THE ANALYST

NMB CAPITAL LIMITED

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MARKET UPDATE

- During the review period (Mid-February to Mid-May), the market remained shut for the majority of the period as SEBON closed down the market amid the nationwide lockdown. The global spread of COVID-19 and its impact on the Nepalese economy acted as the major catalyst for increased selling pressure during the latter half of the review period. Consequently, the benchmark index lost 144.40 points (i.e. 10.7%) to close at 1,201.57. All sub-indices shed points, with Hotels and Non-Life Insurance sub-indices losing the most and Finance sub-index losing the least (table 1). Price of 168 companies declined while 10 companies advanced out of 178 companies traded. The average daily turnover surged by 179.8% to NPR 2.29 billion compared to NPR 0.82 billion in the previous review period. The rise in turnover volume was mainly due to increase in the index during February wherein NEPSE crossed 1600.

- The preliminary impact of the shutdown has been witnessed in the net profit of the listed companies. The published financials for Q3 FY 19/20 reveal that the net profit of Commercial Banks and Microfinance Companies declined by 0.9% and 2.2%; while their net profit had grown by 19.7% and 50.8% respectively in the previous year. Similarly, Development Banks and Non-life Insurance Companies posted a slower YoY growth on net profit –a growth of 14.0% and 0.3% compared to previous year's 26.5% and 13.3% respectively. Meanwhile the figures for distributable profits of BFIs display a bleaker picture compared their net profit figure as the distributable profits of 6 commercial banks for the FY are negative[1]. As credit growth in the current FY was slow compared to the previous years, the outbreak of the pandemic is likely to subdue credit growth further. The outstanding loans and advances of BFIs has expanded by 11.5%[2] (up to Q3 of the FY) which is the lowest growth rate since after FY 13/14. The overall market's Price to Earnings ratio stands at 15.3x compared to 16.4x in previous review period (figure 1).

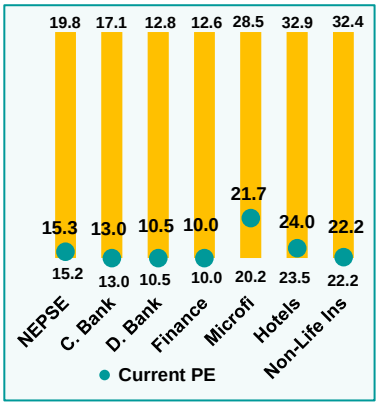

Figure 1: The figures at the top and bottom are the highest and lowest PE recorded during the review period

- In response to disruption in economic activities due to COVID-19, NRB slashed Bank rate/SLF rate (now 5%), IRC rates (now 5%, 3.5% and 2%) and CRR (Now 3%) by 100 bps each to shore up liquidity. NRB also announced moratorium on loan installments until the end of FY 19/20 without any penal interest and charges. The countercyclical buffer announced earlier in the monetary policy has been retracted. These are only few among the different measures taken by NRB[3]. CBS Nepal has downsized this FY's GDP growth rate to 2.28% compared to 7.0% projected previously by MoF. Up to 3Q of the current FY, exports increased by 12.9%, import decreased by 7.5% and remittance decreased by 4.0%. Consequently, trade deficit narrowed down by 8.9% to NPR 903.72 billion compared to expansion of 21.5% a year earlier. Current Account (CA) and BOP both improved compared to last year. CA deficit is at NPR 135.54 billion and BOP surplus is at NPR 36.61 billion[2].

Table 1: Changes in sub-indices during the quarter

Sub-Index	12th February 2020	13th May 2020	Change
Banking	1,153.71	1,041.50	9.73%▼
Dev. Bank	1,828.29	1,687.73	7.69%▼
Finance	671.13	629.23	6.24%▼
Hotels	1,948.98	1,556.69	20.13%▼
Hydro Power	1,010.68	899.67	10.98%▼
Life Insurance	7,534.46	6,509.45	13.60%▼
Manu. & Pro.	2,577.52	2,390.64	7.25%▼
Microfinance	2,322.58	2,008.29	13.53%▼
Non-Life Insurance	6,144.37	5,142.25	16.31%▼
Others	704.75	641.76	8.94%▼
Trading	808.22	751.05	7.07%▼

NMBCL UPDATES

- Signed Underwriting Agreement for IPO of **Balephi Hydropower Ltd.** on *February 18, 2020*
- Right Share Issuance, of **Prudential Insurance Company Ltd. (PICL).** *Issue Open date: March 1,2020.*
- Right Share Issuance of **Gurans Life Insurance Ltd. (GLICL)**. *Announcement Date: March 15, 2020*
- Renewal of RTS Agreement, of **Siddhartha Insurance Ltd (SIL)** on *March 23, 2020.*
- Renewal of RTS Agreement, of **Gurans Life Insurance Ltd. (GLICL)** on *April 11, 2020.*
- Renewal of RTS Agreement, of **United Insurance Co. (Nepal) Ltd. (UIC)** on *May 11, 2020.*

[1] As per unaudited financials published till the end of the review period. The profit figures include data of listed entities only except for commercial banks which include both listed and unlisted institutions.

[2] Nepal Rastra Bank (2020). *Current macroeconomic and financial situation of Nepal: Based on nine months' data of 2019/20*. Retrieved from https://www.nrb.org.np/contents/uploads/2020/05/Current-Macroeconomic-and-Financial-Situation-English-Based-on-Nine-Months-Data-of-2019.20.-1.pdf

[3] Nepal Rastra Bank. (2020). *18-Covid-19_Related*. Retrieved from https://archive.nrb.org.np/bfr/circular/2076-77/2076_77_(Notice)--18-Covid-19_Related-new.pdf

INTEREST RATES

During the review period, the interbank rate fluctuated between maximum 5.3% and minimum 1%. Meanwhile, NRB injected NPR 53.8 billion worth of liquidity through 7 days repo (NPR 20.0 billion), overnight repo (NPR 3.7 billion) and SLF (NPR 30.1 billion). The interbank rate declined sharply in late February and March to bottom at 1%. However, the widespread fear of COVID-19 spooked the market participants and the interbank rate rose with the rise in the level of uncertainity and currently stands near the new upper threshold (i.e.5%).

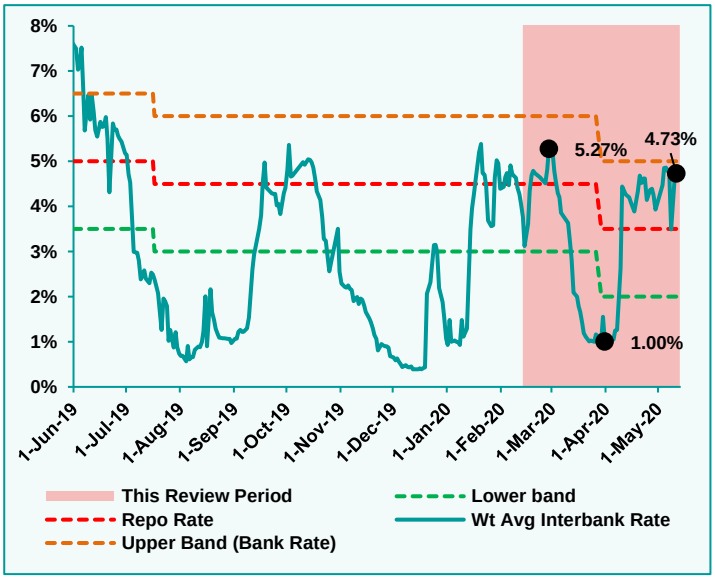

Figure 2: Weighted average interbank rate (Source: NRB)

NRB reduced the upper band, repo rate and lower band of the Interest Rate Corridor by 100 bps to 5%, 3.5% and 2% respectively. Also, NRB slashed CRR to prop up liquidity in the system, however, issuance of fresh development bonds and treasury bills has mopped up liquidity which kept the interbank rate afloat.

NRB renewed NPR 56.9 billion and issued fresh NPR 35 billion worth of treasury bills during the review period. Discount rate on treasury bill of 28 days, 91 days, 182 days and 364 days stood at 4.3278%, 3.2648%, 4.8322% and 4.9533% compared to 4.3278%, 3.98%, 4.5730% and 3.9209% respectively in Mid-February. NRB has published debt issuance calendar to raise NPR 195 billion in internal debt as planned in fiscal budget[4]. Government has already raised NPR 135 billion through treasury bills and development bonds. Such issuance of government securities shall likely put pressure on discount rates of treasury bills.

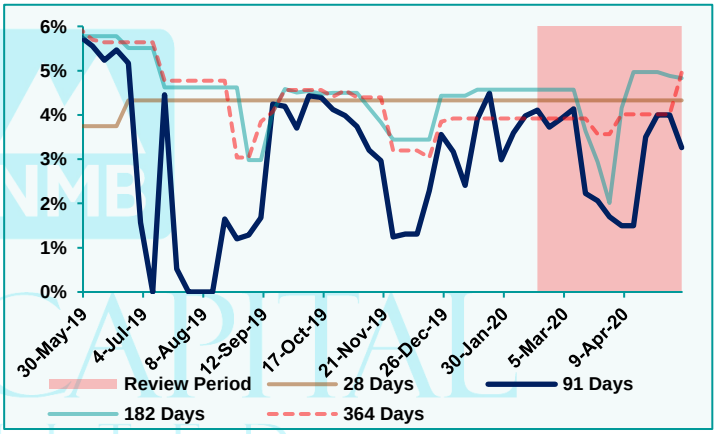

Figure 3: Discount rates of treasury bills (Source: NRB)

Figure 4, below displays average interest rates offered by commercial banks on fixed deposits for individual depositors for different tenures. Interest rates have decline over the review period. Commercial banks have collectively slashed 1-Year fixed deposit rate to 8.25% from 9.25%.

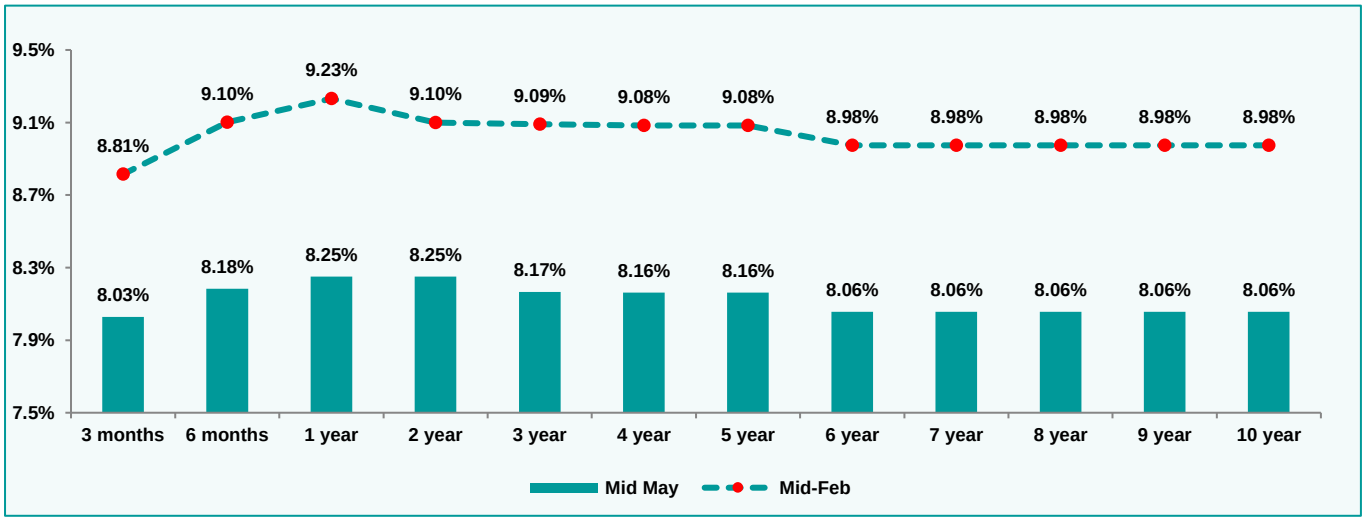

Figure 4: Average interest rates offered by commercial banks in fixed deposits for different tenure

[4] Nepal Rastra Bank (2020). *Issue & Auction Calendar (2076 77) - 2077-01-05 revised*. Retrieved from https://archive.nrb.org.np/pdm/pdm_auction_calendar/Issue%20&%20Auction%20Calender%20(2076_77)%20-%202077-01-05%20%20revised.pdf

NEPSE – TECHNICAL ANALYSIS

Figure 5: Daily chart of NEPSE

During the review period the benchmark index witnessed a wide trading range, wherein NEPSE **(*1,201.57, ▼10.73%*)** rocketed 286 points in just 11 trading days followed by a fall of 430 points in the subsequent 16 trading days. Overall the Index lost 144.40 points during the review period. In early part of the review period, the index marched northwards with completion of the double bottom pattern with significant surge in transaction volume. After reaching 1600 - the target for the double bottom pattern - the index fell sharply. The fall swiftly retraced more than 78.6% of the gains to arrive at the bearish trendline that the index had breached earlier this year as shown in figure 5.

As index fell sharply from the level above 1600, moving averages have turned bearish. Relative Strength Index [5] (RSI) has been trending downwards in line with NEPSE and settled near oversold level at 32 at the end of the review period. Earlier, RSI had peaked at 91 at overbought level when the index was above 1600. Moving Average Convergence and Divergence [6] (MACD) also have been falling in line with NEPSE after experiencing a bearish crossover in early March. Increased volatility during the period has widened the Bollinger band [7] as shown in figure 6.

Figure 6: Daily chart of NEPSE with indicators

The retracement has driven the index downwards towards the levels where it previously broke out from the long-term bearish trend line and this level is likely to be tested. The way in which the index reacts at this level shall determine the direction of the index in days to come. A breakout towards the downside from the current levels (the bearish trend line) may take the market back towards the long-term bearish trend and establish that the rally of February was a big bull trap and consequently the index is likely to test the 1,100 level once again. While on the flipside, if the index does find support at this bearish trend line and continues its upward move, it shall provide further reassurance for the end of long-term bearish trend. This upward move shall have an immediate resistance at 1,350.

Due to the outbreak of COVID-19, the regulatory body, SEBON has halted trading in the secondary market. Due to infrequent trading, inferences from technical analysis may lose their effectiveness.

[5] No. of periods = 14
[6] Periods of 12, 26, 9 is taken for Fast average, Slow average and Signal Average respectively
[7] No. of periods = 20, Width = 4 times the Standard Deviation

COMPLEXITIES IN SHARE VALUATION

Around four centuries ago in 1602 the Dutch East India Company became the world's first ever company to formally issue shares to the public and become listed as a joint stock company. As listed shares are easily bought and sold over an exchange, people have been trading equity shares all over the world at prices adhering to the perceived value of the company. As values of companies fluctuate and change over time, so do the price of these shares and thus money has been both made and lost in the share market over the period. As a result, people have been fascinated by the changes in the prices of the shares and have been trying to figure out the value of the shares so they can buy the shares of a company at less than what they are worth to earn profit. Determining the value of shares is called valuation and there are a number of processes with each having their own complexities.

Discounted Cashflow method

One of the most widely used valuation technique is the discounted cashflow method. In a discounted cashflow method, value of company is simply the sum of all the future cashflows discounted to the time of valuation. While the concept is pretty straight forward to grasp, complexities arise when one starts dealing with the two significant inputs for the computations. The first one is the future cash flow and its rate of growth while the other is the discount rate. The valuation begins with the assumption or projection of the future cash flows. Such cashflows may either be the dividend paid to the shareholder or the cashflow generated by the business. While some use projected macroeconomic indicators to project future cashflow others prefer cashflows from the previous years. The problem arises with accurately predicting future events and outcome as they are uncertain. There is a popular saying from John Kenneth Galbraith- "There are two classes of forecasters: Those who don't know – and those who don't know they don't know." The thing about forecast is that every person has his/her own.

As the saying goes a bird in a hand is better than two in the bush; a rupee today is clearly more than a rupee tomorrow. The discount rate is a measure of differences between value of money today and some time in future. Thus, the discount rate is used to compare future cashflow with today's equivalent cashflow. In discounted cashflow model, discount rate is calculated using Weighted Average Cost of Capital (WACC). WACC is the combined cost of equity and the cost of debt, weighted by the relative amounts of each to total capital of the company. Determining the cost of debt (interest rate on its debt) and its relative weight is quite easy; determining the cost of equity is quite elusive. Capital Asset Pricing Model (CAPM) is most widely used to compute the cost of equity. It is calculated as: $R_e = R_f + \beta (R_m - R_f)$; where R_f is the risk-free rate of return, R_m is the overall market return and β (Beta) is the company's volatility with respect to the overall market.

Generally, return on government securities are taken as the risk-free rate of return but in reality, sometimes even government securities are not risk-free as evidenced by multiple sovereign defaults seen in the past and the most recent default by Greece in 2015. In addition, the returns on government securities are dynamic rather than static. Computing the market return has its own challenges. What should be the holding period? Over what time period, should it be calculated? The returns are quite different depending upon one's preference. For instance, the average annual return on NEPSE Index or the average market return ranges from 5.4% to 20.4% depending upon how many years of annual return is taken into consideration. Similar complications arise in case of company Beta (β), which is defined as relative volatility of its return relative to the return of the market; as this behavior of share keeps on changing. Within the period from 2010 to 2019, beta of banking shares can be seen deviating from 1.08(min) to 1.35(max). Historical data shows even larger volatility in shares in other sectors. Apart from CAPM, there are Fama and French models, Build-up models that can be used to arrive at the cost of equity. However, these models are also susceptible to aforementioned limitations.

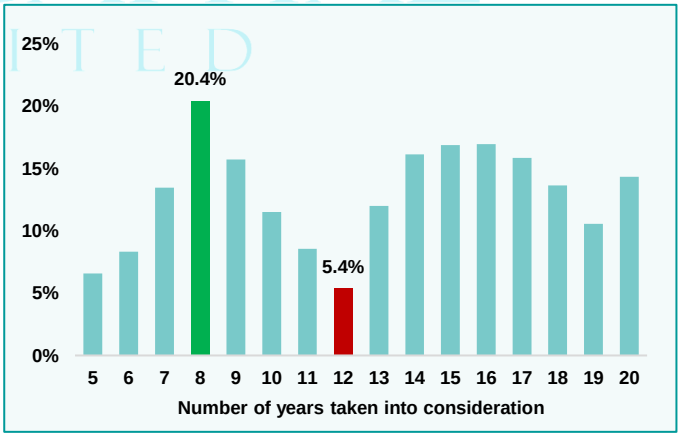

Figure 7: Average annual return on NEPSE

The aforementioned discount rate in other words is the expected return on investment of an investor. The expected return on investment is quite different for each investor because of their opportunity costs, their perceived risks and many other factors. Yet, these models theorize that expected risk and return is same for all investors; i.e. investor's homogeneity in other word. Even if all investors are risk averse, the degree of their risk aversion may differ which would result to different expected returns for same perceived risks. Since, projected future cashflows are discounted

by this rate, a small change in this rate can have a profound effect on a share's overall value. All of these factors bring about significant ambiguity in the valuation done under discounted cashflow method. Apart from future cashflows, there are other factors such as voting rights, pledging facilities and other non-monetary consideration that affect the value of a share which the discounted cashflow fails to incorporate.

Market Model

Lot of people also refer to the market price to arrive at the value of the share and the company. Market price is often considered a fair representation of a share's value. Market is even more accurate measure of value of a share if one is considering selling the share because market price is the proceed one would get when sales is executed. It is the market price that institutions like mutual funds, investment companies, insurance companies and most institutions use while valuing their equity holdings.

The discounted cashflow also uses market prices to arrive at its key inputs including market return and Beta. There are also relative valuation methods that use market price of an asset to determine the value of another asset. As per efficient market hypothesis, market is considered the best valuation metric as the market is assumed to be efficient. An efficient market is where the share price is reflective of all available information. Efficient markets have large number of rational investors making rational trading decision based on all available information consequently keeping market price fairly near to the share's intrinsic value. If in case shares are undervalued or overvalued, the instantaneous buying and selling from these rational investors shall bring price fairly close to its intrinsic value.

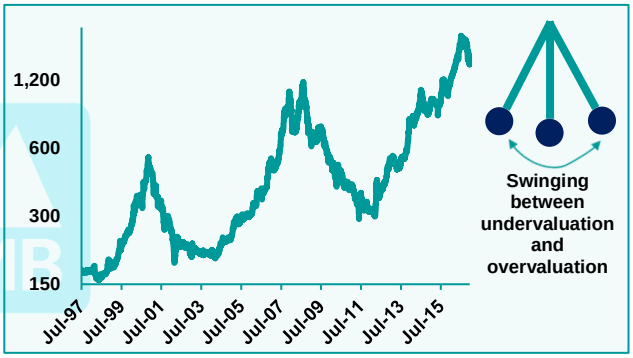

Figure 8: Swings seen in NEPSE over the years

However, in reality, empirical studies around the world have shown that markets are not perfectly efficient and prices don't necessarily reflect all available information. Market prices have been known to keep swinging from undervaluation to overvaluation just like a pendulum. Although, in a perfect scenario the mid-point of the arc is where pendulum should rest, in reality it stays there for either a very brief moment or long periods of time but never resting at a same place. This is often referred to as the market cycle with fear driving market to the extreme of undervalued points and greed driving market to the extreme of overvalued levels. Though rational decision making is expected from the market participants, they often make irrational decisions which are driven by their behavioral biases fueled by fear and greed rather than the available information. Behavioral biases can take many forms. For instance, there is herd mentality where investors rather than doing independent analysis, just follow the herd. Another one is confirmation bias where investors only pay attention to information that confirms with their belief. Other biases include overconfidence bias, anchoring bias, gambler's fallacy bias, disposition effect to name a few. All of these irrational behaviors keep market prices swinging from undervalued and to overvalued levels; therefore, making market valuation often deviate from a share's intrinsic value.

A way forward

Without providing a better alternative, finding faults in the existing methodology is not very productive. Nevertheless, the reality is that despite its limitations, discounted cashflow is one of the best available methodologies to value a share. The concept behind discounted cash flow that the value of a share is the function of present value of the future cashflows is hard to disagree. The takeaway here is, one must internalize its inherent weakness and limitation while using discounted cashflow method. The valuations differ significantly with their assumptions with regard to their future cashflows, computations of beta, choosing the market return, risk-free rate of return etc. Therefore, as valuation is not an exact science; valuating companies within a range of values with a range of assumptions is better than arriving at a single numerical value. While market price is of a share at a given moment, its valuation often deviates from the share's intrinsic value due to aforementioned behavior of market participants. Its near impossible to for a market to be perfectly efficient wherein that market prices always reflect all the available information and are equal to the intrinsic value because human behavior is not always bounded by rationality and is affected by emotions and biases. However, efficiency of a market can be improved so that the deviation from intrinsic value is less or the pendulum swings are of shorter length. Enhancing informational reach to all participants, decreasing trading cost, increasing institutional investors, increasing financial literacy amongst investors shall help in increasing market efficiency.

CHART OF THE QUARTER

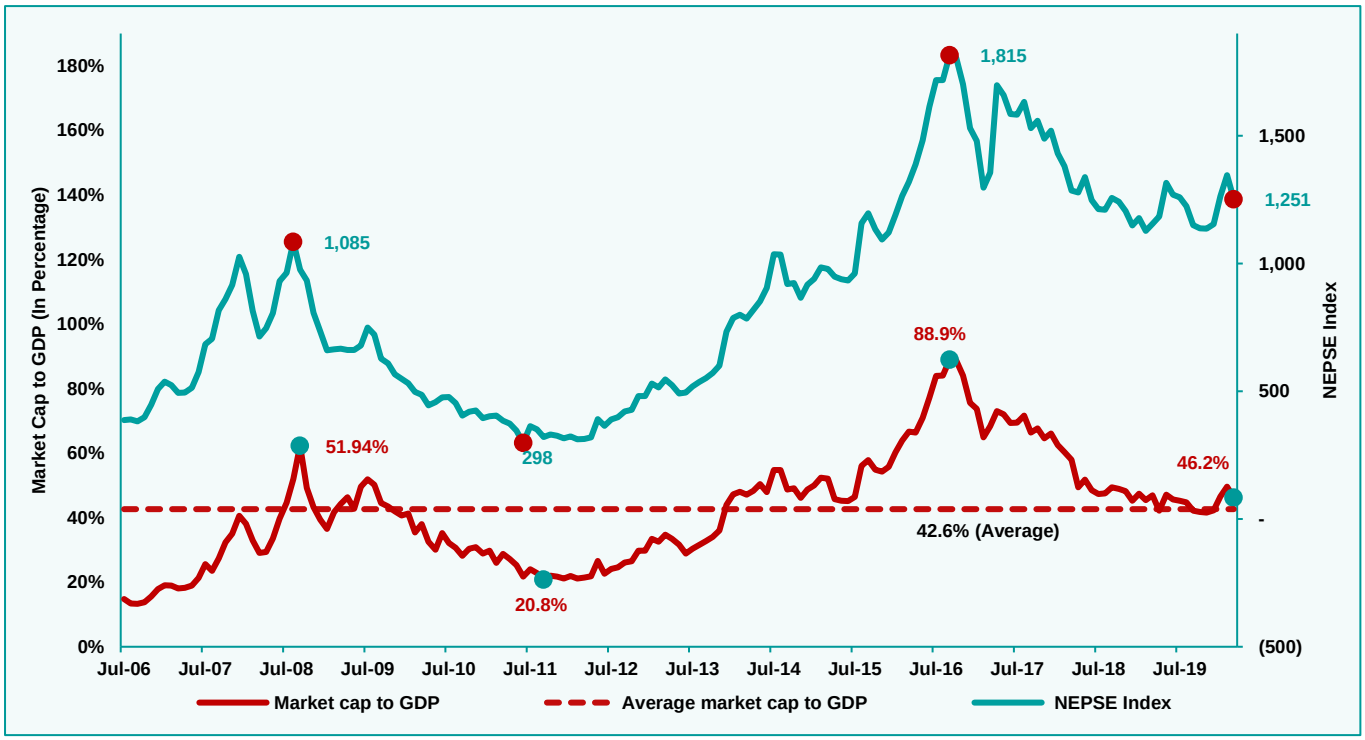

Figure 9: Market Capitalization to GDP Ratio and Monthly NEPSE Index

The ratio of stock market capitalization to GDP compares the value of all listed companies at an aggregate level to the value of the country's total domestic output. This ratio is popularly used as a gauge to the overall stock market – whether the valuations are fair, undervalued or overvalued. In case of Nepal only a handful real sector companies are listed on the exchange which predominately comprises of BFIs and a few hydropower companies, The absolute value of this ratio may be of little significance, however, the ratio can be compared to its historical values to grasp the current level of valuation of the stock market. This ratio currently stands at around 46.2% compared to 88.9% when NEPSE peaked in July 2016 as shown in figure 9. The average historical market capitalization to GDP ratio based on last 14 years stands at 42.6%. Looking at its historical average, Nepalese stock market looks fairly priced.

NMB Capital Limited

RTS List

S. No	Symbol	Company	Sector
1	BPCL	Butwal Power Company Limited	Hydropower
2	CBBL	Chhimek Laghubitta Bikas Bank Limited	Microfinance
3	CFCL	Central Finance Co. Ltd	Finance
4	EIC	Everest Insurance Co. Ltd.	Non-Life Insurance
5	GLICL	Gurans Life Insurance Company Ltd.	Life Insurance
6	HGI	Himalayan General Insurance Co. Ltd	Non-Life Insurance
7	KMCDB	Kalika Laghubitta Bittiya Sanstha Ltd.	Microfinance
8	NBBL	Nagbeli Laghubitta Bikas Bank Ltd.	Microfinance
9	NNLB	Naya Nepal Laghubitta Bikas Bank Ltd.	Microfinance
10	NHDL	Nepal Hydro Developer Ltd.	Hydropower
11	NMB	NMB Bank Limited	Commercial Bank
12	NMBMF	NMB Microfinance Bittiya Sanstha Ltd.	Microfinance
13	PICL	Prudential Insurance Co. Ltd.	Non-Life Insurance
14	SAPDBL	Saptakoshi Development Bank Ltd.	Development Bank
15	SIL	Siddhartha Insurance Ltd.	Non-Life Insurance
16	SLBBL	Swarojgar Laghubitta Bikas Bank Ltd.	Microfinance
17	NSEWA	Nepal Seva Laghubitta Bittiya Sanstha Ltd.	Microfinance
18	NTC	Nepal Doorsanchar Company Limited[8]	Others
19	NMB50	NMB 50	Mutual Fund Scheme
20	NMBHF1	NMB HYBRID Fund L - I	Mutual Fund Scheme
21	SLBSL	Samudayik Laghubitta Bittiya Sanstha Limited	Microfinance
22	UIC	United Insurance Co. (Nepal) Ltd.	Non-Life Insurance
23		10% NMB Debenture 2085	Corporate Debenture

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[8] *Cash Dividend Distribution Only*