

VALUING BANKING STOCKS

A Synopsis on the Basic Models

The Pros & Cons Utilizing Evidence from European Equity Research Practices

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Over the past decade, a central method used by equity analysts to value banks was a variant of the Gordon Growth Model. In various reports, analysts across many European financial institutions were observed to derive the price / book value multiple that a banking stock should trade at, by comparing the bank’s profitability to its cost of equity capital adjusted for the growth rate.

The above method is shown in the following formula:

$$[\text{Implied or Target } P / BV = (ROE - g) / (CoE - g)]$$

where,

P = Share Price
BV = Book Value per Share
ROE = Return on Equity
CoE = Cost of (Equity) Capital
g = Long Term Growth Rate

The above equation – also known as the “Net Asset Value Approach” – has for years been a simple method to gauge a bank’s fair value by using straightforward numbers with the minimum complexity.

Although the constituents of the equation are relatively easy to calculate, they are still very critical numbers. To measure a bank’s profitability analysts use **“Return on Equity”** (net profit divided by net shareholders’ funds), one of the most popular and meaningful ratios among shareholders.

Also, to calculate the “**Cost of Capital**” (or “Cost of Equity”) they only have to add market (or equity) risk premium, adjusted for beta, to risk free rate ($CoE = RF + MRP \times \text{Beta}$). Finally, to estimate the long-term growth rate or “**g**” analysts have to use not only a bank’s historic performance but also their intuition with regard to its future prospects. In other words, it seems impossible for analysts to unanimously agree on one target (fair) price when they analyze a particular bank.

The implied price of a banking stock is derived through the following equation:

$$[\text{Fair Price of a Banking Stock} = \text{Target P} / \text{BV times Current BV}]$$

Divergence of opinion does not appear to be a serious obstacle for an efficient market; however, no model or valuation method is flawless, despite the extent to which it is being used by equity analysts.

In the case of the valuation method under review, criticism is focused upon the assumptions that have to be made and their reliability in the longer term. More specifically, this model seems to be especially sensitive to many assumptions, **possessing high leverage**. Meaning, that **it is easy to make small changes in its assumptions and produce big differences in the final valuation number**. In addition, assumptions are quite subjective and consequently cannot be verified or even rejected. For example, a range of 8% - 9% in sustainable ROE may produce a range of 0% to 20% in the upside potential of a banking stock, when other parameters are held constant.

As equally important weaknesses with regard to this model, we should highlight the following:

- a) The model is biased towards short term and medium term profitability. When analysts estimate “g” for short-term periods, the rate tends to be higher, producing larger valuation numbers (when $ROE > CoE$).
- b) The model is not very well suited for banks operating in emerging markets or regions that provide financial data for short periods. This makes some parameters either difficult to calculate or meaningless to use (risk free rate or beta for example).
- c) The final valuation number tends to come out bigger since the formula is being adjusted for “g” (this also applies when $ROE > CoE$).

The following table presents the key assumptions which analysts must make applying this model:

Country Risk	Cost of Equity	Equity Risk Premium	Long Term ROE	Long Term Growth (G)
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On the other hand it is important to note that the model does demonstrate some key advantages:

- a) It takes into account the most critical factors highlighting the financial performance of a banking institution (ROE, CoE, g, BV).
- b) It has a focus on shareholder value.
- c) It incorporates the risk factor.
- d) It incorporates expectations of growth in earnings and / or dividends.

The Model Application

Analysts use this model mainly as support to strengthen their arguments over the fair value of a banking stock. Under this perspective, assumptions have to be clearly stated and sometimes thoroughly explained in terms of calculation. However, “...**the more sophisticated and theoretically sound a model is, the more inputs it relies on, and consequently but not paradoxically as many analysts believe, the less accountable it becomes...**” for both analysts and investors.

When analysts use this model in their reports, they also construct a sensitivity matrix, showing how the target (fair or implied) price of a banking stock changes due to small changes in “g” or “ROE.”

Some Ideas to Estimate the Constituents of the Model

There are many different paths followed by equity analysts to estimate the appropriate values of the model’s parameters:

“**g**”: It reflects the prospective growth of the bank in the long term. It is estimated by taking into account dividend or net profit CAGR (for historic as well as future periods). Many analysts assume this rate above the long-term GDP growth of a country, when the latter is under-banked and vice versa.

“**Cost of Capital**”: It is calculated as the sum of risk free rate¹ and market risk premium² (adjusted for beta³). Based on the level of disclosure transparency, the free float, and the market cap, the equity risk premium can be adjusted accordingly. For example, a history of negative news surprises implies higher risk.

¹ It usually stands for the long-term government bond yield.

² The yield on long-term sovereign bonds is used as proxy.

³ Significant corporate activity may distort price behaviour and weaken reliability of beta.

“ROE” Sustainable or Achievable: This estimate can become especially subjective. It reflects the bank’s ability to deliver profitability under stable market conditions in the long term. Looking at the bank’s history may be enlightening.

Some versions of the model often used by analysts to value banking stocks are presented below:

Valuation Model 1

	Projected Year 1	Projected Year 2	Projected Year 3	Projected Year 4	Projected Year 5
ROE (Return on Equity)	%	%	%	%	%
BV / S (Book Value per Share)	Amount	Amount	Amount	Amount	Amount
Dividends	Amount	Amount	Amount	Amount	Amount
Terminal Value	0	0	0	0	Amount

Valuation Model 2

Discounted Dividends	Amount
Discounted Terminal Value	Amount
12 – Month Target Value	Price

Valuation Model 3 / Sensitivity Matrix

Analysts choose the most appropriate value according to the most likely scenario at the time of issuing the research report.

	ROE Level 1 (%)	ROE Level 2 (%)	ROE Level 3 (%)
Growth Level 1 (%)	Implied Price	Implied Price	Implied Price
Growth Level 2 (%)	Implied Price	Implied Price	Implied Price
Growth Level 3 (%)	Implied Price	Implied Price	Implied Price

Sources: Financial analysis bibliography, European equity research reports.

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