicts investors' decision making behavior on IPOs of hydropower developers.	0.000	Accept
H5: Corporate governance of hydropower developers significantly predicts investors' decision making behavior on IPOs of hydropower developers.	0.605	Reject
H6: Bandwagon effect significantly predicts investors' decision making behavior on IPOs of hydropower developers.	0.000	Accept
H7a: There is significant difference of investors' decision making behavior on IPOs of hydropower across gender.	0.288	Reject
H7b: There is significant difference of investors' decision making behavior on IPOs of hydropower across age group.	0.091	Reject
H7c: There is significant difference of investors' decision making behavior on IPOs of hydropower across education.	0.005	Accept
H7d: There is significant difference of investors' decision making behavior on IPOs of hydropower across occupation.	0.001	Accept
H7e: There is significant difference of investors' decision making behavior on IPOs of hydropower across investor objectives.	0.000	Accept

4.5 Major findings

The key findings of the study are summarized as follows:

- Pre-issue financial health does not provide significant contribution to the investors' decision on IPOs of hydropower at $\beta = 0.057$ ($p > 0.05$), thus H1 is rejected. It is therefore, concluded that investors do not give importance to the pre-issue financial health of hydropower developers when making investment in IPOs.
- Idiosyncratic risk negatively influences the investors' decision on IPOs of hydropower at $\beta = -0.122$ ($p < 0.05$), thus H2 is accepted. It is therefore, concluded that high level of firm specific risks or idiosyncratic risk discourage investors to subscribe in the IPOs of hydropower developers.
- Expected return provides significant contribution to the investors' decision on IPOs of hydropower at $\beta = 0.214$ ($p < 0.05$), thus H3 is accepted. It means that lucrative returns from IPOs of hydropower developers encourage investors to make investment.
- Sectoral performance provides significant contribution to the investors' decision on IPOs of hydropower at $\beta = 0.419$ ($p < 0.05$), thus H4 is accepted. It is therefore, we found that positive market sentiments towards shares of hydropower in secondary market has encouraged investors to make investment in IPOs of hydropower developers.
- Corporate governance does not provide significant contribution to the investors' decision on IPOs of hydropower at $\beta = 0.022$ ($p > 0.05$), thus H5 is rejected. So, we can say that corporate governance of issuing firm does not have significant influence on the investors' decision on IPOs of hydropower.
- Bandwagon effect provides significant contribution to the investors' decision on IPOs of hydropower at $\beta = 0.246$ ($p < 0.05$), thus H6 is accepted. It means that tendency of investors to hop on bandwagon has significant influence on the investors' decision on IPOs of hydropower.
- H7a was rejected (Since, $p\text{-value} = 0.288 > \text{level of significance } (\alpha) = 0.05$). There is no significant relationship between investors' decision

on IPO of hydropower and gender. This states that investors' decision on IPOs of hydropower does not vary significantly across gender.

- H7b was rejected (Since, $p\text{-value} = 0.09 > \text{level of significance } (\alpha) = 0.05$). There is no significant relationship between investors' decision on IPOs of hydropower and age group. This states that investors' decision on IPOs of hydropower does not differ significantly across age group.
- H7c was accepted (Since, $p\text{-value} = 0.005 < \text{level of significance } (\alpha) = 0.05$). There is significant relationship between investors' decision on IPOs of hydropower and education. This states that investors' decision on IPOs of hydropower differ significantly across education level.
- H7d was accepted (Since, $p\text{-value} = 0.001 < \text{level of significance } (\alpha) = 0.05$). There is significant relationship between investors' decision on IPOs of hydropower and occupation. This states that investors' decision on IPOs of hydropower differ significantly across occupation.
- H7e was accepted (Since, $p\text{-value} = 0.00 < \text{level of significance } (\alpha) = 0.05$). There is significant relationship between investors' decision on IPOs of hydropower and investor objectives. This states that investors' decision on IPOs of hydropower differ significantly across investor objectives.

CHAPTER V

DISCUSSION, CONCLUSION AND IMPLICATIONS

This chapter presents the discussion of major findings and conclusion drawn from the findings of the study. Also, the theoretical and practical implications are also made at the end of chapter.

5.1 Discussion

The major objective of this research was to explore the underlying reasons behind strengthening response from investors towards IPOs of hydropower developers. The study investigated the different factors that can influence investors' decision making behavior towards the IPOs of hydropower developers. To accomplish the research objectives, descriptive research design was used. This study used the structured questionnaire for the data collection.

Based on the analysis of data from 385 respondents, multiple findings have been extracted. The descriptive analysis of Likert scale has showed that respondents gave above average responses to the variables such as idiosyncratic risk, expected return, sectoral performance and bandwagon effect. On the other hand, respondents gave below average responses to the variables such as pre-issue financial health and corporate governance. Based on the results of inferential statistics, idiosyncratic risk, expected return, sectoral performance and bandwagon effect are the predictors of Investors' decision making behavior on IPOs of hydropower developers. Other two independent variables such as pre-issue financial health and corporate governance have no significant impact on investors' decision making behavior on IPOs of hydropower developers. Moreover, investors' decision making behavior on IPOs of hydropower has significant relationship with education, occupation and investors' objectives.

Regarding the idiosyncratic risks of hydropower developers, investors' perception of high level of firm specific risks negatively influences their decision on firm's equity offerings. This finding is in line with findings of (Wasiuzzaman et al., 2018; Fazil & Ipek, 2013; Beaulieu & Bouden, 2015). Previous studies found that lack of support infrastructure, project cost overrun, long payback period and uncertainty about future

ownership are the type of firm specific risks and they negatively influence the investors' decision on IPOs. Although the firm specific risk in hydropower companies is high, but the increasing return on investment compensate that risk. The study found the positive impact of expected return on investors' response on IPOs of hydropower developers. This finding is parallel to the findings of (Joshi, 2018; Srinivas & Rao, 2017), they established the empirical relationship between the initial returns, long term growth potential and investors' decision to invest in initial public offerings.

Similarly, the sectoral performance of hydropower companies in secondary market has been the dominant predictors of investors' behavior on IPOs of hydropower developers in this study. Consistent with the findings of (Ramkrishnan, 2018; Mauer & Senbet, 1992), the present study found that bullish trend in the hydropower sub index and satisfactory returns from the listed shares of hydropower have positively influenced investors' decision on IPOs of hydropower. Unsurprisingly, the bandwagon effect positively influences the investors' response to equity offerings of hydropower developers. This finding is parallel to the findings of (Doherty, 2018; Wang et al., 2017). It means Nepalese investors are following the mass when making investment decision on new equity offerings of hydropower developers rather than making decision on their own.

To sum up, it can be inferred from the above findings that high rate of return, improved sectoral performance and bandwagon effect are the underlying reasons behind strengthening confidence from investors towards IPOs of hydropower developers. Although there is high idiosyncratic risk, low firm value and poor corporate governance, the market level factors and behavioral factors have overshadowed the firm level factors.

5.2 Conclusion

This study has answered out all research questions which were raised in this study. The first question was about the reason of strengthening investors' confidence on IPOs of hydropower developers and the second one was about measuring the relationship between investors' decision on IPOs of hydropower and socio-demographic variables. This part of the research gives the conclusion of the study by depicting main points to answer the research questions and fulfilling the objectives.

The results of the study suggested that investors put emphasis on idiosyncratic risk, expected return, sectoral performance and bandwagon effect while making investment decision on IPO of hydropower developers. Idiosyncratic risk has negative impact on investors' decision on IPOs of hydropower as firms with high level of idiosyncratic risk discourages investors to invest as idiosyncratic risks are not provided with risk premium. The rational investors make the investment decision on the basis of the expected return. They demand returns on the stock in the form of capital gain as well as periodic return in the form of dividends. The study also concluded that sectoral performance of IPO issuing firm and investors' sentiments towards a particular sector and overall market sentiments has positive influence on their demand of IPO. Similarly, a tendency of investors to follow the action of others or hop on bandwagon positively influence their decision making on IPOs. Moreover, bullish trend in the hydropower sub-index and increasing positive market sentiments towards shares of hydropower developers in secondary market influence the investors' decision on IPOs of hydropower developers.

Likewise, investors' decision on IPOs of hydropower developers is associated with education, occupation and investor objectives. In other words, investors' decision on IPOs of hydropower developers differs significantly across categories of education, occupation and investor objectives.

5.3 Implications

This study has theoretical implications, practical implications as well as scope for future studies. This section deals with these implications.

5.3.1 Theoretical implications

This research has tried to show the perception and behavior of investors towards the equity offerings of hydropower developers and the loopholes to cover to make hydropower sector work in public private partnership model. From the theoretical perspective, this research make contribution to the information search literature on investors' decision on IPOs of hydropower by providing empirical evidences on impact of different factors on investors' behavior on IPOs of hydropower developers.

5.3.2 Practical implication

The finding from this research states that there is strengthening confidence of investors on IPOs of hydropower developers but there are many areas that need focus. As the bandwagon effect is significant with investors' decision on IPOs of hydropower developers, it means investors are making decision on IPOs of hydropower developers by following the actions of others. However, Investors should be able to analyze investable IPOs of hydropower developers. It also requires the investors to look at different information provided in the prospectus of the firm and make decision on their own. They should give emphasis on the factors such as pre-issue financial health, cost of generation per megawatt, management team of the company, size of hydropower project, type of hydropower project, strengths and weaknesses of the company and different associated risks.

Along with that, investors should be aware about the fact that most of the hydropower developers issue the share to general public during the construction phase of the project. It takes long gestation period and thus long time for generating the electricity. It is the stupidity of the investor to search for immediate return from the company which has not yet generated income revenue. Rather than looking for the immediate return, investors should hold the shares of hydropower developers for long term lucrative returns.

Similarly, the IPO issuing hydropower developers need to focus on various areas. First of all, the firm should provide the clear power purchase agreement, realistic cash flow and income forecast to the investors. Second, firm should report the progress of the project and future plans through regular AGM. Third, firm should focus on building the power evacuation infrastructure and hydropower project simultaneously. It makes easier for the firm to distribute electricity immediately after the hydropower project are completed. Fourth, latest technology, competent manpower and experienced team allows the firm to complete the project on time.

Apart from these, there is the need of strong regulatory body in hydropower sector. The strong regulatory body make the uniform financial reporting standards, detect the fraud from the promoter and make the firm more transparent and accountable to the investors. Nepal government should make safe and sound sector specific policies and

different incentives measures through monetary policy. It is also the responsibility of Nepal government to make cross border transmission agreement and ways to improve the electricity consumption in the country.

If above areas are improved, it will boost the confidence of investors towards IPOs of hydropower sector. These steps make hydropower sector more reliable and stable and attracts more investors. It will be the first step towards the economic growth. Ultimately, it provides win-win situation among investors, hydropower developers and the country.

5.3.3 Scope for future study

After this study, there are more areas to be explored. This study does not take into account the perspectives of locals. An explorative research from the perspectives of local will provide revalidation of the findings. Likewise, a comprehensive qualitative study can be done from the perspectives of both the investors and executives of hydropower developers by including other variables such as timing of IPO, management team, internal use of capital etc. Similarly, the investors' decision on share of hydropower sector can be explored through the secondary market perspectives. Apart from these, impact of benefit sharing model on investors' decision of upcoming IPOs of hydropower developers can also be explored.

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Annexes

Annex I

Questionnaire

Dear respondents,

I am Sujan Karki, a student of MBA from School of Management Tribhuvan University (SOMTU). I am conducting a graduate research project on **“Investors’ Decision Making Behavior on Initial Public Offerings of Hydropower Developers”**. I would like to request you to kindly spare few minutes to fill this questionnaire and help me in the survey. The information will be used for only academic purpose and will be kept confidential. There is no right or wrong answers. Please express your opinions freely. Your valued information will be highly appreciated.

Please tick one for each criteria group

Q1. Gender	Q2. Age-Group	Q3. Education	Q4. Occupation
a. Male→225	a. 18-28→209	a. High school→87	a. Self-employed→71
b. Female→160	b. 29-45→95	b. Bachelor→158	b. Employee→132
	c. Above 45→81	c. Masters and above→140	c. Students→131
			d. Others→51

Q5. What is your primary motive for investment in IPOs of ordinary shares?

- a. Initial return→104
- b. Medium-term gains→125
- c. Long-term appreciation→156

Q6. Please rate the following statements related to pre-issue financial health of hydropower developers.

Statements	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Pre-issue financial health					
a. IPO grading of most of hydropower developers is above average.	47	95	115	121	7
b. The net worth per share of hydropower developers is satisfactory.	37	120	104	116	8
c. The financial position of hydropower developers at the time of IPO issue is satisfactory.	28	112	120	115	10
d. Hydropower developers have easy access to long term financing.	28	88	115	131	23
e. Hydropower developers have realistic earnings and cash flow forecasts for next three years.	35	104	133	97	16

Q7. Please rate the following statements related to firm specific risks of hydropower developers.

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Idiosyncratic risk					
a. Hydropower projects suffer from cost and time overrun.	6	38	95	171	75
b. There is volatility in power generation and sales for hydropower companies due to run of river projects.	12	34	102	174	63
c. Hydropower projects have long payback period.	11	39	80	158	97
d. Hydropower developers suffers from insufficient rural electrification and transmission lines after completing project.	11	39	94	166	75
e. I am uncertain about the position of investors after the project is handed over to government.	8	43	113	148	73

Q8. Please rate the following statements related to expected return of hydropower shares.

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Expected return					
a. I get appropriate return by selling hydropower share immediately after listing.	21	60	87	166	51
b. I will get capital gains by holding the shares of hydropower developers.	13	57	114	156	45
c. Hydropower developers provides adequate dividend.	31	70	150	114	20
d. I believe investment in shares of hydropower provide me lucrative returns.	19	48	118	166	34

Q9. Please rate the following statements related to performance of hydropower shares in NEPSE.

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Sectoral performance					
a. I find the shares of hydropower developers as attractive as other companies from different sectors.	18	72	109	143	43
b. Hydropower sub-indices indicate the bullish trend in the sector.	12	46	126	143	58
c. The hydropower shares have domination in the market in terms of trading quantity and market capitalization.	20	79	119	131	36
d. The performance of hydropower companies in secondary market is satisfactory.	15	20	94	172	54

Q10. Please rate the following statements related to corporate governance of hydropower developers.

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Corporate governance					
a. The promoters of hydropower companies show transparency while estimating project cost.	57	116	120	84	8
b. Hydropower companies are accountable to the shareholders.	49	115	111	96	14
c. There is presence of strong regulatory body in hydropower sector.	58	114	113	84	16
d. I believe that hydropower developers have strong internal control mechanism.	39	127	106	94	19

Q11. Please rate the following statements related to your behavior while making investment.

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Bandwagon effect					
a. I am influenced by what other people do in the market.	23	83	89	163	27
b. I consider the suggestion of friends and families while making investment.	16	44	118	150	57
c. I wait for the news about IPOs subscription status before investment.	13	48	110	155	59
d. I normally make investment in the hot stocks.	17	56	113	149	50

Q12. Please give your opinions about the levels of agreement for the following statements related to investment decision on IPOs of hydropower developers.

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Investor's decision on IPO of hydropower					
a. I am satisfied with my investment in IPOs of hydropower developers.	13	39	108	187	38
b. I have been able to achieve my investment objectives due to investment in IPOs of hydropower.	12	46	134	157	36
c. I am ready to invest in the IPOs of hydropower developers.	10	23	112	191	49
d. I will recommend others to invest in the IPOs of hydropower developers.	13	32	113	165	62

THANK YOU FOR YOUR COOPERATION

Annex II

Comparison of independent variables by gender

Variables	Gender	N	Mean	S.D.	T-value	P-value
PF	Male	225	2.908	0.829	-0.246	0.805 (NS)
	Female	160	2.929	0.835		
IR	Male	225	3.661	0.787	-0.331	0.741 (NS)
	Female	160	3.688	0.732		
ER	Male	225	3.298	0.835	-0.767	0.444 (NS)
	Female	160	3.361	0.739		
SP	Male	225	3.329	0.825	-1.667	0.096 (NS)
	Female	160	3.466	0.746		
CG	Male	225	2.677	0.909	-1.539	0.125 (NS)
	Female	160	2.820	0.893		
BE	Male	225	3.332	0.836	-2.227	0.022 (S)
	Female	160	3.523	0.777		

Note: S = Statistically significant and NS = Not significant

Annex III

Comparison of independent variables by age group

Variables	Age group	N	Mean	S.D.	F-value	P-value
PF	18-28	209	3.063	0.773	7.772	0.000 (S)
	29-45	95	2.693	0.879		
	Above 45	81	2.800	0.848		
IR	18-28	209	3.608	0.741	3.919	0.021 (S)
	29-45	95	3.861	0.796		
	Above 45	81	3.617	0.756		
ER	18-28	209	3.134	0.806	14.994	0.000 (S)
	29-45	95	3.474	0.780		
	Above 45	81	3.639	0.643		
SP	18-28	209	3.280	0.780	4.217	0.015 (S)
	29-45	95	3.487	0.833		
	Above 45	81	3.540	0.756		
CG	18-28	209	2.870	0.810	5.779	0.003 (S)
	29-45	95	2.505	0.970		
	Above 45	81	2.664	0.999		
BE	18-28	209	3.360	0.800	2.300	0.102 (NS)
	29-45	95	3.379	0.906		
	Above 45	81	3.583	0.729		

Note: S = Statistically significant and NS = Not significant

Annex IV

Comparison of independent variables by education

Variables	Education	N	Mean	S.D.	F-value	P-value
PF	High school	87	2.816	0.845	2.651	0.072 (NS)
	Bachelor	158	2.860	0.827		
	Masters and Above	140	3.043	0.816		
IR	High school	87	3.630	0.856	0.182	0.833 (NS)
	Bachelor	158	3.679	0.731		
	Masters and Above	140	3.691	0.743		
ER	High school	87	3.566	0.761	8.709	0.000 (S)
	Bachelor	158	3.144	0.760		
	Masters and Above	140	3.377	0.814		
SP	High school	87	3.598	0.760	4.799	0.009 (S)
	Bachelor	158	3.272	0.758		
	Masters and Above	140	3.382	0.835		
CG	High school	87	2.736	1.027	0.361	0.697 (NS)
	Bachelor	158	2.695	0.801		
	Masters and Above	140	2.784	0.936		
BE	High school	87	3.681	0.753	6.406	0.002 (S)
	Bachelor	158	3.312	0.815		
	Masters and Above	140	3.357	0.826		

Note: S = Statistically significant and NS = Not significant

Annex V

Comparison of independent variables by occupation

Variables	Occupation	N	Mean	S.D.	F-value	P-value
PF	Self employed	71	2.716	0.845	4.552	0.004 (S)
	Employee	132	2.944	0.827		
	Student	131	3.084	0.786		
	Others	51	2.694	0.847		
IR	Self employed	71	3.800	0.944	1.023	0.383 (NS)
	Employee	132	3.670	0.682		
	Student	131	3.603	0.720		
	Others	51	3.678	0.792		
ER	Self employed	71	3.275	0.820	7.044	0.000 (S)
	Employee	132	3.402	0.733		
	Student	131	3.130	0.829		
	Others	51	3.691	0.690		
SP	Self employed	71	3.472	0.768	3.185	0.024 (S)
	Employee	132	3.386	0.762		
	Student	131	3.246	0.817		
	Others	51	3.623	0.808		
CG	Self employed	71	2.592	0.904	1.528	0.207 (NS)
	Employee	132	2.725	0.898		
	Student	131	2.857	0.824		
	Others	51	2.657	1.085		
BE	Self employed	71	3.458	0.897	2.691	0.046 (S)
	Employee	132	3.350	0.776		
	Student	131	3.340	0.840		
	Others	51	3.691	0.688		

Note: S = Statistically significant and NS = Not significant

Annex VI

Comparison of independent variables by investor objectives

Variables	Investor objectives	N	Mean	S.D.	F-value	P-value
PF	Initial return	104	2.846	0.835	0.991	0.372 (NS)
	Medium term gains	125	2.888	0.921		
	Long term appreciation	156	2.986	0.747		
IR	Initial return	104	3.639	0.817	1.235	0.292 (NS)
	Medium term gains	125	3.760	0.819		
	Long term appreciation	156	3.624	0.674		
ER	Initial return	104	3.579	0.788	8.861	0.000 (S)
	Medium term gains	125	3.148	0.801		
	Long term appreciation	156	3.295	0.757		
SP	Initial return	104	3.639	0.669	13.888	0.000 (S)
	Medium term gains	125	3.112	0.883		
	Long term appreciation	156	3.436	0.734		
CG	Initial return	104	2.589	0.956	2.779	0.063 (NS)
	Medium term gains	125	2.712	0.955		
	Long term appreciation	156	2.854	0.812		
BE	Initial return	104	3.666	0.823	9.486	0.000 (S)
	Medium term gains	125	3.204	0.843		
	Long term appreciation	156	3.409	0.745		

Note: S = Statistically significant and NS = Not significant

Annex VII

Subscription status of IPOs of hydropower

S. N	Company Name	Issued Shares	Subscription times	Remarks
1	Union Hydropower Ltd	3534340	0.9649	General Public
2	Himal Dolakha Hydropower Company	7647210	0.3974	General Public
3	Shiva Shree Hydropower Ltd	3351140	0.215	General Public
4	United IDI-Mardi and R.B. Hydropower Ltd	873910	11.67	General public
5	Mountain Energy Nepal Ltd	1968027	7.11	General public
6	Greenlife Hydropower Ltd	3251652	7.37	General public
7	Singati Hydro Energy Ltd	2697000	8.47	General Public
8	Ru Ru Jalvidut Pariyojana Ltd	379167	11.67	General Public
9	Mailung Khola Jal Vidhyut Company Ltd	736286	41.68	General Public
10	Terhathum Power Company Ltd	800000	39.06	General Public

Source: SEBON, 2021