The Theory of Investment Value

Newsletter of Value Investing n° 8

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• Dear Folks,

• Some of you’ve visited me in Freiburg already. Guess how old is University of Freiburg? Exactly 550 years old, about 5 and 36 times that of HKU and UST respectively! It is not surprised that the libraries of this old university hold a lot of century-old books.
John Burr Williams

• Today, a Chinese friend of mine who studies Volkswirtschaft (national economy) helped me to borrow a 70-year-old book from her department’s library – The Theory of Investment Value.

• It is intriguing that this book is actually a PhD dissertation published even before thesis presentation. John Burr Williams, who was the PhD candidate, finished this seminal work in October 1937. Today, it has become the corner stone of value investing, which enlighten Buffett as to the way of calculating intrinsic value of a business. I glanced some chapters and was impressed by the writer’s logical arguments. It will be alerting to read chapter 1 – The difference between speculation and investment – amid the recent small turmoil in the stock markets!
A Cow for Her Milk

- In chapter 5, the author defined the investment value (= intrinsic value, as we call it) of a stock as the present worth of all dividends to be paid upon it. Likewise, he also defined the investment value of a bond as the present worth of its future coupons and principal. Mathematically, it states:

- For stocks,

\[ V_0 = d_1 * a^1 + d_2 * a^2 + d_3 * a^3 + \ldots \]

- where

\[ V_0 = \text{investment value} \]
\[ d_t = \text{dividend in year } t \]
\[ a = 1 / (1 + r) \]
\[ r = \text{interest rate} \]
A Cow for Her Milk

• For bonds,

\[ V_o = d_1 \cdot a^1 + \ldots + d_n \cdot a_n + P \cdot a_n \]

• where
  • \( V_o \) = investment value
  • \( d_t \) = dividend in year \( t \)
  • \( a = 1 / (1 + r) \)
  • \( r \) = interest rate
  • \( P \) = principal (or face value)
  • \( n \) = number of years to maturity
A Cow for Her Milk

Williams realized most people will object to the foregoing formula for stocks by saying that it should use present worth of future earnings, not future dividends. Yet, he argued if earnings not paid out in dividends are all successfully reinvested at compound interest for the benefit of the stockholder, as the critics imply, then these earnings should produce dividends later; if not, then they are money lost. He further made analogy to emphasize that earnings are only a means to an end, and the means should not be mistaken for the end. He stated:

- A cow for her milk,
- A hen for her eggs,
- And a stock, by heck,
- For her dividends.

In farming, we own a cow because it produces milk; in value investing, we hold a stock because it pays out dividend!
What Do We Learn?

• We now learn that Williams proposed the investment (intrinsic) value of a stock is the present value of its all future dividends but not earnings. What’s its implication on our stock investment?

• The diagram in the next slide shows how dividend is paid out with a 70% payout policy. In Williams’ opinion, retained earnings should be eventually paid out as dividends in its lifetime, if not now. In regards, the investment (intrinsic) value of a stock which pays no dividend at all in its lifetime is exactly zero.

• Many mainland stocks are very hot. Yet, I find that some of them have very low payout ratio. While we realize a fast growing business requires more retained earnings to fuel its growth, we should be still critical on how those managers justify their use of retained earnings.
What Do We Learn?

Business

retained earnings

€30

€100 earnings

Stock

70% dividend payout ratio

€70 dividend

€100 earnings
• In future, I will talk more about dividend policy and also introduce a short-hand formula to evaluate the intrinsic value of a stock.

• Yours,

• Winky

• Freiburg
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