

# Stock valuation of northwest saving bank case study example

[Business](#), [Company](#)



## **Stock Valuation of Northwest Savings Bank**

Many people think that investing is merely the act of buying something on low and selling it in high, which makes the investment seem very easy. But it is truly a difficult task as one needs to understand if making an investment is worth the price paid for the security and determine if the investment is expensive or cheap.

Investment is a very crucial task and should be done with great care. Making investment seems easy, but earning a good return on investment is difficult. Therefore, investment should be done after analyzing the company or stock or any instrument on which the investment is to be made. When the investment is done in a hurry, then it leaves the investor with sufficient time to regret. There are many ways to analyze investment opportunities. One of the major investment sectors is to invest in stock of the company. Investing in a stock is a risky job and extreme care should be taken while investing in the stock. The value of stock investment changes every day and the market as well as the performance of that particular company has a huge impact on the price of stock. So, detail analysis is necessary to ensure that investing in a stock is fruitful. As mentioned above, there are several methods to evaluate the stock investment, but the fundamental basis for evaluation is the ratio value analysis and dividend discount model valuation. So, to analyze the stock of Northwest savings bank, we will use two models and determine if investing in the stocks of the Northwest savings bank is worth or not.

## Ratio analysis valuation

Ratio analysis valuation can be very useful in analyzing the company and to take the investment related decisions. Ratio analysis incorporates the past performance of the company and helps the investor to correctly make a decision. Ratio analysis will give investors enough room to analyze the attractiveness of the stock. If an investor does ratio analysis, then ratios have to be compared with other companies or industry average to determine the attractiveness of the investment. Not only this, ratios measured today can be compared with its ratios measured in the past to see how good or bad the company has performed during the period of comparison.

So, to decide whether it is good to invest in the stocks of Northwest saving, we will compute some ratios and then compare it with the industry average.

### - Price to Sales (P/S) Ratio

If we look at the price to sales ratio, we can clearly see that the P/S ratio for the Northwest Saving Bank (NWBI) is 4.47: 1 i. e. investors are paying \$4.47 for each dollar of sales revenue. This is little higher than that of industry where investors are paying \$3.03 for each dollar of sales revenue. While one or other way can manipulate earnings, price to sales ratio gives information that is more reliable to investors. While the low P/S ratio is more preferable because lower the P/S ratio, better is the expected value of the company's share. But the P/S ratio of NWBI is higher than that of the industry average and stock of NWBI seems to be less attractive to invest. But this ratio does have its limitation as it cannot capture the future growth prospect so we should not base our decision on this ratio only.

### - Price/Earnings Ratio

P/E ratio is widely accepted valuation ratio even though it has some imperfections. Since it is based on the market prices, which is determined by the market forces and the earnings of the company, which is based on the forecasts based on past performance and anticipations about the future, it incorporates future growth prospects of the company, as well. It determines the earning power of the stock i. e. it measures how much dollar the investors are paying for each dollar of earnings.

If we look at the P/E ratio of NWBI, we can see it to be 20. 25 times i. e. investors are currently paying \$20. 25 to earn \$1 but in the industry, investors are paying \$13. 125 on average to earn \$1 from similar company. This shows that the stock of NWBI is overpriced and the market force will eventually bring the price down. On the other hand, the higher P/E ratio than average indicates that Northwest savings bank has greater earning power and has the profitability of increasing profitability in future. The high P/E ratio of NWBI shows that it is a growth stock.

#### - Price to Book Value (P/B Ratio)

P/B ratio compares the price that investors are paying for the share with book value of the company. Higher value of P/B ratio indicates that the company's stock is overvalued relative to the equity or company's net worth per share while the low P/B ratio indicates the share to be undervalued than its actual net worth.

The market to book ratio, also called the P/B ratio of NWBI is 1. 204 times, which indicates that the stock of NWBI is trading at a price that is 1. 204 times higher than its net worth, while similar stocks are trading at price 1. 175 higher than the net worth.

Based on all these ratios, we can say that the company's stock price is too high. The stocks of the Northwest Saving Bank are traded in much higher price than it should be. We can say this because the ratios of the competitors in the industry are much lower than that of NWBI and the company's ratios are much larger than the industry average. So, to match with the industry average and to justify the investments made by investors based on the ratio, the price of the Northwest Saving Bank should be around \$15.50. The price of \$14.78 can be justifiable based on detail analysis of a bank's performance, but since we have just ratios to look at, the price of the stock should be around \$15.50.

## **Dividend Discount Model Analysis**

Dividend Discount Model (DDM) Analysis is a fundamental valuation technique in which all the future earnings are discounted to present value using an appropriate discount rate to determine the intrinsic value of the stock. This model assumes that the stock is just worth the present value of future dividends it gives to the investors.

## **The calculations are illustrated in the appendix.**

### Conclusion and Recommendation

Based on the calculation, we can see that the stock of the Northwest Saving Bank is underpriced. The ratio analysis shows that the company is doing a good job and there is a growth prospect for the company. Even though the ratios are quite higher than the industry average, investors can get a higher return in future because its P/E ratio is significantly higher than industry indicating that the company has growth prospects in the future. The dividend

discount model also supports the fact that the stock of the Northwest Saving Bank is underpriced. This model shows that the stock's value is more than \$15 but it is currently trading at around \$14.7. So, It is good to invest in stock of the Northwest Saving Bank.

## Calculations Appendix

Calculation of Ratios

Price to Sales Ratio= Price per share/Sales per share

Price to Earnings Ratio= Price per share/Earnings per share

Market to Book Ratio= Price per share/Book Value per share

Industry Average= (PNC+FNFG+CCNE)/3

## Calculation of dividend growth rate and value of stock

We know, company's ROE is equal to growth rate of the company (g) multiplied by the retention ratio.

$g = \text{ROE} \times (1 - \text{dividend payout ratio})$

Dividend payout ratio= Dividend per share/Earning per share

After calculating the dividend payout ratio, then we calculate the growth rate (g) for each company using the above-mentioned formula. Then using the growth rates of PNC, FNFG, and CCNE, we calculate the average growth rate of industry. The calculation is illustrated in the table.

## Given,

Calculating value of stock based on constant growth model

We know,

Intrinsic value of stock  $V_s = \frac{D_1}{k-g} = \frac{D_0(1+g)}{k-g}$

**Where,**

$$D1 = \text{dividend in year 1}$$

K = required rate of return

g = constant dividend growth rate

So,

$$D0 = \text{dividend of 2013} = \$0.52$$

g = 5.41% (in constant growth model we are using the industry benchmark average)

$$Vs = \frac{D1}{k-g} = \frac{0.52(1+0.0541)}{0.09-0.0541}$$

$$Vs = 0.5481320.0359$$

$$Vs = \$15.268$$

So, based on the constant growth model, the value of the stock is worth \$15.268 which is pretty much comparable with the ratio analysis valuation.

**Calculating value of stock based on non-constant growth model**

In the table below, we have calculated the dividend growth rate for each year based on actual and forecasted dividends up to 2018. After 2018, the dividend grows at the rate of 5.41%, i. e. industry average for perpetual time.

**The equation to calculate value of stock based on non-constant dividend discount model is:**

$$Vs = \frac{D1}{(1+k)^1} + \frac{D2}{(1+k)^2} + \dots + \frac{Dn}{(1+k)^n} + \frac{TV}{(1+k)^n}$$

**Where,**

$D_1, D_2, \dots, D_n$  ?

?

= ?

?

**Then, calculating the terminal value of the stock as**

$$TV = D_{2018}(1+0.0541)^{k-0.0541}$$

$$TV = 0.72(1+0.0541)^{0.09-0.0541}$$

$$TV = 0.7589520.0359$$

$$TV = \$21.141$$

**Now substituting TV in above equation,**

$$V_s = 0.56(1+0.09)^1 + 0.60(1+0.09)^2 + 0.64(1+0.09)^3 + 0.68(1+0.09)^4 + 0.$$

$$72(1+0.09)^5 + 0.76(1+0.09)^6 + 21.141(1+0.09)^6$$

$$V_s = 0.514 + 0.505 + 0.4942 + 0.4820.468 + 0.4532 + 12.605$$

$$V_s = \$15.05$$

Therefore, the value of stock under non-constant growth model is \$15.05.